GENERAL NOTES

- The project includes the construction of a drying bed facility. The work includes construction of four settling basins; four filter beds; four dry storage pads; collection and transport pipes; installation of an oil-water separator and flow meter; new access road pavement; concrete sidewalk and lighting.
- 2. The Contractor is reminded of the requirements of Subsection 108.01 Subletting of Contract, which requires him to perform work 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 of the Special Provisions: Subsection 107.06 Contractor Duty Regarding Public Convenience; Subsection 107.12 Protection of Persons and Property; and Section 645 Work Zone Traffic Control
- 4. 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.
- 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 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, traffic signal conduits, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for seperately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- 6.. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.
- 7. The Contractor shall obtain a Community Noise permit from the State Department of Health, Noise and Radiation Branch, 591 Ala Moana Blvd., Room 136, Honolulu, HI 96813-2498; Telephone No. 586-4700. This shall be considered incidental to Section 107.2 and will not be paid for separately.
- The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- 9. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to their respective bid items and will not be paid for separately.
- 10. 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 their respective bid items and will not be paid for separately.
- 11. Removal and disposal of existing curb and gutter, curb, sidewalk and asphalt concrete pavement, curb, sidewalk and any debris shall be considered incidental to their respective bid items.
- 12. All saw cutting work shall be considered incidental to their respective bid items and will not be paid for separately.

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

GENERAL NOTES (Continued)

The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes complying with ADAAG Section 4.3, and side streets and cross streets at all times. This work shall be considered incidental

to their respective bid items and will not be paid for separately.

TRAFFIC NOTES FOR WORK ON CITY \ COUNTY STREETS

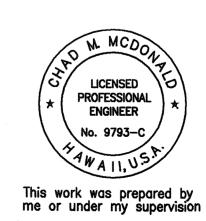
- 1. A permit shall be obtained from the Department of Transportation Services before work on any portion of a public street or highway may begin. Construction traffic control plans approved by the Department of Transportation Services and/or the Department of Planning and Permitting must be provided when applying for the permit.
- 2. The contractor shall provide, install, and maintain all necessary signs and other protective facilities, which shall conform with the "Hawaii Administration Rules 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 Highways Administration's "Manual on Uniform Traffic Controls Devices for Streets and Highways, Part VI Traffic Controls for Street and Highway Construction and Maintenance Operations."
- 3. Work on any city street area may be performed only between the hours of 8:30 A.M. To 3:30 P.M., Monday through Friday, unless otherwise permitted by the Department of Transportation Services.
- 4. During working hours, the contractor shall provide for through traffic. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be open to traffic.
- 5. As required by the Department of Transportation Services, the contractor shall provide off-duty police officers to control the flow of traffic.
- 6. Where pedestrian walkways exist, they shall be maintained in passable condition in accordance with ADAAG 4.1.1(4) and 4.3, or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.
- 7. Driveways shall be kept open unless the owners of the property using these Rights-Of-Way are otherwise provided for satisfactorily.
- 8. Contractors shall reference to the approval of the the Department of Planning and Permitting, 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.
- 9. The contractor shall notify the Department of Planning and permitting at 768-8084 one (1) week prior to any work to be done on signs, posts and pavement markings.
- 10. No equipment shall be stored within street Rights-Of-Way except at locations designated in writing and approved by the Department of Transportation Services.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	HWY-0-01-08	2010	ADD.3	34

LE	GEND	

Existing Electrical Line — F — New Electrical Line Existing Joint Pole Existing Power Pole Existing Electric Manhole Adjusted Elec. MH Frame/Cover New Electric Manhole Existing Telephone Line Existing Telephone Pole Existing Telephone Manhole Existing Signal Corps Line Existing TV Cable — S.i.c. — Existing Sandwich Isles Communication Line —ω—12— Existing 12" Water Line Existing Water Manhole Existing Water Air Valve Existing Water Valve Box Existing Water Meter Existing Fire Hydrant — 5—12— Existing Sewer Line Existing Sewer Manhole ————— 6— Existing 6" Gas Line Existing Gas Valve Box Existing Gas Manhole Existing Monument —_d—_24— Existing 24" Drain Line osdmh Existing Storm Drain Manhole Existing Grated Drop Inlet Existing Catch Basin Existing Traffic Sign Existing Highway Lighting Standard Existing Highway Lighting Pullbox Existing Traffic Signal Pole Existing Traffic Signal Pullbox Existing Metal Guardrail New Metal Guardrail

<u>Appro</u>	ved:	
Chief.	Traffic Review Branch, DPP	Date



MITSUNAGA & ASSOCIATES, INC. EXP. DATE

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

6/11/10	⚠ Deleted General Note 14 \$ Renumbered General Notes
Date	Revision

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GENERAL NOTES \$ LEGEND

PEARL CITY DRYING BED FACILITY

Project No. HWY-0-01-08

Scale: As Noted Date: May 2010

As Noted Date: May 2010
SHEET No. C-1 OF 21 SHEETS



CITY AND COUNTY GENERAL CONSTRUCTION NOTES

- All applicable construction work shall be done in accordance with the standard specifications for public works construction, September 1986 and standard details for public works construction, September 1984, as amended, of the department of public works, city and county of Honolulu and the counties of Kauai, Maui, and Hawaii, and hrs 103.50.
- 2. The state will assure the work will be constructed in accordance with the approved plans and in conjunction with the rules relating to soil erosion standards and guidelines of the city \$\psi\$ county of Honolulu.
- 3. The underground pipes, cables or ductlines known to exist by the contracting officer from his search of records are indicated on the plans. The contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities 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 the new lines.
- 4. The existing utilities have been shown on these plans insofar as it is possible to do so. Their locations as shown are approximate only and the contractor shall make independent check on the ground by probing and with the various utility companies and governmental agencies to ascertain their exact locations. If utilities not shown are suspected, require toning of these areas prior to excavation to locate them.
- 5. The contractor shall protect all existing utilities whether shown on the plans or not. Before disrupting service of any utility, the contractor shall contact the city's representative and appropriate responsible utility authority. Damage to existing utilities as a result of construction activities shall be repaired by the contractor at no additional cost to the city or state.
- 6. The contractor shall make arrangements for utilities such as electricity, etc. required for his operations, and all costs for these utilities shall be borne by the contractor.
- 7. All existing utilities to remain in use, whether or not shown on the plans, shall be protected at all times by the contractor during construction unless specified on the plans to be abandoned. Any damage to the existing utilities shall be repaired and paid for by the contractor.
- 8. Unless relocation is called for on the plans, existing utilities shall remain in-service and in place. If relocation of existing utilities is required for the contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the contractor's expense and only with the approval of the contracting officer.
- 9. The contractor shall 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 contracting officer for clarification.
- 10. The existing improvements on the premises and in adjacent area that are not to be removed, shall be preserved and protected. Any and all damages resulting from the contractor's construction operation shall be replaced and repaired to original condition, at no additional cost to the owner.
- 11. The contractor shall be responsible for cleaning and restoration to original or better condition, nearby improvements affected by dust and/or other reasons resulting from the construction activity.

CITY AND COUNTY GENERAL CONSTRUCTION NOTES CONTINUED



FED. ROAD
DIST. NO.STATEPROJ. NO.FISCAL
YEARSHEET
NO.TOTAL
SHEETSHAWAIIHAWAIIHWY-0-01-082010534

5 34

12. No contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing drainage systems, or adjoining properties, streets or natural watercourses. Should such violations occur, the contractor may be cited and the contractor shall immediately make all remedial actions necessary.

- 13. The contractor shall be responsible for conformance with the applicable provisions of the water quality and water pollution control standards contained in Hawaii administrative rules, Title 11, Chapter 54, "Water Quality Standards", and Title 11, Chapter 55, "Water Pollution Control", as well as Chapter 14 of the revised ordinances of Honolulu, as amended. Best management practices shall be employed at all times during construction.
- 14. Pursuant to Chapter 6E, HRS, in the event any artifacts or human remains are uncovered during construction operations, the contractor shall immediately suspend work and notify the Honolulu police department, the state department of land and natural resources-historic preservation division (692-8015). In addition, for non-city projects, the contractor shall inform the civil engineering branch, department of planning and permitting (768-8084); and for city projects, notify the responsible city agency.
- 5. Topographic map provided by Controlpoint Surveying, inc on February 23, 2009.
- 16. It shall be the contractor's responsibility to notify the contracting officer for any and all discrepancies found on the drawings or specifications prior to construction. Any discrepancies or questions raised after the bid opening that may result in extra cost will be evaluated by the state. It shall be the contractor's responsibility to submit shop drawings on how they will resolve such discrepancies. General practice of trade shall be used to resolve such discrepancies which must be approved by the contracting officer.
- 17. The bid price for all design items shall be inclusive of all construction materials, labor, equipment, etc. required for those items to be in place and complete to a standard acceptable to the engineer and contracting officer. Minor revisions to the design of the grading, utilities, erosion control, traffic control, roadway, sidewalks, etc. may occur after the bid opening as part of the plan review or coordination process. These minor revisions shall be considered incidental to the various related bid items.
- 18. The Contractor shall notify the Civil Engineering Branch, Department of Planning and Permitting, at 768-8084 to arrange for inspectional services and submit two (2) sets of approved Construction Plans seven (7) days prior to commencement of construction work.
- 19. For projects abutting State Highways' rights-of-way, the owner or his authorized representative shall notify the State Department of Transportation, Highways Division, Oahu District, Drainage Discharge Unit at 831-6793 for an assessment of State Highways permit requirements.
- 20. For Bench Mark, see sheet C-6.

APPROVED:

DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING DATE CITY AND COUNTY OF HONOLULU (FOR CONSTRUCTION WITHIN CITY R/W ONLY)

Melini Johnhum
CHIEF, CIVIL ENGINEERING BRANCH, DPP

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H20/11 MITSUNAGA & ASS

me or under my supervision

Chair M M M 4/30/2012

MITSUNAGA & ASSOCIATES, INC. EXP. DATE

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

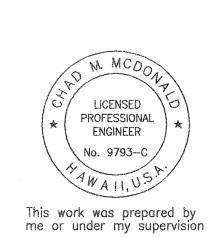
TEMPORARY EROSION CONTROL NOTES:

- Follow sequence of operation as recommended on pages 23 and 24 of the "Rules Relating to Soil Erosion Standards and Guidelines", April 1999, of the Department of Planning and Permitting, City & County of Honolulu.
- 2. The contractor shall minimize the amount of land to be exposed at any time.
- 3. Exposed areas that are not at final grade and are expected to be exposed for more than 30 days shall be placed with a vegetative cover or be mulched (at a rate of 45 cubic feet per 1,000 square feet) in order to prevent erosion and silt runoff.
- 4. Temporary erosion controls shall not be removed before permanent erosion controls are in place and established.

TEMPORARY EROSION CONTROL MEASURES:

- 1. Prior to commencement of construction, temporary erosion control measures shall be installed.
- 2. Opening and clearing of land for construction shall be performed incrementally to minimize erosion potential.
- Areas not within the limits of construction work shall remain vegetated during construction operations.
- 4. When cleared or grubbed areas are not to be disturbed for 30 days or more, seed, plant or hydroseed temporary vegetation.

4/19/11



COUNTY of Honolulu General Notes and Temp. E.C. Notes

Date Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CITY AND COUNTY OF HONOLULU
GENERAL CONSTRUCTION &
TEMP. EROSION CONTROL NOTES

Added Sheet for City \$

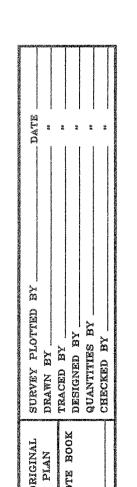
PEARL CITY DRYING BED FACILITY

Project No. HWY-0-01-08

Scale: As Noted Date: May 2010

SHEET No. C-1A OF 21 SHEETS

C.O. 4A



WATER POLLUTION AND EROSION CONTROL NOTES: -Continued

E. PERMIT REQUIREMENTS:

- 1. If a National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.
- 2. If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the Permit from the Department of Health, Clean Water Branch.
- 3. Comply with all applicable State and Federal Permit conditions. Permits may include but are not limited to the following:
 - a. NPDES Permit for Construction Dewatering
 - b. NPDES Permit for Hydrotesting Waters

WATER NOTES

- 1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the Standard Specifications for Road and Bridge Construction, dated 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 1991, and all subsequent amendments and additions.
- 2. 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 pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- Ines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends whenever 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 measure necessary to protect water lines, such as constructing special reaction blocks and/or modifying his construction method.
- 4. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
- 5. The Contractor shall notify BWS Capital Projects Division, Construction Section in writing one week prior to commencing work on the water system.
- 6. Re-approval shall be required if this project is not under construction within a period of two years.

SEWER NOTES

- 1. All sewer construction shall be performed in accordance with the City's standard specifications, Sept. 1984, current City practices and Revised Ordinances of Honolulu, 1990 as amended, and the Design Standards of the Department of Wastewater Management Vol. 1, July 1993.
- 2. In the event that any change in alignment or grade for the proposed sewers are required due to unforeseen conflict with other utilities, 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.
- The contractor shall notify the Construction Management Branch, Wastewater Division, DDC, at 768-8788 or 768-8770 to arrange for inspection services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of sewer 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. Trees in the road right-of-way shall be situated in a minimum of 5'-0" from the City's sewer lines.
- 6. Re-The underground pipes, cables or ductlines known to exist by 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, the the presence of the Wastewater inspector and exercise proper care in excavating the area. The contractor shall be responsible and pay for all damaged utilities.
- Sewer lateral shall be clear of and not conflicting with any other utility. Minimum horizontal and vertical clearances shall be strictly observed and followed.
- 8. Slope for sewer laterals shall be 1.00% unless otherwise noted.
- 9. Building plumbing facilities shall be controlled by sewer lateral
- 10. The contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
- 11. The consulting engineer shall submit to DPP mylar "as-built" tracings of the construction plans as actually constructed, showing all changes from the original plans.
- 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.
- 13. All sewer pipe joints within easements shall be wrapped with geotextile root barrier.
- 14. Geotextile fabric to envelope the pipe cradle and select backfill material shall be provided where water or unstable soil conditionals are encountered.
- 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:

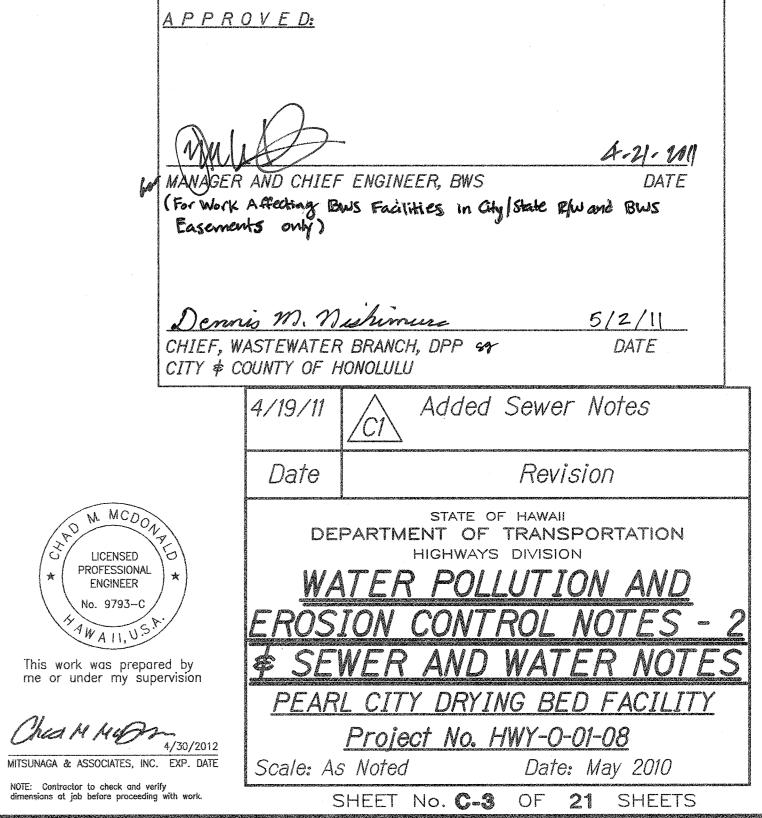


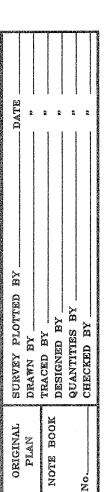
FED. ROAD DIST. NO.		PROJ. NO.	FISCAL YEAR		TOTAL SHEETS
HAWAII	HAWAII	HWY-0-01-08	2010	5	34

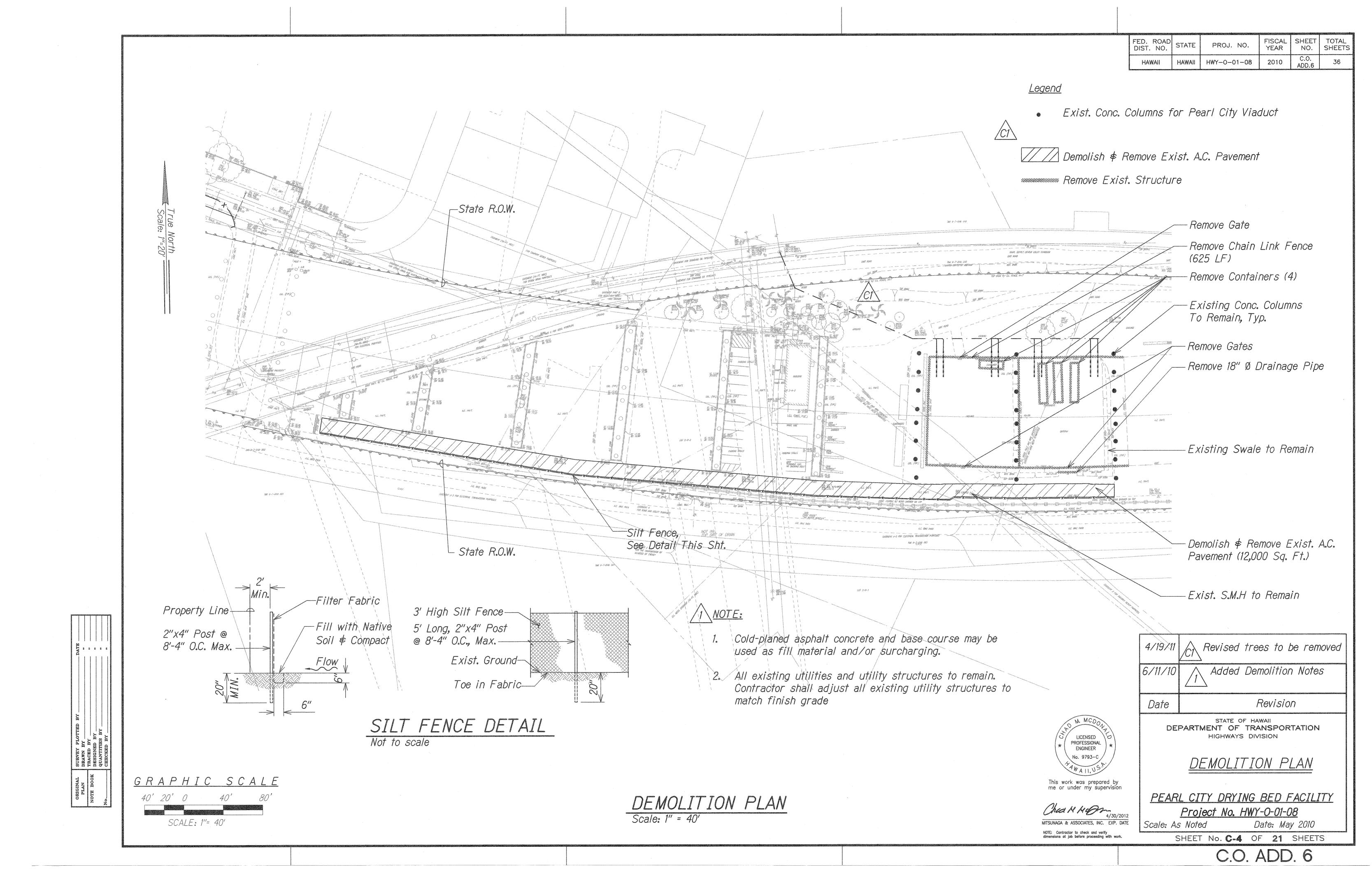
SEWER NOTES CONTINUED

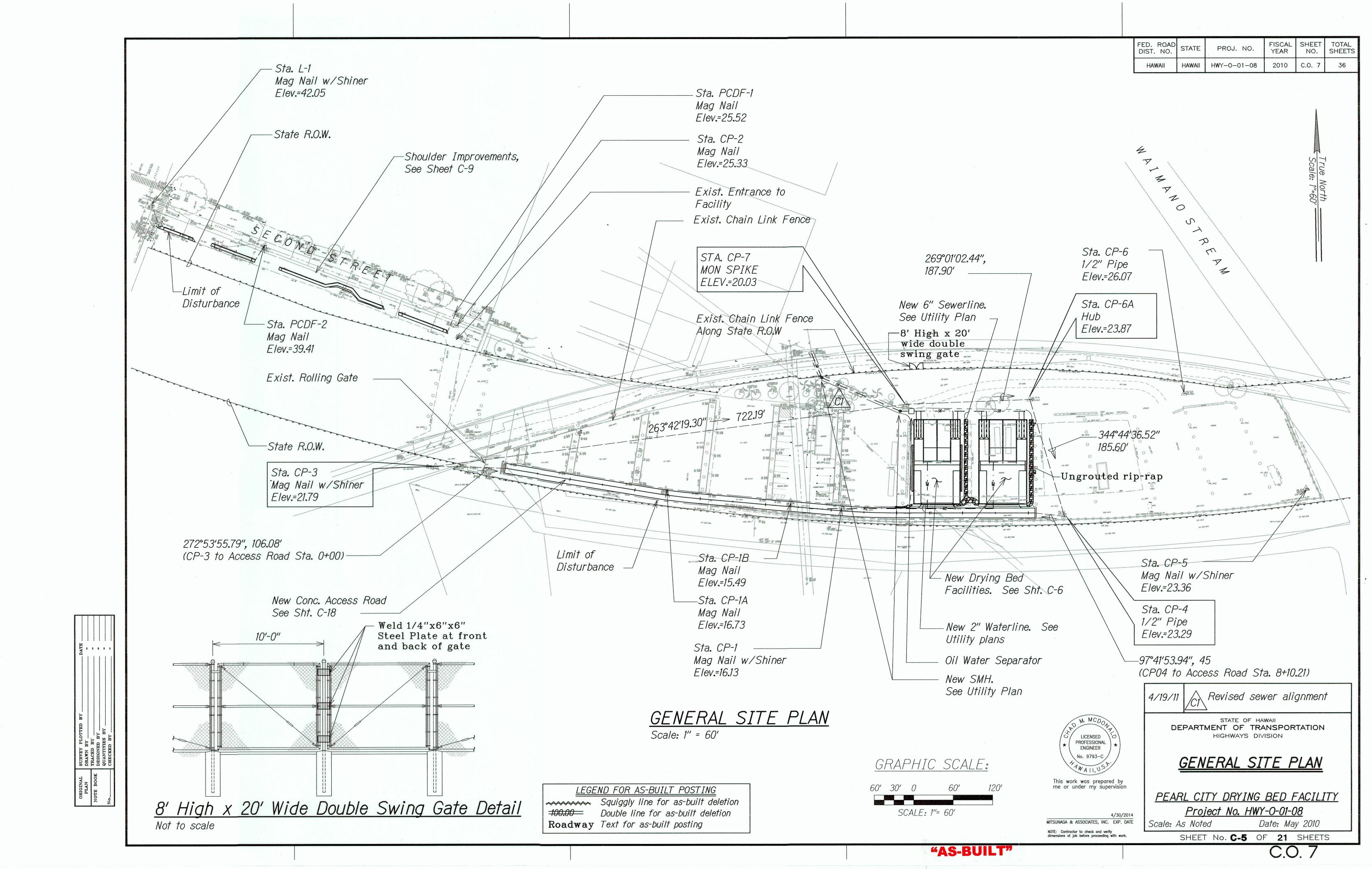
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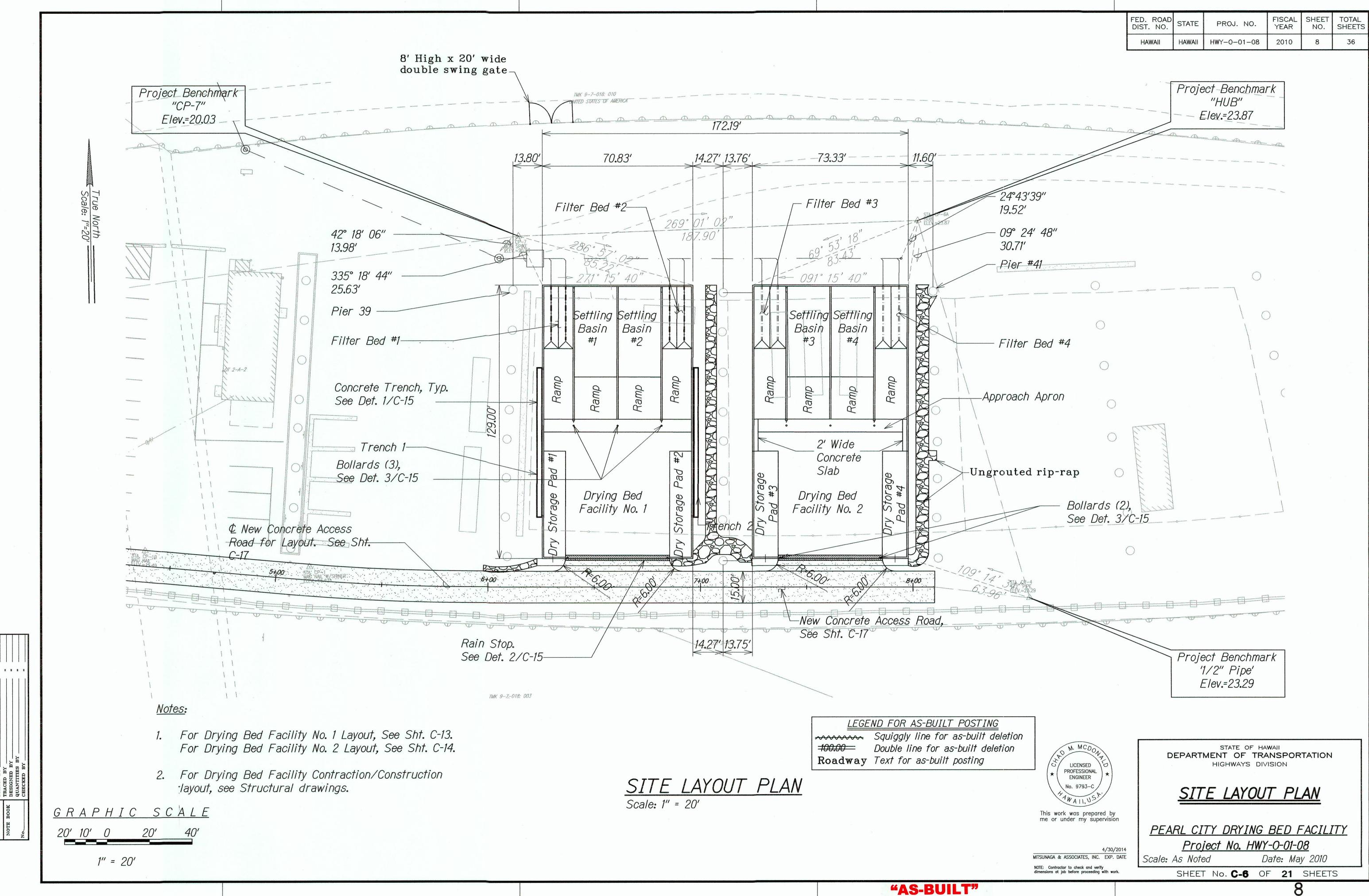
- All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to the following:
 - a. Full body harnesses for up to two personnel.
 - o. Lifeline and associated clips.
 - c. Ingress/Egress and fall protection 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.
 g. Continuous gas detector (calibrated) to measure oxygen,
 hydrogen sulfide, carbon monoxide and flammables
 (capable of monitoring at a distance at least 20-feet
- h. Personnel multi-gas detector to be carried by inspector.
- 16. When connecting to a live sewer line, the contractor shall abide by all conditions that the State 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 spill resulting from the connection.
- 17. If contractor encounters flow monitoring devices such as special sewer manhole cover embedded with solar panels; notify C & C of Honolulu, ENV-CSM at 768-7272 to coordinate temporary removal.
- 18. Contractor shall maintain visibility and maintenance access to live sewer manhole locations at all times including during non-work hours and paving operations.

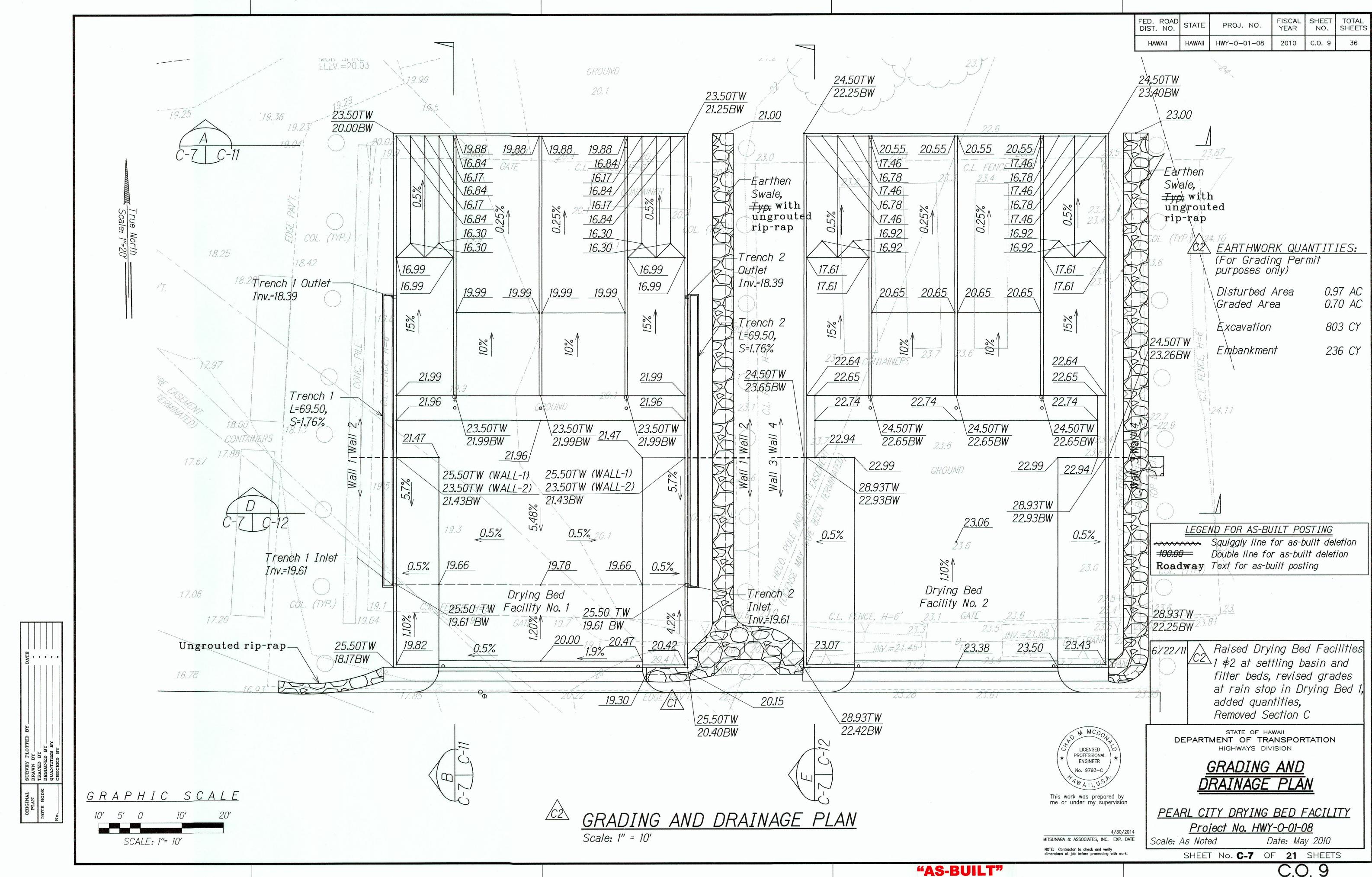




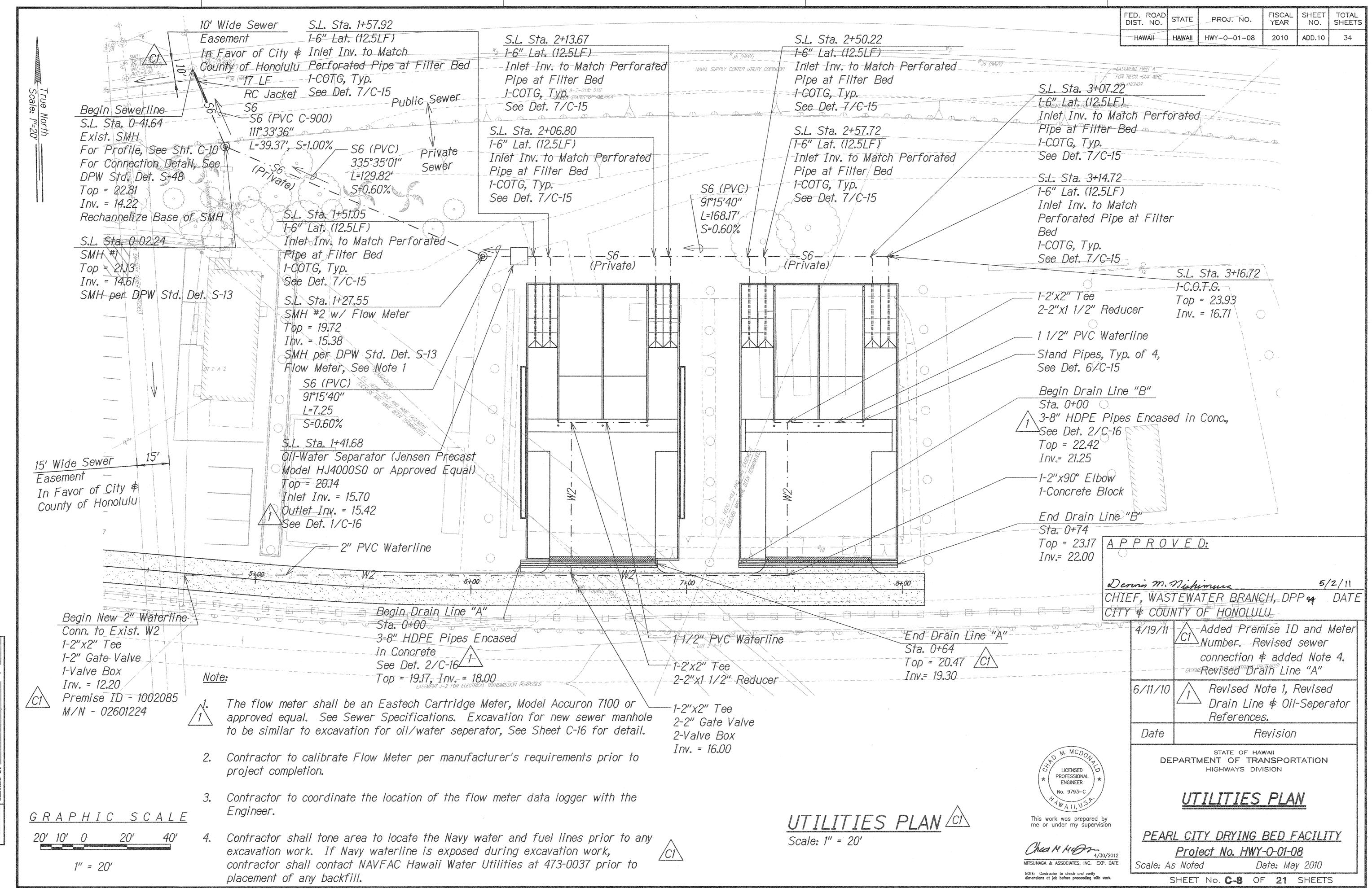








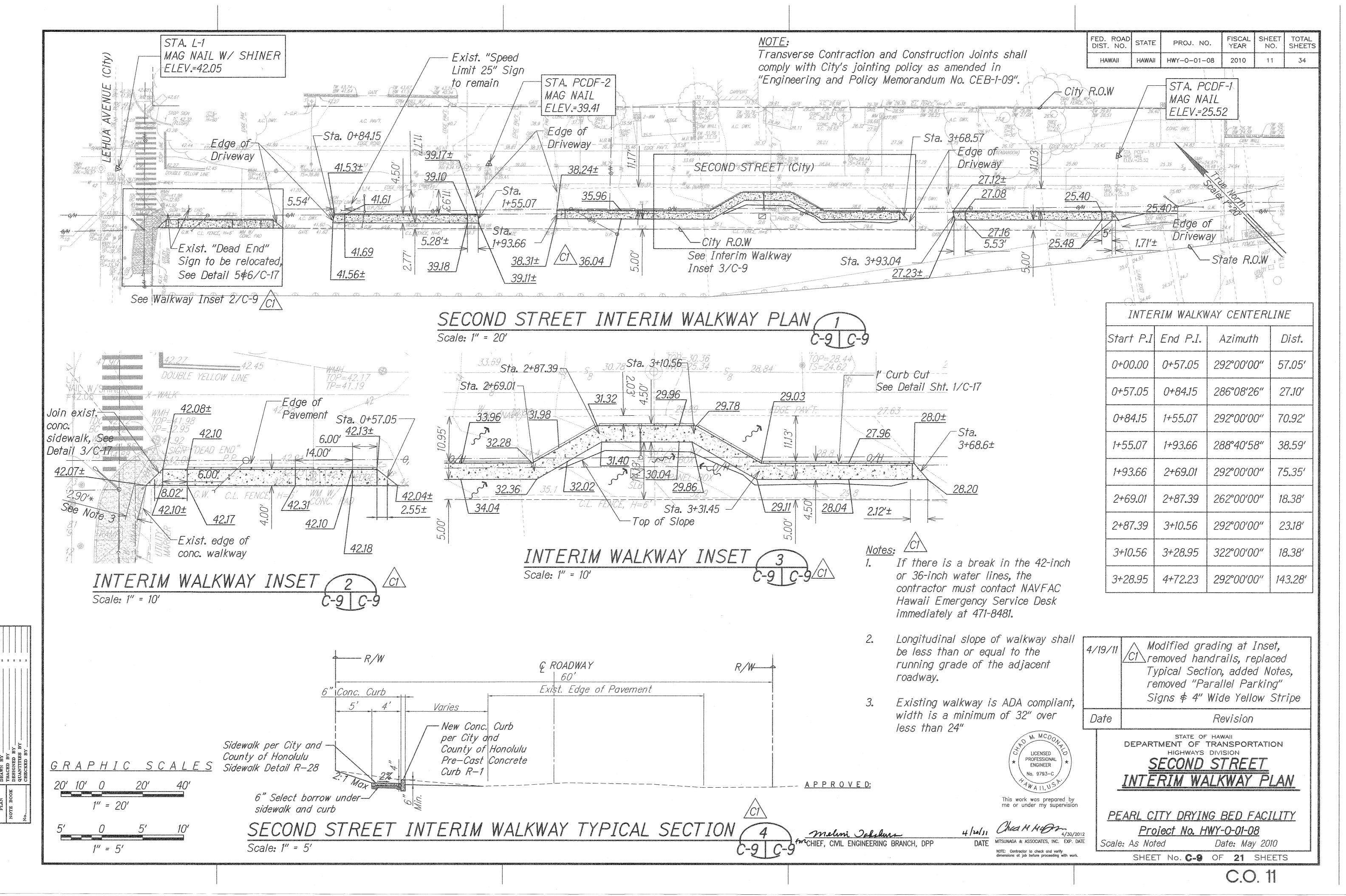
C.O. 9

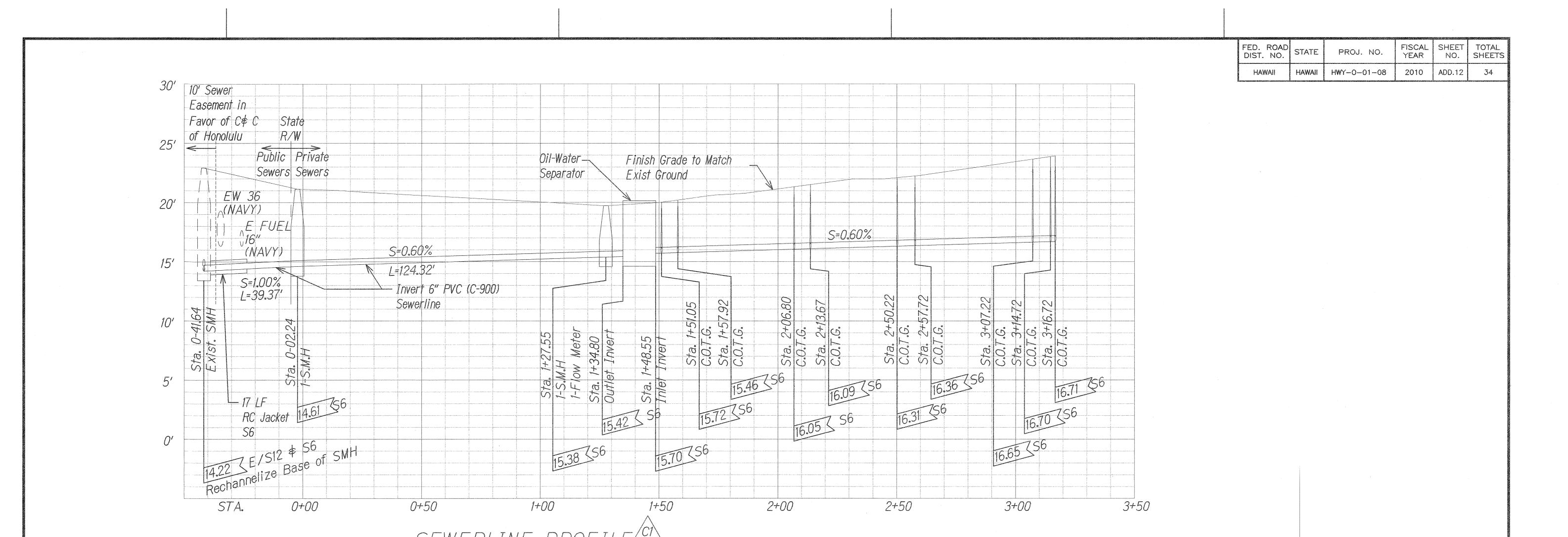


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QUANTITIES

ORIGINAL PLAN NOTE BOOK

C.O. ADD. 10





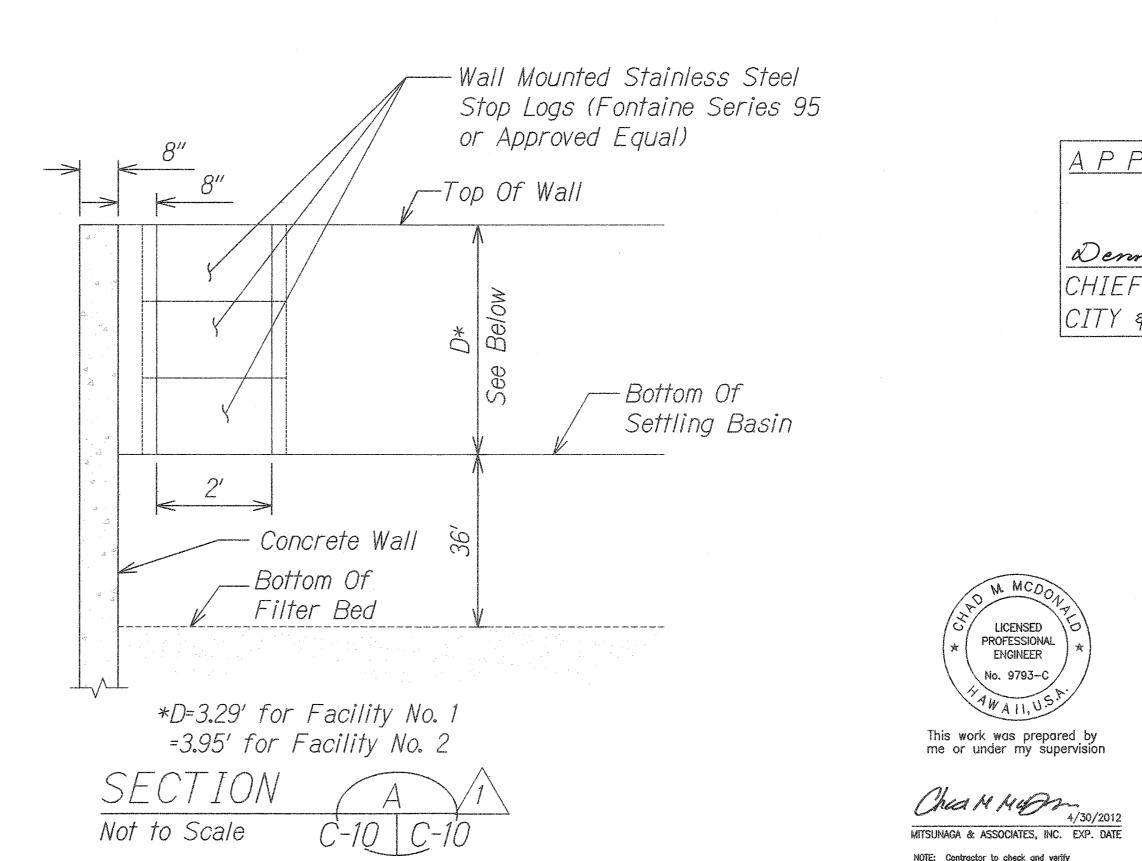
6" Ø PVC ---Perforated Pipe -Filter Bed-8" Concrete — _Wall Mounted Stainless Steel Stop Logs (Fontaine Series 95 or Approved Equal) _8" Concrete Wall -Settling— Basin

STOP LOGS ENLARGED PLAN

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

Scale: Horiz. 1" = 20'

Vert. 1" = 4"



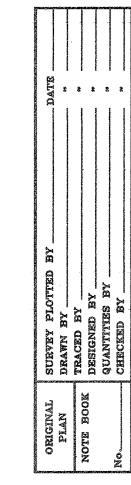
Dennis M. Nishimung 5/2/11 CHIEF, WASTEWATER BRANCH, DPP 39 DATE CITY & COUNTY OF HONOLULU Revised sewer promocion updated point of connection Added Stop Log Details Date Revision STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION SEWER LINE PROFILE This work was prepared by me or under my supervision PEARL CITY DRYING BED FACILITY

APPROVED:

LICENSED PROFESSIONAL ENGINEER

No. 9793-C

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



GRAPHIC SCALE:

SCALE: 1"= 20'

SCALE: 1"= 4"

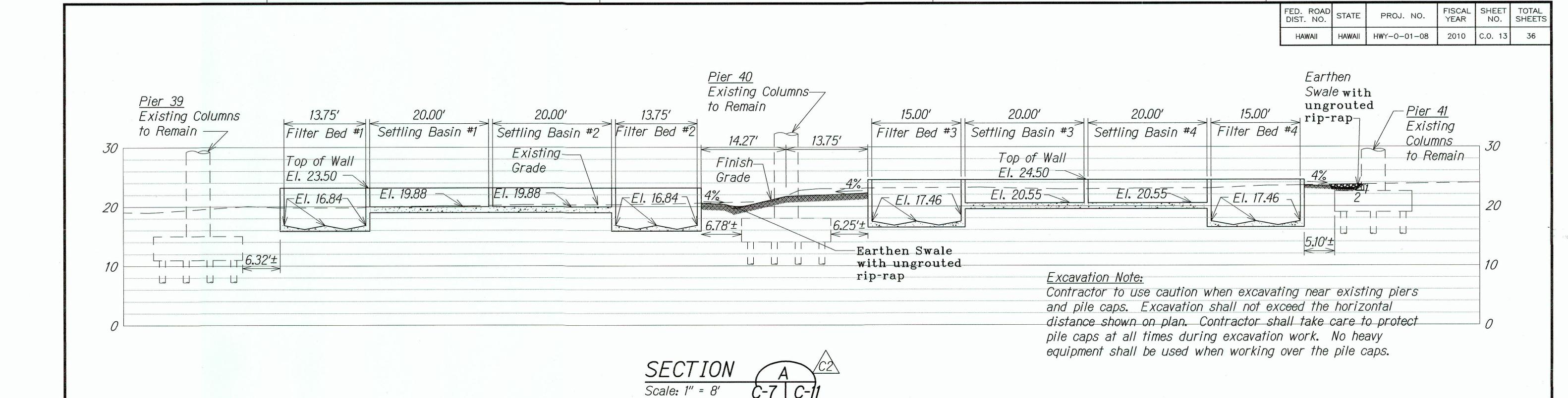
20' 10' 0

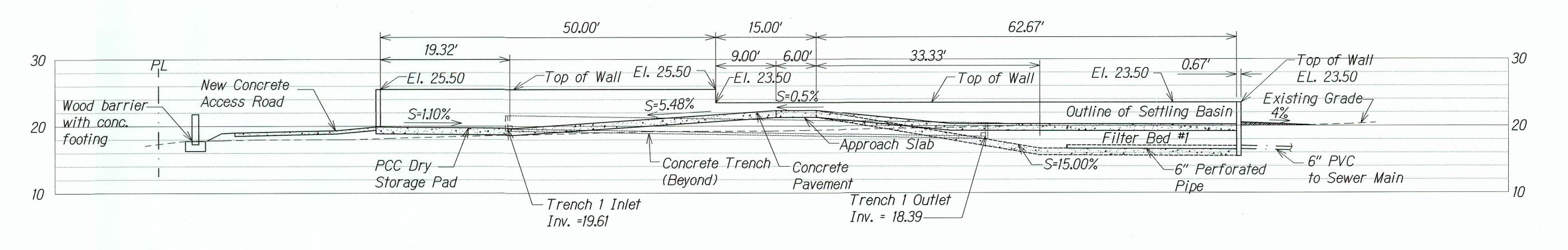
SHEET No. C-10 OF 21 SHEETS C.O. ADD. 12

Date: May 2010

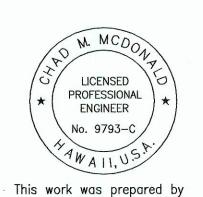
Project No. HWY-0-01-08

Scale: As Noted









This work was prepared by me or under my supervision

4/30/2014 MITSUNAGA & ASSOCIATES, INC. EXP. DATE NOTE: Contractor to check and verify dimensions at job before proceeding with work.

Revised sections for raised drying bed facilities STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

SITE SECTIONS -1

PEARL CITY DRYING BED FACILITY Project No. HWY-0-01-08

Date: May 2010 Scale: As Noted SHEET No. C-11 OF 21 SHEETS

SCALE: 1"= 8"

GRAPHIC SCALE

SURVEY PLOTTEI
DRAWN BY
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DESIGNED BY

"AS-BUILT"

LEGEND FOR AS-BUILT POSTING

Double line for as-built deletion

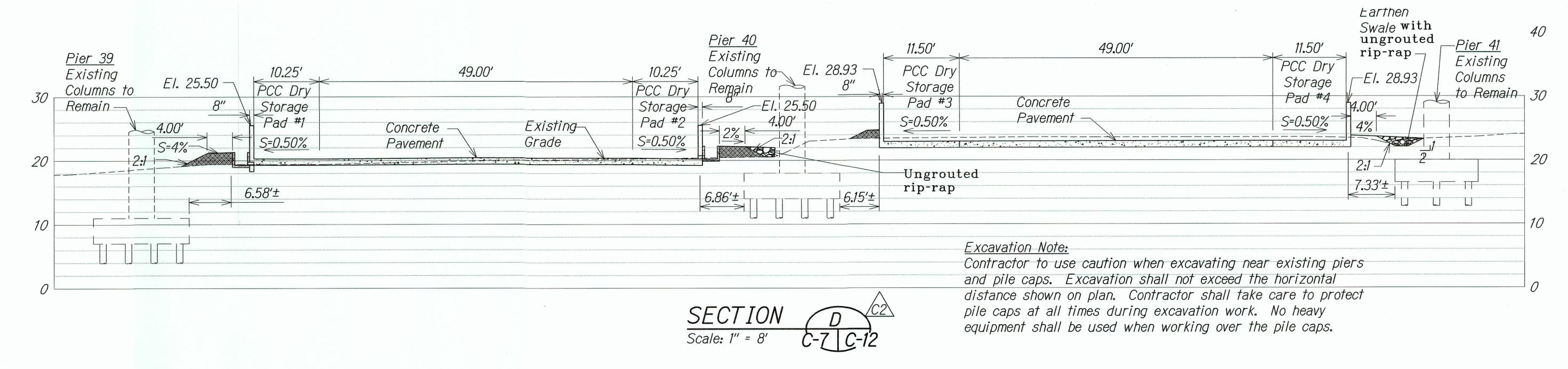
Squiggly line for as-built deletion

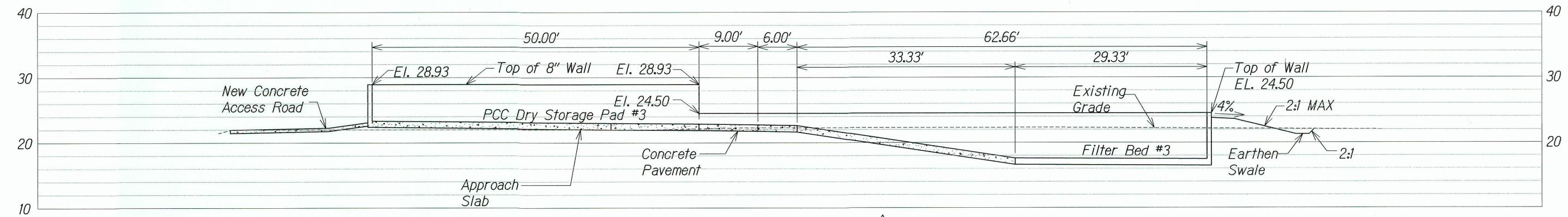
Roadway Text for as-built posting

C.O. 13

,	FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	
	HAWAII	HAWAII	HWY-0-01-08	2010	C.O. 14	36

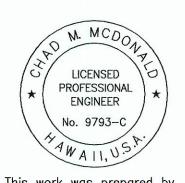






SECTION E

Scale: 1" = 8' C-7 | C-12



This work was prepared by me or under my supervision

4/30/2014
MITSUNAGA & ASSOCIATES, INC. EXP. DATE

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

6/22/11 Revised sections for raised C2 drying bed facilities, Removed Section C

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

SITE SECTIONS -2

PEARL CITY DRYING BED FACILITY

Project No. HWY-0-01-08

Scale: As Noted Date: May 2010

SHEET No.C-12 OF 21 SHEETS

<u>GRAPHIC SCALE</u> 8' 4' 0 8' 16'

SCALE: 1"= 8'

Squiggly line for as-built deletion

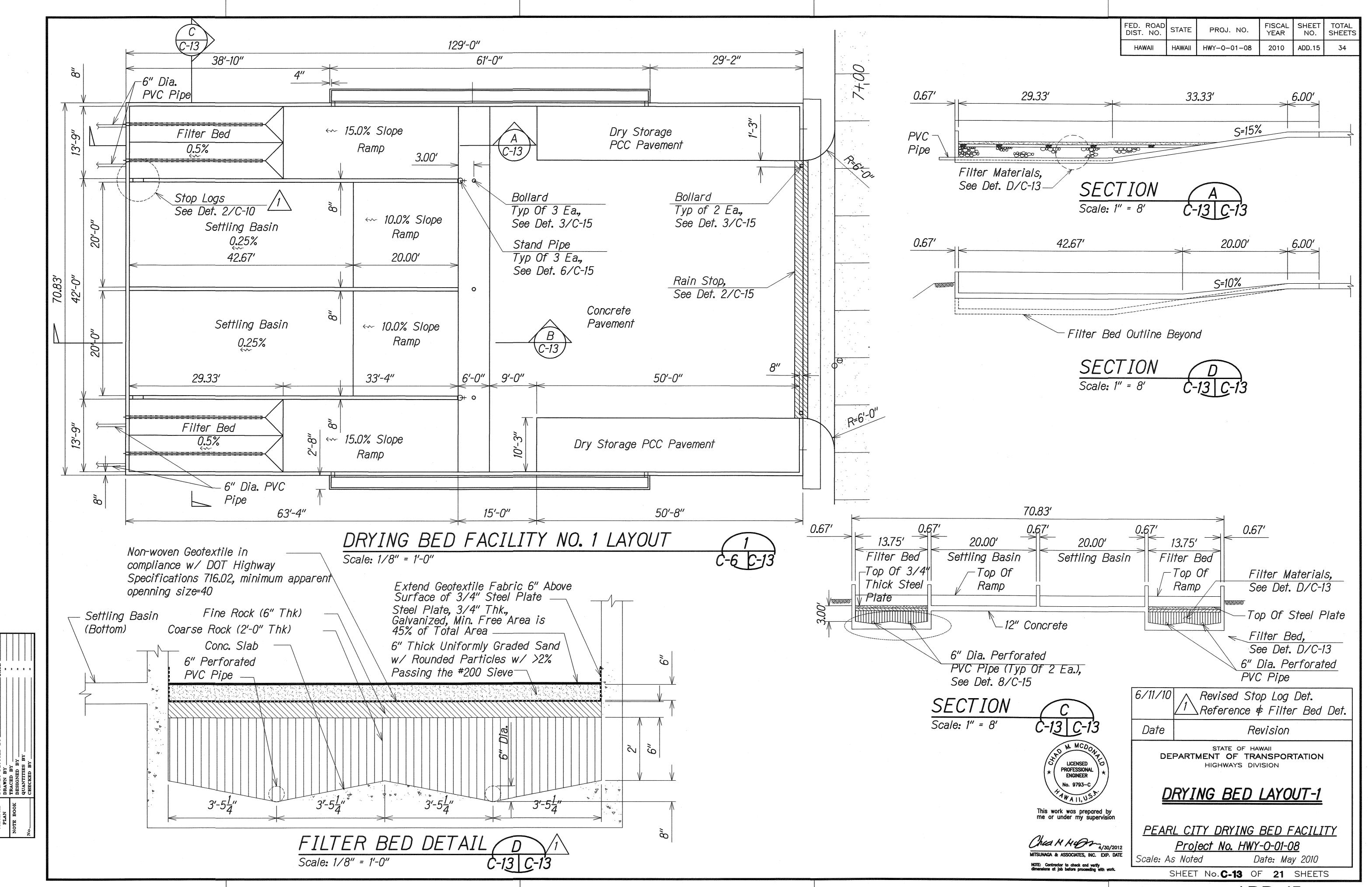
Double line for as-built deletion

Roadway Text for as-built posting

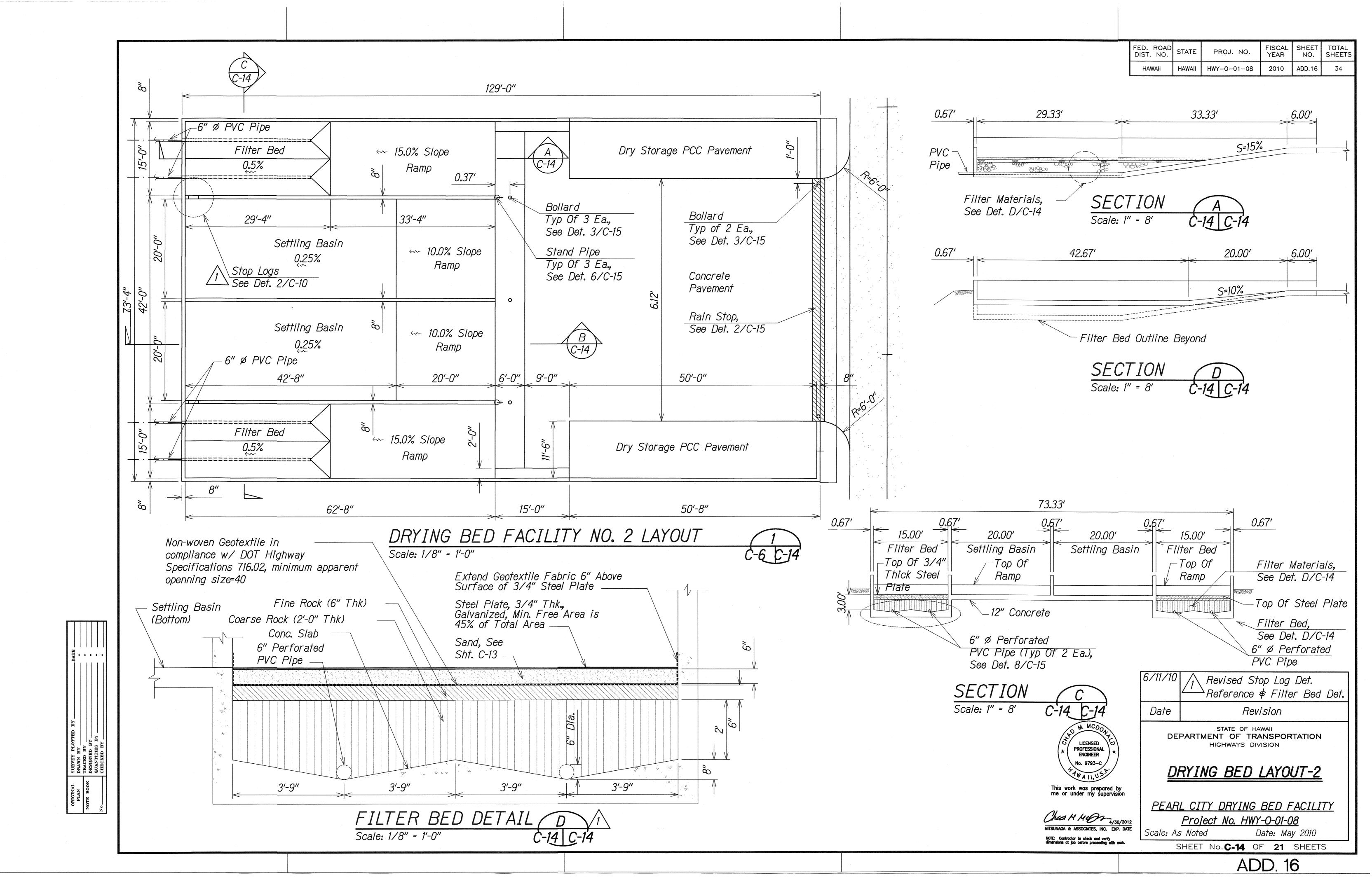
LEGEND FOR AS-BUILT POSTING

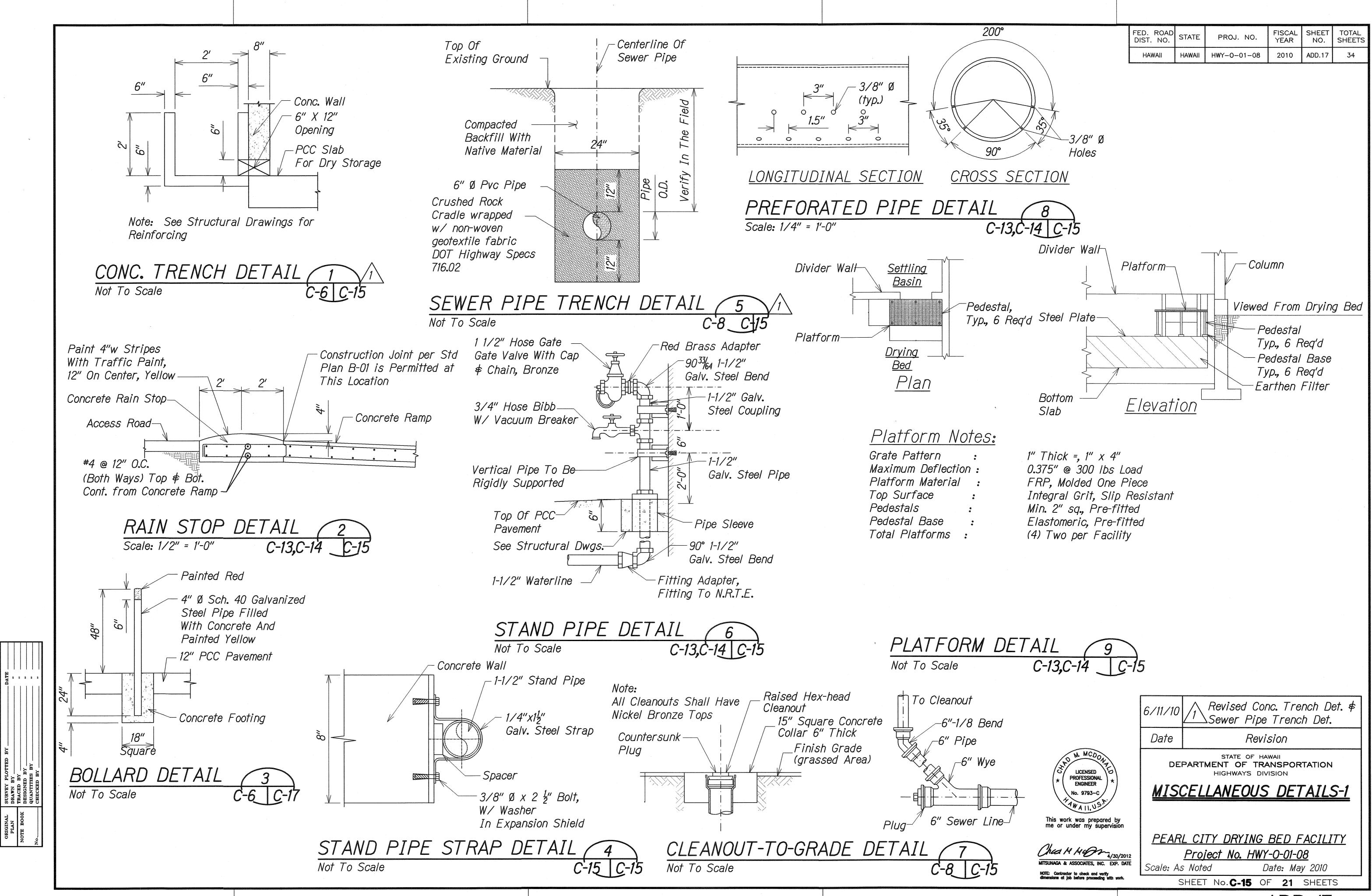
"AS-BUILT"

C.O. 14

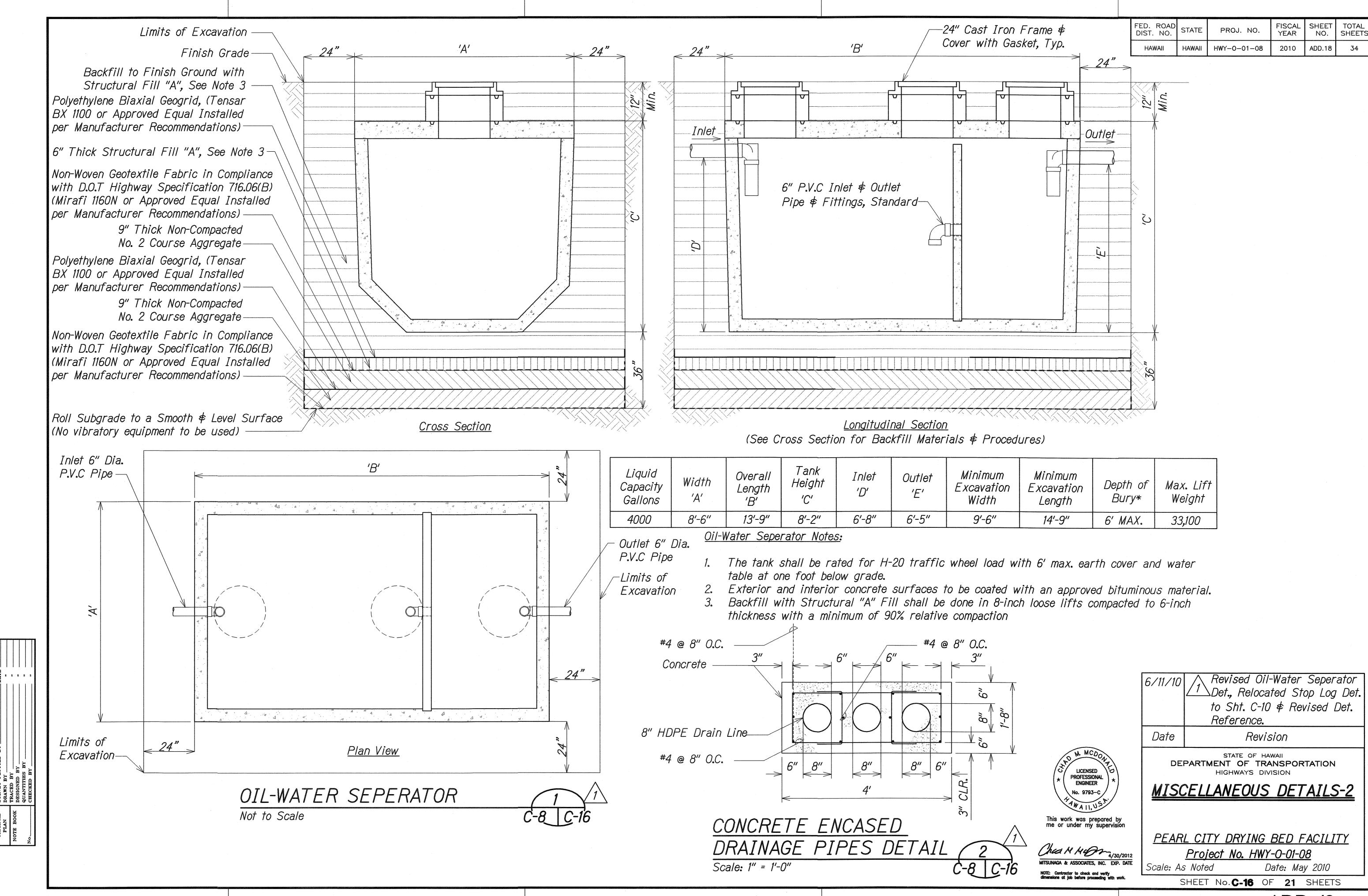


ADD. 15





ADD. 17



ADD. 18

ANCHOR POSTS NOTES:

- 1. KEEP INSIDE OF 2-1/4" ANCHOR POST FREE FROM IMPEDIMENTS THAT MAY PREVENT PROPER SEATING OF 2" SIGN POST.
- 2. SQUARE TUBING SING POST SHALL BE TELESCOPING TYPE WITH 7/16" DIA. HOLES AT 1" O.C. ON FOUR SIDES.
- 3. OCTAGON SIGN POST SHALL BE TELESCOPING TYPE WITH 7/16" DIA. HOLES AT 1" O.C. ON TWO SIDES.
- 4. USE 5/16" x 2-3/4" BOLTS TO SECURE THE OCTAGONAL AND SQUARE TUBING POST ONTO THE 2-1/4" SQUARE TUBE AND ANCHOR POST.
- (*) ALL SIGN(S) INSTALLATIONS MUST MEET LATERAL AND HEIGHT CLEARANCES, INCLUDING NEW SIGNS THAT WILL BE POSTED ON TO EXISTING SIGN POST. EXTEND, RELOCATE OR REPLACE AS REQUIRED TO MEET CLEARANCE REQUIREMENTS.

6/11/10

Date

♦ WASHERS ON BOTH — SQUARE SIDES TUBE FINISH-**ANCHOR** GRADE CONCRETE FOOTING -12" INSTALLATION OF NEW OR RELOCATED SIGN POST W/ CONCRETE FOOTING For Work Within City ROW C-9 C-17 Not To Scale

NEW OR EXIST. CURB

LINE OR EXIST. EDGE

5/16" x 2-3/4"

GALVANIZED BOLTS, NUTS

APPROVED:

Melini Jahahura CHIEF, CIVIL ENGINEERING BRANCH, DPP

MIN.

OF PAVEMENT ---

2" SQUARE OR-

OCTAGONAL SIGN

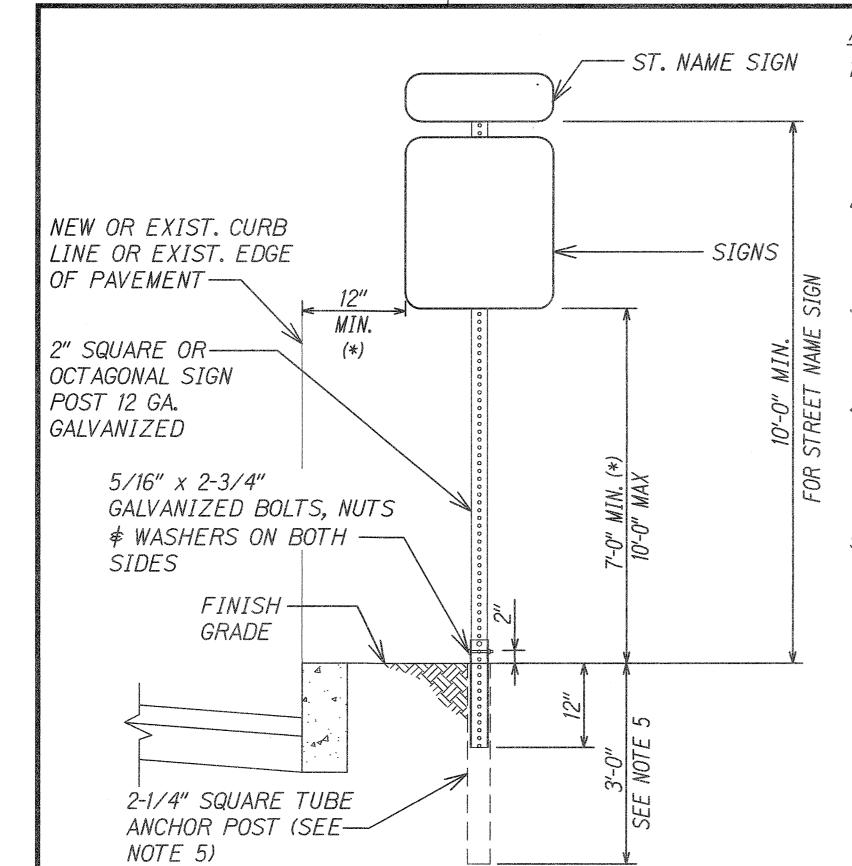
POST 12 GA.

GALVANIZED

- ST. NAME SIGN

SIGNS

NIN.



ANCHOR POSTS NOTES: 1. KEEP INSIDE OF 2-1/4" ANCHOR POST

FREE FROM IMPEDIMENTS THAT MAY PREVENT PROPER SEATING OF 2" SIGN

2. SQUARE TUBING SING POST SHALL BE TELESCOPING TYPE WITH 7/16" DIA. HOLES AT 1" O.C. ON FOUR SIDES.

3. OCTAGON SIGN POST SHALL BE TELESCOPING TYPE WITH 7/16" DIA. HOLES AT 1" O.C. ON TWO SDIES.

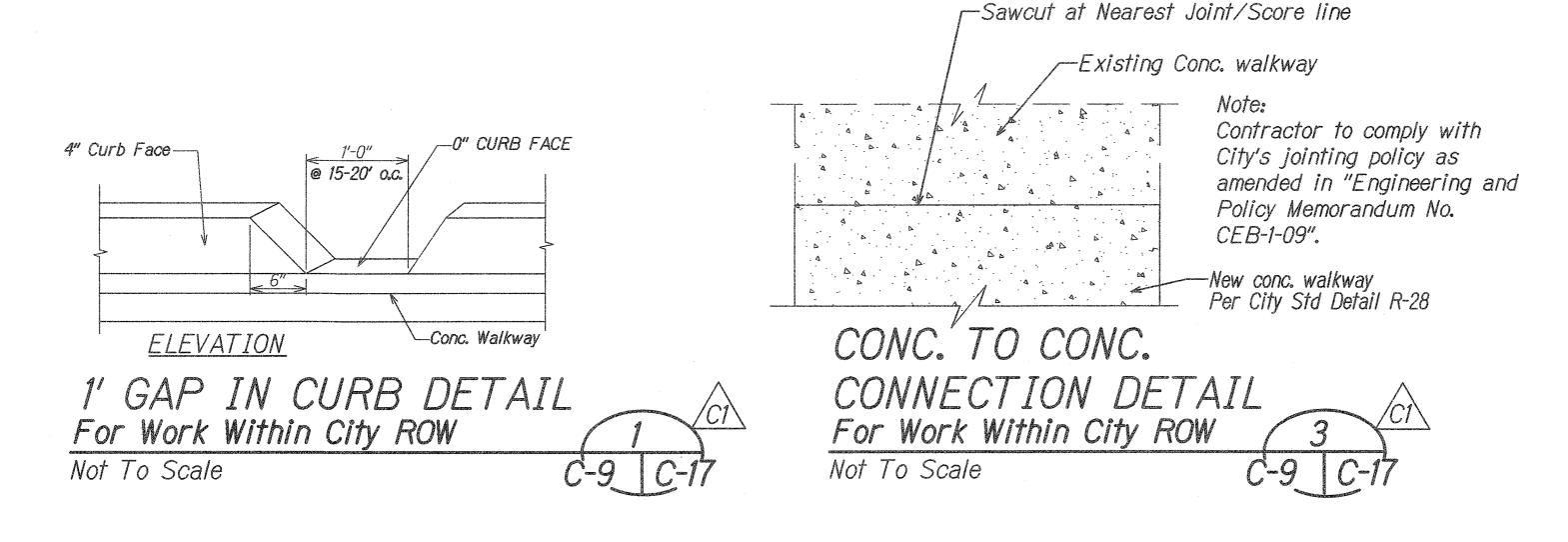
4. USE 5/16" x 2-3/4" BOLTS TO SECURE THE OCTAGONAL AND SQUARE TUBING POST ONTO THE 2-1/4" SQUARE TUBE AND ANCHOR POST.

5. MINIMUM BURY DEPTH FOR THE 2-1/4" ANCHOR POST SHALL BE AS FOLLOWS: 4'-0" MIN. AT POOR SOIL CONDITIONS 2'-6" MIN. AT ROCKY CONDITIONS

(*) ALL SIGN(S) INSTALLATIONS MUST MEET LATERAL AND HEIGHT CLEARANCES, INCLUDING NEW SIGNS THAT WILL BE POSTED ON TO EXISTING SIGN POST. EXTEND, RELOCATE OR REPLACE AS REQUIRED TO MEET CLEARANCE REQUIREMENTS.

INSTALLATION OF NEW OR RELOCATED SIGN POST W/ ANCHOR POST, WITHOUT CONCRETE FOOTING For Work Within City ROW

Not To Scale



LICENSED PROFESSIONAL **ENGINEER** No. 9793-C

This work was prepared by me or under my supervision

Chea H H407-4/30/2012 MITSUNAGA & ASSOCIATES, INC. EXP. DATE NOTE: Contractor to check and verify dimensions at job before proceeding with work

4/23/11

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION INTERIN WALKWAY DETAILS PEARL CITY DRYING BED FACILITY Project No. HWY-0-01-08

Post Detail

Removed all handrail details,

<u>∠C1</u>_Jointing detail and sidewalk

detail, Conc. To Conc.

Revision

detail. Added gap in curb

Connection Detail, and Sign

Revised All Details on Sheet

Scale: As Noted Date: May 2010 SHEET No. C-17 OF 21 SHEETS

C.O. ADD. 19

