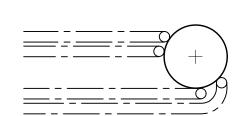


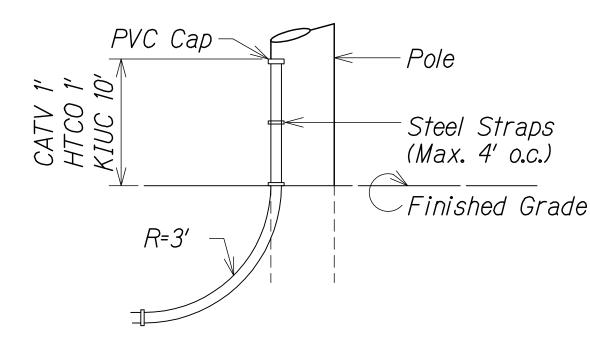
#### Water Notes:

- 1. The contractor shall verify in the field the location of the existing water facilities prior to trenching. Excavation around existing water facilities shall be done by hand.
- 2. Material used for back filling at the water facilities crossings shall not contain any stones, rocks, or other similar material and shall not contain vegetable matter or debris of any kind. No "Adobe" or similar material shall be used.
- 3. Provide concrete encasement for the conduits at all waterline, service lateral and fire hydrant crossings. The contractor shall notify the Department of Water at least 24-hours prior to scheduling back filling operations at the water facilities crossings.

#### DETAIL AT WATER FACILITIES CROSSINGS Not to Scale

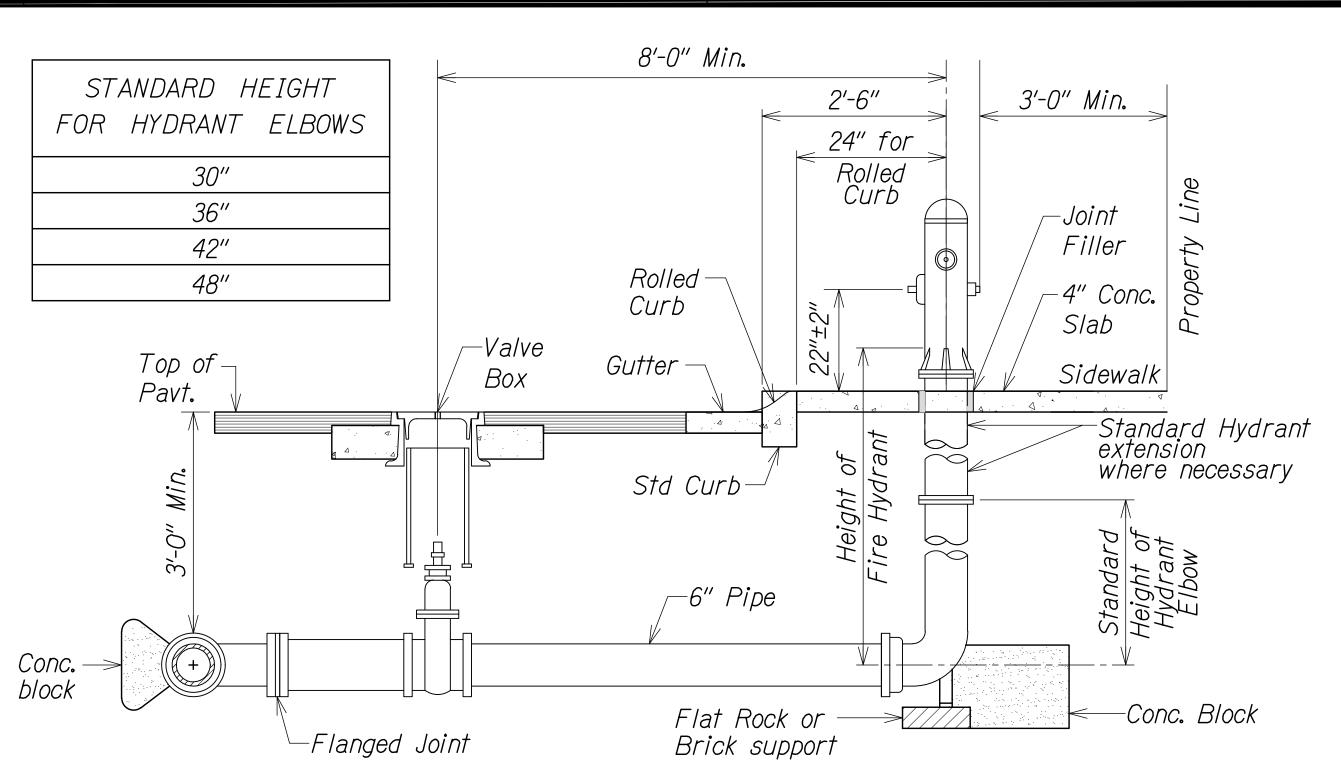


### PLAN



ELEVATION

POLE RISER DETAIL Not to Scale



If multiple hydrant extensions are used, a minimum of the top 3 flange joints shall use break-off bolts.

Standard Hydrant extensions are available in the following lengths: 6 to 30 inches long in increments of 6 inches

### <u>SECTION</u> Varies (4'-0" Min) -Conc. Block lain Conc.-Block <u>Gutter</u> *Notes*: 30" (24" for Rolled Curb) 8'-0" Min

PLAN

(STRAIGHT RUN)

Not to Scale

accordance with Division 200, Section 206.01 of the Water System Standards.

the curb and gutter and sidewalk) the measured distance from the fire hydrant to the 6" hydrant FIRE HYDRANT CONNECTION DETAIL gate valve. The etched numbers shall be 2-inches tall.



FISCAL SHEET TOTAL

NH-056-1(50) 2019 | C.O.ADD.63 | 244

FED. AID

PROJ. NO.

1. Gaskets for flanged joints shall be 1/8"

duck-inserted rubber packing garlock no. 19.

2. Bolts shall be break-off type, 5/8" dia. x 3"

long machine bolts with cut threads, American

galvanized steel or silicon bronze. Install bolt

3. Nuts shall be American Standard heavy cold

punched hexagon nuts, hot dipped galvanized

5. Refer to plate FH11 for fire hydrant

installation with curb guard. (Oahu and Kauai

only). For Maui, refer to plate FH9 where no

6. Flanged outlet for the tee is optional for

7. Tapping sleeve with tapping valve assembly

9. Provide slotted flanged riser for hydrant as

needed to align 4-1/2" nozzle perpendicular to

10. Install hydrant markers. (See plates FH12

may be used for connection to exist main.

8. Lubricate hydrant nozzle threads with

Oahu; mandatory for Kauai and Maui.

Standard coarse hexagon heads, hot dipped

STATE OF HAWAI'I **DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION

## FIRE HYDRANT DETAILS

KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: July 2019 SHEET No. *UP9* OF 11 SHEETS

Painting of the new fire hydrants shall be in 2. The Contractor shall etch onto the 4" thick

FED. ROAD DIST. NO.

with threads facing up.

steel or silicon bronze.

street curbing.

non-toxic grease.

and FH13)

curb. (For Maui only)

4. Concrete shall be DWS 2500.

*Notes*:

concrete slab for the hydrant curb guard (or onto the 4" thick concrete slab between

THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION PROVIDED BY THE PROJECT CONTRACTOR. THE UPDATED CONSTRUCTION INFORMATION

DEPICTED HEREIN HAS NOT BEEN VERIFIED FOR ACCURACY AND COMPLETENESS. NO REPRESENTATION IS BEING MADE TO ITS VALIDITY 11/12/19 | 🖎 Reissuing plan for legibility only. No

Manager and Chief Engineer Department of Water, County of Kauai

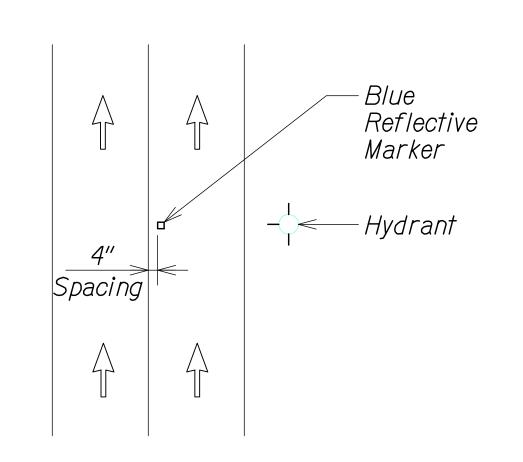
*APPROVED* 

Date

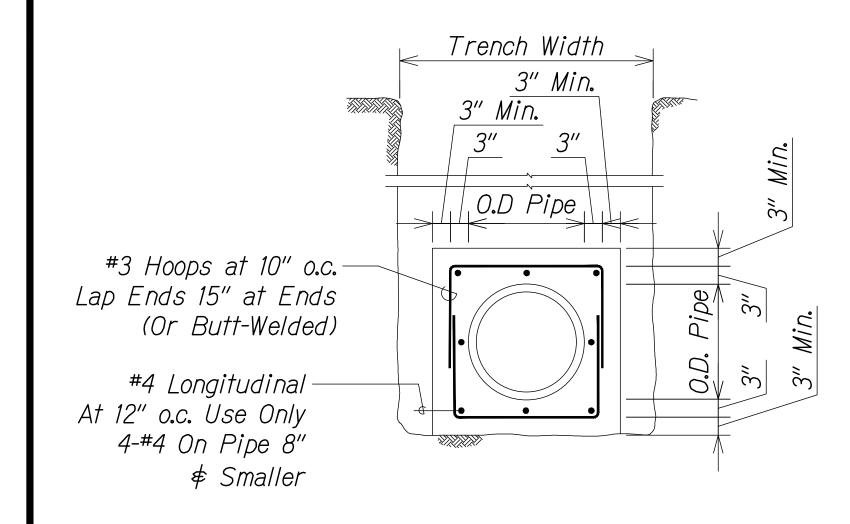
design changes have been made. 9/20/19 A Reissuing plan for legibility only. No design changes have been made. REVISION

"AS-BUILT"

C.O.ADD.63

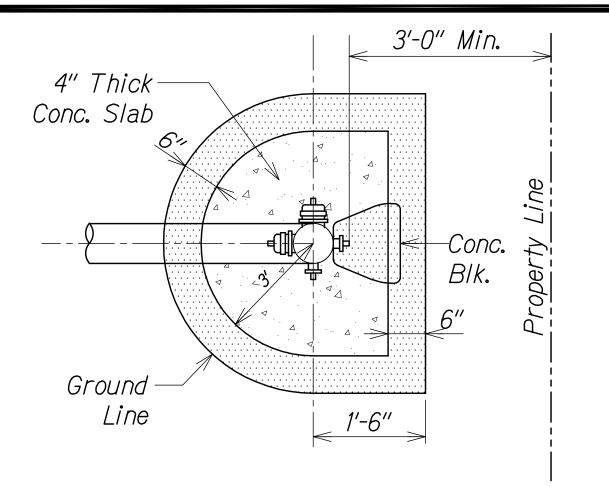


### HYDRANT MARKER LOCATION Not to Scale



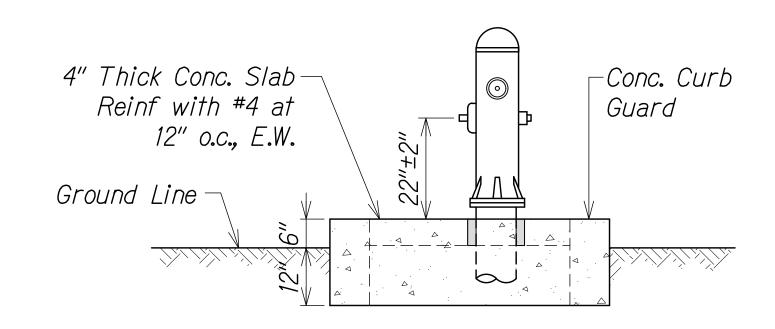
CONCRETE JACKET DETAIL

Not to Scale



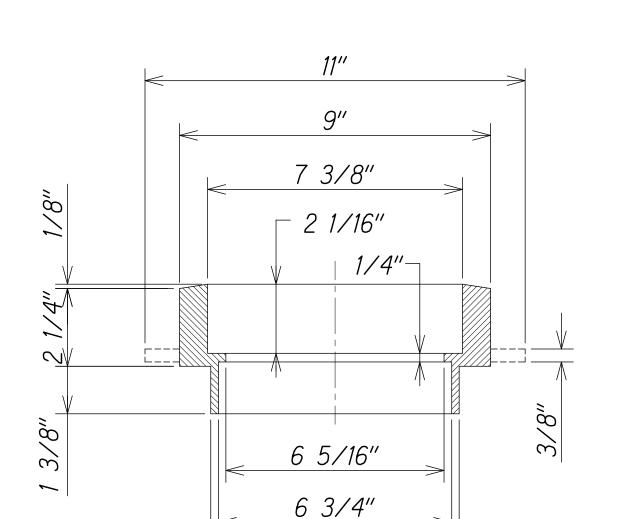
#### Notes:

- 1. Concrete shall be DWS 2500.
- 2. Slope slab 1/4" per foot away from hydrant.



HYDRANT CURB GUARD (NON-SIDEWALK AREA)

Not to Scale



## 7 3/8" 1/4"-<sup>-</sup> 13/16" 1 1/8"-6 5/16" 6 3/4" 7 3/16"

FED. AID PROJ. NO.

FISCAL SHEET TOTAL YEAR NO. SHEETS

NH-056-1(50) 2019 | C.O.ADD.64 | 244

8 15/16"

5 1/4" x 2 1/4" RISER USES STANDARD 5 1/4" DROP LID

Not to Scale

7 3/16"

5 1/4" x 1 1/8" RISER REQUIRES 1 1/8" RISER LID

Not to Scale

FED. ROAD DIST. NO.

#### TYLER/UNION RISERS

Item/Description	UPCode 670610	Height Increase	Weight
5 1/4 x 1 1/8 Slip-In*	145554	1 1/8"	8
5 1/4 x 2 1/4 Slip-In	145547	2 1/4"	14
*Use with 1 1/8" Lid Only			

#### *Notes:*

- 1. Tack weld cast iron riser to existing cast iron valve box.
- 2. Valve boxes shall be adjusted to match finish grade by physically raising or lowering the existing valve box frame and cover and reconstructing the concrete settlement slab and valve box riser (if necessary). For road resurfacing projects, the top of three piece valve boxes with 5 1/4" shafts may be adjusted to match the new finish grade by installing fixed cast iron risers tack welded to the existing cast iron valve box.

## FIXED CAST IRON RISER FOR ALL 5-1/4" SHAFT VALVE BOX

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. STATE OF HAWAI'I **DEPARTMENT OF TRANSPORTATION** 

LICENSED PROFESSIONAL ENGINEER

Not to Scale THESE PLANS HAVE BEEN PREPARED UTILIZING INFORMATION PROVIDED BY THE PROJECT CONTRACTOR. THE **UPDATED CONSTRUCTION** INFORMATION DEPICTED HEREIN HAS NOT BEEN VERIFIED FOR ACCURACY AND COMPLETENESS. NO REPRESENTATION IS BEING | MADE | TO ITS VALIDITY.

11/12/19 A Reissuing plan for legibility only. No design changes have been made. 9/20/19 A Reissuing plan for legibility only. No design changes have been made.

**REVISION** 

FIRE HYDRANT \$ WASTEWATER DETAILS KUHIO HIGHWAY SHORT-TERM

IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD Fed. Aid Proj. No. NH-056-1(50) Scale: As Noted Date: July 2019

SHEET No. *UP10* OF 11 SHEETS

<u>APPROVED</u>

Manager and Chief Engineer Department of Water, County of Kauai

Chief, Division of Wastewater Management

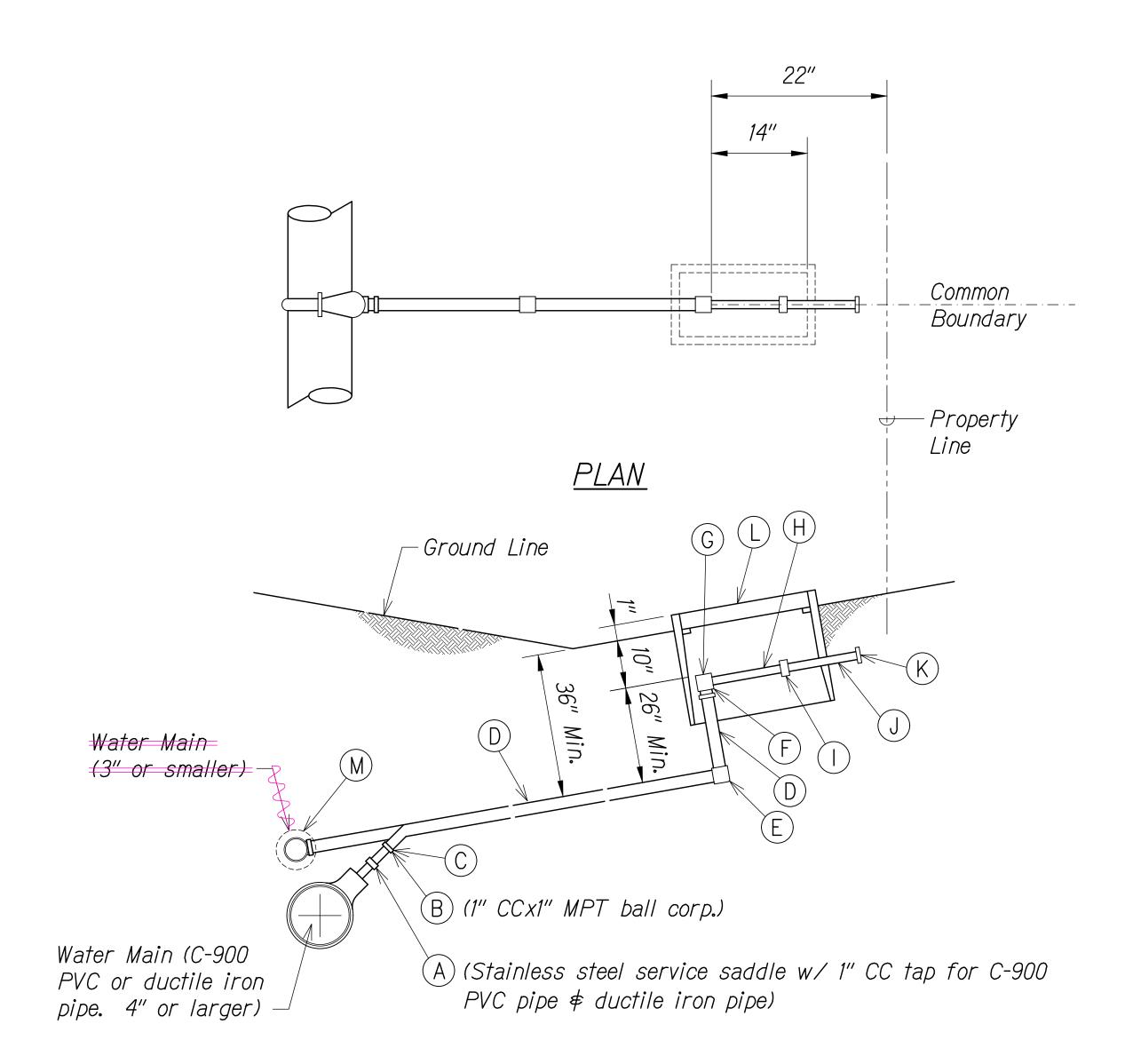
"AS-BUILT"

# Date

DATE

C.O.ADD.64

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
KAUAI	HAW.	NH-056-1(50)	2019	C.O.ADD.65	244



	Schedule of Fittings	
Item	Description	Single Service
А	Stainless steel service saddle w/ 1" CC tap for C-900 PVC pipe \$ D.I. pipe	1
В	1" CC x 1" MPT ball corporation	1
C	Pack joint couplings (Ford C14-44 or approved equal)	1
D	1" copper tube, Type "K" soft	1
Ε	1" 90° copper elbow, S x S	1
F	1" copper male adapter, SXT	1
G	Angle ball valve, 1" female IPT inlet x 3/4" meter coupling nut outlet (Ford BA13-342W or approved equal)	1
Н	Meter spacing, supplied by Dept. of Water ≠ installed by contractor	1
I	Ball valve w/ handle, 3/4" meter coupling but inlet x 1" female IPT outlet (Ford B13-342 w/ HT-34 handle or approved equal)	1
J	Linesetter, 1" copper tube, Type "K" soft, 12" long (see Std. Det. L3)	1
K	1" plastic thread protector	1
L	Type "B" concrete meter box w/ cast iron cover	1
<b>-M</b> -	Tee w/ 1" bushing (when connecting to 3" or smaller pipe)	1

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#### *Note*:

Install Type "X" conc. meter box w/ cast iron cover in sidewalk or paved areas. Top of meter box to be flushed with finished grade.

#### General Note:

All laterals in State ROW will need a minimum 36" cover to finish grade.

Not to Scale

## SINGLE SERVICE DETAIL

<u>PROFILE</u>

Manager and Chief Engineer Department of Water, County of Kauai

Date

DATE

100.00

Roadway

11/12/19 🛦 Reissuing plan for legibility only. No design changes have been made. 9/20/19 A Reissuing plan for legibility only. No design changes have been made.

Text for as-built posting

LEGEND FOR AS-BUILT POSTINGS

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**REVISION** 

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION highways division *FIRE HYDRANT* **WASTEWATER DETAILS** 

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WILSON OKAMOTO CORPORATION LIC. EXP. DATE

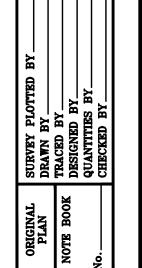
KUHIO HIGHWAY SHORT-TERM IMPROVEMENTS KUAMOO ROAD TO TEMPORARY KAPAA BYPASS ROAD Fed. Aid Proj. No. NH-056-1(50)

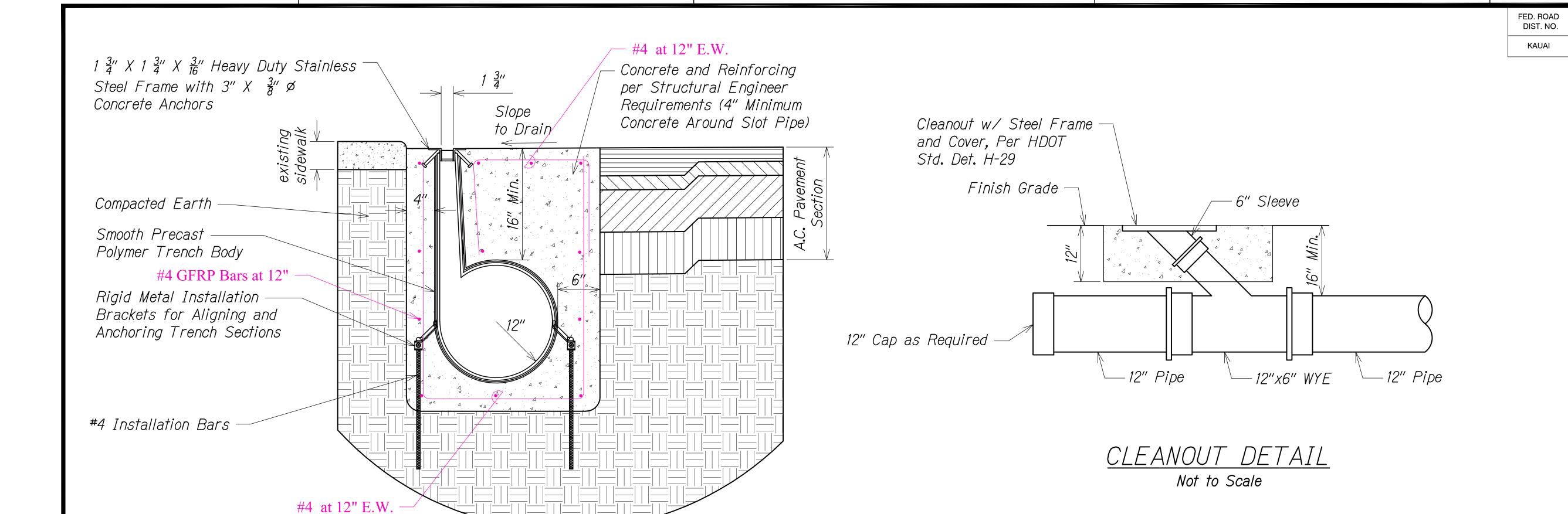
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C.O.ADD.65

<u>APPROVED</u>

"AS-BUILT"





NOTES:

1. Reinforce According to Structural Requirements

12" OFFSET SLOT DRAIN DETAIL

Not to Scale

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FISCAL SHEET TOTAL YEAR NO. SHEETS

| NH-056-1(50) | 2019 | CO.ADD.65S-1 | 244

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## WI

STATE OF HAWAI'I
DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

<u>SLOT DRAIN DETAIL</u>

KUHIO HIGHWAY SHORT-TERM

IMPROVEMENTS KUAMOO ROAD

TO TEMPORARY KAPAA BYPASS ROAD

Fed. Aid Proj. No. NH-056-1(50)

Scale: As Noted Date: July 2019

SHEET No. *UP11A* OF 11 SHEETS

"AS-BUILT"

New Sheet

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Roadway

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REVISION

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