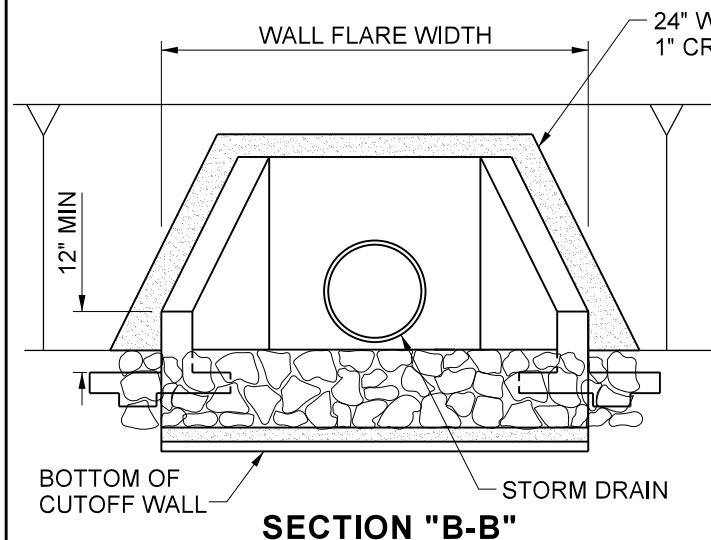


PLAN

SECTION "A-A"

DETAIL A



SECTION "B-B"

NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
(A) RIPRAP CLASS AND THICKNESS (T)
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4" OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. 10' LONG (MIN) BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC.
6. RIPRAP PAD WIDTH TO BE THE GREATER OF THE WALL FLARE WIDTH OR 10'.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster 11/30/22
 DIRECTOR OF TRANSPORTATION DATE
 MARK LANCASTER, P.E.

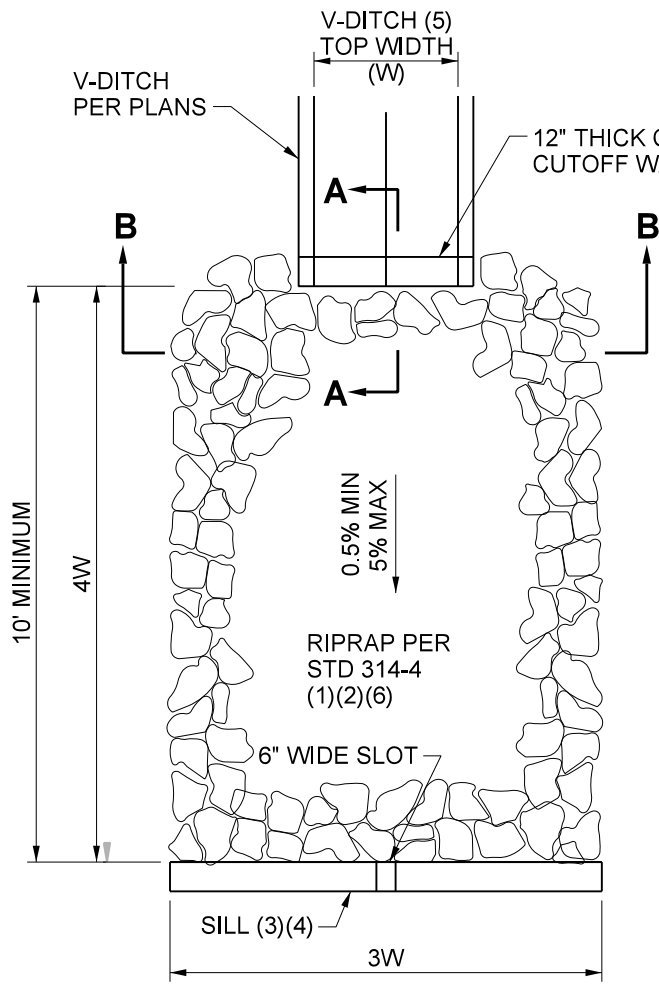
REVISION	DESCRIPTION	MARK	DATE	APPROVED



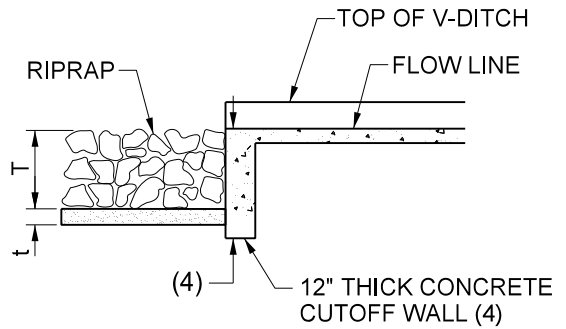
COUNTY OF RIVERSIDE

RIPRAP ENERGY DISSIPATOR AND APRON AT WINGWALL STORM DRAIN OUTFALL

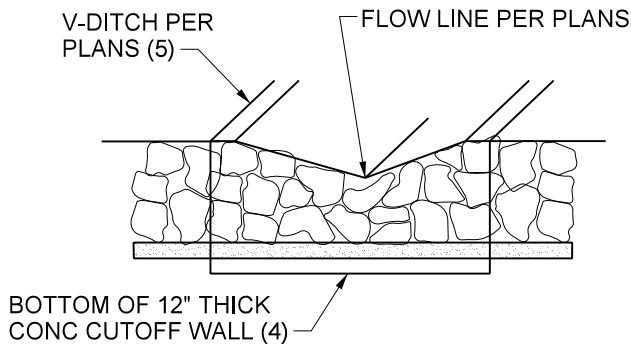
STANDARD No. 314 (1 OF 4)



PLAN



SECTION "A-A"



SECTION "B-B"

NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
(A) RIPRAP CLASS AND THICKNESS (T)
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN $W > 36"$, OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. DETAIL MAY BE UTILIZED FOR CIRCULAR CONCRETE DITCH ALSO.
6. FOR 3' WIDE DITCH AT SLOPE OF <5% AND A FLOW RATE < 3.0 CFS, ENERGY DISSIPATOR MAY BE 6' BY 6' No. 2 BACKING PER STD 314-4.

NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.

DATE

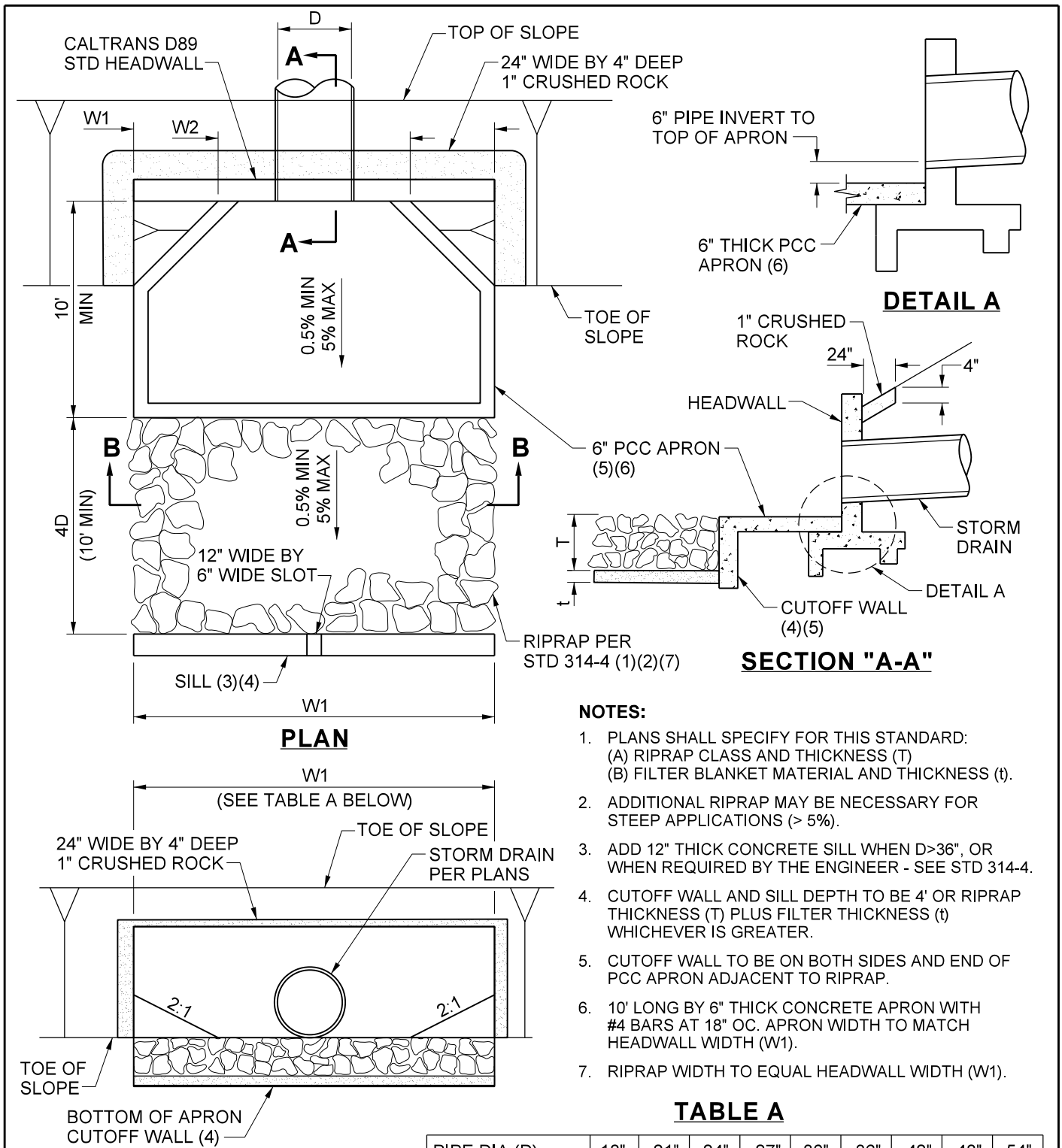


COUNTY OF RIVERSIDE

**RIPRAP ENERGY
DISSIPATOR AT
V-DITCH OUTFALL**

STANDARD No. 314 (2 OF 4)

REVISION	DESCRIPTION	MARK	DATE	APPROVED



NOTES:

1. PLANS SHALL SPECIFY FOR THIS STANDARD:
(A) RIPRAP CLASS AND THICKNESS (T)
(B) FILTER BLANKET MATERIAL AND THICKNESS (t).
2. ADDITIONAL RIPRAP MAY BE NECESSARY FOR STEEP APPLICATIONS (> 5%).
3. ADD 12" THICK CONCRETE SILL WHEN D>36", OR WHEN REQUIRED BY THE ENGINEER - SEE STD 314-4.
4. CUTOFF WALL AND SILL DEPTH TO BE 4' OR RIPRAP THICKNESS (T) PLUS FILTER THICKNESS (t) WHICHEVER IS GREATER.
5. CUTOFF WALL TO BE ON BOTH SIDES AND END OF PCC APRON ADJACENT TO RIPRAP.
6. 10' LONG BY 6" THICK CONCRETE APRON WITH #4 BARS AT 18" OC. APRON WIDTH TO MATCH HEADWALL WIDTH (W1).
7. RIPRAP WIDTH TO EQUAL HEADWALL WIDTH (W1).

TABLE A

PIPE DIA (D)	18"	21"	24"	27"	30"	36"	42"	48"	54"
WALL WIDTH (W1)	12.7'	13.7'	14.7'	15.7'	16.7'	18.7'	20.7'	22.7'	25.2'
APRON WIDTH (W2)	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.0'	4.5'

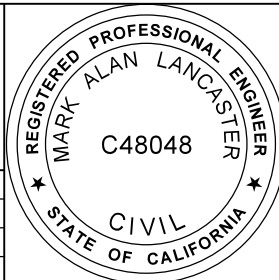
NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22
DATE

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.



COUNTY OF RIVERSIDE

**RIPRAP ENERGY DISSIPATOR
AND APRON AT STRAIGHT
HEADWALL OUTFALL**

STANDARD No. 314 (3 OF 4)

REVISION	DESCRIPTION	MARK	DATE	APPROVED

RIPRAP ENERGY DISSIPATOR SIZING TABLE

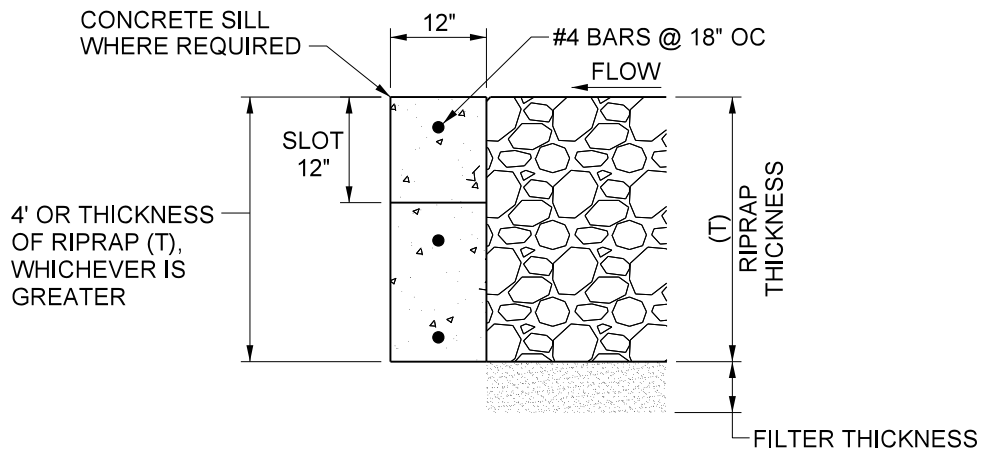
DESIGN VELOCITY (FT/SEC)	RIPRAP CLASS	RIPRAP THICKNESS (T) PLACEMENT METHOD A *	RIPRAP THICKNESS (T) PLACEMENT METHOD B *	FILTER MATERIAL **	FILTER THICKNESS (t)
6-8	NO. 2 BACKING	N/A	1.25'	1" CRUSHED ROCK	0.5'
8-13	1/4 TON	N/A	3.3'	1" CRUSHED ROCK	0.75'
13-15	1/2 TON	3.4'	4.3'	1" CRUSHED ROCK	1.0'
15-17	1 TON	4.3'	5.4'	1" CRUSHED ROCK	1.0'
17-20	2 TON	5.4'	N/A	1" CRUSHED ROCK	1.0'

* FOR RIPRAP GRADATION AND PLACEMENT METHOD DESCRIPTIONS SEE CALTRANS STD SPECIFICATIONS SECTION 72-2

** SEE 1" CRUSHED ROCK GRADATION THIS SHEET

1" CRUSHED ROCK GRADATION

SIEVE SIZE	PERCENT (%) PASSING
1-1/2" (37.5 mm)	100
1" (25.0 mm)	90-100
3/4" (19.0 mm)	30-60
1/2" (12.5 mm)	0-20
3/8" (9.5 mm)	-
No. 4 (4.75 mm)	0-5
No. 8 (2.36 mm)	-
ASTM C131 Testing Grading	A



NOT TO SCALE

PREPARED UNDER THE SUPERVISION OF:

Mark Lancaster

11/30/22
DATE

DIRECTOR OF TRANSPORTATION
MARK LANCASTER, P.E.



COUNTY OF RIVERSIDE

**RIPRAP ENERGY
DISSIPATOR SIZING
AND CONCRETE SILL**

STANDARD No. 314 (4 OF 4)

REVISION DESCRIPTION	MARK	DATE	APPROVED