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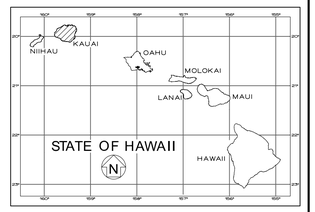
STATE OF HAWAII

AGRIBUSINESS DEVELOPMENT CORPORATION

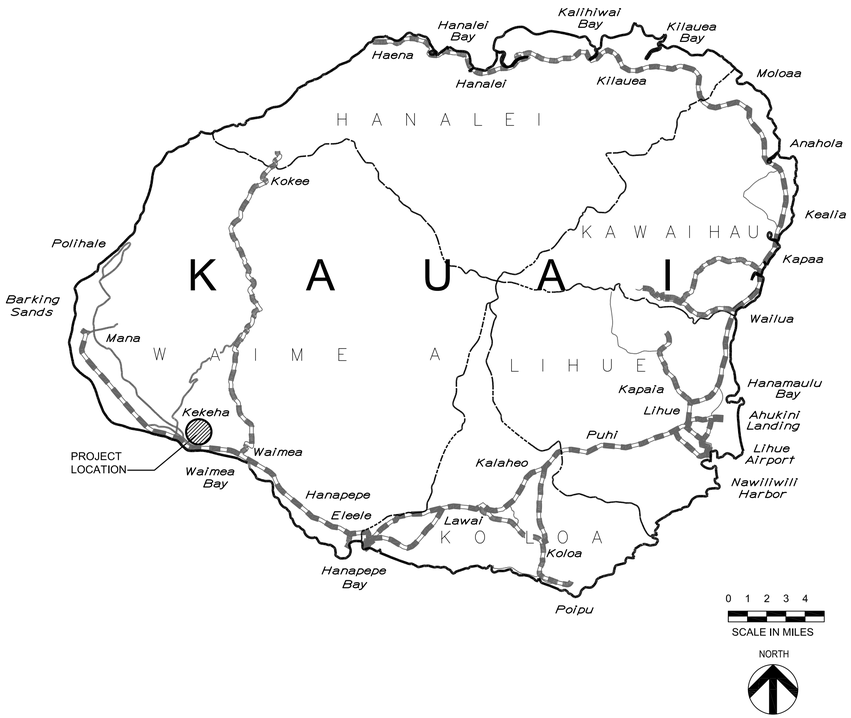
KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, KAUAI, HAWAII
TMK: 1-2-002:001

ADC PROJECT NO. 10006



PLANS PREPARED BY:

SSFM INTERNATIONAL
501 SUMNER STREET, SUITE 620
HONOLULU, HAWAII 96817



VICINITY MAP

NORTH

LOCATION MAP

AGRIBUSINESS DEVELOPMENT CORPORATION
STATE OF HAWAII

APPROVED:

EXECUTIVE DIRECTOR _____ DATE _____

BID SET - NOT FOR CONSTRUCTION

GENERAL NOTES:

1. The scope of work for this project consists of replacement of the existing Kekaha bridge structure including but not limited to the addition of piers, asphalt pavement reconstruction, bridge structure reconstruction, utility relocation and other related improvements required to complete this project.

2. The Contractor is reminded of the requirements of Subsection 105.16(A) - Subcontract Requirements which requires them to perform work amounting to not less than 30 percent of the total contract cost, less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.

3. The Contractor's attention is directed to the following Sections: Subsection 104.11 - Utilities and Services; Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 107.11 - Safety: Accident Prevention; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control. As part of coordination requirements, the Contractor shall include the Engineer in all email correspondences with utilities, facilities, and agencies.

4. Construction and restoration of all existing highway facilities within the State's right-of-way, including the legal relations and responsibility to the public, shall be in accordance with the current Hawaii Standard Specifications for Road and Bridge Construction, dated 2005, the Specifications for Installation of Miscellaneous Improvements within State Highways, of the State Highways Division, HDOT Design Criteria for Bridges and Structures, and the Contract Special Provisions for this project.

5. The Contractor shall be responsible for conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.

6. The Contractor at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health.

7. Work may be performed only between the hours of 8:30 am and 3:00 pm, Monday through Friday, except State holidays, unless when otherwise approved in writing by the District Engineer.

   During work hours, only one lane of traffic shall be closed, unless otherwise approved in writing by the District Engineer.

   At certain locations, "No Lane Closure" will be in effect during the "Back to School Jam", Thanksgiving weekend, Christmas/New Year period and at other times as directed by the Engineer.

8. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities, and shall take necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the Administrative Rules of Hawaii Governing The Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways, adopted by the Director of Transportation, and the current U.S. Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Temporary Traffic Control.

   Lane closures shall conform to the traffic control plan incorporated into these construction plans and must be approved by the Engineer prior to the issuance of permit.

9. The Contractor shall submit requests for detours and lane closures in accordance with Specification Subsection 645.03(F) and within the timeframes required for implementation. Once the request has been approved by HDOT, the Contractor shall provide written Weekly Lane Closure Request to the HDOT Construction field office at least two (2) weeks prior to the scheduled work.

10. Public Notice is required for lane closures. Contractor shall submit notice to the Engineer for approval a minimum of three weeks prior to publication. Pre-approval of notice, with dates left blank, is permissible. Advertisement shall be in accordance with Specification Subsection 645.03(H).

11. Lane closures or detours that slow down traffic shall not occur during peak hours (6:30 am to 8:30 am and 3:00 pm to 6:00 pm).

12. If night work is approved, the Contractor shall stop all work and contact the U.S. Fish and Wildlife Service (1-800-344-9453) if bats or birds are seen flying around the work area at night. Night work will be permitted except during the seabird fledgling period of September 15 through December 15 of each year. If night work is approved during fledgling period, lighting shall utilize amber light bulb with shield or side panels and will be directed towards the ground. Night work will be allowed but the Contractor shall obtain a noise variance permit at his cost with no additional time.

13. Prior to the start of construction, the Contractor shall contact the Hawaii One Call Center at (866) 423-7287 or 811 to have respective utility companies locate and mark where their underground facilities are located. The Contractor shall coordinate all work.

14. The Contractor shall notify the County of Hawaii, Mass Transit Agency at (808) 961-8744, heleonbus@hawaiicounty.gov no less than 30 days prior to the start date of work.

15. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

16. The Contractor shall notify and coordinate with surrounding agencies, facilities, residences and businesses that may be impacted by the project.

17. The Contractor is advised that in addition to other Contractors working in the same areas, various utility companies (or their Contractors) may be performing work within the project area. The Contractor is to coordinate all work with other Contractors in the area and to coordinate the design. In case of unreasonable conflict among Contractors regarding access or work sites, the Engineer will make the final determination of priorities.

18. The term "Engineer for the Utility Companies" shall also mean its delegated Representative and/or the Utilities' Inspectors of record.

19. The Permit to Perform Work upon State Highway may be suspended or revoked due to defaulting on any of the permit conditions therein, including, but not limited to:

    a. Performing work before or after permitted hours.
    b. Failure to maintain roadway surfaces in a smooth and safe condition.
    c. Failure to clean up construction debris generated from project work.
    d. Failure to provide proper traffic control.
    e. Failure to replace damaged pavement markings and signs.
    f. Failure to maintain highway lights and/or traffic signal systems.
    g. Failure to address public complaints to the satisfaction of the District Engineer.

20. The Contractor shall provide and maintain for access to and from all existing driveways, ADA access routes complying with ADAAG Section 4.3, side streets and cross streets at all times. This work shall be considered incidental to the various contract items and will not be paid for separately.

21. The existence and location of overhead and 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 the work is possible. The Contractor shall tone for the exact locations and depths of all underground facilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, electrical posts, drainage structures and pipes, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for separately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

22. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Damages to the existing facilities shall be immediately reported to the respective utility companies, and/or County or State agencies. The repair work shall be done at the Contractor's expense, to the satisfaction of the Engineer.

23. The Contractor shall be responsible for coordinating with the HDOT Surveyor and preserving and referencing survey monuments prior to disturbance. 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 reinstall monuments. Monuments shall be reinstalled, adjusted, or reset in accordance with Standard Plan D-07 or D-08 as appropriate. Completed monuments must check within a tolerance of the smaller of an error ratio of 1:20,000 for

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

GENERAL NOTES - 1

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: As Noted — Date: May 2026

SHEET No. X OF X SHEETS

BID SET - NOT FOR CONSTRUCTION

GENERAL NOTES (CONT.):

distance and alignment or a maximum positional error of 0.03 feet. The Contractor shall reset monuments outside tolerance at no cost to the State.

24. Verify and check all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer for direction.

25. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

26. Existing drainage system will be functional at all times during construction. Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items and will not be paid for separately.

27. Earth swale shall be graded to drain. This work shall be considered incidental to various contract items and will not be paid for separately.

28. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to various contract items and will not be paid for separately.

29. No material and/or equipments shall be stockpiled or otherwise stored within the highway right-of-way except at locations designed in writing approved by the District Engineer.

30. Removal, demolish and disposal of existing asphalt concrete pavement, thermoplastic line markings, traffic tapes, pavement markers, epoxy adhesives and any debris shall be considered incidental to their respective bid items.

31. The Contractor shall remove and dispose of all existing raised pavement markers, thermoplastic line markings, traffic tapes, and epoxy adhesives prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to PMA Pavement, Mix No. IV (PG 64E-22) and will not be paid for separately.

32. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to PMA Pavement, Mix No. IV (PG 64E-22) for Keaau-Pahoa Road and HMA Pavement, Mix No. IV (PG 64-16) for driveways and will not be paid for separately.

33. All saw cutting and safety edge work shall be considered incidental to PMA Pavement, Mix No. IV (PG 64E-22) and will not be paid for separately.

34. Prior to placement of new aggregate base course, the existing base shall be compacted to a relative compaction greater than or equal to 95%.

35. The top of the Hot Mix Asphalt Base Course prior to placement of the new PMA Pavement shall comply with the ten-foot straight edge requirement. The variation of the surface from a straight edge with two contacts with the surface, shall not exceed 3/16".

36. The exact locations and limits or areas to be filled with leveling course, reconstructed and cold planed shall be determined in the field by the Engineer.

37. Preformed pavement marking tape shall be removed prior to resurfacing. Removal shall be done by scraping, grinding or other method approved by the Engineer. Payment shall be incidental to various pavement marking items.

38. Prior to his paving operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the finish grade. The Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, gas, electrical, telephone and cable utilities, etc. to be adjusted to the finish grade. Adjustments shall not be measured for payment but shall be considered incidental to various items of work in the proposal.

39. Cold planing of adjacent travel ways shall be completed on the same day. Temporary pavement markings shall be installed prior to the end of each work day. Temporary striping on cold planed surfaces shall be with paint (tape will not be allowed). Temporary striping on final overlay shall be with temporary tape. This work shall be considered incidental to the various pavement marking items.

40. The Contractor will be allowed to pave one lane of the roadway on a single day with the adjacent lane being paved the next day.

41. Paving shall not commence on the same day as the cold-planing.

42. All pavement drop offs shall not be allowed during non-working hours, unless a taper is provided. Use slopes of 6:1 for longitudinal taper transitions and 48:1 for transverse tapered transitions.

43. After completion of resurfacing or paving, the Contractor and the Engineer will test for and determine ponding areas (i.e. low spots within the resurfaced or paved area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas at no cost to the State.

44. Compaction tests shall be taken in accordance with the Specifications for Installation of Miscellaneous Improvements within State Highways, and the Contract Special Provisions for this project as follows:

    a. Subbase: One (1) compaction test per lift per 200 lineal feet of roadway.
    b. Base course: One (1) compaction test per lift per 200 lineal feet of roadway.
    c. One (1) compaction test per lift per 300 lineal feet of trench.
    d. A copy of the test results shall be submitted to the District Engineer.

45. All regulatory, guide and construction signs and barricades shall have a high-intensity Type III or IV retroreflective background.

46. The Contractor shall reference, to the satisfaction of the District Engineer, all existing traffic signs, posts, and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts, and pavement markings disturbed by his activities, at his expense, unless directed otherwise by the District Engineer or his representative. 03

47. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company and shall be the Contractor's responsibility. Personal injury resulting from contact with existing utilities shall be the Contractor's responsibility. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for new lines.

48. The Contractor shall take a profile along the centerline of the proposed utility trench both before commencing trench excavation work and after trench has been repaved. Profiles shall be submitted to the District Engineer and shall be used to verify the roadway surface has been restored to its original condition or smoother.

49. The Contractor shall provide an adequate and safe non-bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic. Bridging materials shall not be used on high speed roadways, which are roads with a design speed of 50MPH or higher. Smooth riding connections between roadway surfaces and bridging material shall be provided. Should complaints be received due to noise generated from this work, the Contractor shall immediately address those complaints.

50. The Contractor shall make every effort to minimize the use and the duration of use of steel plates. The State may require the backfilling and patches of trenches due to the excessive usage of steel plates.

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

GENERAL NOTES - 2

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: As Noted Date: May 2026

SHEET No. X OF X SHEETS

BID SET - NOT FOR CONSTRUCTION

GENERAL NOTES (CONT.):

51. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or ductline.

52. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two 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. Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours.

53. Contractor shall adjust all utility boxes and manhole frames and covers, valve box frames and covers, new street monuments, etc. to finish grades. Contractor shall coordinate with all utility agencies and companies for work on each respective utility. Adjustments shall not be measured for payment but shall be considered incidental to various items of work in the proposal.

54. The Contractor shall survey and stake and install all appurtenances associated with the project within the State right-of-way or construction parcels as shown in the plans.

55. Plastic Marking Tape. Provide plastic marking tape that is acid and alkali resistant polyethylene film 6 inches wide with minimum thickness of 0.004 inch. Provide tape with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Manufacture with integral wires, foil backing or other means to enable detection by metal detector when the tape is buried up to 3 feet deep. Manufacture tape specifically for marking and locating underground utilities. Provide the metallic core of the tape encased in a protective jacket or provided with other means to protect it from corrosion. Conform to the following tape color and bear a continuous printed inscription describing the specific utility.

Red:	Electric
Yellow:	Gas, Oil, Dangerous Materials
Orange:	Telephone, Telegraph, Television, Police, Fire, Communications
Blue:	Water Systems
Green:	Sewer Systems

56. Pursuant to the HDOT Design Criteria for Highway Drainage dated June 15, 2019, maintain a minimum vertical clearance of one foot and horizontal clearance of two feet between drainage facilities and other utilities or obstructions one foot and two feet respectively, or in accordance with the applicable utility agencies whichever is greater.

57. The Contractor shall provide oversight for quality control of work. The Contractor shall submit copies of all measurements and test results to the Engineer once obtained. This includes, but not limited to, strength, compaction, density, survey, drill shaft, and core data for concrete, asphalts, and soils. All sampling and testing shall be done by a person certified in material test method. Submit certifications to Engineer prior to testing.

58. The Contractor shall inform the Engineer of all scheduled work to facilitate inspection per Subsection 105.11 - Inspection of the Work and Materials. See schedule requirements in Subsections 108.06 - Progress Schedules and 108.07 - Weekly Meetings. Failure to inform the Engineer shall result in withholding payment or the work being considered unauthorized and subject to Subsection 105.12 - Removal of Non-Conforming and Unauthorized Work.

59. All work specified in the Contract but not listed separately in the Proposal Schedule with a pay item shall be considered incidental to various contract items and shall not be paid for separately.

60. All grading and subgrade preparation shall be as recommended in the "Geotechnical Investigation Keaau-Pahoa Road Improvements - Route 130, Keaau to Pahoa, Hawaii" by Hirata & Associates, Inc. dated December 7, 2018.

For Fire Hydrant Relocation only:

61. Before removing the existing fire hydrant and concrete block, the existing gate valve shall be restrained to the tee with threaded uni-rods.

62. Concrete slab for fire hydrant shall be constructed with 4-inch concrete over 4-inch bed course. Slope concrete slab 2% away from hydrant. This work shall be considered incidental to the relocation of fire hydrant and will not be paid for separately.

63. Existing fire hydrants that are removed shall be cleaned and returned to DWS Baseyard. This work shall be considered incidental to Fire Hydrant Relocation.

CONSTRUCTION SCHEDULE NOTES:

1. Construction implementation shall employ phasing and scheduling of work in such a manner as to ensure strict adherence to the following requirements. Any work adversely affected by these requirements shall be accommodated accordingly and shall not be cause for contract time extension or additional compensation by the State.

   a. The Contractor shall not cut, clear or adversely affect existing trees that are greater than 15 feet in height in conjunction with this project between June 1st and September 15th due to the Hawaiian hoary bat pupping season.

   b. No night time work will be allowed during the seabird fledgling season, which runs from September 15th to December 15th.

2. In the unlikely event that significant archeological resources or human remains are uncovered during construction operations, the Contractor shall immediately suspend work in the area and notify the Engineer, and the State Department of Land and Natural Resources Historic Preservation Division at (808) 692-8015. Also, see Specification Subsection 107.13(B).

TOPOGRAPHIC SURVEY NOTES:

1. Existing topographic survey was conducted on February 12, 2024 by Lucas Breckenridge & Associates, Inc.

2. Coordinate referred to 1983 State Plan Coordinate System - Hawaii -Zone 4 with azimuths measured clockwise from True South.

3. The location, existence, size, depth, condition, capacity of any drainage systems, cesspol/septic tank system, sewer line, and utility lines on the property is not part of this map. The appropriate governmental agency and/or utility agencies should be contacted for this information.

4. Only improvements shown on this map have been field located (except as noted).

5. Surveyor has made no investigative or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.

6. Contours and Elevations referenced to G 1000 (PID TU0686) LSML Datum (GPS observation) the data used to generate the contours was produced by LiDAR Drone Flight. Ground elevation will need to be verified prior to any civil design.

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

GENERAL NOTES - 3

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: As Noted — Date: May 2026

SHEET No. X OF X SHEETS

BID SET - NOT FOR CONSTRUCTION

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

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

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

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

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

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

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

7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 21 calendar days of date of award. The Site-Specific BMP Review Checklist may be obtained from http://www.stormwaterhawaii.com.

B. WASTE DISPOSAL:

1. Waste Materials
Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 21 calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.

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

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

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

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

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

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

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

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

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

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

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

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

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

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4/30/28

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

WATER POLLUTION AND EROSION CONTROL NOTES

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: As Noted Date: May 2026

SHEET No. X OF X SHEETS

BID SET - NOT FOR CONSTRUCTION

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.):

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

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

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

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

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

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

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

   b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.

   c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.

   d. Keep products in their original containers with the original manufacturer's label.

   e. Do not mix substances with one another unless recommended by the manufacturer.

   f. Whenever possible, use a product up completely before disposing of the container.

   g. Follow manufacturer's recommendations for proper use and disposal.

   h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

   a. Keep products in original containers unless they are not resealable.

   b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).

   c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

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

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

   b. Fertilizers:
   Apply fertilizers used only in the minimum amounts recommended by the manufacturer and Federal, State, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

   c. Paints:
   Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

   d. Concrete Trucks:
   Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

4. Spill Control Plan

   a. Post a spill prevention plan to include measures to prevent and clean up each spill.

   b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.

   c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.

   d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.

   e. Clean up all spills immediately after discovery.

   f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

WATER POLLUTION AND EROSION CONTROL NOTES
KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006
Scale: As Noted — Date: May 2026
SHEET No. X OF X SHEETS

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WATER POLLUTION AND EROSION CONTROL NOTES (CONT.):

g. *Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at (808) 586-4309, and the Hawaii State Hospital Operator at (808) 247-2191 and the Clean Water Branch (DOH-CWB) via email at cleanwaterbranch@doh.hawaii.gov during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.*

E. *PERMIT REQUIREMENTS:*

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

2. *Comply with all applicable State and Federal Permit conditions. Permits may include, but not limited to the following:*

   a. *NPDES Permit for Construction Activities*

F. *SITE-SPECIFIC BMP REQUIREMENTS:*

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

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

Follow the requirements below:

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

2. *Contain on-site runoff using Perimeter Sediment Controls*
   a. *SC-7 Silt Fence or Filter Fabric Fence*
   b. *SC-2 Vegetated Filter Strips and Buffers*
   c. *SC-6 Compost Filter Berm/Sock*
   d. *SC-8 Sandbag Barrier*
   e. *SC-9 Brush or Rock Filter*

3. *Control offsite runoff from entering construction area*
   a. *EC-3 Run-On Diversion*
   b. *EC-5 Earth Dike, Swales, and Ditches*

4. *Incorporate applicable Site Management BMP*
   a. *SM-1 Construction BMP Training*
   b. *SM-2 Material Storage and Handling*
   c. *SM-3 Stockpile Management*
   d. *SM-6 Solid Waste Management*
   e. *SM-7 Sanitary Waste Management*
   f. *SM-9 Hazardous Materials and Waste Management*
   g. *SM-10 Spill Prevention and Control*
   h. *SM-11 Vehicle and Equipment Cleaning*
   i. *SM-12 Vehicle and Equipment Maintenance*
   j. *SM-13 Vehicle and Equipment Refueling*
   k. *SM-14 Scheduling*
   l. *SM-15 Location of Potential Sources of Sediment*
   m. *SM-16 Staging Area*
   n. *SM-17 Preservation of Existing Vegetation*
   o. *SM-19 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 (SC-11) 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-4) 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.*

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

WATER POLLUTION AND EROSION CONTROL NOTES

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: As Noted — Date: May 2026

SHEET No. X OF X SHEETS

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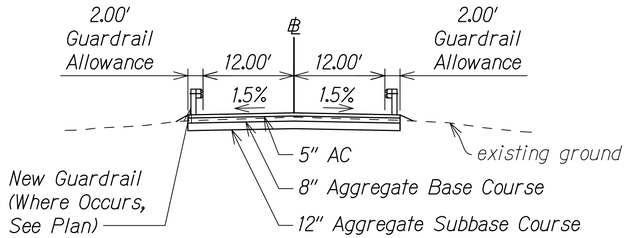

TYPICAL ROAD SECTION

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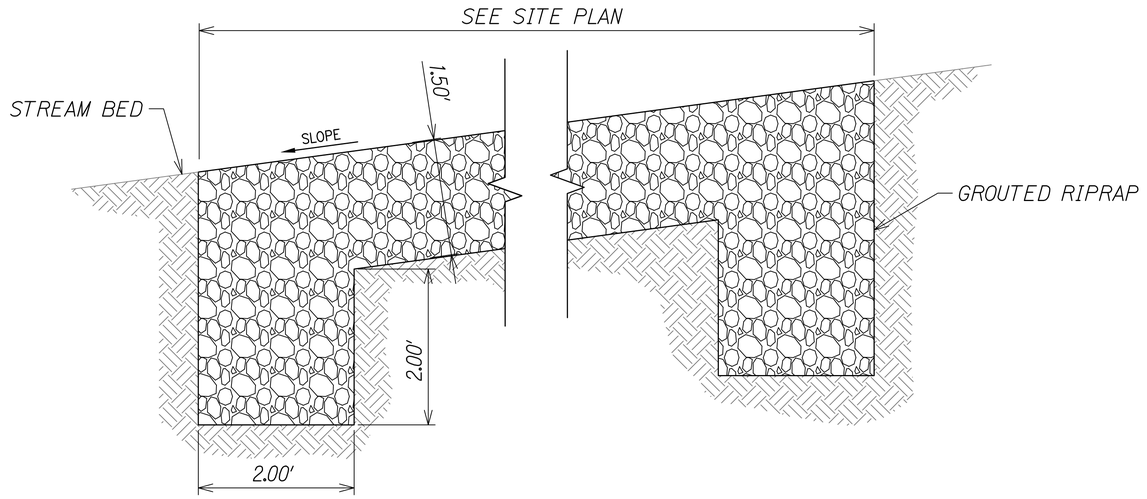

STREAM BED GROUTED RIPRAP

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TYPICAL SECTION

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

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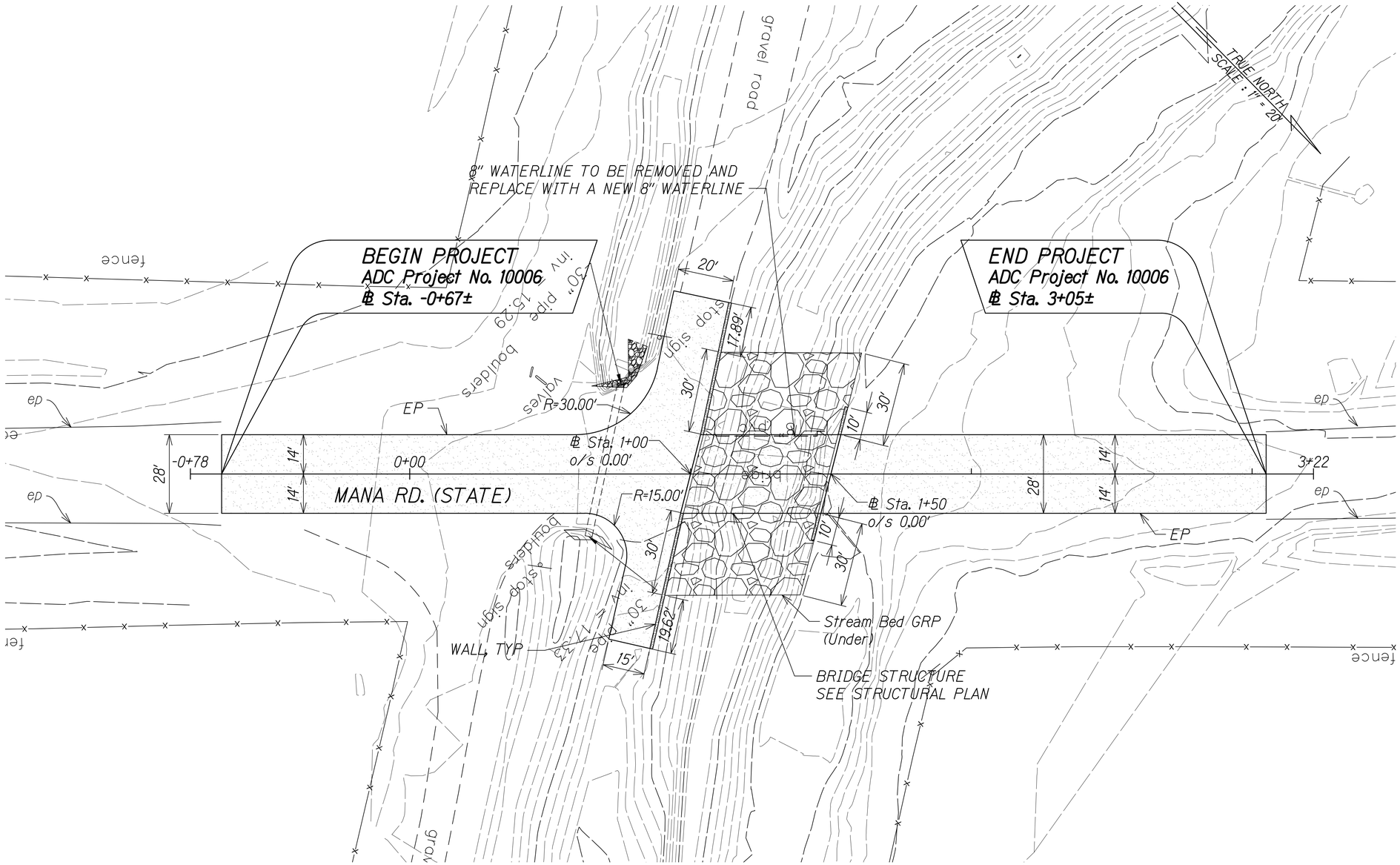

GRAPHIC SCALE:

20' 10' 0 20' 40'

Scale: 1" = 20'

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ROAD PLAN

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Scale: 1" = 20' Date: May 2026

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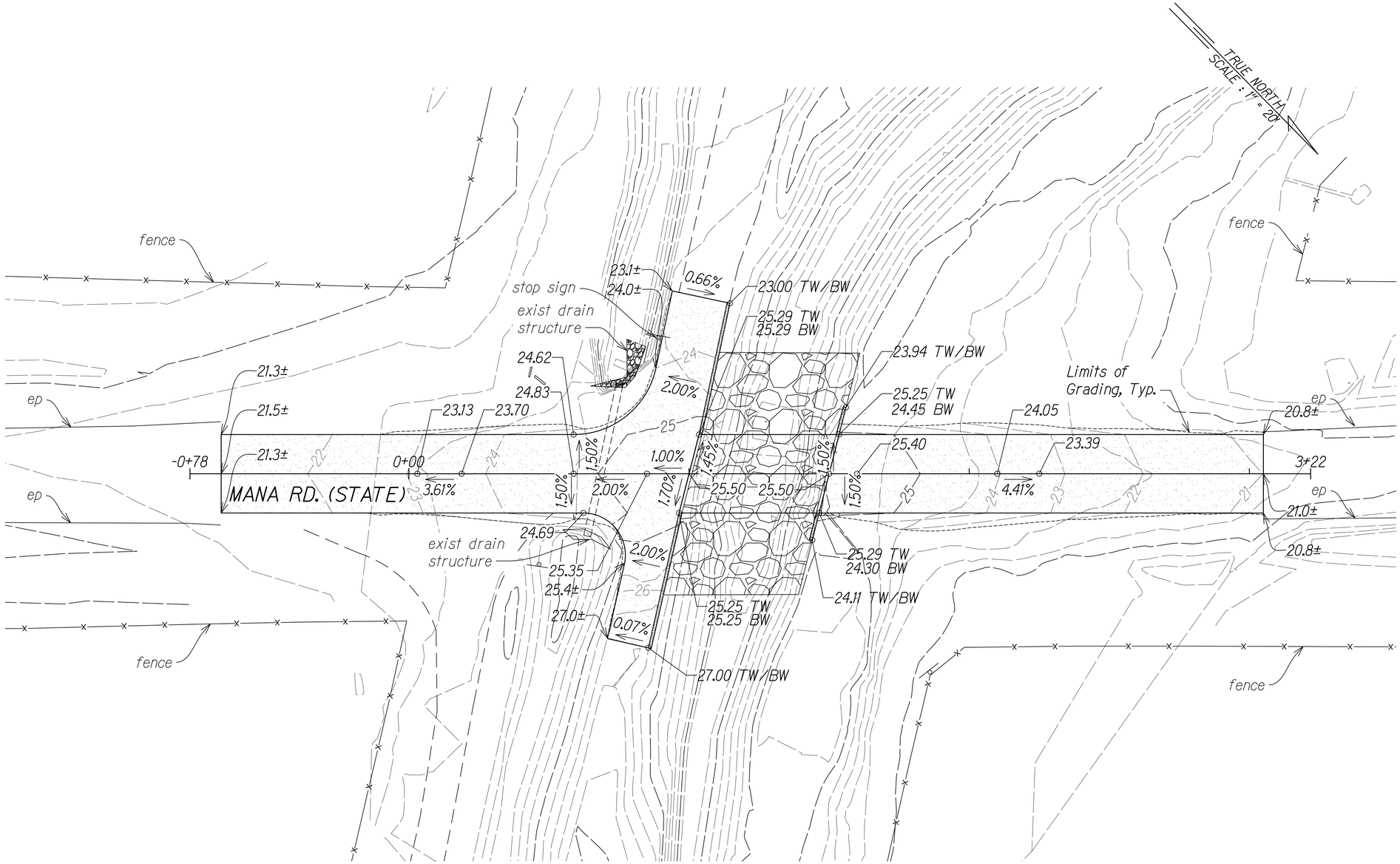

LEGEND:

- AC Pavement
- GRP

GRAPHIC SCALE:

20' 10' 0 20' 40'

Scale: 1" = 20'

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GRADING PLAN

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Index To Drawings

Sheet Number	Description
S0.1	Structural Notes
S0.2	Structural Notes
S0.3	Structural Notes
S1.1	Demolition Plan
S1.2	Bridge Layout Plan
S1.3	Bridge Deck And Foundation Plan
S2.1	Bridge Elevation
S2.2	Bridge Section
S3.1	Girder Details
S3.2	Girder Details
S4.1	Abutment Details
S4.2	Wingwall Details
S5.1	Bearing Details
S5.2	Keeper Block Details
S6.1	Approach Details
S6.2	Parapet Details
S6.3	Miscellaneous Details and Notes

General Notes

A. A pre-construction meeting with representatives from affected State, County, and the Contractor must be held prior to commencement of construction.

B. The Contractor must verify and check all dimensions, conditions, and details shown on the drawing prior to the start of construction. Contractor must report any discrepancies in writing to the Engineer before commencing work or ordering materials.

C. The Contractor must field verify all existing conditions prior to ordering or fabricating materials. Conditions may differ from those shown on plan.

D. The Contractor shall be responsible for cleaning and removal of all silt and debris generated, deposited, and accumulated within downstream waterways, ditches, drain pipes, and on public roadways. Debris must be disposed of at an appropriate site and the Contractor must inform the Engineer of the location of disposal sites. The Contractor must observe and comply with all federal, state, and local laws required for the protection of public health and safety and environmental quality.

E. All items noted incidental will not be paid for separately and must be included in the amount paid for other items.

F. The Contractor shall be responsible for conformance with the applicable provisions of the water quality and water pollution control standard contained in Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards" and Title 11, Chapter 55, "Water Pollution Control". Best management practices must be employed at all times during construction.

G. The Contractor shall obtain and pay for all necessary permits or certificates required prior to start of work, including permit for hydrotesting and dewatering discharge as issued by the State Department of Heath.

H. Details shown on drawings are considered typical for all similar conditions. Modify details for special conditions as directed by the Engineer.

I. Details noted as typical apply in all other conditions unless specifically shown or noted otherwise.

J. All materials and workmanship shall conform to the requirements of the local code in addition to codes cited.

K. Existing record drawings are not available. Contractor must attend mandatory site visit prior to bid to observe existing site conditions and constraints.

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STRUCTURAL NOTES

KEKAHA BRIDGE #108 REPLACEMENT
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Scale: AS NOTED Date: MAY 2026

SHEET No. S0.1 OF 17 SHEETS

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Construction Notes

A. The Contractor must remove all silt and debris resulting from his work and from drainage facilities, roadways, and other areas. The cost incurred for necessary remedial action ordered by the Engineer must be paid by the Contractor.

B. The Contractor must relocate, remove, or replace all existing utilities, roadway pavement, fences, irrigation, and landscaping disturbed due to work related to this project as directed by the Owner.

C. The Contractor must restore all existing improvements that are damaged as a result of the construction to their original condition or better including pavements, embankments, curbs, signs, landscaping, structures, utilities, walls, fences, etc.

D. The Contractor must notify all Agencies to verify the actual locations of all utilities in the project area prior to excavating.

E. The Contractor is responsible for maintenance and protection of existing utilities from damage.

F. Locations for existing underground utilities and structures shown on civil plans are from the latest available data but are not guaranteed. The Contractor must not assume that where no utilities are shown that none exists.

G. The Contractor must, at his expense, keep the project and surrounding areas free from dust nuisance and take supplementary measures as necessary.

H. Neither the professional activities of SSFM International, Inc. (SSFM), nor the presence of SSFM or SSFM's employees at a construction site, shall relieve the General Contractor and any other entity of their obligations, duties, and responsibilities including but not limited to, construction means, methods, sequences, techniques, or procedures necessary for performing, superintending, or coordinating all portions of the work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory Agencies. SSFM and SSFM's personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions.

I. For installation of anchor bolts, the Contractor must provide rigid templates to maintain the proper locations and must protect such anchor bolts at all times during the period of construction.

J. All vertical dimensions are measured plumb unless noted otherwise.

K. The Contractor must notify the Engineer at least 48 hours in advance for review and observation of excavations, reinforcing, and concrete pours.

L. Form and Shoring:
   1. Minimum time before removal of forms: 21 days
   2. No shoring shall be removed without the approval of the Engineer.
   3. Shores shall be arranged so that they remain undisturbed if forms are removed.

M. All construction work shall be in accordance with Highways Standard Specifications, dated 2005, the Special Provisions of this project and the Standard Plans of the State of Hawaii, Department of Transportation, Highways Divisions, inclusive dated 2008.

N. The Contractor is responsible for properly sheeting and bracing excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins, and settlement.

O. The Contractor must perform construction so as not to cause falling rock, soil, or debris in any form to fall, slide, or flow into adjoining properties or natural water courses. Should such violations occur, the costs incurred for remedial action must be payable by the Contractor.

Construction Notes

P. No blasting is allowed on this project.

Q. The Contractor must notify Hawaii One Call Center at 811 or (866) 423-7287 at least 5 days prior to the start of excavation or trenching.

R. The Contractor is responsible for means and methods of construction, workmanship, and job safety. The Contractor must provide temporary shoring and bracing as required for stability of structural members and system. The Contractor must submit a construction plan that ensures structural stability for review and approval by the Engineer.

S. Construction loading must not exceed design live loads unless special shoring is provided. Allowable loads must be reduced and approved by the Engineer in areas where structure has not attained its full design strength.

T. Construction joints may be relocated or additional ones added subject to the approval of the Engineer.

U. All exposed concrete edges shall be chamfered 3/4"x3/4" unless otherwise noted.

V. The Contractor shall verify elevations before fabricating reinforcing.

W. Top of concrete deck topping must be constructed to follow the roadway elevations.

Demolition Notes

A. The Contractor must visit the site prior to bidding and familiarize himself with and verify the actual existing conditions of the bridge.

B. The contractor must field verify dimensions shown on plans. Notify the Engineer if any discrepancies are found.

C. The Contractor must remove all demolished concrete, steel, and other debris. Dispose of at an approved disposal site.

D. Demolition of the existing bridge must be handled in a manner so as not to disturb or damage the channel below, except for improvements shown on plans.

Abbreviations:

&	-	And	In.	-	Inch
AASHTO	-	American Association Of State Highway And Transportation Officials	Jt.	-	Joint
			Ksf	-	Kips Per Square Foot
Abut.	-	Abutment	Ksi	-	Kips Per Square Inch
A.C.	-	Asphalt Concrete	Lb., lbs	-	Pound, Pounds
Approx.	-	Approximate	LF	-	Linear Feet
ASTM	-	American Society For Testing And Materials	LRFD	-	Load And Resistance Factor Design
AWS	-	American Welding Society	L.S.	-	Lump Sum
Az.	-	Azimuth	Max.	-	Maximum
BOF	-	Bottom of Footing/Foundation	Min.	-	Minimum
			mph	-	Mile Per Hour
Bot.	-	Bottom	No.	-	Number
C.J.	-	Construction Joint	NTS	-	Not To Scale
℄	-	Centerline	O.C.	-	On Center
C.G.	-	Center of Gravity	OD	-	Outside Diameter
C.G.S.	-	Center of Gravity of Steel	Pcf	-	Pounds Per Cubic Feet
Clr.	-	Clear	Pl., PL	-	Plate
Conc.	-	Concrete	Plf	-	Pounds Per Linear Feet
Cont.	-	Continuous	Psf	-	Pounds Per Square Foot
CY	-	Cubic Yard	Psi	-	Pounds Per Square Inch
Dbl.	-	Double	R, Rad.	-	Radius
Det.	-	Detail	Rebar	-	Reinforcing Bar
DEMO	-	Demolition	Ref.	-	Reference
Dia.	-	Diameter	Reinf.	-	Reinforced, Reinforcing, Reinforcement
Dwg.	-	Drawing			
(E)	-	Existing	R.O.W.	-	Right Of Way
Ea.	-	Each	S.E.	-	Superelevation
E.F.	-	Each Face	Sht.	-	Sheet
Exist.	-	Existing	Slp.	-	Slope
Exp. Jt.	-	Expansion Joint	Sta.	-	Station
Elev., Elv.	-	Elevation	Std.	-	Standard
etc.	-	Et cetera	Stirr.	-	Stirrup
E.W.	-	Each Way	Sym.	-	Symmetrical
Exp.	-	Expansion	Thk.	-	Thick
F.A.	-	Force Account	Typ.	-	Typical
Ft	-	Feet	Vert.	-	Vertical
Gir.	-	Girder			
Galv.	-	Galvanized			
Horz.	-	Horizontal			

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STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

STRUCTURAL NOTES

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: AS NOTED Date: MAY 2026

SHEET No. S0.2 OF 17 SHEETS

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General Specifications

The State of Hawaii 2005 Standard Specifications for Road and Bridge Construction, and Special Provisions prepared for this contract.

Design Specifications

A. AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020.

B. State of Hawaii Department of Transportation Highways Division, DRAFT Design Criteria for Bridges and Structures, April 2021.

Design Data

A. Dead Load:
   1. Concrete Density: 160 pcf
   2. An allowance of 25psf for future wearing surface of asphalt concrete has been provided for in the design.

B. Live Load: AASHTO HL-93 Truck Loading, Agricultural Vehicles provided by the Client

C. Seismic Load:
   1. Peak Ground Acceleration, PGA: 0.12g
   2. Spectral Acceleration at 0.2-sec, Ss: 0.18g
   3. Spectral Acceleration at 1-sec, S1: 0.052g
   4. Soil Site Class: D
   5. Seismic Performance Zone: 1
   6. Importance Category: Essential

D. Wind Load: 130 mph. Value is a 3-Second Gust Wind Speed (V) at an elevation of 33ft for wind exposure category C, with 7% probability of exceedance in 50 years (MRI = 700 years, Annual Probability = 0.00143)

E. Utility Load: An allowance of 150 PLF on each side of the bridge for utility loads has been provided for in the design.

F. Water Load:
   1. Buoyancy: Static uplift force pressure on soffit: 0.16 ksf
   2. Water design velocity for design flood: 21.9 ft/s
   3. Water Drag Coefficient, Cd: 1.4
   4. Longitudinal Flowing Water Pressure: 0.67 ksf
   5. Flood Water Elevation: 26', overtopping deck

Foundation and Soil Notes:

A. Bearing Capacity:
   1. Extreme event limit state:
   2. Strength limit state: 3,000 psf

B. Friction Factor:
   1. Extreme event limit state:
   2. Strength limit state: 0.4

C. Active & At-Rest Earth Pressures (Level Backfill):
   1. Active earth pressure (freestanding): 40 pcf
   2. Active earth pressure (restricted): 55 pcf
   3. At-rest earth pressure (freestanding):
   4. At-rest earth pressure (restricted):

D. Passive Earth Resistance:
   1. Extreme event limit state:
   2. Strength limit state: 300 pcf

E. Scour Level: 2ft under channel bottom.

F. For additional information, see Preliminary Geotechnical Investigation Agriculture Roadway and Bridge #108 Repair by Hirata & Associates, Inc., dated October 2023.

Concrete Notes

A. All concrete shall develop the following minimum ultimate compressive strengths, with corresponding maximum size of aggregates and slumps as follows (unless shown elsewhere in schedules):

Element	28 Day Strength (PSI)	Maximum Size Aggregate
Concrete Deck	4000	3/4"
Parapet	4000	3/4"
Abutment & Wingwall	4000	3/4"
Foundation	4000	3/4"

B. Cement must conform to ASTM 595, Type 1L, unless otherwise noted.

C. The use of any calcium chloride in concrete is prohibited.

D. Use of admixture at Contractor's option, but subject to Engineer's approval.

E. Inserts, anchor bolts, plates, etc. embedded in concrete shall be hot-dipped galvanized unless noted otherwise.

Reinforcing Steel Notes

A. Reinforcing steel must conform to ASTM A615, Grade 60 unless otherwise noted.

B. Reinforcement must be detailed in accordance with AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020, unless otherwise noted.

C. All reinforcing bar bends, hooks, offsets, and extensions shall conform to AASHTO LRFD Bridge Design Specifications.

D. Welding of reinforcing steel is not permitted, unless otherwise shown on drawings. Welding of reinforcing steel shall conform to the latest edition of AWS D1.4 "Structural Welding Code - Reinforcing Steel" of the American Welding Society. Deformed reinforcing bars to be welded must conform to ASTM A706, Grade 60.

E. Minimum clear cover distance is measured from surface of concrete to face of any reinforcing bar. Unless otherwise noted, the cover is measured:
   1. Concrete cast against and permanently exposed to earth = 3"
   2. Abutments, wingwalls = 2"
   3. Bridge deck: bottom bars = 1 1/2", top bars = 2 1/2"
   4. Clear cover to beam stirrups = 1 1/2"

F. Reinforcing bar bends must be made cold.

G. Dimensions relating to reinforcing bars (e.g. spacing of bars, etc.) are to center of bars unless noted otherwise.

H. Reinforcing bars must be securely tied at all intersections and lap spliced except where the spacing of the intersections is less than 12 inches in each direction, in which case alternate intersections must be tied.

I. All reinforcing splice lengths and development lengths shall conform to AASHTO LRFD Bridge Design Specifications.

J. Minimum clear spacing between parallel bars must be 1 1/2 times the diameter of bar (for non bundled bars). In no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate, or 1 1/2".

Prestressed Concrete Notes

A. Prestressed concrete plank details can be seen on sheet S3.1 through S3.3.

B. Pre-stressed concrete planks cured using radiant heat.

C. Pre-tension stands must be 7 wire 1/2" dia. low relaxation steel strands conforming to ASTM A416, Grade 270.

D. Non-prestressed reinforcing steel shall be ASTM A615, Grade 60 unless otherwise noted. See Specifications for properties.

E. Strand pattern is symmetrical about the longitudinal centerline of the girder.

F. The Contractor must submit shop drawings indicating proposed strand releasing sequence and reinforcing details to the Engineer prior to fabrication.

G. During curing, care must be taken to avoid excessive camber or excessive lateral deflection of the plank due to improper orientation or storage.

H. Steam curing may be used to accelerate strength gain.

I. Lifting devises shall be placed within 2 feet from ends. Details and locations of lifting device must be submitted to the Engineer for approval. Such approval does not relieve the contractor of his responsibilities if beam is damaged due to failure of the lifting device.

J. Any beam inserts and blockouts required by Contractor but not shown in these plans must be detailed on shop drawings and submitted to the Engineer for approval.

K. Minimum compressive strength at release of Pretension f'ci = 4500 psi, and at 28 day compressive strength f'c = 6000 psi.

L. Roughen top surface of plank to 1/4" minimum amplitude after initial setting.

M. Strand release sequence must not induce any lateral deflection of the plank.

N. Strand pattern and strand masking patter shall be symmetrical around the longitudinal centerline of the plank.

O. Strand pattern and strand masking patter shall be symmetrical around the longitudinal centerline of the plank.

ORIGINAL PLAN
NOTE BOOK
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STRUCTURAL NOTES

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: AS NOTED Date: MAY 2026

SHEET No. S0.3 OF 17 SHEETS

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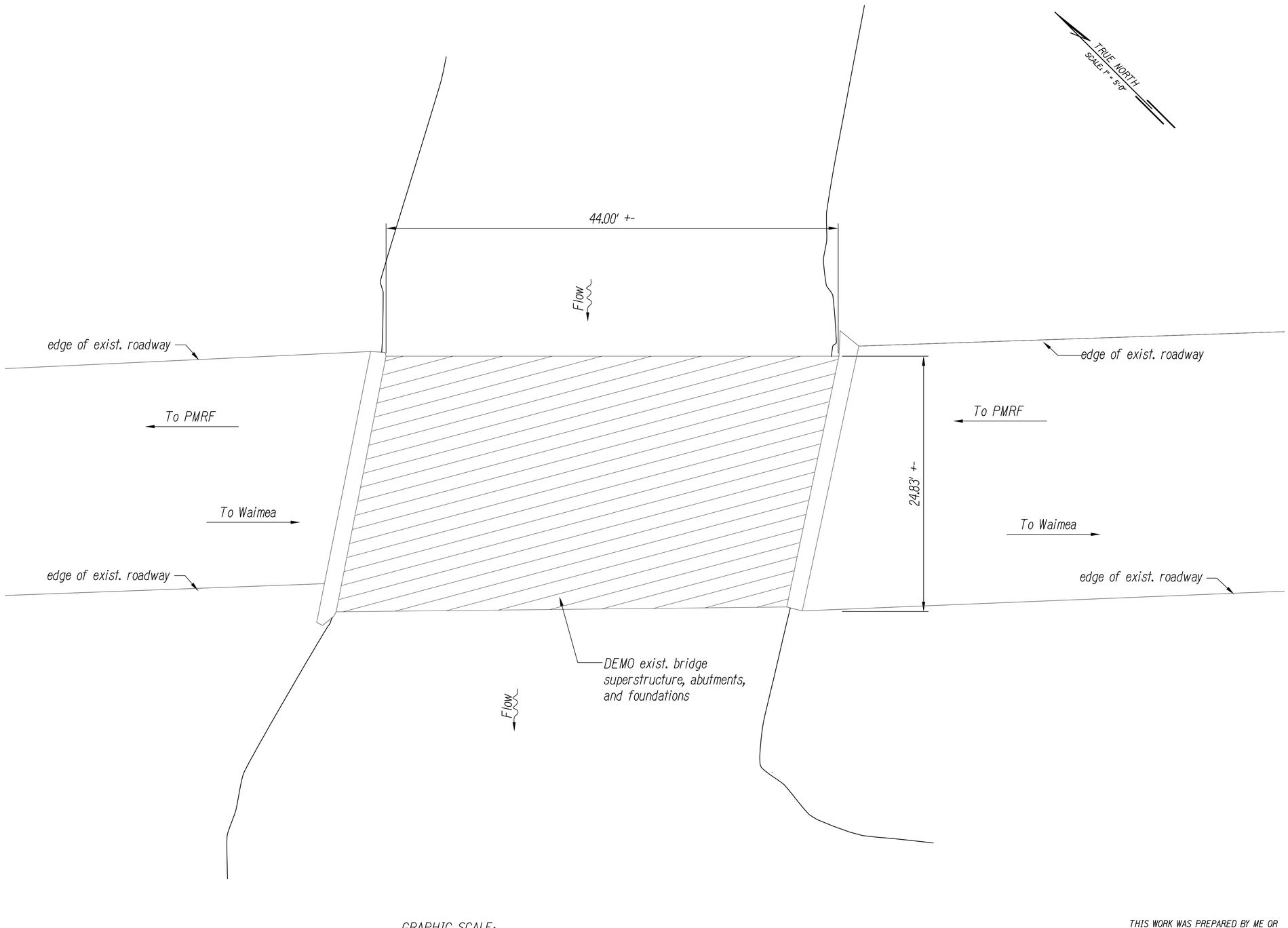

Sheet Notes

1. Contractor shall start the demolition work at the existing decks and exterior girders.
2. Demolition of existing bridge shall be coordinated with civil drawings.
3. Submit demolition phasing plan to the Engineer for review and approval prior to starting work. The plan shall indicate road closure, demolition, removal of existing bridge, construction operations, portable traffic barriers, and measures to provide public safety.
4. Demolish existing bridge, and roadway as shown.
5. Construct new abutments, approach slabs, and bridge. The road will be closed during construction.
6. Restore roadway, approaches, and ground to match adjacent conditions, see Civil.

BRIDGE DEMOLITION PLAN

Scale: 1" = 5'-0"

A
S1.1 | S1.1

GRAPHIC SCALE:
5' 0 5'
SCALE: 1" = 5'-0"

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DEMOLITION PLAN

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

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SHEET No. S1.1 OF 17 SHEETS

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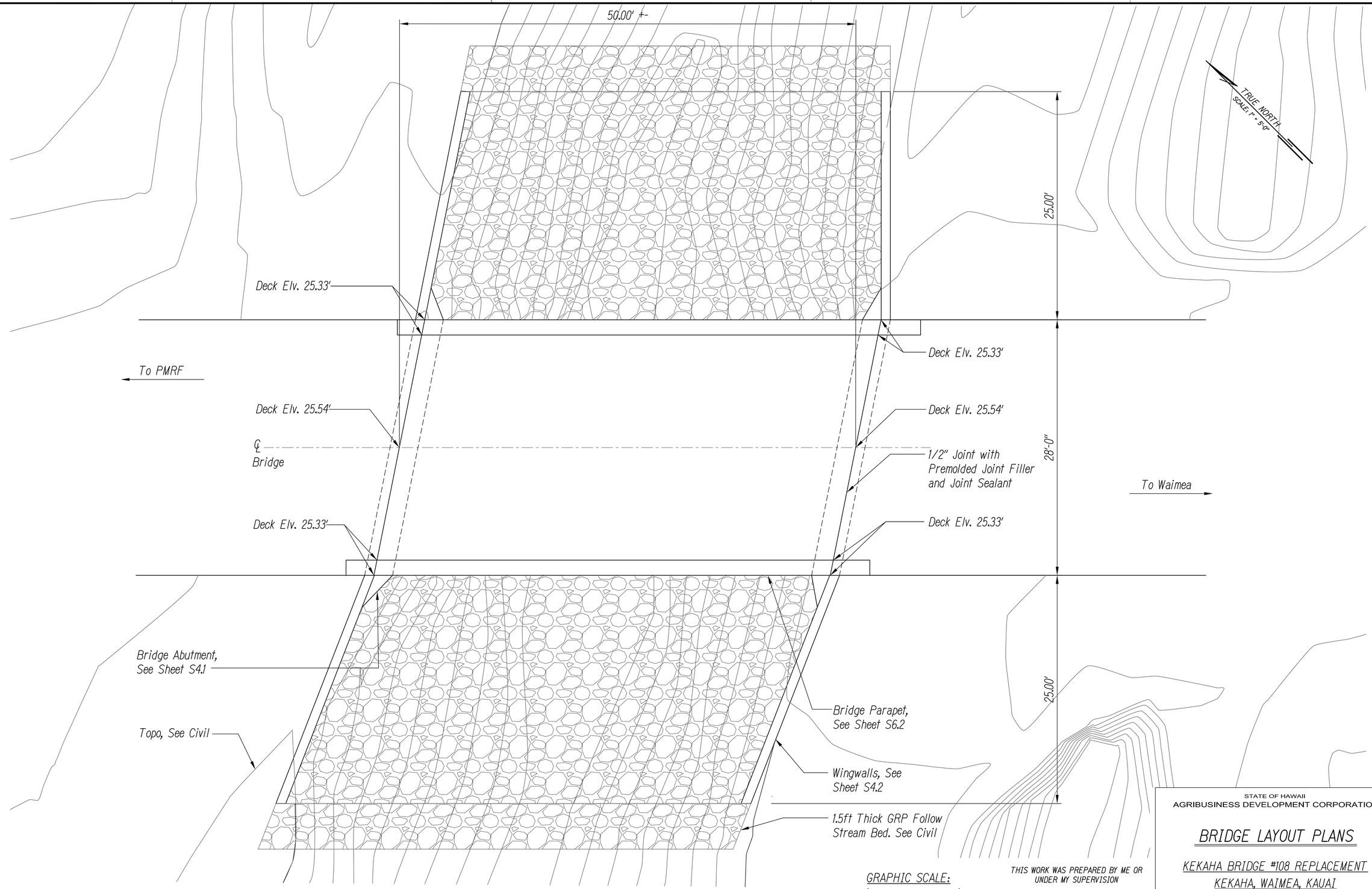

BRIDGE LAYOUT PLAN

Scale: 1" = 5'-0"

A S1.2 | S1.2

GRAPHIC SCALE:

5' 0 5'

SCALE: 1" = 5'-0"

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BRIDGE LAYOUT PLANS

KEKAHA BRIDGE #108 REPLACEMENT

KEKAHA, WAIMEA, KAUAI

ADC PROJECT NO. - 10006

Scale: AS NOTED Date: MAY 2026

SHEET No. S1.2 OF 17 SHEETS

ORIGINAL PLAN

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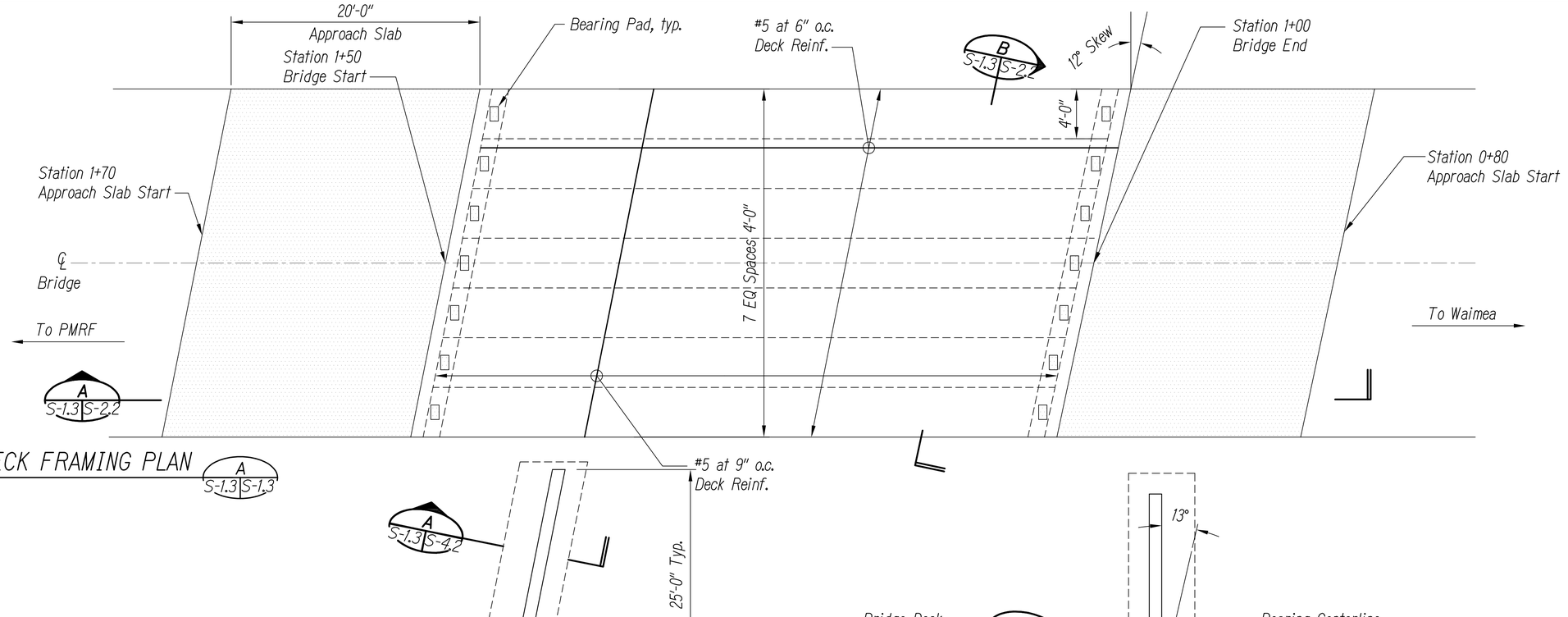
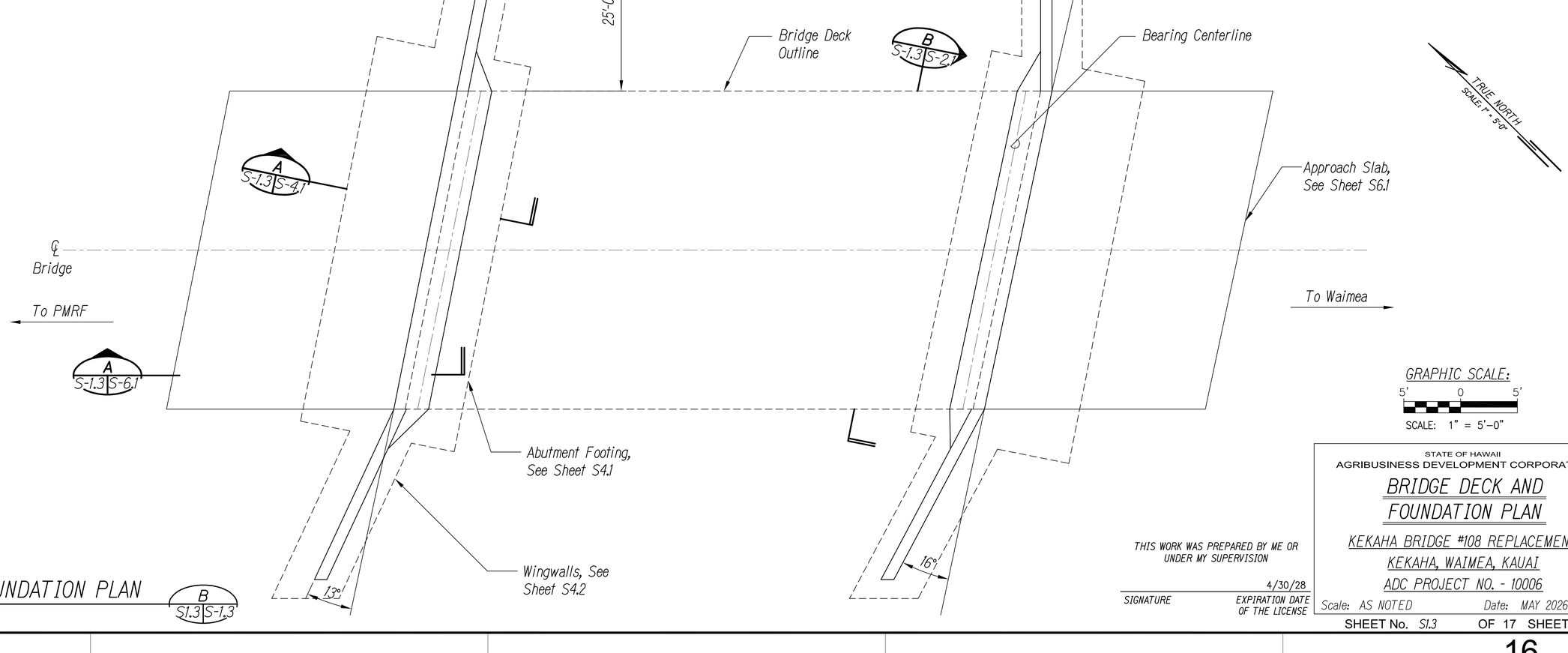


BRIDGE DECK FRAMING PLAN

Scale: 1" = 5'-0"

A S-1.3 S-1.3



BRIDGE FOUNDATION PLAN

Scale: 1" = 5'-0"

B S1.3 S-1.3

GRAPHIC SCALE:

5' 0 5'

SCALE: 1" = 5'-0"

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BRIDGE DECK AND FOUNDATION PLAN

KEKAHA BRIDGE #108 REPLACEMENT
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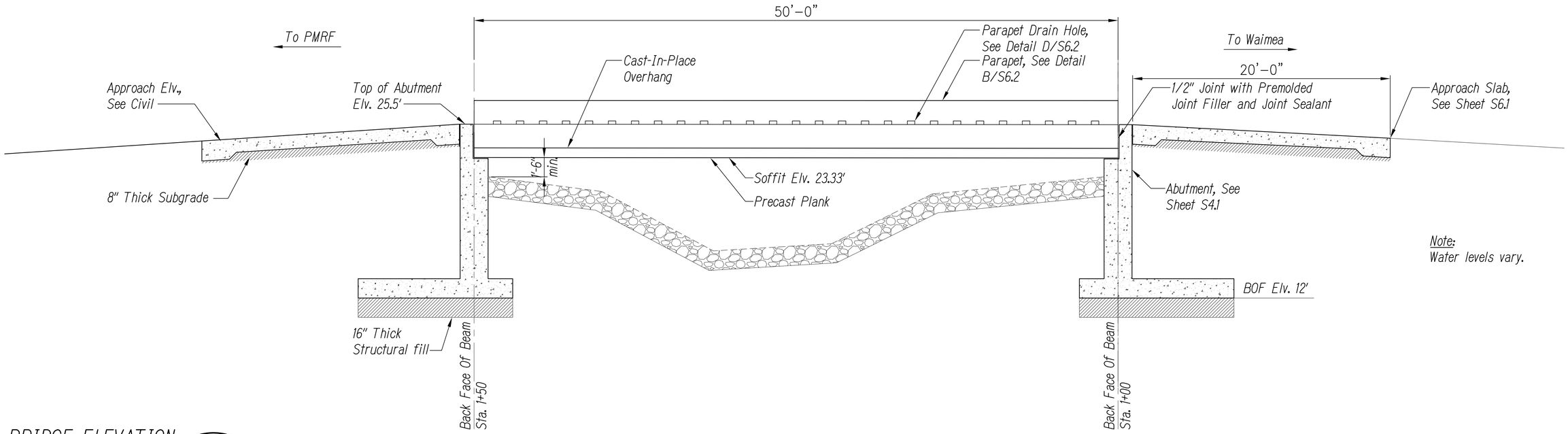
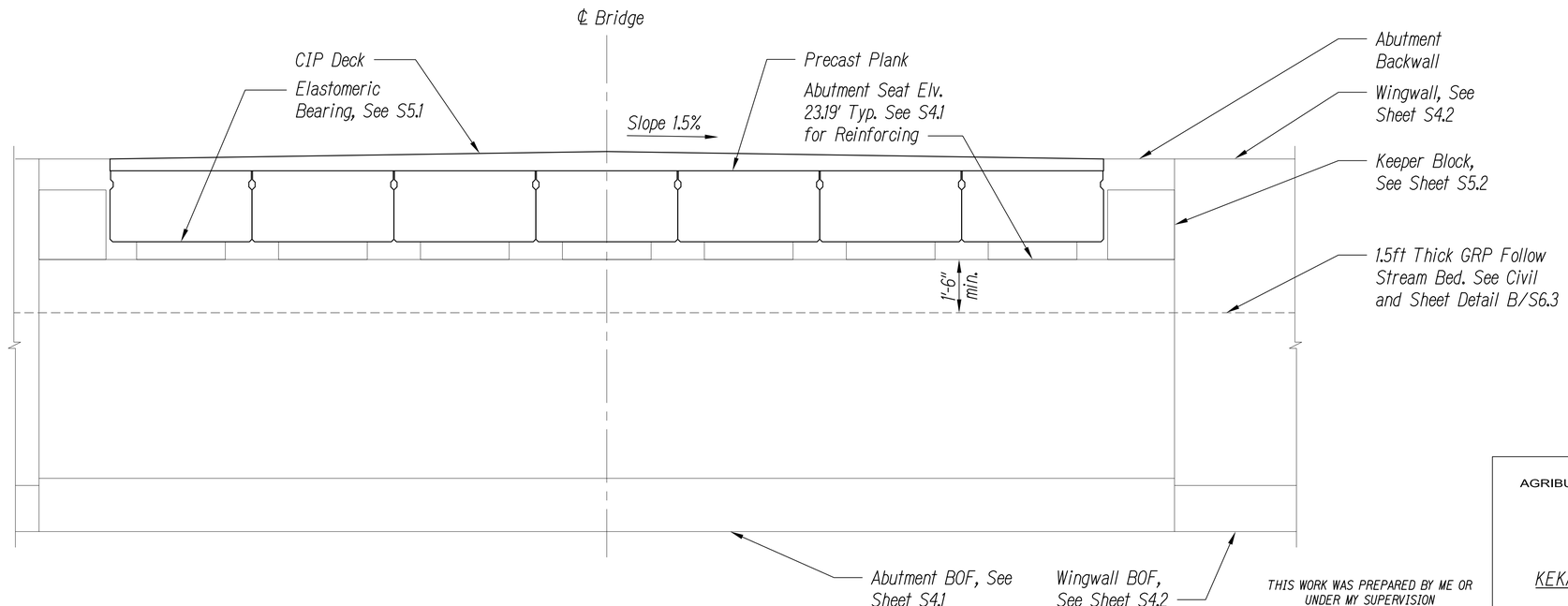


BRIDGE ELEVATION (A)
Scale: 1/4" = 1'-0"
S1.3 | S2.1



BRIDGE ELEVATION (B)
Scale: 1/2" = 1'-0"
S1.3 | S2.1

GRAPHIC SCALE:
1' 0 2' 4' 8'
SCALE: 1/4" = 1'-0"
1' 0 2' 4'
SCALE: 1/2" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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BRIDGE ELEVATION

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SHEET No. S2.1 OF 17 SHEETS

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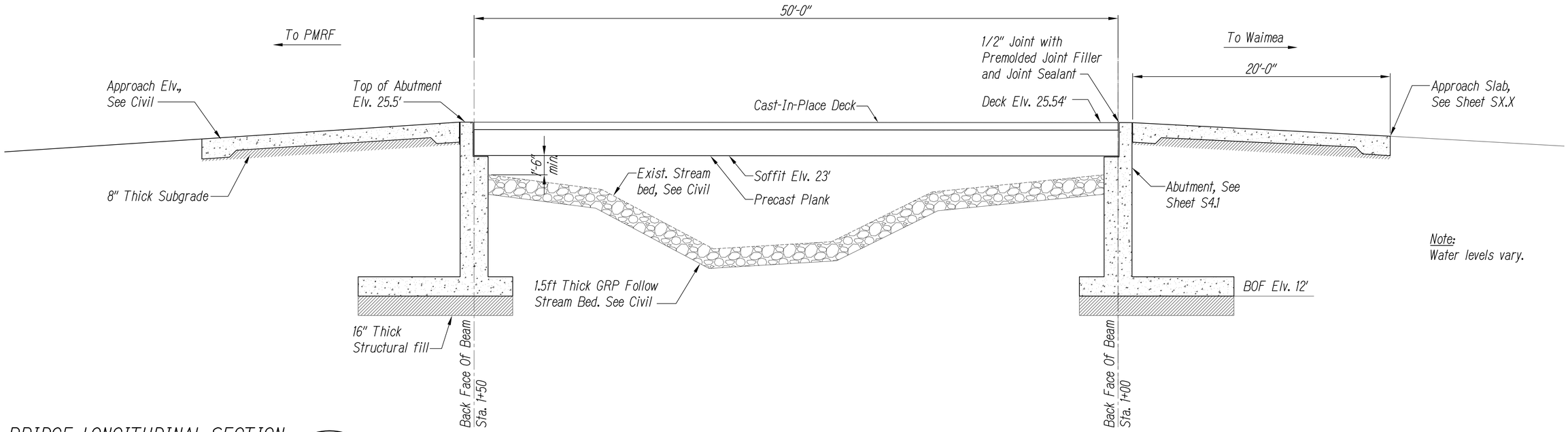
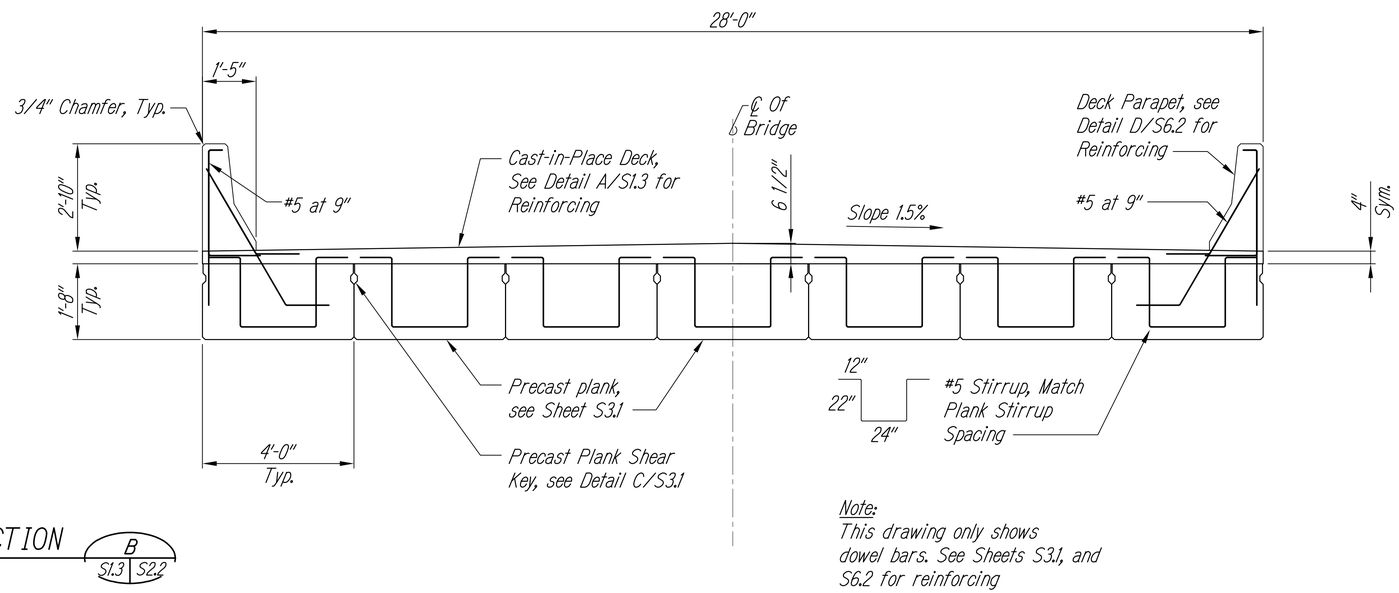


BRIDGE LONGITUDINAL SECTION

Scale: 1/4" = 1'-0"

A S1.3 | S2.2



BRIDGE CROSS SECTION

Scale: 1/2" = 1'-0"

B S1.3 | S2.2

Note:
This drawing only shows dowel bars. See Sheets S3.1, and S6.2 for reinforcing

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GRAPHIC SCALE:

1' 0 2' 4'
SCALE: 1/2" = 1'-0"

2' 0 4' 8'
SCALE: 1/4" = 1'-0"

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BRIDGE SECTION

KEKAHA BRIDGE #108 REPLACEMENT
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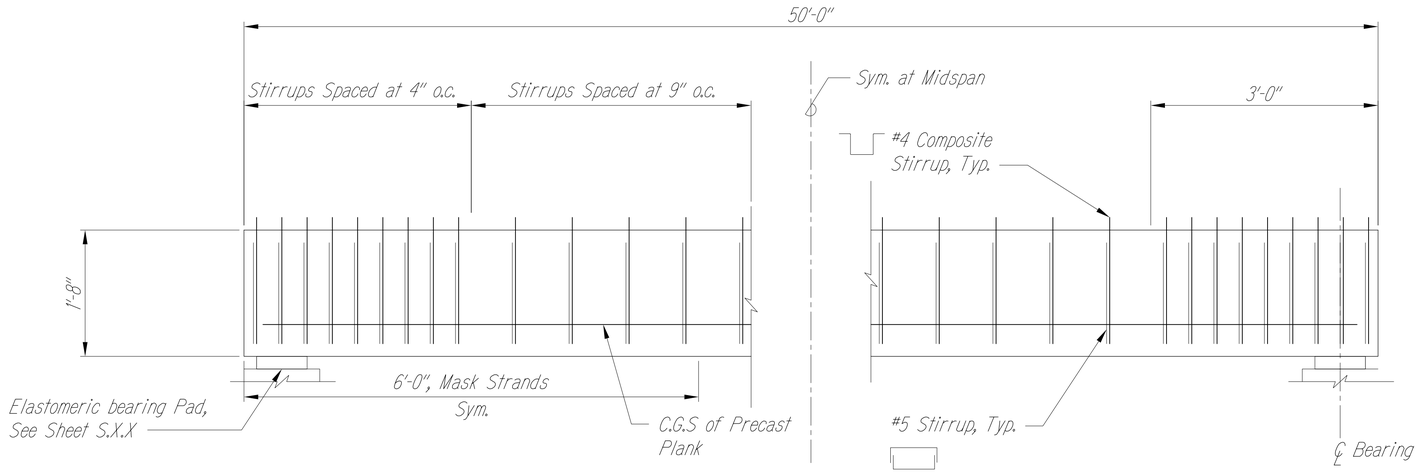
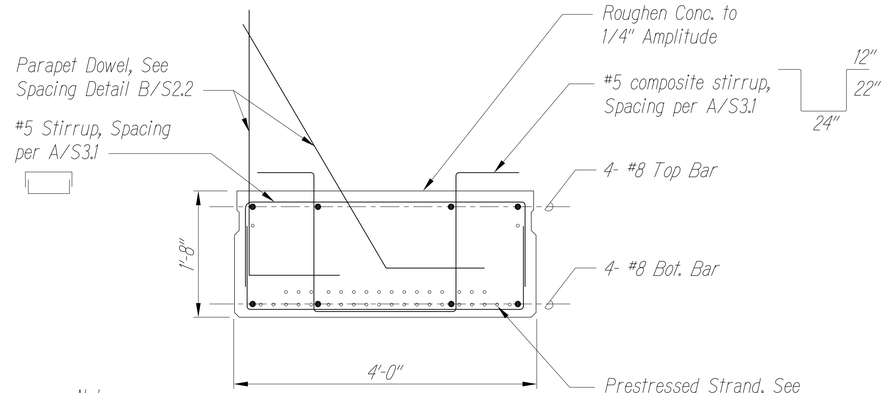


PRECAST PLANK SHEAR REINFORCING DETAIL

Scale: 1" = 1'-0"

A S3.1 | S3.1

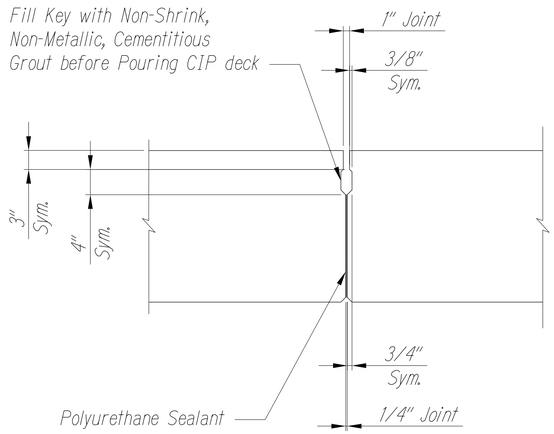


Note:
Exterior precast plank tendons are masked similar to Detail E/S3.1

EXTERIOR PRECAST PLANK

Scale: 1" = 1'-0"

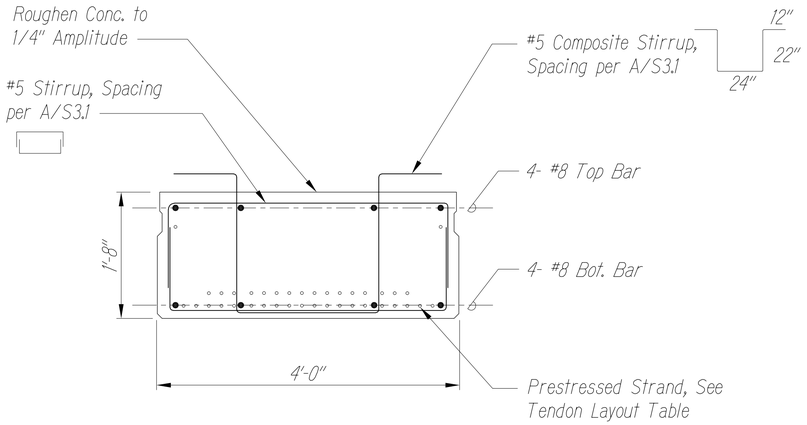
B S3.1 | S3.1



PRECAST PLANK SHEAR KEY DETAIL

Scale: 1" = 1'-0"

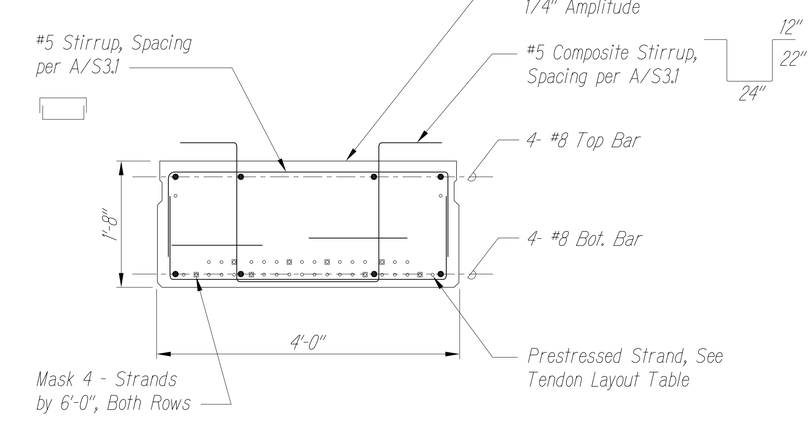
C S3.1 | S3.1



PRECAST PLANK TYPICAL SECTION

Scale: 1" = 1'-0"

D S3.1 | S3.1



PRECAST PLANK END SECTIONS

Scale: 1" = 1'-0"

E S3.1 | S3.1

GRAPHIC SCALE:
1' 0 1'
SCALE: 1" = 1'-0"

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GIRDER DETAILS

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

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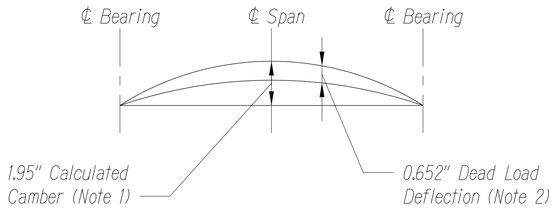
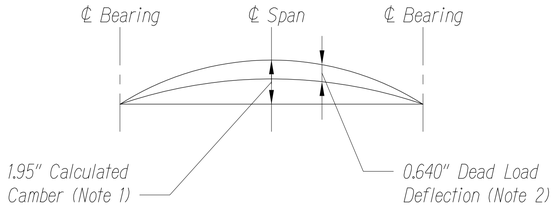


Exterior Precast Plank



Interior Precast Plank

Camber and Deflection Notes:

1. The initial camber (1.00") includes the effect of the initial prestress force and the weight of the plank after removal from the bed. The calculated chamber value at 60 days is the initial camber multiplied by creep factor to approximate the effect of camber growth and concrete creep. Positive values shown for calculated camber indicate a net upward deflection. Maximum camber immediately prior to erection of plank shall not exceed the calculated camber by more than 1/2". Plank with cambers exceeding the maximum camber will not be accepted.

2. Dead load deflection is due to the weight of the concrete topping, and includes edge beam for the exterior plank.

CAMBER DETAILS
Scale: NTS
A S3.2 S3.2

Prestress Tendon Layout Table

Strand Diameter	Row #	Row Height	# of Tendons	Transverse Distance
1/2"	1	2"	20	2" Spacing, Typ.
1/2"	2	4"	16	2" Spacing, Typ.
1/2"	3	16"	2	44" Spacing

Note:

Strand row height is measured from beam soffit.

Pretensioning Table

Segment	Working Force		C.G.S.
	Max	Min.	
End-Span	200 Kips	187 Kips	3.56"
MidSpan	178 Kips	171 Kips	

Note:

1. C.G.S. is measured from beam soffit.
2. Working force is the force remaining in the prestressing steel after all loses.

PRESTRESSING TABLES
Scale: NTS
B S3.2 S3.2

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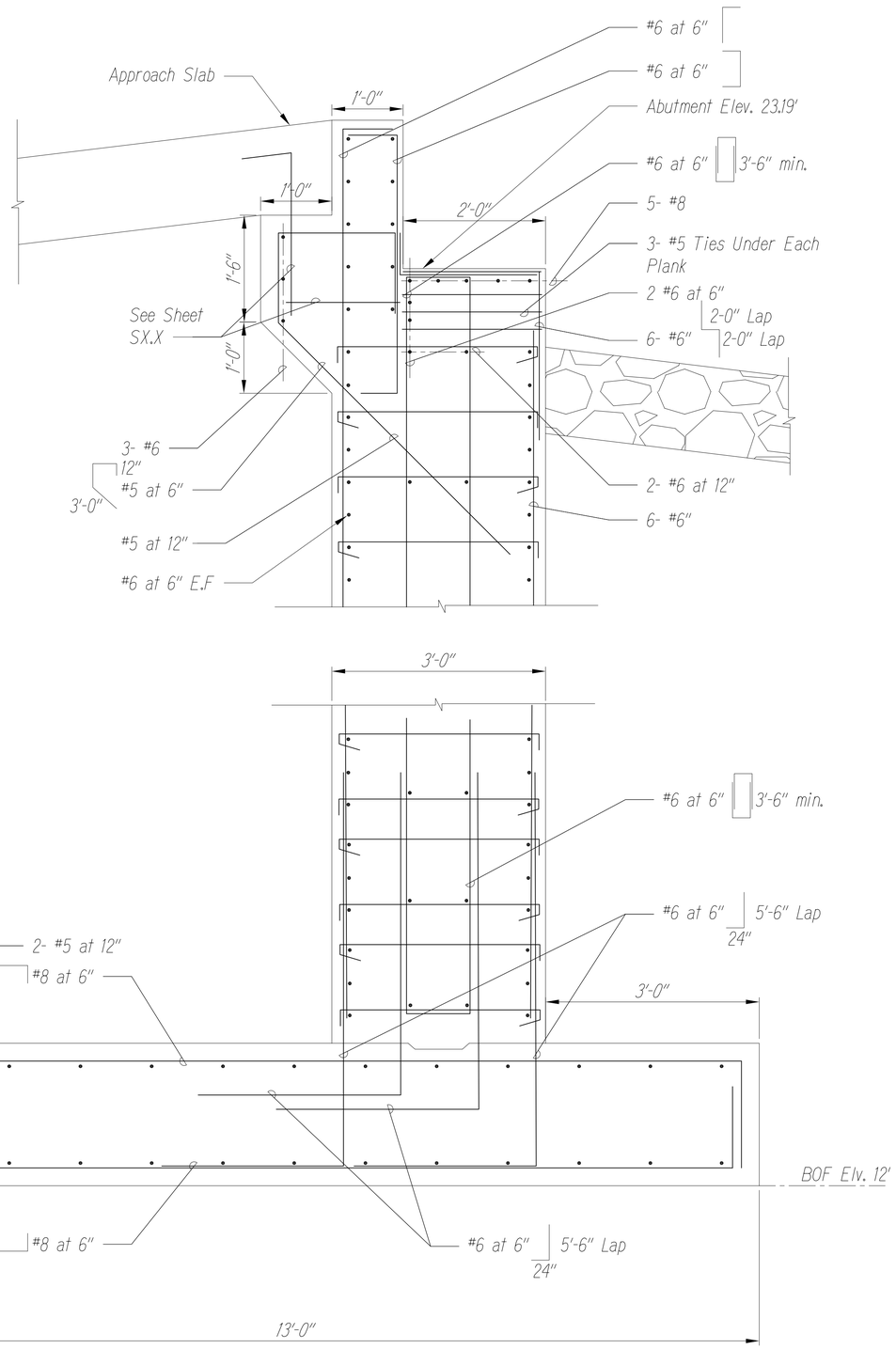

ABUTMENT DETAIL (A S1.3 | S4.1)

Scale: 1" = 1'-0"

GRAPHIC SCALE:

1' 0 2' 4'

SCALE: 1/2" = 1'-0"

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ABUTMENT DETAILS

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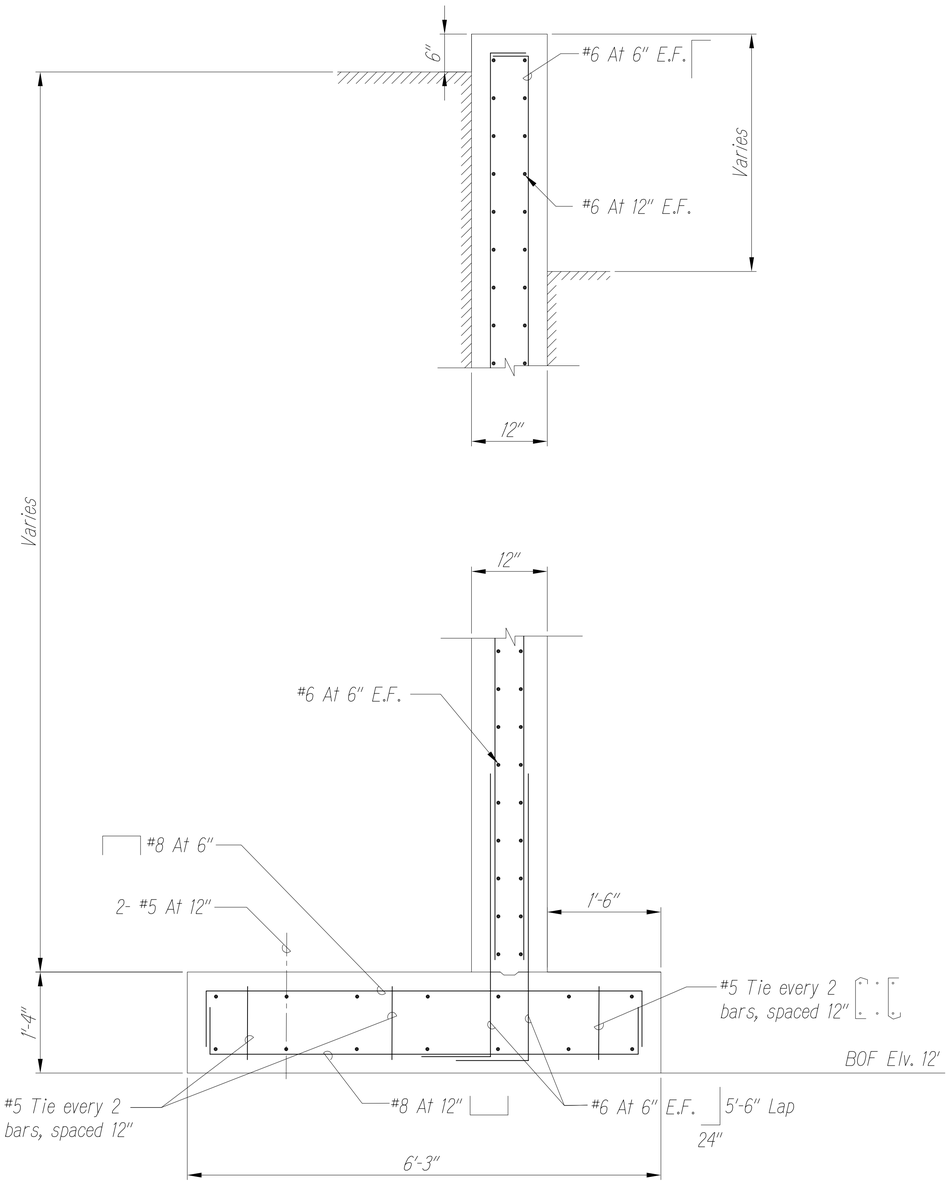
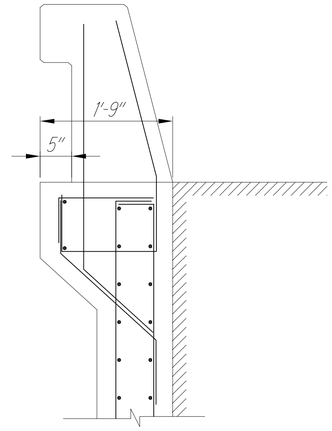


WING WALL DETAIL

Scale: 1" = 1'-0"

A | S1.3 | S4.2



WING WALL BARRIER SECTION

Scale: 1" = 1'-0"

B | S4.2 | S4.2

GRAPHIC SCALE:

1' 0 2' 4'

SCALE: 1/2" = 1'-0"

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WINGWALL DETAILS

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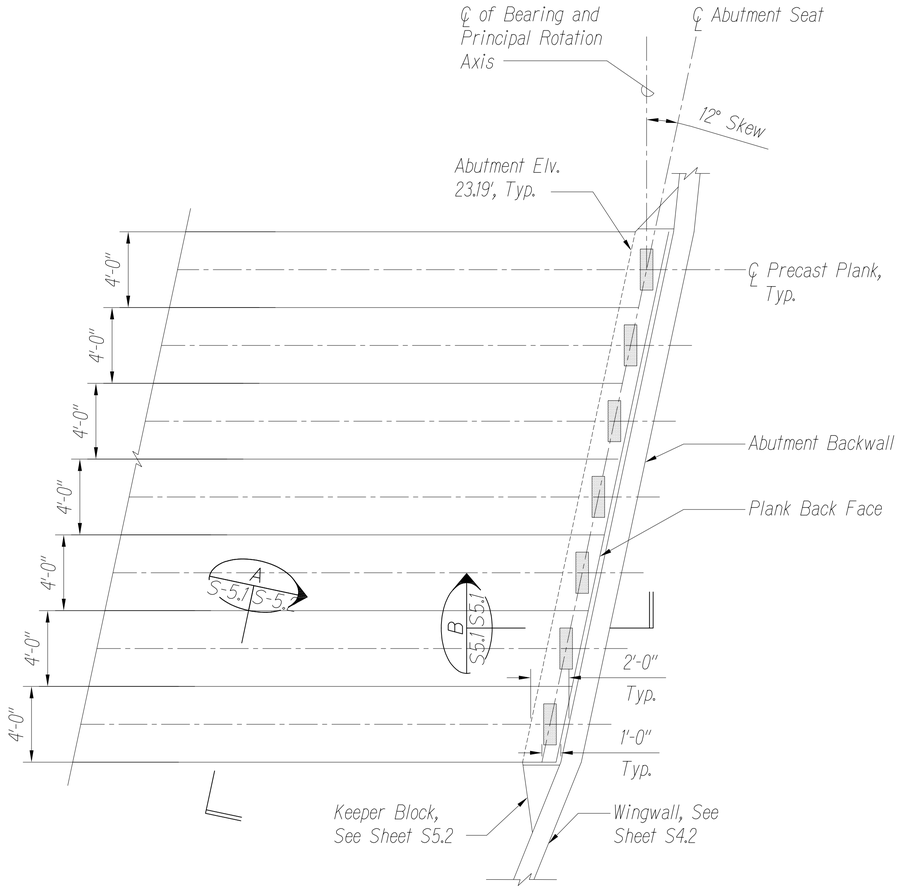
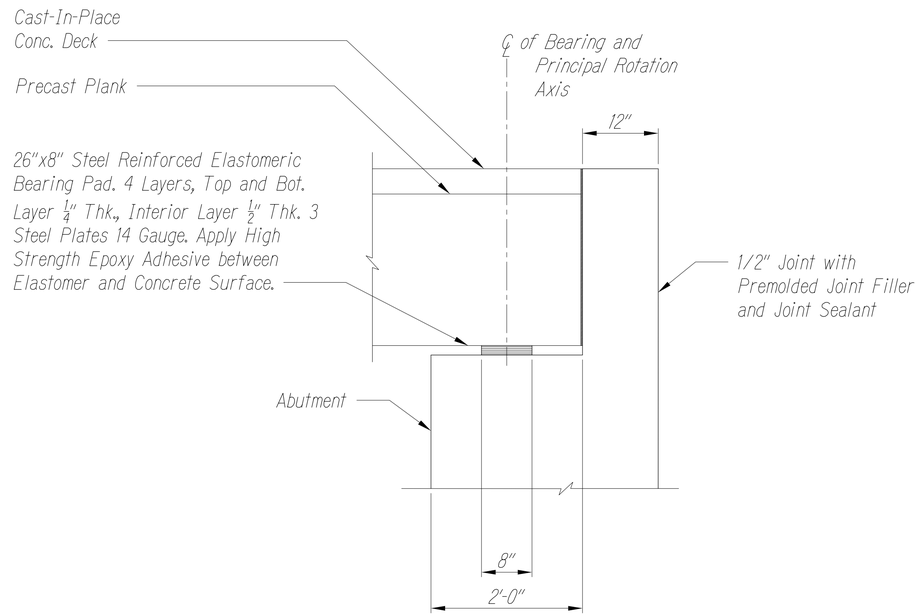


BEARING PLAN DETAIL

Scale: 3" = 1'-0"

A S-5.1 | S-5.1



BEARING SECTION DETAIL

Scale: 1" = 1'-0"

B S5.1 | S5.1

Notes:

1. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and visible after the bearing is installed.
2. All edges of the bearing steel plates shall be ground or otherwise treated so that no sharp edges remain.
3. Design thickness of elastomeric bearings are 1.5 inch, however the actual thickness may vary per manufacturer. Actual thickness may not be thicker than 1.73 inch and must be approved by the Engineer prior to fabrication.
4. Seat length normal to the centerline of bearing shall not be less than 12" at any location.
5. Reinforcing is not shown for clarity.
6. The parapet and approach slab are not shown for clarity.

GRAPHIC SCALE:

3" 0 3" 6" 9"

SCALE: 3" = 1'-0"

1' 0 1'

SCALE: 1" = 1'-0"

STATE OF HAWAII
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BEARING DETAILS

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

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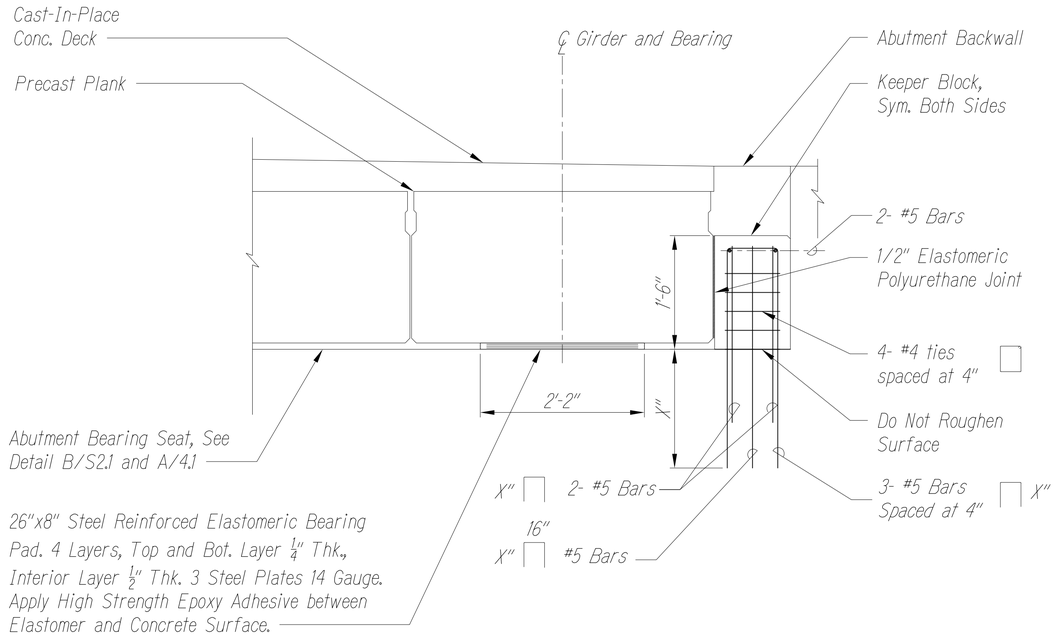


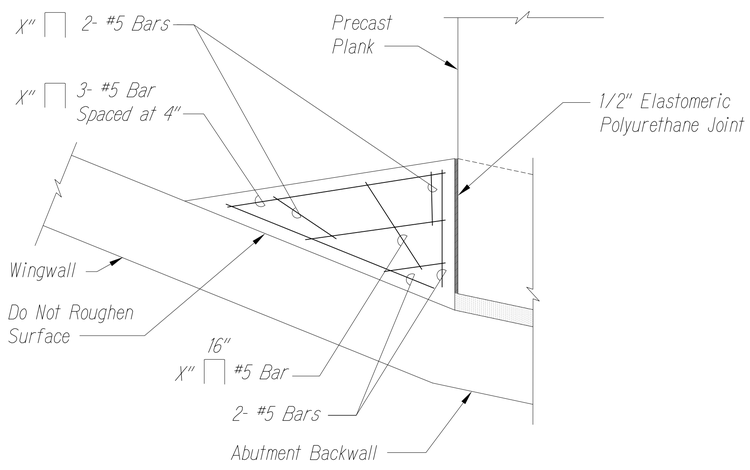
KEEPER BLOCK DETAIL

Scale: 1" = 1'-0"

A S5.1 | S5.2

Sequence Notes:

1. Keeper block primary reinforcement is embedded concrete Abutment rebar assembly.
2. Abutment concrete is poured and cured until design strength.
3. Keeper block ties are assembled in place.
4. Keeper block concrete is poured.



KEEPER BLOCK DETAIL

Scale: 1" = 1'-0"

B S5.2 | S5.2

Notes:

1. Abutment, precast plank, and deck reinforcement not shown for clarity.
2. Parapets not shown for clarity.

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GRAPHIC SCALE:

1' 0 1'

SCALE: 1" = 1'-0"

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HOLD DOWN DETAILS

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
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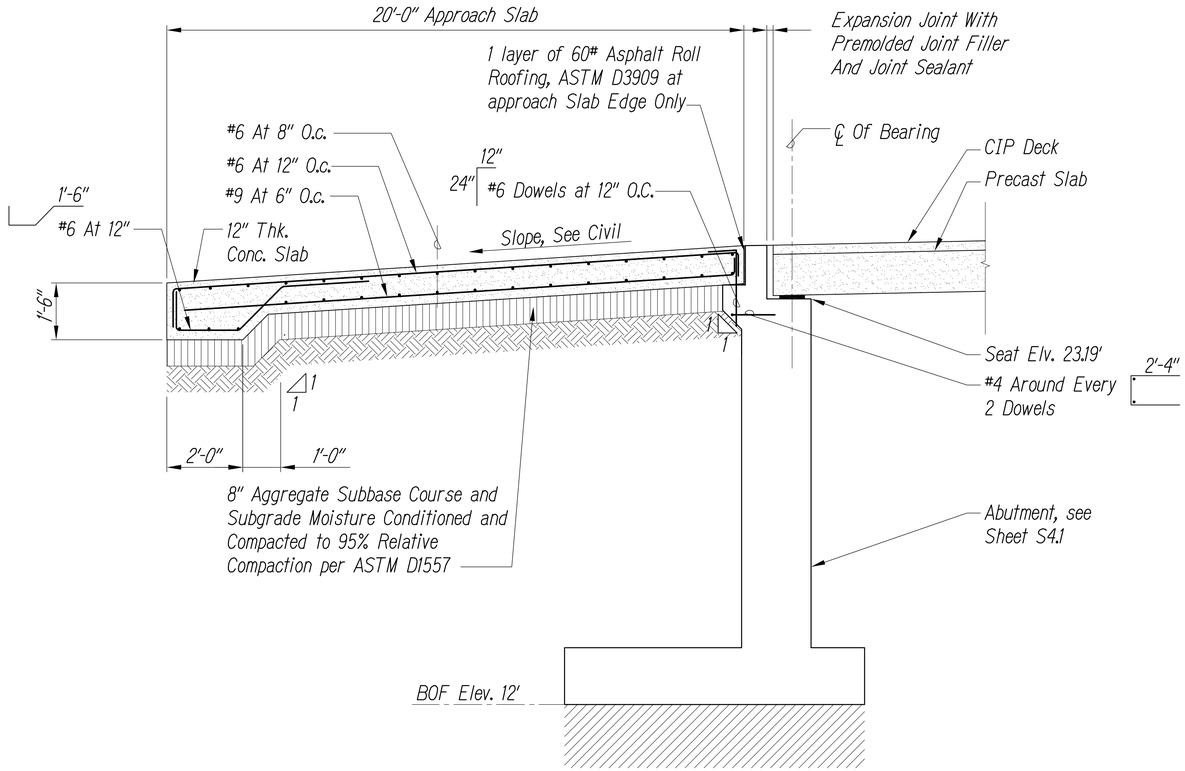

TYP. APPROACH SLAB DETAIL

A
S1.3 | S6.1

Scale: 1/2" = 1'-0"

ORIGINAL PLAN

NOTE BOOK
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GRAPHIC SCALE:
1' 0 2' 4'
SCALE: 1/2" = 1'-0"

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APPROACH DETAILS

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KEKAHA, WAIMEA, KAUAI
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SHEET No. S6.1 OF 17 SHEETS

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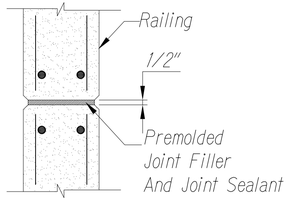
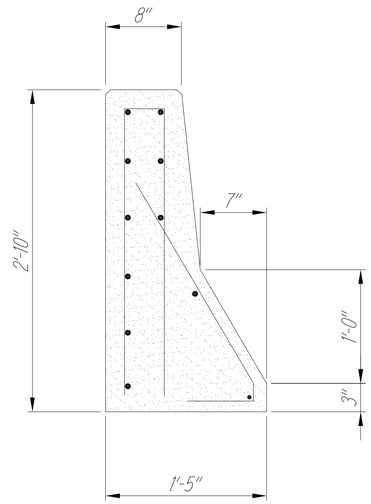
Note: Space Railing Joints
At Maximum 8'-0" On Center



TYP. JOINT AT RAILING

Scale: 1 1/2" = 1'-0"

A S6.2 | S6.2

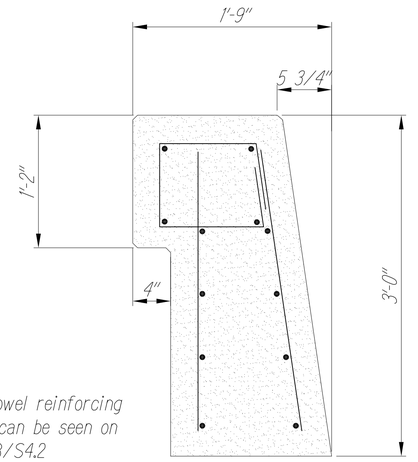


Note: Dowel reinforcing details can be seen on Detail B/S2.2

BRIDGE PARAPET SECTION

Scale: 1 1/2" = 1'-0"

B S6.2 | S6.2

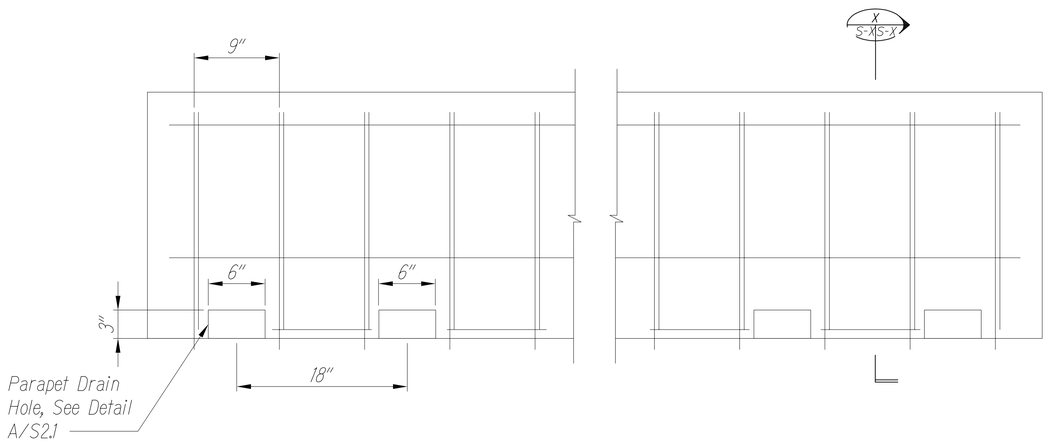


Note: Dowel reinforcing details can be seen on Detail B/S4.2

WING WALL BARRIER SECTION

Scale: 1 1/2" = 1'-0"

C S6.2 | S6.2



BRIDGE PARAPET LONGITUDINAL SECTION

Scale: 1 1/2" = 1'-0"

D S6.2 | S6.2

ORIGINAL PLAN

NOTE BOOK

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

No.

GRAPHIC SCALE:

6" 0 6" 12" 18"

SCALE: 1 1/2" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

4/30/28

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

SCALE: 1/2" = 1'-0"

PARAPET DETAILS

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: AS NOTED Date: MAY 2026

SHEET No. S6.2 OF 17 SHEETS

BID SET - NOT FOR CONSTRUCTION

Construction Sequence

1. Demo entire existing bridge.
   A. Remove deck and railing first, then substructure, then foundation.
   B. Backfill as required.

2. Complete entire abutment and wingwall footing excavation to the bottom of the footing elevations.

3. Construct spread footings.

4. Construct abutment and wingwalls at least 7 days after footing pour in stage 3, or until the concrete in stage 3 has attained a compressive strength of 3000psi, whichever occurs later.

5. Construct keeper blocks and bearing seats at least 7 days after abutment pour in stage 4, or until concrete in stage 4 has attained a compressive strength of 3000psi, whichever occurs later.

6. Place elastomeric bearings at center of concrete seats.

7. Backfill to bottom of approach slab.

8. Lift and install precast planks at least 15 days after pour in stage 5, or until concrete in stage 4 has attained a compressive strength of 4000psi, whichever occurs later.
   A. Grout the shear keys connecting adjacent planks once all planks are assembled into place.
   B. Install joints concurrently to installation of precast planks.

9. Pour cast-in-place concrete topping, end beams, and remainder of the deck.

   Note: Stage 10, 11 and 12 may be done concurrently.

10. Construct approach slabs.

11. Construct barrier.

12. Install GRP at bottom of channel. Finish grading to match existing.

13. Bridge may be opened for traffic after concrete in the approach slab and barrier have attained a compressive strength of 4000 psi, and at least 7 days after the newest pour.

CONSTRUCTION SEQUENCE NOTES

A
S6.3 | S6.3

Scale: 1/8" = 1'-0"

ORIGINAL PLAN

NOTE BOOK
No.

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

GRAPHIC SCALE:

1' 0 1'

SCALE: 1" = 1'-0"

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION

MISCELLANEOUS DETAILS

KEKAHA BRIDGE #108 REPLACEMENT
KEKAHA, WAIMEA, KAUAI
ADC PROJECT NO. - 10006

Scale: AS NOTED Date: MAY 2026

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

4/30/28
SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. S6.3 OF 17 SHEETS

BID SET - NOT FOR CONSTRUCTION