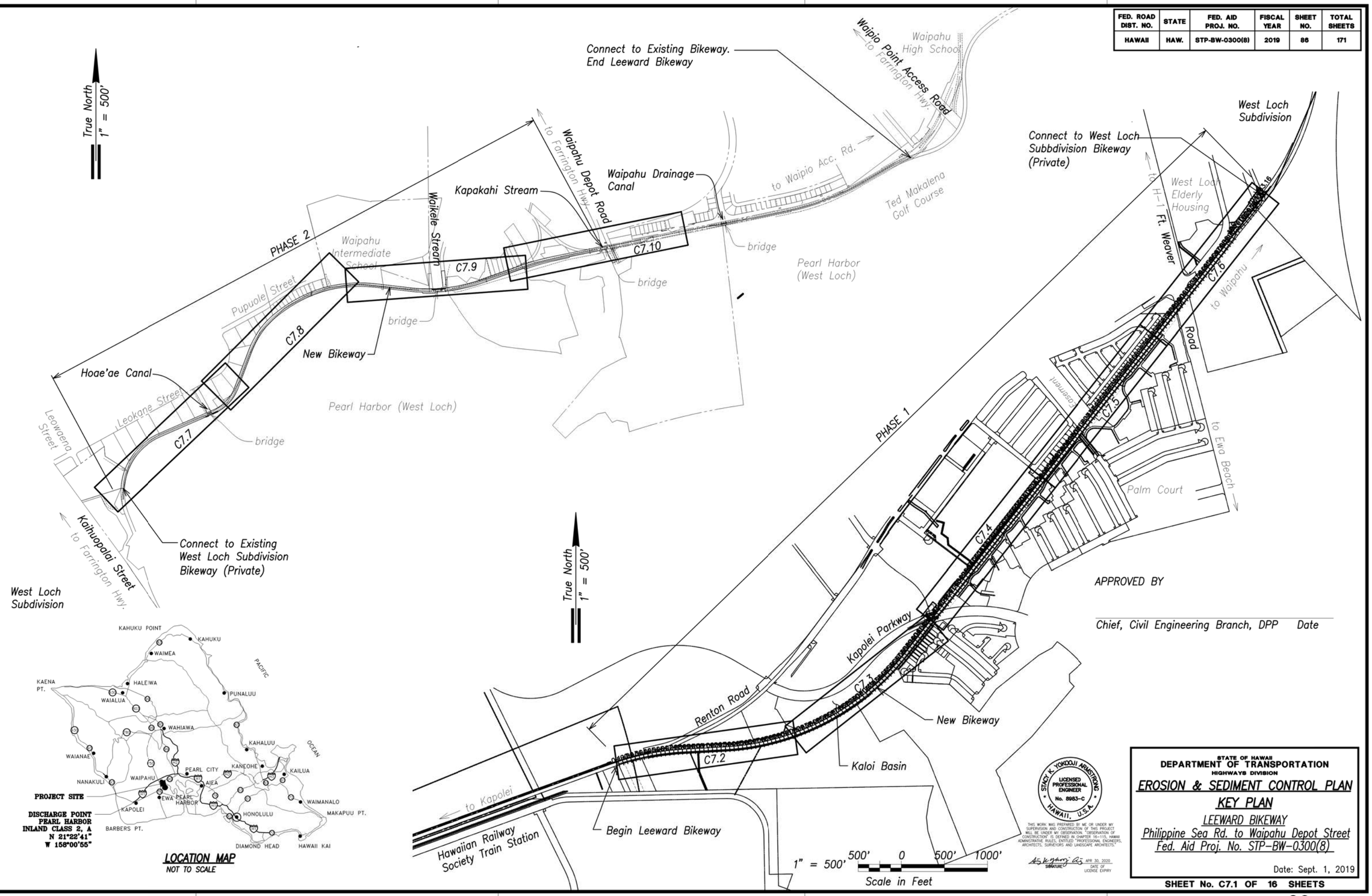
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 86 | 171 |







**LOCATION MAP**
*NOT TO SCALE*

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

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

**EROSION & SEDIMENT CONTROL PLAN**

**KEY PLAN**

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

**SHEET No. C7.1 OF 16 SHEETS**

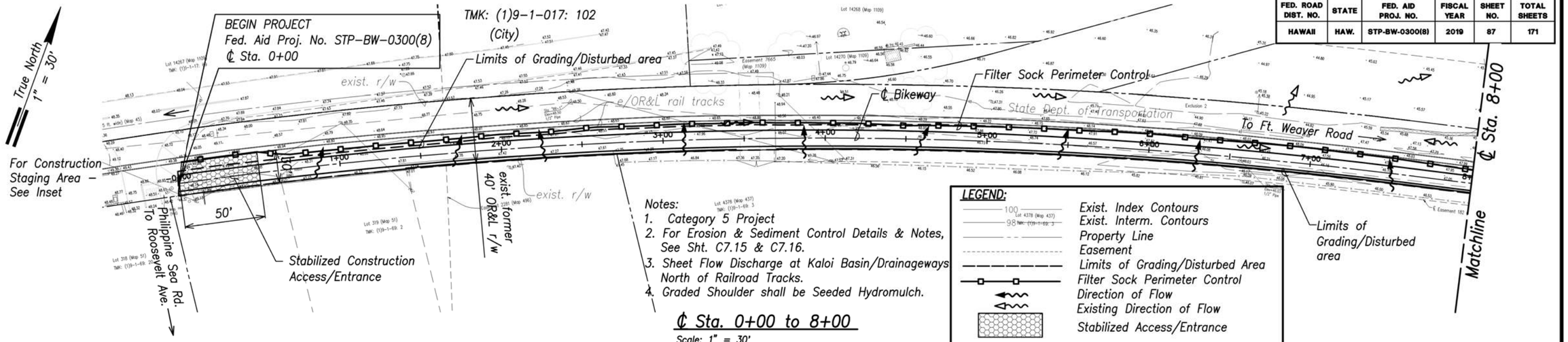
STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

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

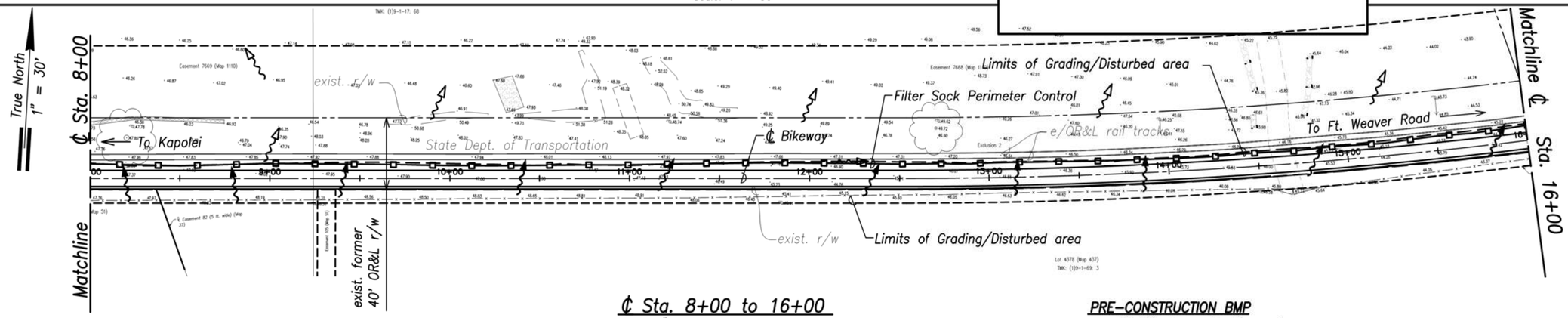
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 87 | 171 |



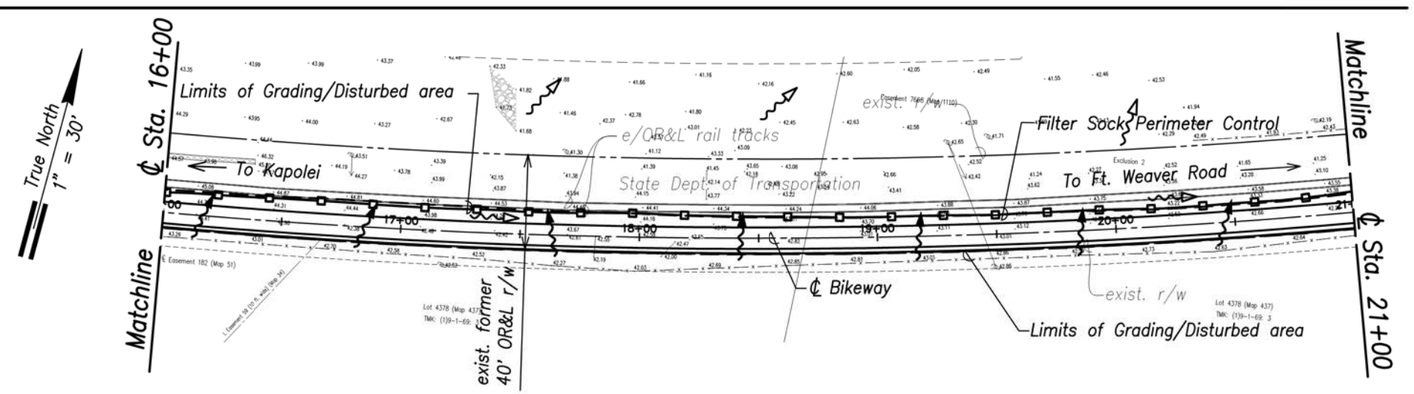

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at Kaloi Basin/Drainageways North of Railroad Tracks.
4. Graded Shoulder shall be Seeded Hydromulch.

**℄ Sta. 0+00 to 8+00**
Scale: 1" = 30'

**LEGEND:**
- Exist. Index Contours
- Exist. Interm. Contours
- Property Line
- Easement
- Limits of Grading/Disturbed Area
- Filter Sock Perimeter Control
- Direction of Flow
- Existing Direction of Flow
- Stabilized Access/Entrance




**℄ Sta. 8+00 to 16+00**
Scale: 1" = 30'




**℄ Sta. 16+00 to 21+00**
Scale: 1" = 30'

Graphic Scale:
1" = 30' 30' 0 30' 60'
Scale in Feet

***PRE-CONSTRUCTION BMP***
- *Stabilized construction entrance*
- *Compost filter sock*

***DURING CONSTRUCTION BMP***
- *Temporary stabilization*
- *Drain inlet protection*

***POST CONSTRUCTION BMP***
- *Permanent stabilization (grass/pavement)*

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 0+00 TO ℄ STA. 21+00

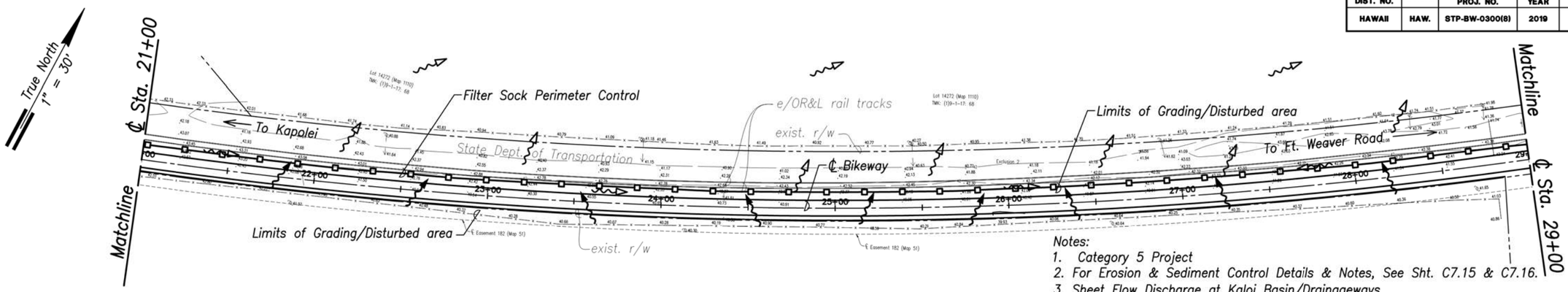
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.2 OF 16 SHEETS

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

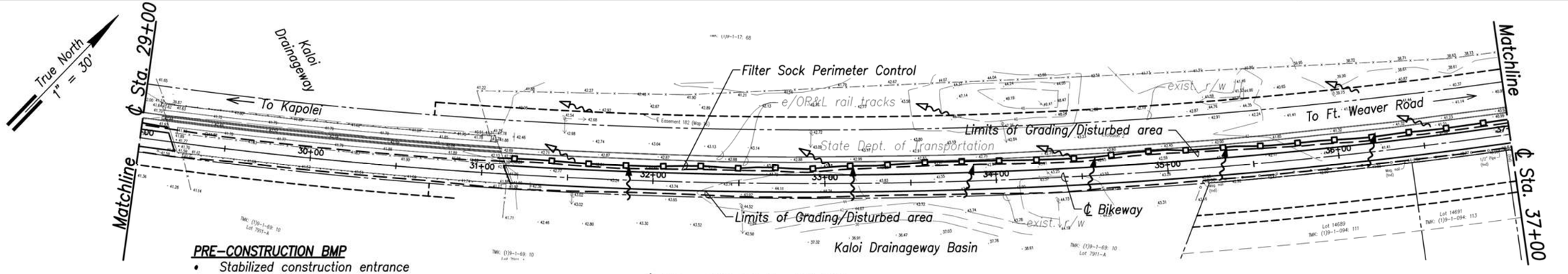
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 88 | 171 |




## ℄ Sta. 21+00 to 29+00

Scale: 1" = 30'

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at Kaloi Basin/Drainageways North of Railroad Tracks.
4. Remove Steel Plate at the End of the Day.
5. Graded Shoulder shall be Seeded Hydromulch.



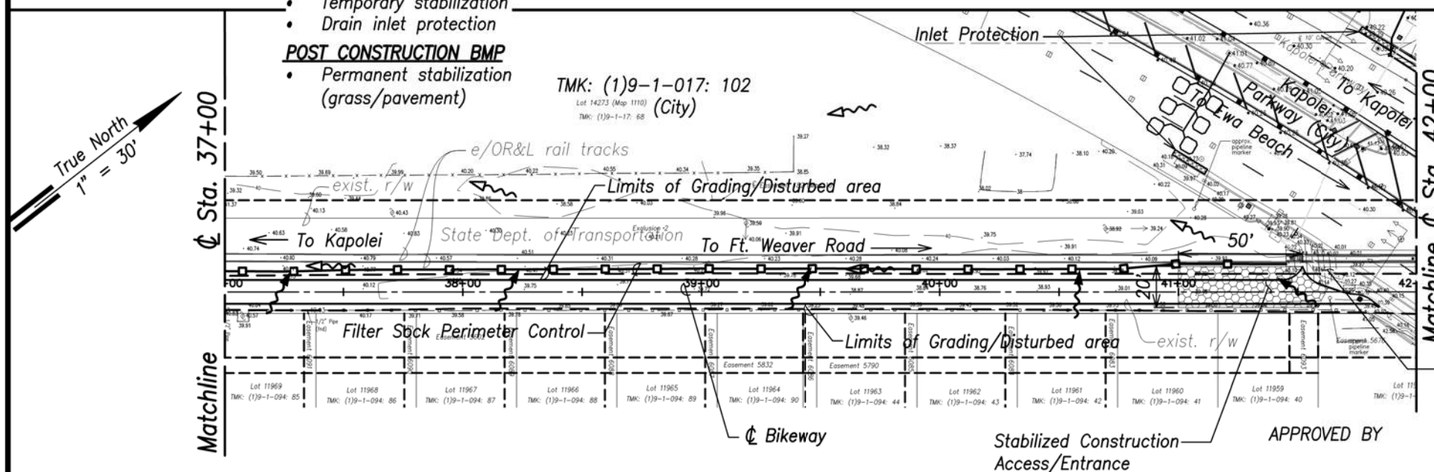

## ℄ Sta. 29+00 to 37+00

Scale: 1" = 30'

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)




## ℄ Sta. 37+00 to 42+00

Scale: 1" = 30'

**LEGEND:**

- Exist. Index Contours
- Exist. Interm. Contours
- Property Line
- Easement
- Limits of Grading/Disturbed Area
- Filter Sock Perimeter Control
- Direction of Flow
- Existing Direction of Flow
- Stabilized Access/Entrance
- Inlet Protection

Graphic Scale:
1" = 30' (30' 0 30' 60')
Scale in Feet

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
SIGNATURE — DATE OF LICENSE EXPIRY

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

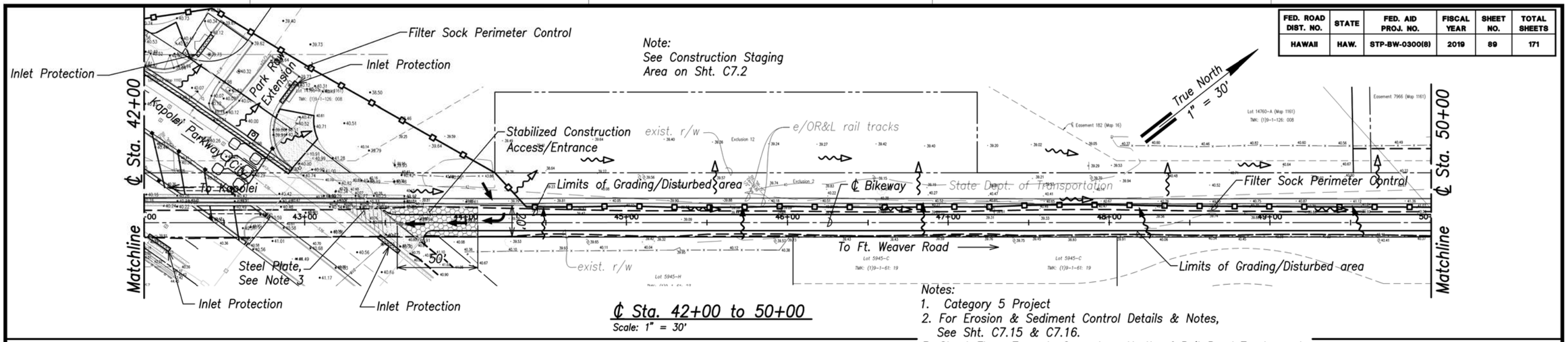
## ℄ STA. 21+00 TO ℄ STA. 42+00

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 89 | 171 |

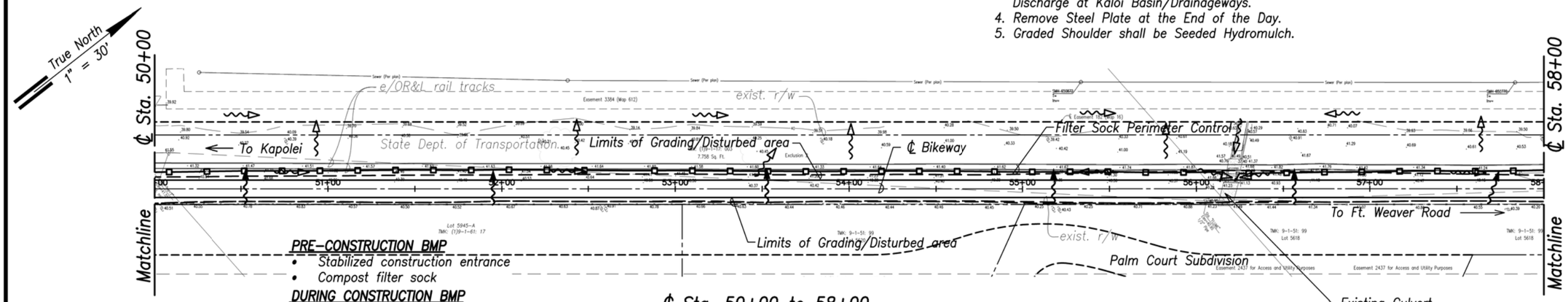



Note:
See Construction Staging Area on Sht. C7.2

## ℄ Sta. 42+00 to 50+00

Scale: 1" = 30'

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flows Towards Open Area North of Rail Road Tracks and Discharge at Kaloi Basin/Drainageways.
4. Remove Steel Plate at the End of the Day.
5. Graded Shoulder shall be Seeded Hydromulch.



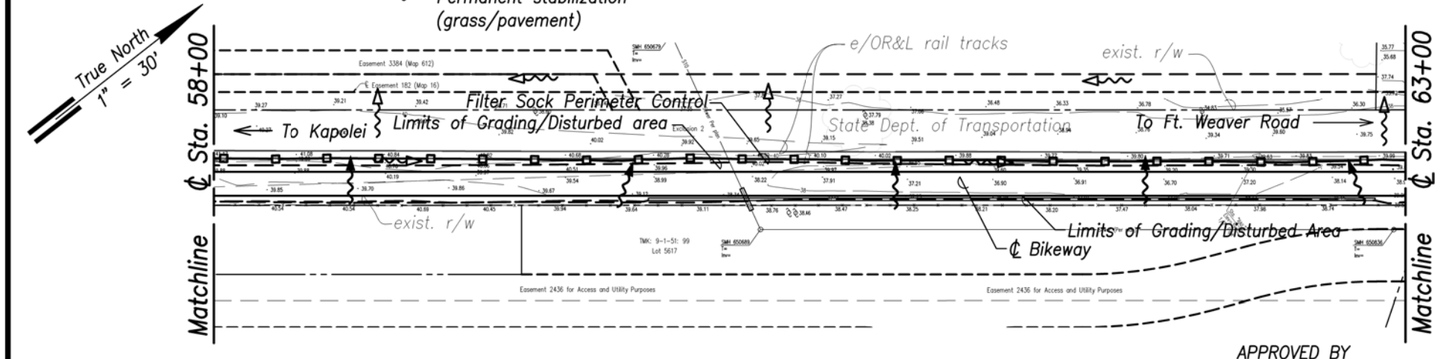

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)

## ℄ Sta. 50+00 to 58+00

Scale: 1" = 30'




## ℄ Sta. 58+00 to 63+00

Scale: 1" = 30'

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed Area |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |
| | Direction of vehicle Access |

Graphic Scale:
1" = 30' 30' 0 30' 60'
Scale in Feet

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 42+00 TO ℄ STA. 63+00

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
SIGNATURE — DATE OF LICENSE EXPIRY

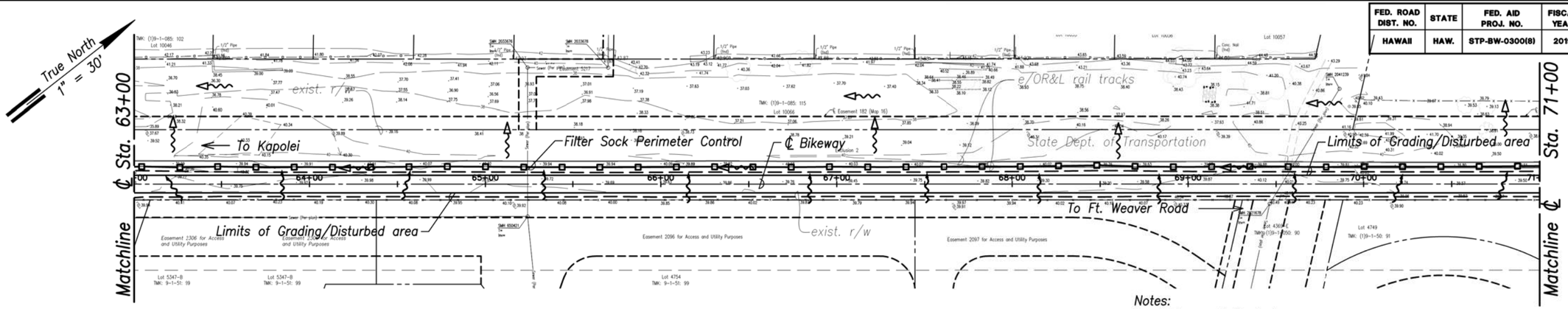
APPROVED BY

Chief, Civil Engineering Branch, DPP Date

SHEET No. C7.4 OF 16 SHEETS

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

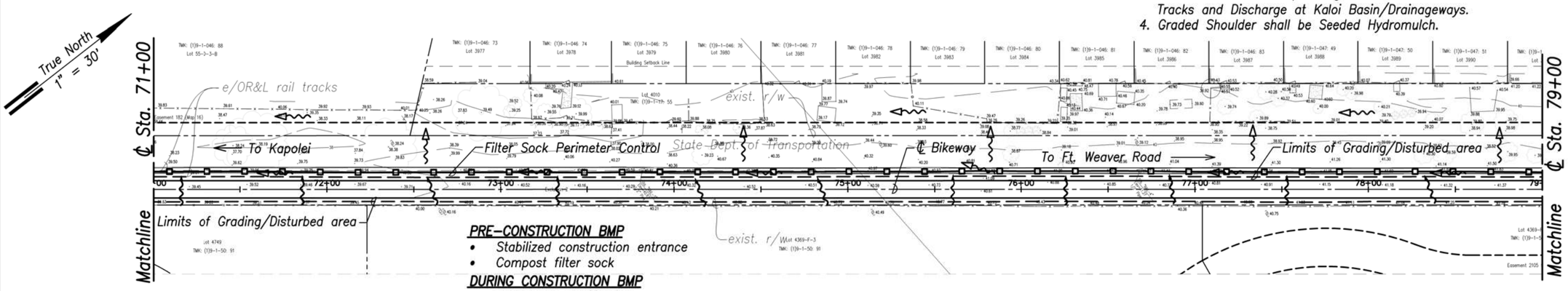
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 90 | 171 |




## ℄ Sta. 63+00 to 71+00

Scale: 1" = 30'

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Towards Open Vegetated Swale North of Railroad Tracks and Discharge at Kaloi Basin/Drainageways.
4. Graded Shoulder shall be Seeded Hydromulch.



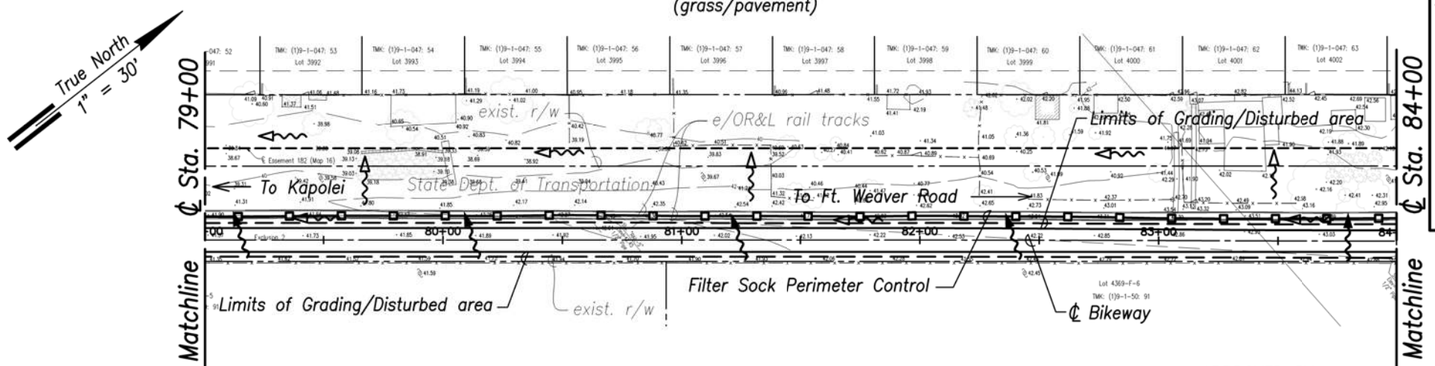

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)

## ℄ Sta. 71+00 to 79+00

Scale: 1" = 30'




## ℄ Sta. 79+00 to 84+00

Scale: 1" = 30'

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed Area |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |

Graphic Scale:

1" = 30' 30' 0 30' 60'

Scale in Feet

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 63+00 TO ℄ STA. 84+00

LEEWARD BIKEWAY

Philippine Sea Rd. to Waipahu Depot Street

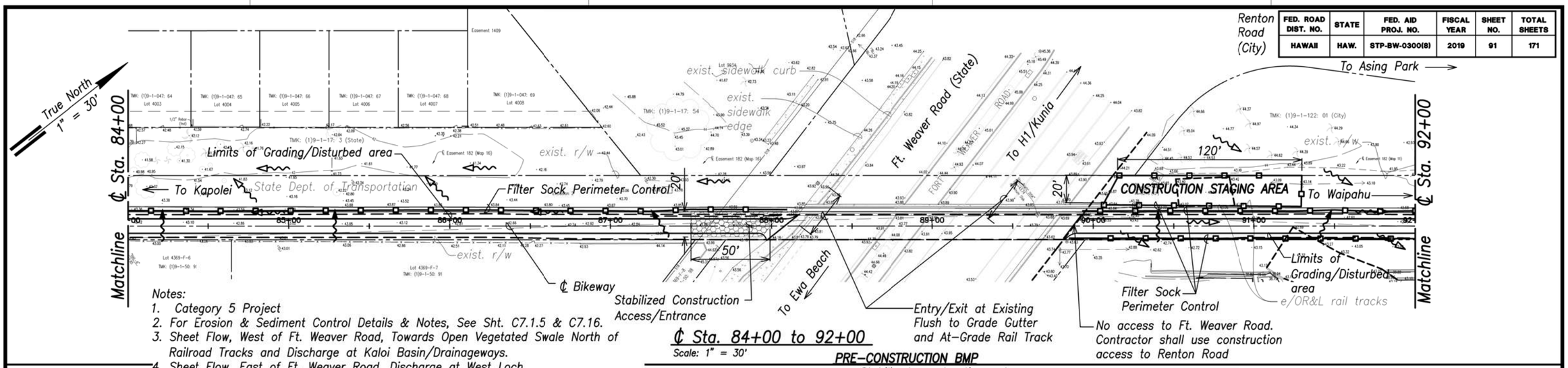
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.5 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 91 | 171 |



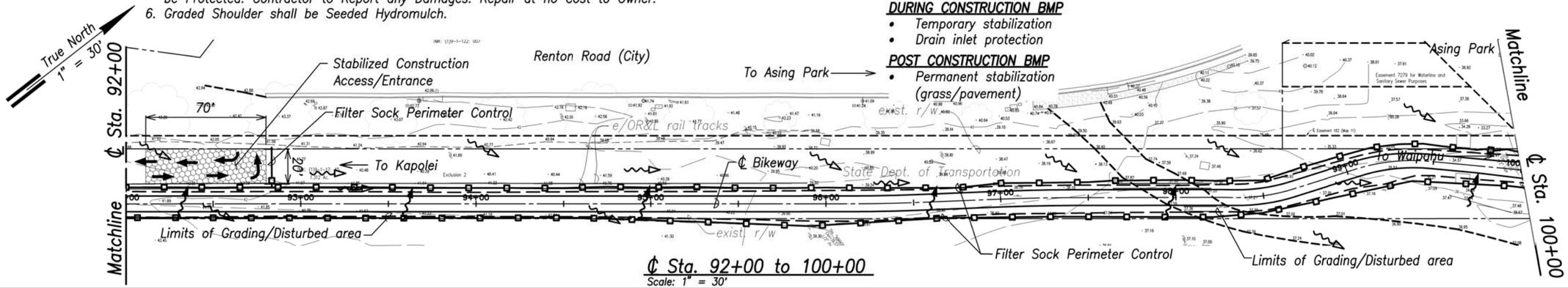

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.1.5 & C7.16.
3. Sheet Flow, West of Ft. Weaver Road, Towards Open Vegetated Swale North of Railroad Tracks and Discharge at Kaloi Basin/Drainageways.
4. Sheet Flow, East of Ft. Weaver Road, Discharge at West Loch.
5. Existing Utility Pole, Boxes, and Petroleum Warning Signs within Staging Area must be Protected. Contractor to Report any Damages. Repair at no Cost to Owner.
6. Graded Shoulder shall be Seeded Hydromulch.

℄ Sta. 84+00 to 92+00
Scale: 1" = 30'

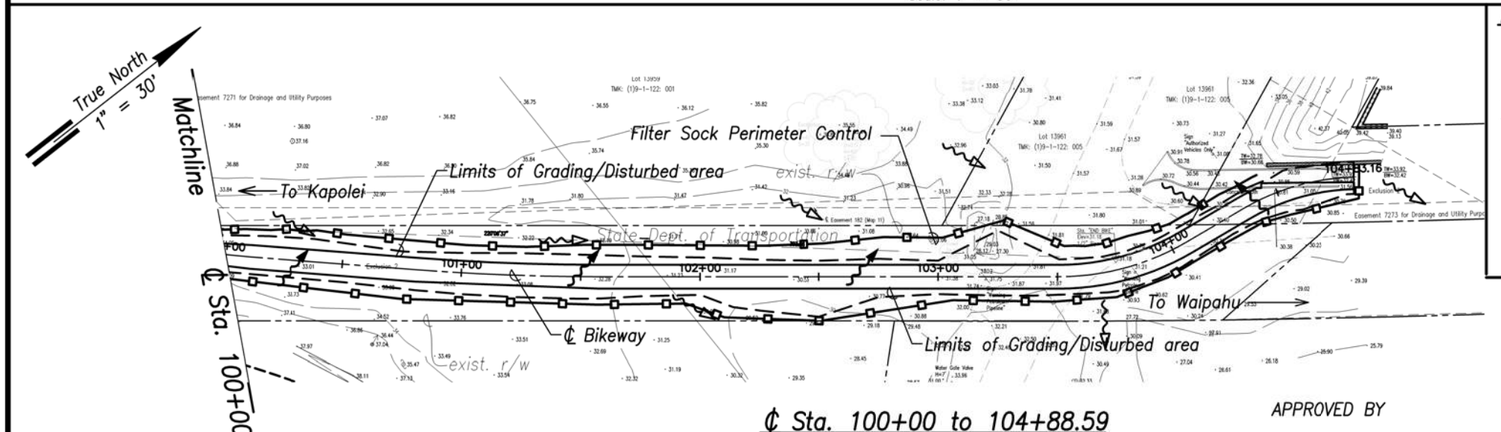
**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)




℄ Sta. 92+00 to 100+00
Scale: 1" = 30'




℄ Sta. 100+00 to 104+88.59
Scale: 1" = 30'

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |
| | Direction of vehicle Access |

Graphic Scale:
1" = 30' (30' 0 30' 60')
Scale in Feet

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 84+00 TO ℄ STA. 104+88.59

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.6 OF 16 SHEETS

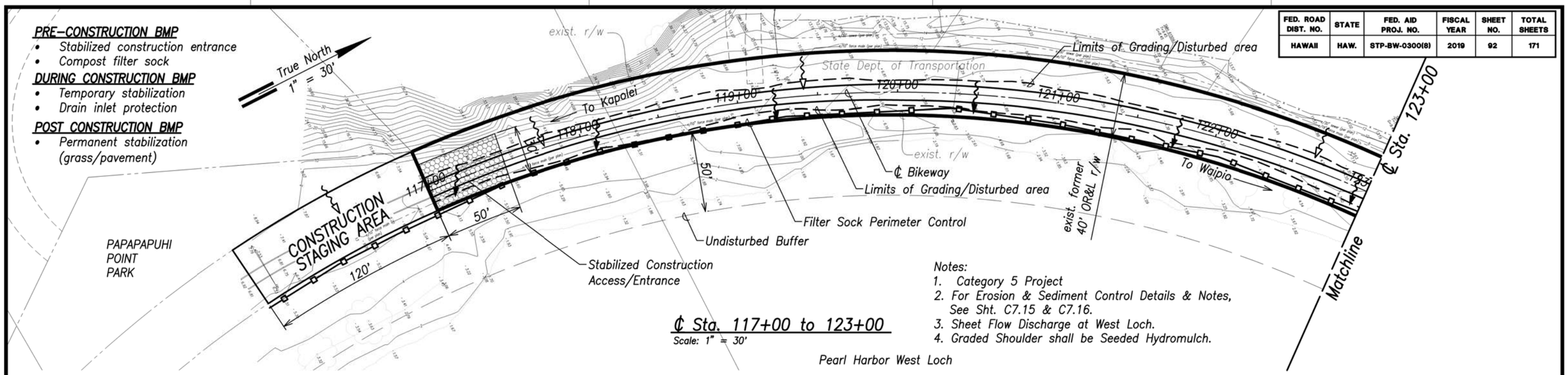
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
|---|---|---|
| | DRAWN BY | |
| | TRACED BY | |
| NOTE BOOK | DESIGNED BY | |
| No. | QUANTITIES BY | |
| | CHECKED BY | |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 92 | 171 |

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

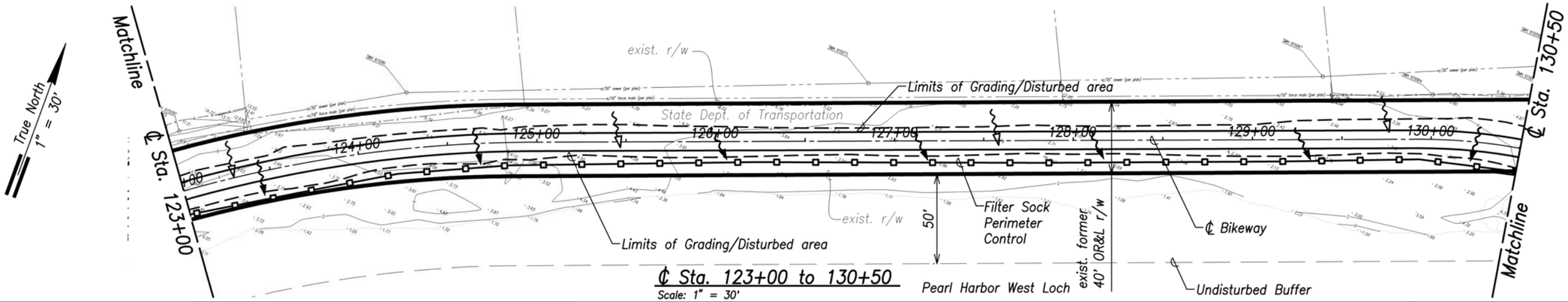
**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)




℄ Sta. 117+00 to 123+00
Scale: 1" = 30'

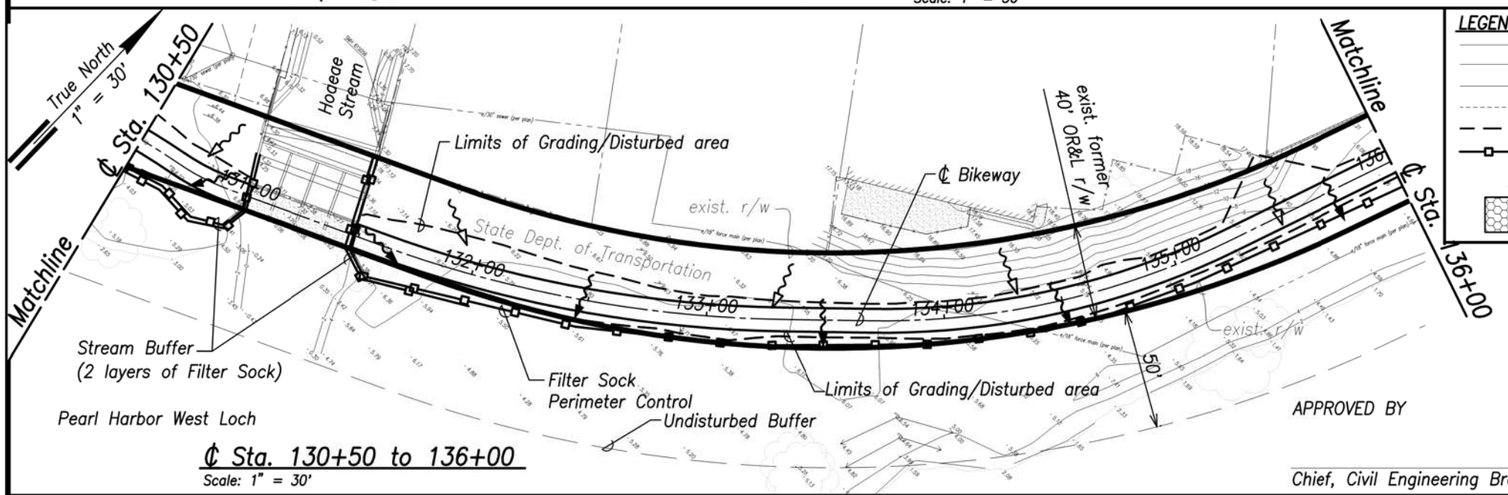
Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at West Loch.
4. Graded Shoulder shall be Seeded Hydromulch.

Pearl Harbor West Loch




℄ Sta. 123+00 to 130+50
Scale: 1" = 30'

Pearl Harbor West Loch




℄ Sta. 130+50 to 136+00
Scale: 1" = 30'

Pearl Harbor West Loch

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed Area |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |

Graphic Scale:
1" = 30' (30' 0 30' 60')
Scale in Feet

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 117+00 TO ℄ STA. 136+00

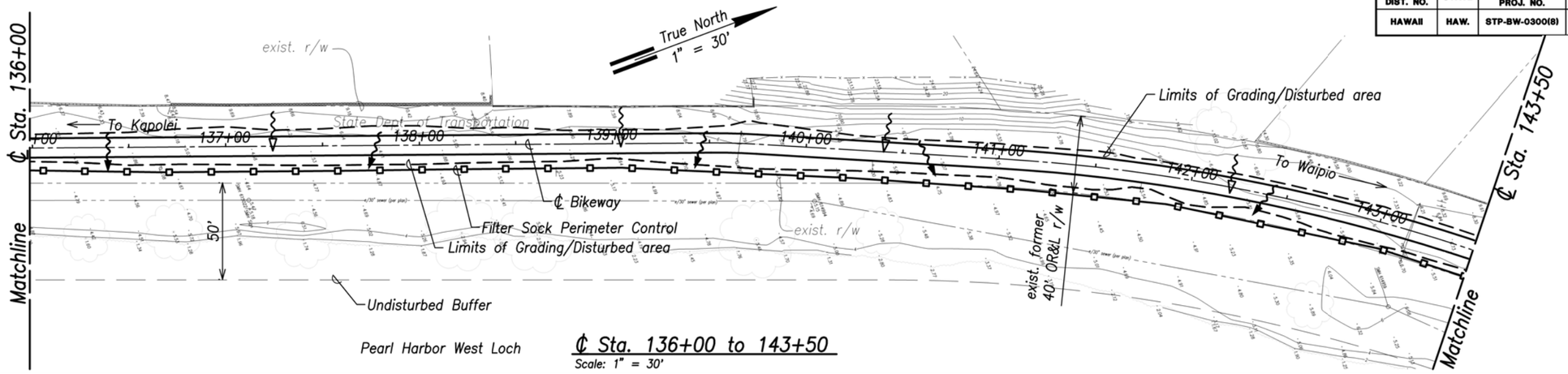
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

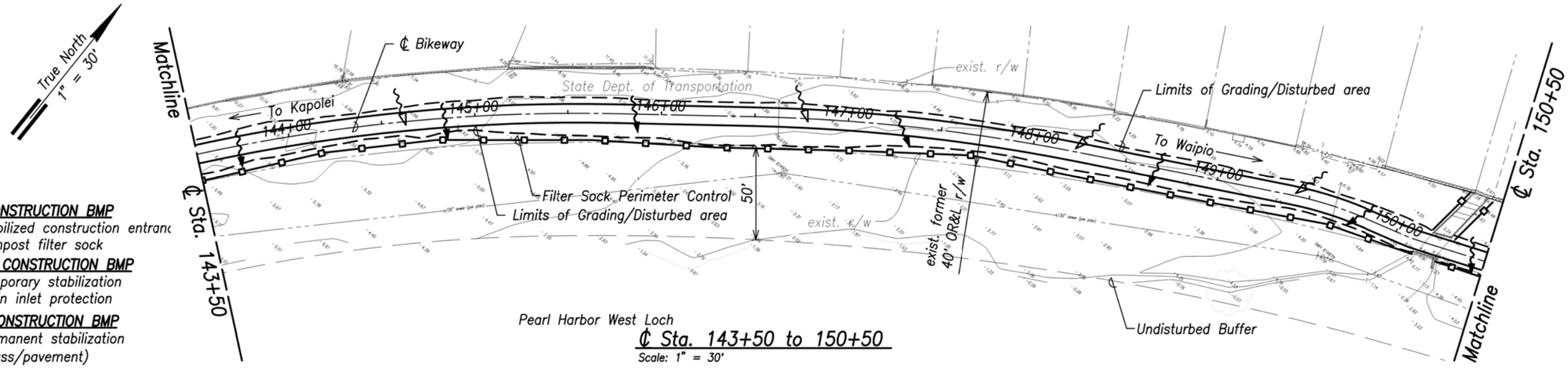
Date: Sept. 1, 2019

SHEET No. C7.7 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 93 | 171 |

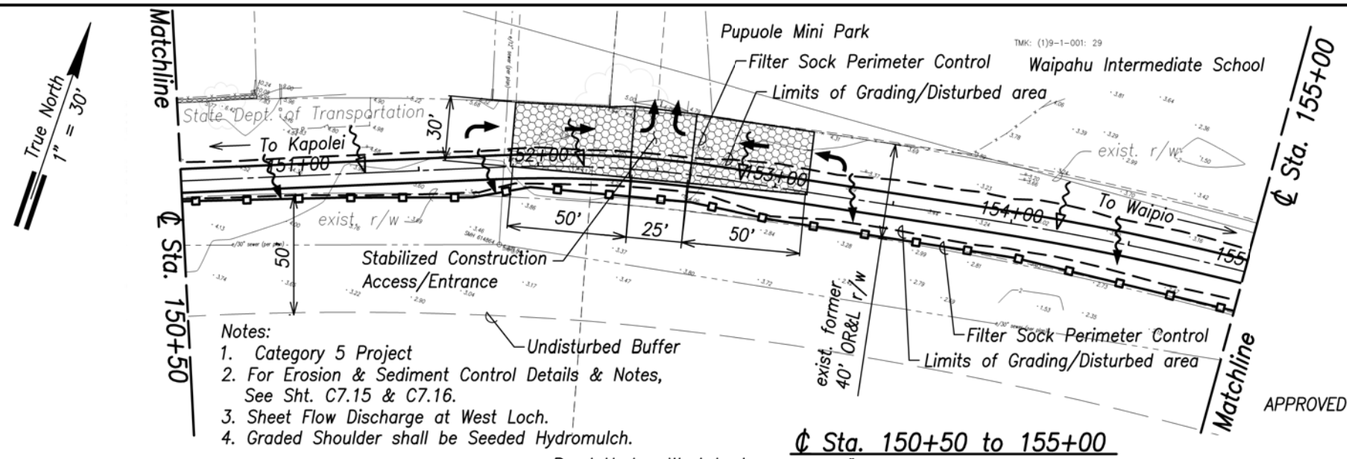



**PRE-CONSTRUCTION BMP**
- Stabilized construction entranc
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)




Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at West Loch.
4. Graded Shoulder shall be Seeded Hydromulch.

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed Area |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |
| | Direction of vehicle Access |

Graphic Scale:
1" = 30' 30' 0 30' 60'
Scale in Feet

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

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

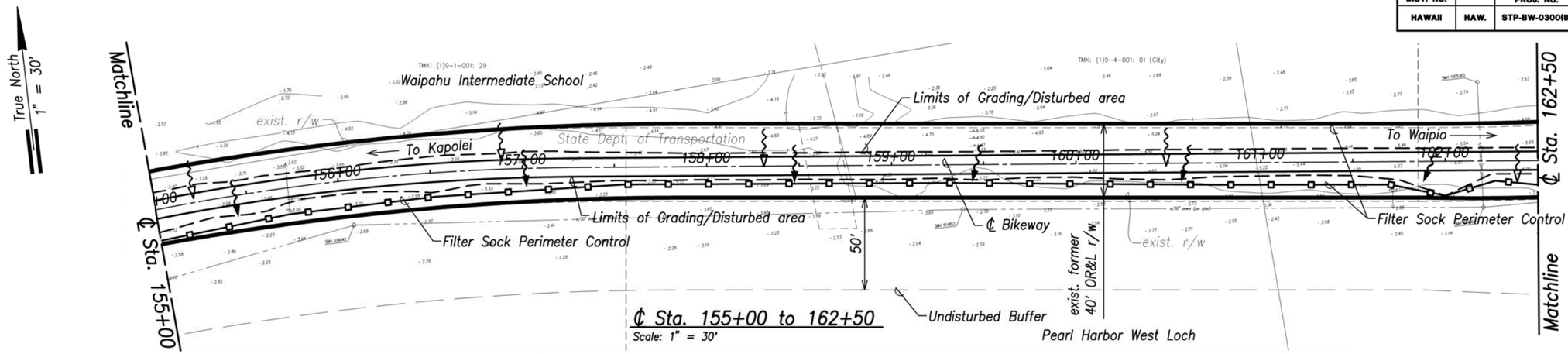
## ℄ STA. 136+00 TO ℄ STA. 155+00

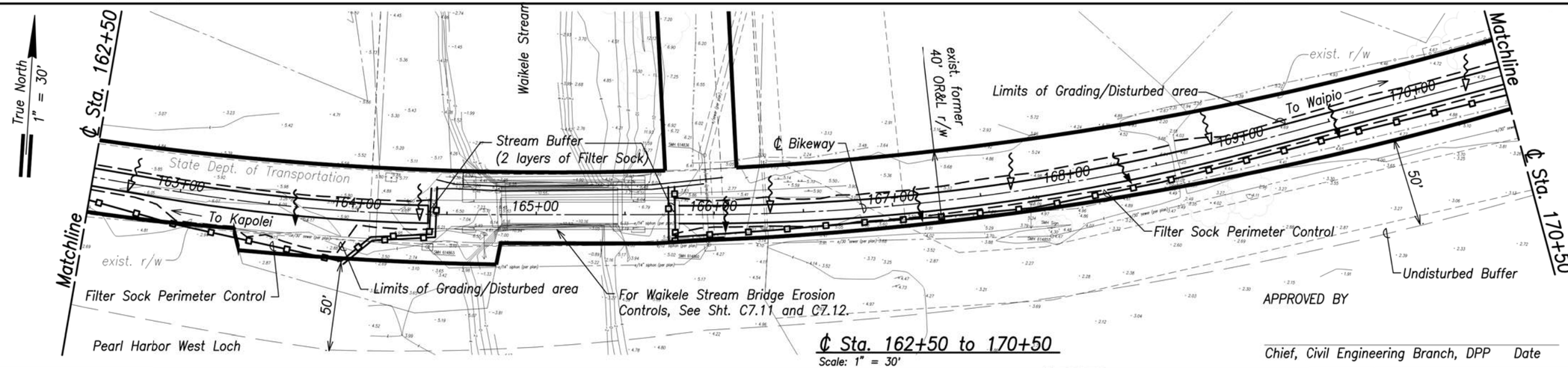
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

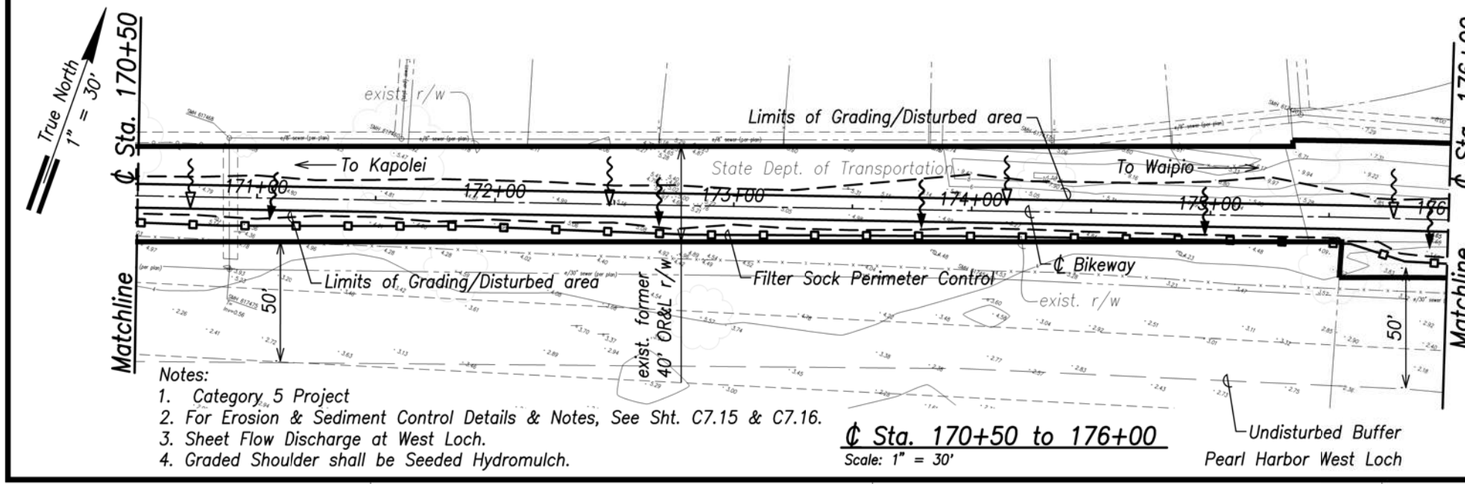
Date: Sept. 1, 2019

SHEET No. C7.8 OF 16 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 94 | 171 |




Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at West Loch.
4. Graded Shoulder shall be Seeded Hydromulch.

LEGEND:

- Exist. Index Contours (100)
- Exist. Interm. Contours (98)
- Property Line
- Easement
- Limits of Grading/Disturbed Area
- Filter Sock Perimeter Control
- Direction of Flow
- Existing Direction of Flow
- Stabilized Access/Entrance

Graphic Scale:

1" = 30' 30' 0 30' 60'

Scale in Feet

PRE-CONSTRUCTION BMP
- Stabilized construction entrance
- Compost filter sock

DURING CONSTRUCTION BMP
- Temporary stabilization
- Drain inlet protection

POST CONSTRUCTION BMP
- Permanent stabilization (grass/pavement)

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE

APR 30, 2020
DATE OF LICENSE EXPIRY

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION & SEDIMENT CONTROL PLAN

## ℄ STA. 155+00 TO ℄ STA. 176+00

LEEWARD BIKEWAY

Philippine Sea Rd. to Waipahu Depot Street

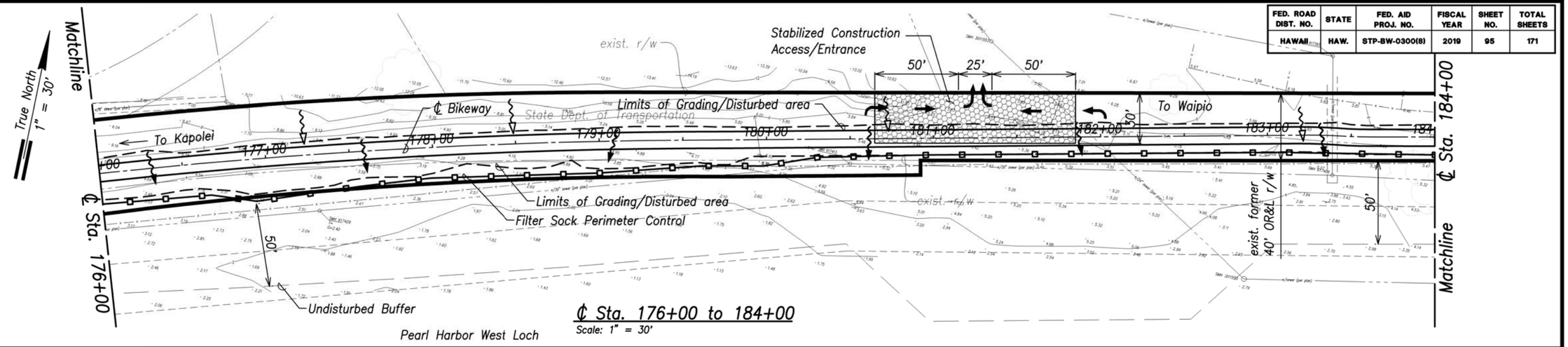
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.9 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 95 | 171 |




℄ Sta. 176+00 to 184+00
Scale: 1" = 30'




℄ Sta. 184+00 to 185+72
Scale: 1" = 30'

Notes:
1. Category 5 Project
2. For Erosion & Sediment Control Details & Notes, See Sht. C7.15 & C7.16.
3. Sheet Flow Discharge at West Loch.
4. Graded Shoulder shall be Seeded Hydromulch.

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)

**LEGEND:**

| | |
|---|---|
| 100 | Exist. Index Contours |
| 98 | Exist. Interm. Contours |
| | Property Line |
| | Easement |
| | Limits of Grading/Disturbed Area |
| | Filter Sock Perimeter Control |
| | Direction of Flow |
| | Existing Direction of Flow |
| | Stabilized Access/Entrance |
| | Direction of vehicle Access |

Graphic Scale:
1" = 30' 30' 0 30' 60'
Scale in Feet

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

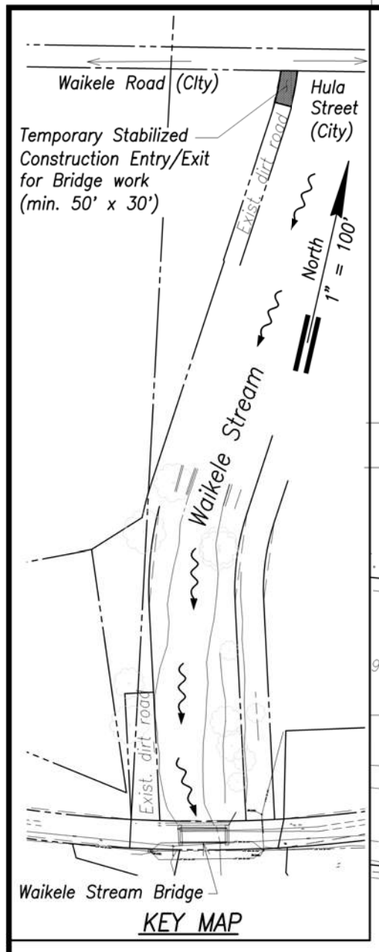
EROSION & SEDIMENT CONTROL PLAN
℄ STA. 176+00 TO ℄ STA. 185+72
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

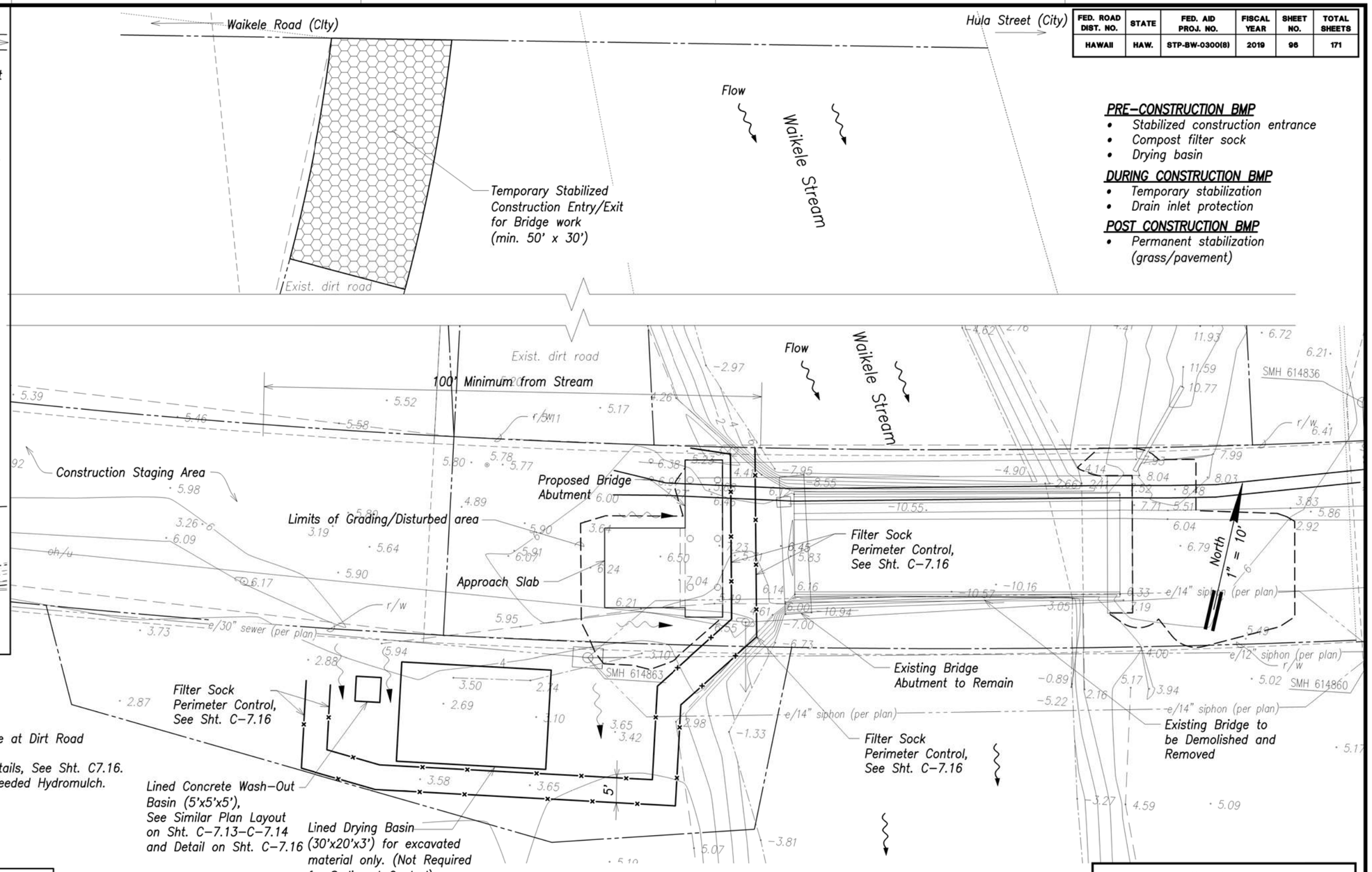
SHEET No. C7.10 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 96 | 171 |




KEY MAP




**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock
- Drying basin

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)

Note:
Install Stabilized Construction Entrance at Dirt Road Entrance from Hula Street.
For Erosion and Sediment Control Details, See Sht. C7.16.
All Disturbed Finish Grade Shall be Seeded Hydromulch.

LEGEND:
- Filter Sock Perimeter Control
- Entry/Exit
- Drainage Flow Direction

Graphic Scale:
1" = 10' 10' 0 10' 20'
Scale in Feet

WAIKELE STREAM BRIDGE – EROSION AND SEDIMENT CONTROL PLAN
Scale: 1" = 10'

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG LICENSED PROFESSIONAL ENGINEER No. 8983-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
SIGNATURE DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

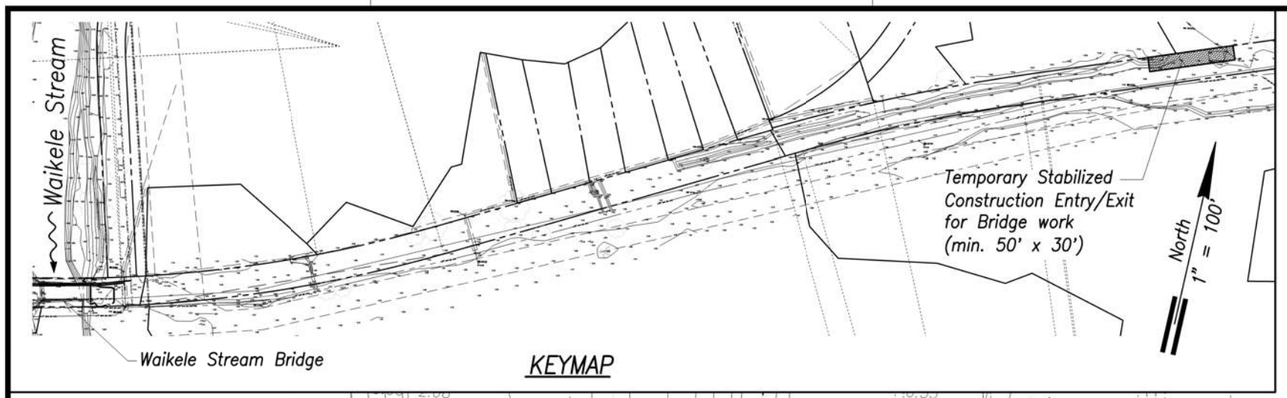
WAIKELE STREAM BRIDGE – PHASE 1
EROSION AND SEDIMENT CONTROL PLAN
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.11 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 97 | 171 |




KEYMAP

***PRE-CONSTRUCTION BMP***
- *Stabilized construction entrance*
- *Compost filter sock*
- *Drying basin*

***DURING CONSTRUCTION BMP***
- *Temporary stabilization*
- *Drain inlet protection*

***POST CONSTRUCTION BMP***
- *Permanent stabilization (grass/pavement)*

Flow
Waikele Stream
Filter Sock Perimeter Control, See Sht. C-7.16
100' Minimum from Stream
SMH 614836
Lined Drying Basin (30'x20'x3') for excavated material only. (Not Required for Sediment Control) See Similar Plan Layout on Sht. C-7.13-C-7.14 and Detail on Sht. C-7.16
North
1" = 10'
Lined Concrete Wash-Out Basin (5'x5'x5'), See Similar Plan Layout on Sht. C-7.13-C-7.14 and Detail on Sht. C-7.16
Proposed Bridge Abutment
Approach Slab
Construction Staging Area
e/14" siphon (per plan)
e/12" siphon (per plan)
e/30" sewer (per plan)
e/ sewer (per plan)
r/w
SMH 614860
Limits of Grading/Disturbed area
Existing Bridge Abutment to Remain
Existing Bridge to be Demolished and Removed
oh/u

*Note:*
*For Erosion and Sediment Control Details, See Sht. C7.16.*
*All Disturbed Finish Grade Shall be Seeded Hydromulch.*

LEGEND:
- Filter Sock Perimeter Control
- Entry/Exit
- Drainage Flow Direction
- Direction of vehicle Access

Graphic Scale:
1" = 10' 10' 0 10' 20'
Scale in Feet

## WAIKELE STREAM BRIDGE – EROSION AND SEDIMENT CONTROL PLAN
Scale: 1" = 10'

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

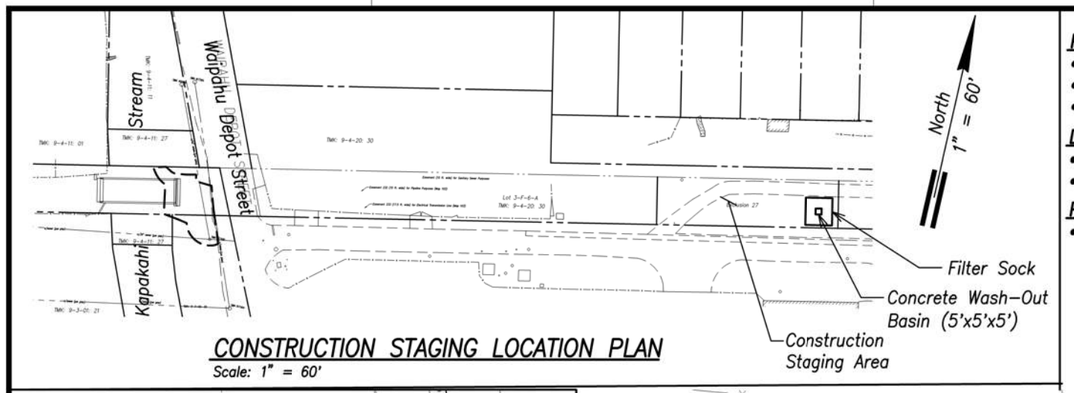
WAIKELE STREAM BRIDGE – PHASE 2
EROSION AND SEDIMENT CONTROL PLAN
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.12 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 98 | 171 |



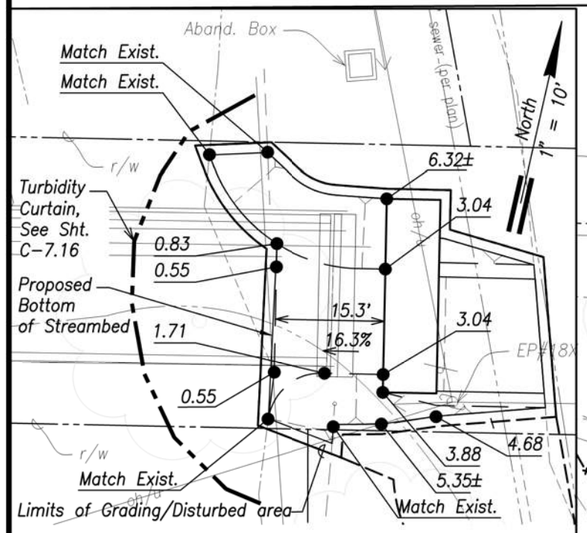

## CONSTRUCTION STAGING LOCATION PLAN

Scale: 1" = 60'

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock
- Drying basin

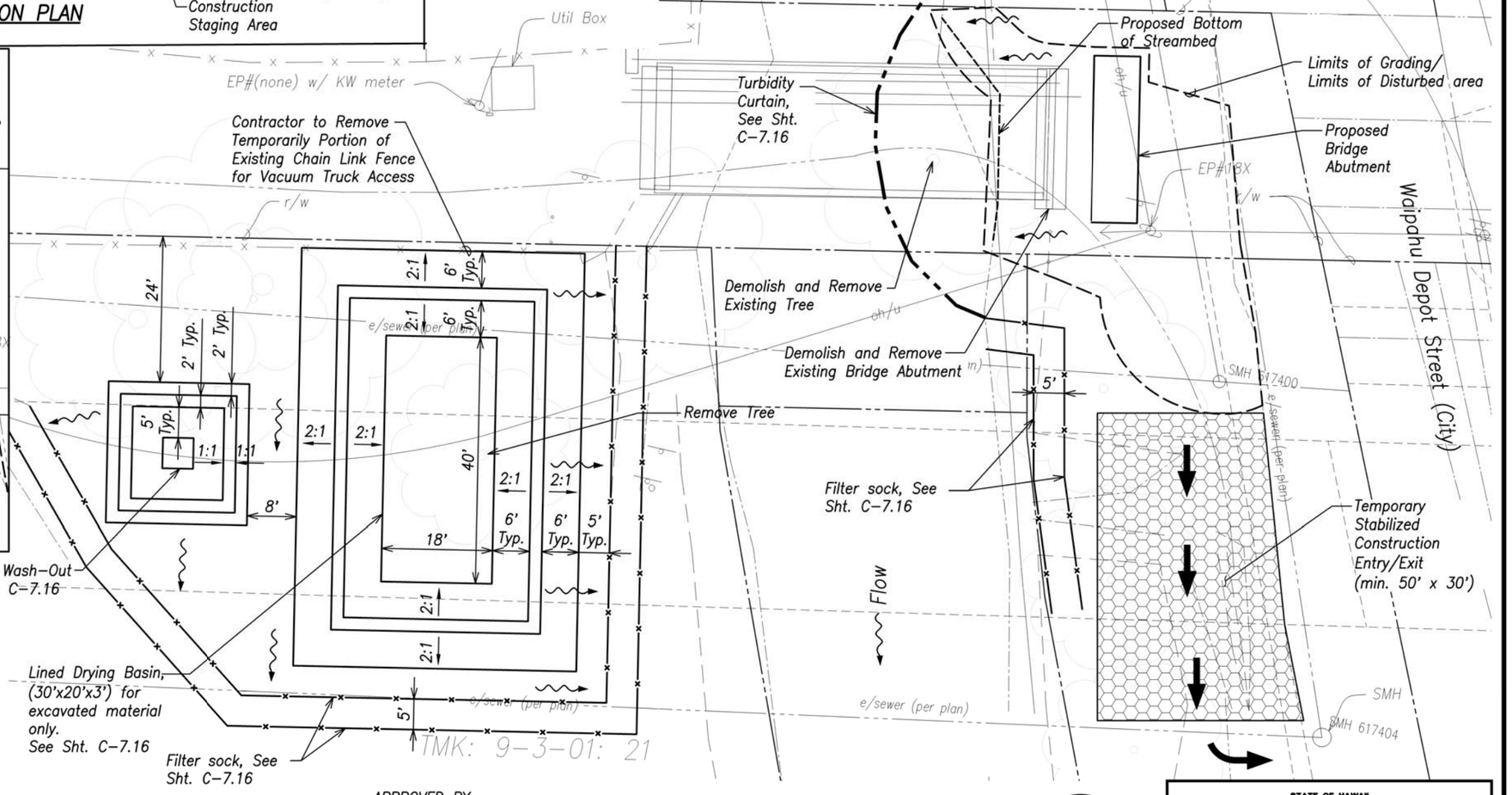
**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)




## STREAM ALTERATION GRADING PLAN

Scale: 1" = 10'




## Construction Phasing

### Phase 1

1. Install erosion control measures shown on plan.
2. Demolish and remove existing improvements called out on plans.
3. Excavate streambed and grade surrounding area to elevations shown on plans.

**LEGEND:**
- Filter Sock
- Turbidity Curtain
- Entry/Exit
- Drainage Flow Direction
- Direction of vehicle Access

**Notes:**
1. For Erosion and Sediment Control Details, See Sht. C7.16.
2. Lined Drying Basin not required for Sediment Control.
3. All Disturbed Finish Grade Shall be permanently stabilized.

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

Graphic Scale: 1" = 10' (10' 0 10' 20') Scale in Feet

STACY K. YOKOOJI ARMSTRONG LICENSED PROFESSIONAL ENGINEER No. 8983-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

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

## KAPAKAHI STREAM BRIDGE – EROSION AND SEDIMENT CONTROL PLAN

Scale: 1" = 10'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

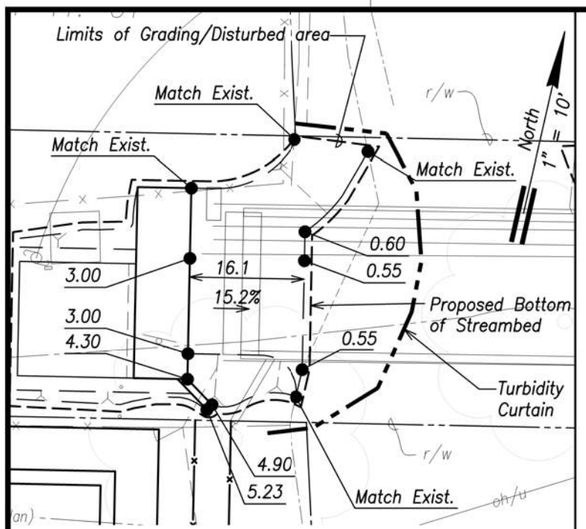
# KAPAKAHI STREAM BRIDGE– PHASE 1 EROSION AND SEDIMENT CONTROL PLAN

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

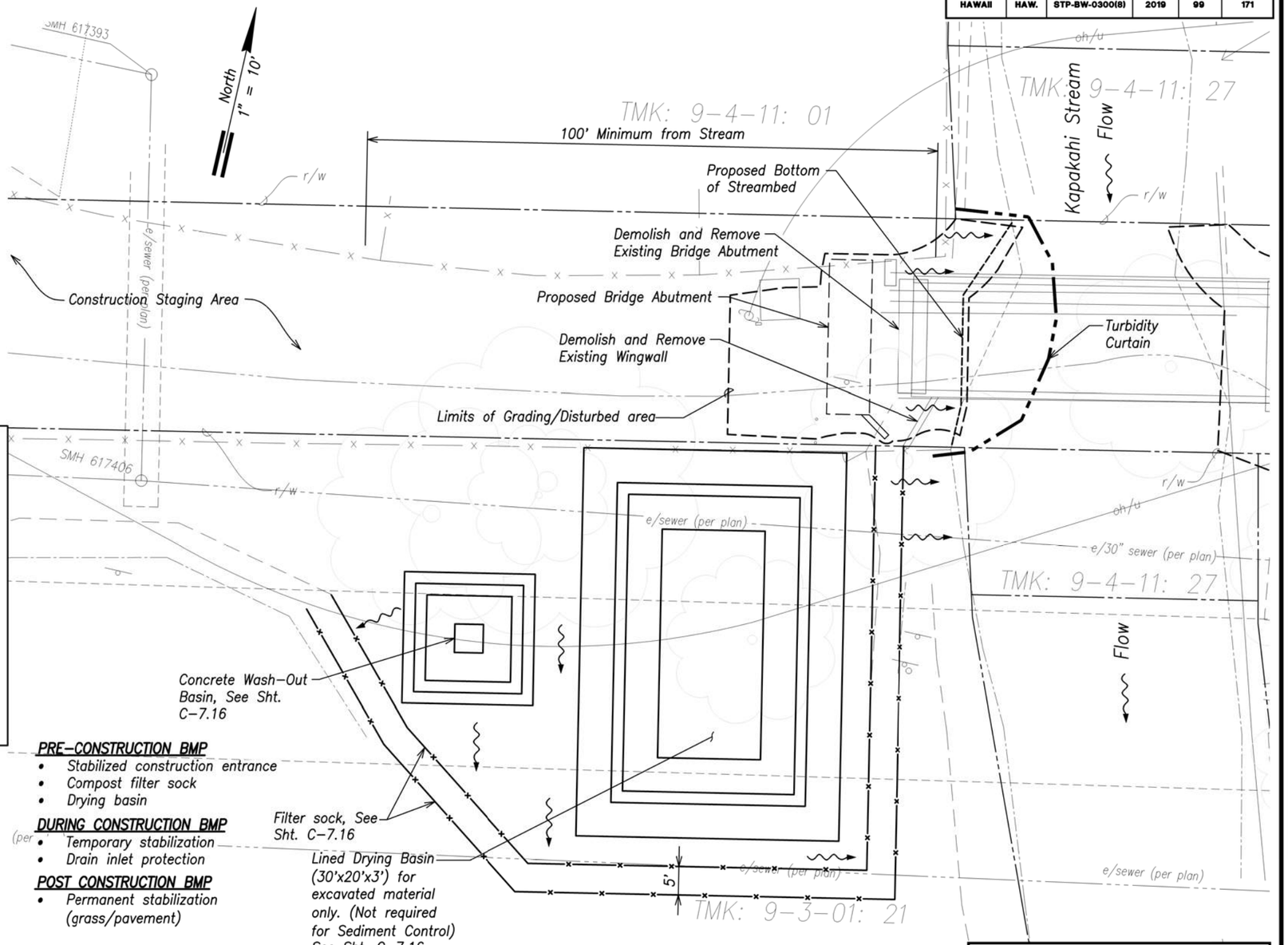
SHEET No. C7.13 OF 16 SHEETS

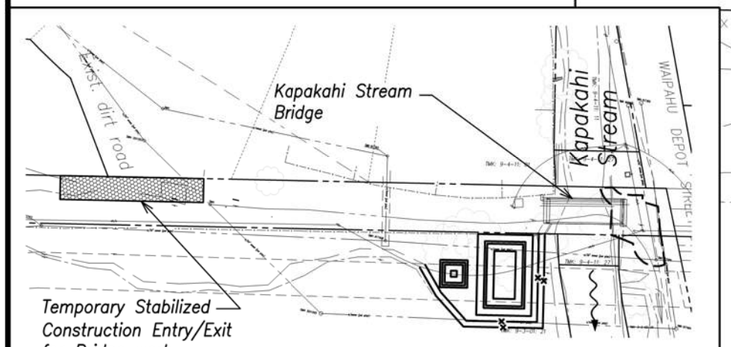
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 99 | 171 |




## STREAM ALTERATION GRADING PLAN

Scale: 1" = 10'




KEYMAP

## Construction Phasing

### Phase 2

1. Install erosion control measures shown on plan. Contractor shall inspect and ensure re-used erosion control measures are in good working condition.
2. Demolish and remove existing improvements called out on plans.
3. Excavate streambed and grade surrounding area to elevations shown on plans.

**PRE-CONSTRUCTION BMP**
- Stabilized construction entrance
- Compost filter sock
- Drying basin

**DURING CONSTRUCTION BMP**
- Temporary stabilization
- Drain inlet protection

**POST CONSTRUCTION BMP**
- Permanent stabilization (grass/pavement)

LEGEND:
- Filter Sock
- Turbidity Curtain
- Entry/Exit
- Drainage Flow Direction

Note:
1. Contractor to install 50' x 30' temporary stabilized construction entry/exit at the connection point to the existing roadway.
2. For Erosion and Sediment Control Details, see Sht. C7.16.
3. Contractor to reinstall chain link fence temporarily removed and reinstate areas used for Basins to satisfactory condition.
4. All Disturbed Finish Grade Shall be permanently stabilized.

Graphic Scale:

1" = 10' 10' 0 10' 20'

Scale in Feet

## KAPAKAHI STREAM BRIDGE - EROSION AND SEDIMENT CONTROL PLAN

Scale: 1" = 10'

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

## KAPAKAHI STREAM BRIDGE - PHASE 2 EROSION AND SEDIMENT CONTROL PLAN

LEEWARD BIKEWAY

Philippine Sea Rd. to Waipahu Depot Street

Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.14 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 100 | 171 |

## Erosion and Sediment Control Plan Schedule and Rain Response Plan Notes:

Project Sequence:

1. Install stabilized construction entrances, perimeter controls, inlet protection, and temporary fencing for protected areas, clearing and grubbing as necessary for the installation of these BMPS.
2. Proceed with clearing, grading and construction.. Relocate, reconstruct and maintain bmps as needed to keep them effective at all times. Initiate temporary stabilization immediately once grading is completed in each phase.
3. Initiate stabilization of steep slopes (> 15%) with hydroseeding as soon as grading is completed on those areas. Install permanent irrigation system prior to permanent seeding.
4. Plant permanent ground cover according to the landscaping plan as soon as possible.
5. Remove or dismantle temporary erosion control structures after full establishment of permanent vegetative cover.
6. Practice good housekeeping measures throughout the duration of construction.
7. Inspections will be performed weekly.

Rain Response Plan:

The following will be performed when heavy rains, tropical storm or hurricane is imminent or is forecasted in the next 48 hours:

1. Temporary suspension of octive grading and trenching.
2. Inspect all perimeter controls, and inlet protection devices, and maintain as needed. Reinstall any perimeter controls that were removed due to active work in the area. If a severe storm is expected, remove inlet protection devices to prevent flooding on surrounding streets.
3. Cover or relocate material stockpiles and liquid material containers to avoid contact with rainwater.
4. Place spill pans or oil-only spill pads under construction vehicles to prevent runoff from contacting any spilled petroleum products. Properly dispose of any accumulated oily water after the rain event.
5. Re-inspect after the approaching heavy rains, tropical storm or hurricane and replace or maintain bmps as needed.

## Erosion Prevention / Sediment Control Notes

1. The Contractor shall follow the guidelines in the City and County of Honolulu's "Rules Relating to Water Quality."
2. Contractor shall comply with the project scheduling requirements of the City's Rules Relating to Water Quality.
3. An ESCP coordinator must be designated using the form in appendix A to the Rules Relating to Water Quality prior to permitting.
4. Measures to control erosion and other pollutants shall be in place before any earthwork is initiated.
5. Slope Protection
   Slope protection is required on areas with slopes greater than 15% and on areas of moderate slope that are prone to erosion unless they are being actively worked. Use diversion of slope (dikes, swales, slope drains) to divert water around the slope. Provide a 10-ft buffer zone at the toe of slope. Only 5 acres may be disturbed at anytime on slopes greater than 15%.
6. Temporary stabilization is required on disturbed areas which are at final grade or when the disturbed area will not be worked for 14 consecutive days or more.
7. Permanent Stabilization
8. Preserve Existing Vegetation
   Clearly mark the areas to be preserved with flags or temporary fencing. Where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.
9. Minimize Soil Compaction
   Areas where final stabilization or infiltration practices will be installed shall be protected from excessive compaction during construction. Vehicle and equipment use shall be restricted or techniques to condition the soils to support vegetation shall be implemented in the areas that have been compacted and are designated to remain vegetative or post-construction infiltration areas. Clearly mark the areas to be avoided with flags or temporary fencing. where temporary fencing is used, fencing must be adequately supported by posts and maintained in an upright position.
10. Perimeter Controls
    Perimeter controls are required downslope of all disturbed areas. Maintain downstream vegetated buffer area.
11. Inlet Protection
    - All storm drain inlets onsite and those offsite which may receive runoff from the site shall use an inlet protection device unless they are directed to a sediment basin.
    - Sediment levels may not exceed one third of the height of a sediment barrier or inlet protection device at any point along the length of the sediment barrier or the inlet protection device.
    - Sediment barriers and inlet protection devices must be unclogged and cleaned when performance is compromised.
    - Torn, weathered or sagging sediment barriers or inlet protection devices must be repaired or replaced immediately.
12. Tracking Control
    - Minimize sediment track-out onto off-site streets, other paved areas, and sidewalks from vehicles exiting the construction site by restricting vehicle traffic to properly designated areas and using additional controls to remove sediment from vehicle tires prior to exiting the site.

## Erosion Prevention / Sediment Control Notes (cont'd)

- Vehicular parking and movements on project sites must be confined to paved surfaces or predefined parking areas and vehicle paths, which shall be marked with flags or boundary fencing.
- All pollutants and materials that are dropped, washed, tracked, spilled, or otherwise discharged from a project site to off-site streets, other paved areas, sidewalks or the ms4 must be cleaned using dry methods such as sweeping or vacuuming.
- Washing pollutants and materials that are discharged from the project site to the ms4 into drain inlets or catch basins is prohibited unless the material is sediment and the inlets are directed to a sediment basin or sediment trap.

13. Best management practices (BMPs) shall not be removed until final stabilization is complete for that phase.
14. Refer to City and County of Honolulu Best Management Practices Manual- Construction, for more information on BMPs.

The followings BMPs were determined to be not applicable based on the specific site conditions. As construction progressed, revisions may be necessary and will be provided to DPP inspectors.

- Sediment Barriers
  - Not required as the proposed BMPs (perimeter control, sandbag berm, inlet protections) are sufficient to address any potentiol sediment runoff
- Diversion BMPs to divert upstream runoff around disturbed areas of the site
  - N/A since grading occurs on existing slopes less than 15%
- Velocity Dissipation Devices
  - There are no outlets requiring velocity dissipation devices.
- Sediment Traps
  - N/A due to area to be disturbed is greater than 5 acres.
- Sediment Basins
  - Justification provided to DPP in separate document.

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE APR 30, 2020 DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION AND SEDIMENT CONTROL NOTES
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP-BW-0300(8)

Date: Sept. 1, 2019

SHEET No. C7.15 OF 16 SHEETS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 100S-1 | 171 |

## GOOD HOUSEKEEPING BMPS NOTES:

1. *Street Sweeping and Vacuuming.*

   *all pollutants discharged from construction site to off–site areas must be swept or vacuumed each day before leaving the job site.*

2. *Materials delivery, storage and use management.*

   *Prevent, reduce, or eliminate the discharge of pollutants from material delivery, storage, and use to the storm water system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, installing secondary containment. Construction materials, waste, toxic and hazardous substances, stockpiles and other sources of pollution shall not be stored in buffer areas, near areas of concentrated flow, or areas abutting the ms4, receiving waters, or drainage improvements that discharge off–site. Primary and secondary containment controls and covers shall be implemented to the maximum extent practical (MEP).*

3. *Spill prevention and control.*

   *Create and implement spill prevention and response plans to eliminate and minimize the discharge of pollutants to the MS4 and receiving waters from leaks and spills by reducing the chance for spills, absorbing, containing, and cleaning up spills and properly disposing of spill materials. At a minimum, all projects shall cleanup all leaks and spills immediately.*

4. *Hazardous materials.*

   *Prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use and waste disposal. In the event that hazardous materials are discharged to the MS4, the property owner or ESCP Coordinator shall immediately notify the Department of Facilities Maintenance, Honolulu Fire Department, and Honolulu Police Department of the discharge by telephone. A written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the Director no less than 3 days after notification by phone.*

5. *Nonhazardous materials.*

   *In the event that nonhazardous materials are discharged to the MS4, the property owner or ESCP coordinator shall notify the City Department of Facilities Maintenance by telephone no later than the next business day. A written report describing the pollutants that were discharged, the reasons for the discharge, and the measures that have been taken or will be taken to prevent a reoccurrence of the discharge shall be submitted to the Director no less than 3 days after notification by phone.*

6. *Vehicle and equipment cleaning.*

   *Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment cleaning operations by using off–site facilities when feasible, washing in designated, contained areas only, and eliminating discharges to the storm drain system by evaporating and/or treating wash water, as appropriate or infiltrating wash water for exterior cleaning activities that use water only.*

7. *Vehicle and equipment fueling.*

   *Prevent fuel spills and leaks by using off–site facilities, fueling only in designated areas, enclosing or covering stored fuel, and implementing spill controls such as secondary containment and active measures using spill response kits.*

8. *Vehicle and equipment maintenance.*

   *Eliminate and minimize the discharge of pollutants to storm water from vehicle and equipment maintenance operations by using off–site facilities when feasible, performing work in designated areas only, using spill pads under vehicles and equipment, checking for leaks and spills, and containing and cleaning up spills immediately.*

9. *Solid waste management.*

   *Prevent or reduce discharge of pollutants to the land, groundwater, and in storm water from solid waste or construction and demolition waste by providing designated waste collection areas, collect site trash daily, and ensuring that construction waste is collected, removed, and disposed of only at authorized disposal areas.*

## GOOD HOUSEKEEPING BMPS NOTES CONT.:

10. *Sanitary/Septic waste management.*

    *Temporary and portable sanitary and septic waste systems shall be mounted or staked in, well–maintained and scheduled for regular waste disposal and servicing. Sources of sanitary and/or septic waste shall not be stored near the MS4 or receiving waters.*

11. *Stockpile management.*

    *Stockpiles shall not be located in drainage ways, within 50 feet from areas of concentrated flows, and are not allowed in the City Right–of–Way. Sediment barriers or silt fences shall be used around the base of all stockpiles. Stockpiles shall not exceed 15 feet in height. Stockpiles greater than 15 feet in height shall require 8 foot wide benching in accordance with ROH Chapter 14, Article 15. Stockpiles must be covered with plastic sheeting or a comparable material if they will not be actively used within 7 days.*

12. *Liquid waste management.*

    *Liquid waste shall be contained in a controlled area such as a holding pit, sediment basin, roll–off bin, or portable tank of sufficient volume and to contain the liquid wastes generated. Containment areas or devices must be impermeable and leak free and should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains.*

13. *Concrete waste management.*

    *Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout offsite or performing onsite washout in a designated area constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations. plastic lining material should be a minimum of 10 millimeter polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material. Containment areas or devices should not be located where accidental release of the contained liquid can discharge to water bodies, channels, or storm drains. washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75 percent full. Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of as solid wastes.*

14. *Contaminated soil management.*

    *At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheeting. Contaminated soil should be disposed of properly in accordance with all applicable regulations.*

15. *Dust Control.*

    *The Contractor, at his own expense, shall provide effective measures for the control of dust from the project site and haul roads so it shall not be transported or discharged to off–site areas. The work must be in conformance with air pollution control standards contained in the Hawaii Administrative Rules: Title 11 Chapter 60.1, "Air Pollution Control".*

16. *BMP and Site Maintenance.*

    *The Contractor shall maintain temporary erosion control measures throughout the project duration. The Contractor shall clean trash and debris around the surrounding area on a weekly basis.*

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

*APPROVED BY*

*Chief, Civil Engineering Branch, DPP (For Grading Purposes only)* *Date*

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983–C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16–115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE — APR 30, 2020 DATE OF LICENSE EXPIRY

| DATE | REVISION |
|---|---|
| 11/1/19 | 1 New Sheet |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION AND SEDIMENT CONTROL NOTES

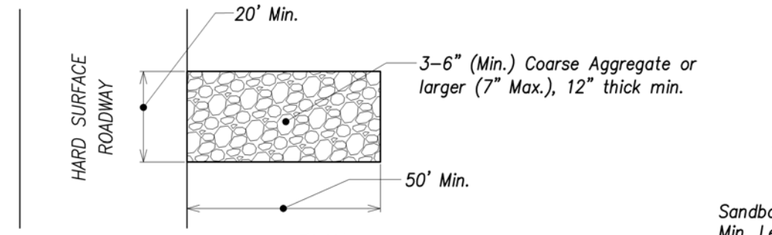
LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP–BW–0300(8)

Date: Sept. 1, 2019

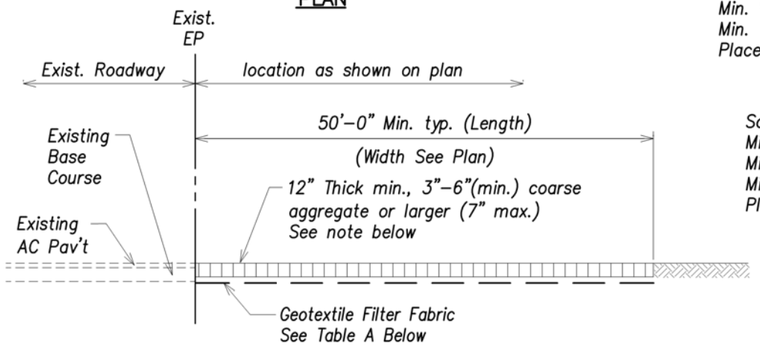
SHEET No.C7.15AOF 16 SHEETS

ADD. 100S-1

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | STP-BW-0300(8) | 2019 | 101 | 171 |




PLAN

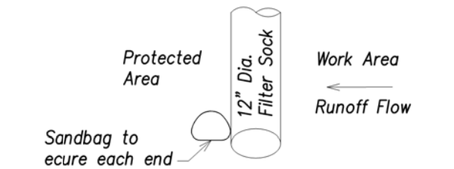



SECTION

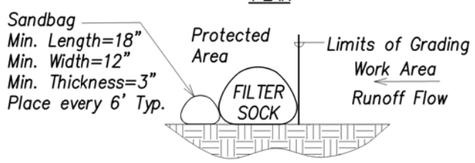
Note:
12" Coarse Aggregate layer shall be removed immediately prior to installation of roadway base course.

| Table A Geotextile Requirements | |
|---|---|
| Physical Property | Requirements |
| Grab Tensile Strength | 220 LB (ASTM D1682) |
| Elongation Failure | 60% (ASTM D1682) |
| Mullen Burst Strength | 430 lb (ASTM d3768) |
| Puncture Strength | 125 lb (ASTM d751, modified) |
| Equivalent Opening | size 40–80 (U.S. STD Sieve, CW–02215) |

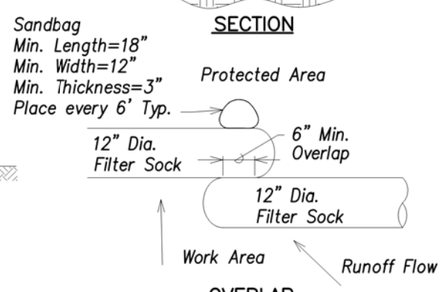
## CONSTRUCTION INGRESS/EGRESS
NOT TO SCALE




PLAN

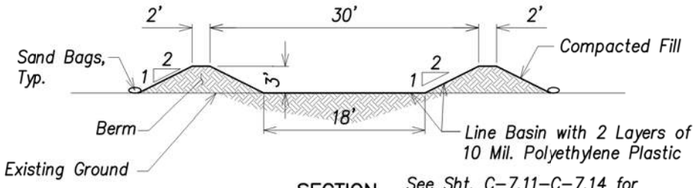



SECTION



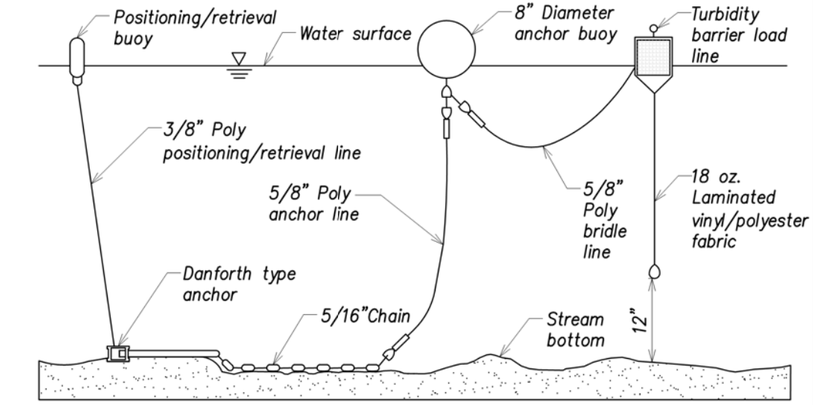

OVERLAP

## 12" DIA. FILTER SOCK
NOT TO SCALE

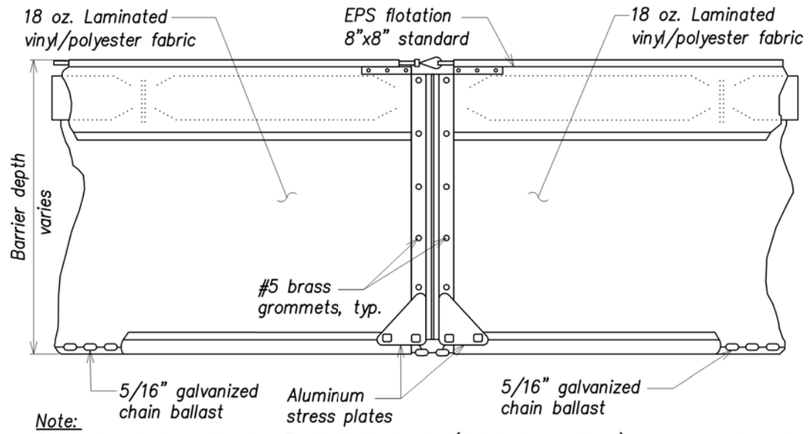



SECTION See Sht. C–7.11–C–7.14 for Plan and Location of Basin

## DRYING BASIN
NOT TO SCALE

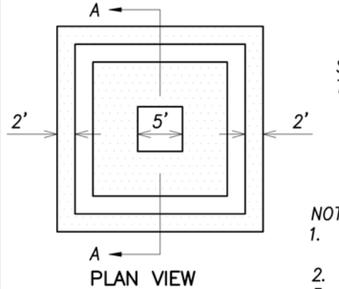



## TURBIDITY CURTAIN ANCHOR DETAIL
NOT TO SCALE

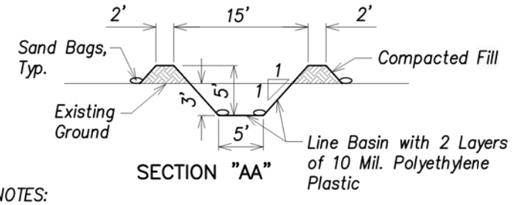



Note:
Contractor shall provide Aer–Flo turbidity barrier (detail shown above), or approved equal, and install per manufacturer's requirements.

## TURBIDITY CURTAIN
NOT TO SCALE



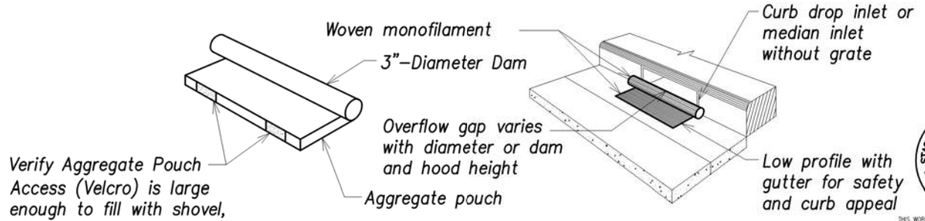

PLAN VIEW




SECTION "AA"

NOTES:
1. Line Basin with 2 Layers of 10 Mil. Polyethylene Plastic.
2. Place Sand Bags on Top Sheeting.
3. Clean Out Hardened Concrete to Maintain Basin Capacity.

## CONCRETE WASH–OUT BASIN DETAIL
NOT TO SCALE




## SEDIMENT FILTER FOR CATCH BASINS
NOT TO SCALE

APPROVED BY

Chief, Civil Engineering Branch, DPP Date

STACY K. YOKOOJI ARMSTRONG
LICENSED PROFESSIONAL ENGINEER
No. 8983–C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16–115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

APR 30, 2020
DATE OF LICENSE EXPIRY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# EROSION AND SEDIMENT CONTROL DETAILS

LEEWARD BIKEWAY
Philippine Sea Rd. to Waipahu Depot Street
Fed. Aid Proj. No. STP–BW–0300(8)

Date: Sept. 1, 2019

SHEET No. C7.16 OF 16 SHEETS

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