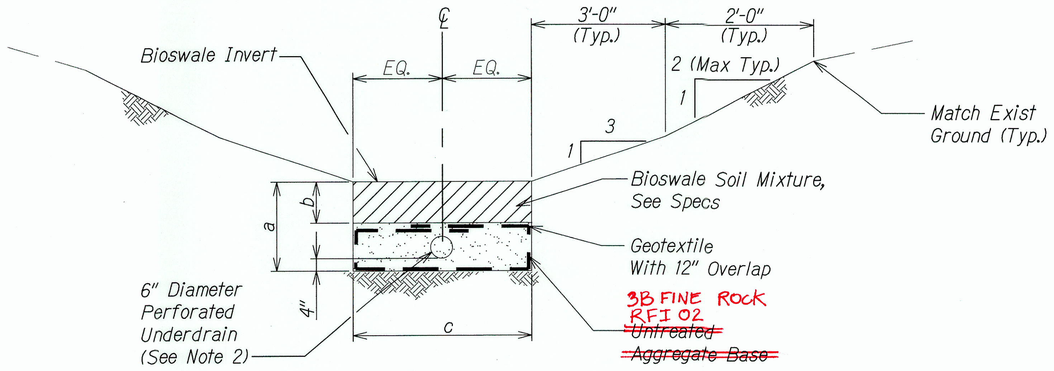
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1I-01-14M	2014	15	42



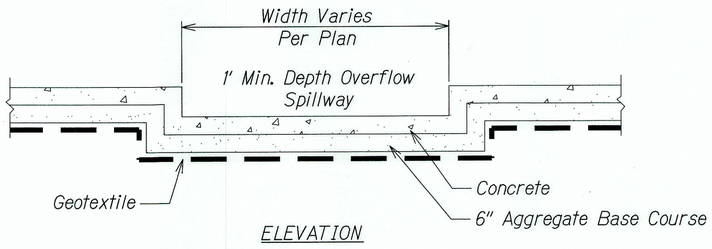
Bioswale Dimensions		
	University Ave. Cloverleaf West	University Ave. Cloverleaf East
a	1'-4"	2'-0"
b	0'-4"	1'-0"
c	4'-0"	6'-0"

Note:
1. Soil type/vegetation per Landscape plans.
2. Provide cleanouts for underdrain pipe at 100' o.c. (max.).
3. Bioswale section shall be uniform. Underdrain pipe shall be placed at the same slope as the bioswale as indicated in the plans.

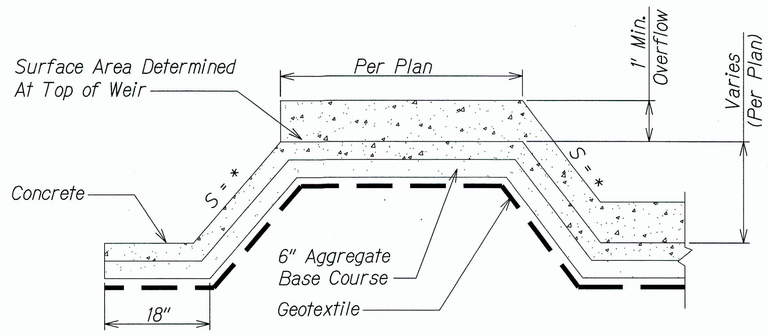
TYPICAL BIOSWALE DETAIL (1)

Scale: Not to Scale

EC-05, EC-09 EC-01



ELEVATION



* 3:1 slope; unless otherwise noted per plans

SECTION

Notes:
1. Sediment shall be removed from the spillway when it reaches 6 inches in depth.
2. Any damage to the spillway slopes shall be repaired.
3. For structural details, see Sheet EC-02.

TYP. CONC. SPILLWAY DETAIL (2)

Scale: Not to Scale

EC-01 EC-01

ORIGINAL PLAN | NOTE BOOK | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

MISC. DETAILS.DWG 10/16/2013 3:34:04 PM

JASON H. LAU LICENSED PROFESSIONAL ENGINEER NO. 9360-C HAWAII USA

4/30/14

EXP. DATE

This work was prepared by me or under my supervision.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS

ALA WAI WATERSHED STORM WATER BEST MANAGEMENT PRACTICES ON OAHU
Project No. H1I-01-14M

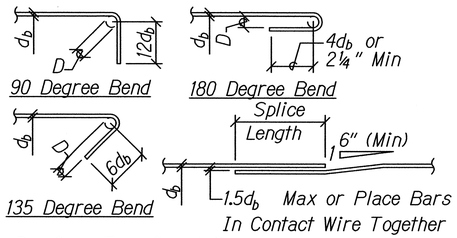
Scale: Not to Scale Date: January 2014

SHEET No. EC-01 OF 16 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1I-01-14M	2014	16	42

Minimum Splice & Embedment Lengths					
Bar Size	Lap Splice		Embedment		
	Bot Bar Or Wall Bar	Top Bar	Straight		w/ Std Hook
			Bot Bar Or Wall Bar	Top Bar	
#3, #4	29"	38"	22"	29"	11"
#5	36"	47"	28"	36"	14"
#6	43"	56"	33"	43"	17"
#7	63"	82"	48"	63"	20"
#8	72"	94"	55"	72"	22"
#9	81"	106"	62"	81"	25"
#10	91"	119"	70"	91"	28"
#11	101"	132"	78"	101"	31"



$D = 6d_b$ For #8 and Smaller

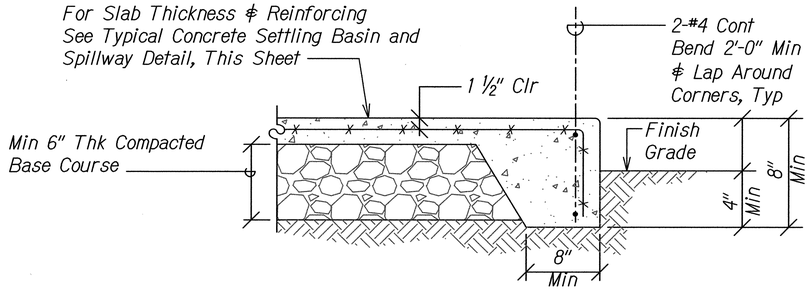
$D = 8d_b$ For #9 To #11

1. Lengths Are For Concrete Beams & Columns With Rebar Spaced 1 Bar Diameter Min O.C. And Concrete Walls with Rebars Spaced 2 Bar Diameters Min O.C. Increase Bar Length 50% For Bars Spaced Closer Than Minimums Specified.
2. "Top Bars" Are Horizontal Bars With 12" Or More Of Concrete Cast Below.

TYPICAL REBAR SPLICE & EMBEDMENT LENGTH SCHEDULE

Scale: Not To Scale

1 EC-02/EC-02

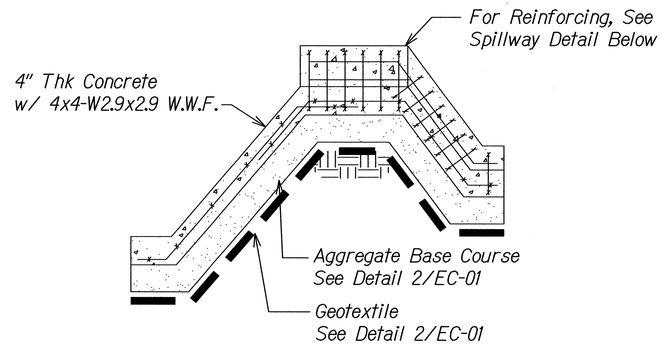


Notes: Welded wire fabric reinforcement shall be chaired to maintain proper concrete clear cover throughout the slab.

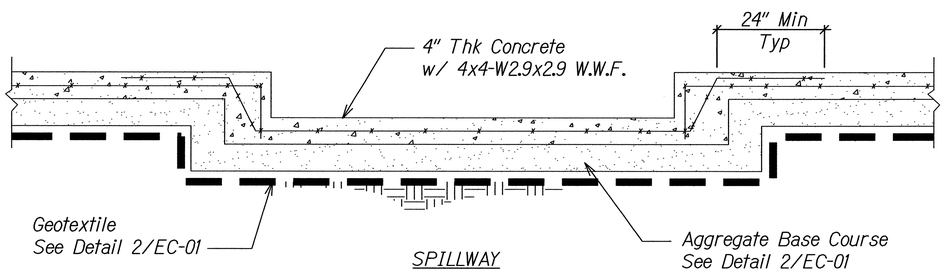
TYPICAL SLAB-ON-GRADE DETAIL AT THICKENED SLAB EDGE

Scale: Not To Scale

2 EC-02/EC-02



SECTION



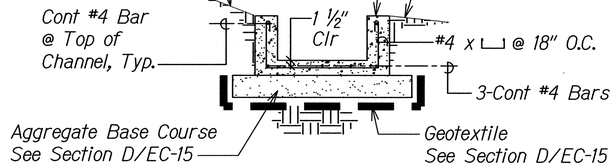
SPILLWAY

Notes:
1. For balance of information, See Detail 2 on Sheet EC-01.
2. Contractor shall provide thickened slab edges. See Typical Slab-On-Grade Detail At Thickened Slab Edge, this sheet.

TYPICAL CONC SETTLING BASIN AND SPILLWAY REINFORCING DETAIL

Scale: Not To Scale

3 EC-02/EC-02



Notes: For balance of Information, See Section D on Sheet EC-15

TYPICAL CONC OPEN CHANNEL DETAIL

Scale: Not To Scale

4 EC-02/EC-02

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

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RON E. IWAMOTO
LICENSED PROFESSIONAL ENGINEER
No. 8871-S
HAWAII, U.S.A.

4/30/14
EXP. DATE

This work was prepared by me or under my supervision.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL STRUCTURAL DETAILS

ALA WAI WATERSHED STORM WATER BEST MANAGEMENT PRACTICES ON OAHU
Project No. H1I-01-14M

Scale: As Shown Date: January 2014

SHEET No. EC-02 OF 16 SHEETS