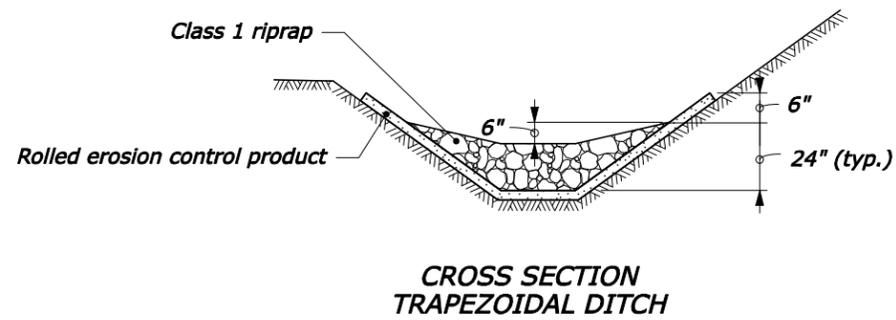
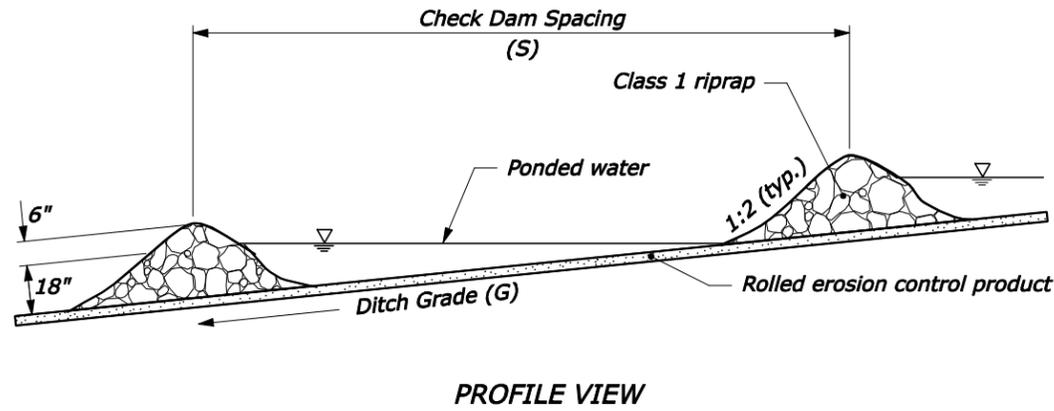
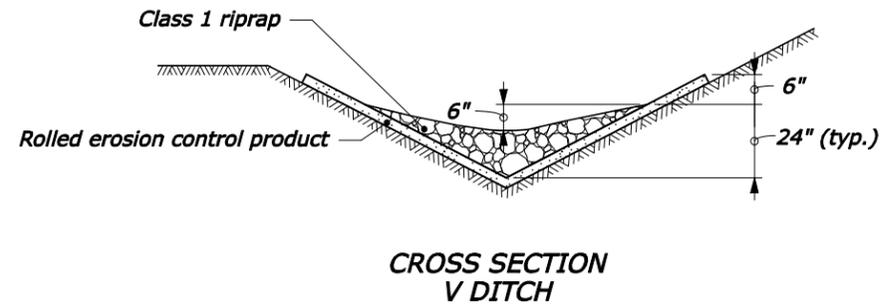


NOTE:

1. Repair all rills or gullies prior to installation.
2. Install check dams in ditches perpendicular to the flowline.



RIPRAP CHECK DAM SPACING	
DITCH GRADE (G)	CHECK DAM SPACING (S) max. (ft)
7%	20
8% and 9%	15
≥10%	10

RIPRAP CHECK DAM WITH ROLLED EROSION CONTROL PRODUCT

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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY DETAIL CHECK DAM WITH ROLLED EROSION CONTROL PRODUCT	
DETAIL APPROVED FOR USE 01/2011	DETAIL
REVISED:	C157-54

NOTES TO THE DESIGNER

Last Updated: January 2011

General Information

1. **Appropriate Applications.** Check dams reduce scour in a channel or ditch and provide runoff treatment by reducing flow velocity and encouraging sediment deposition. Appropriate applications include:
 - Use riprap check dams in conjunction with RECP lining in ditches steeper than 5% or 6%
 - Steep channels where storm water runoff velocities exceed 3 ft/s
 - During the establishment of grass linings in ditches
2. **Limitations.**
 - Not used in live streams
 - Drainage areas 10 acres or less
3. **Layout Guidance.**
 - Install the first check dam about 15 ft from the outfall and at regular intervals based on slope gradient and soil type (steeper slopes and more erosive soils (e.g. loose sand or silt) will require shorter spacing between check dams).
 - When installing a series of check dams in a channel, install outlet stabilization measures below the final dam, such as riprap or geotextile, to minimize erosion potential.
 - The type of RECP to use is site-specific. Coordinate with Hydraulics to select the type of RECP.

Applicable SCRs

1. Section 157:
http://www.cflhd.gov/design/documents/construction/scr_03/S157-03E.doc
2. Section 713:
http://www.cflhd.gov/design/documents/construction/scr_03/S713-03E.doc

Typical Pay Item Used

- 15706-0200 Soil erosion control, check dam [EA]
- 62901-[0100 through 1400] Rolled erosion control product, type xx [SQYD] or 62901-[0100 through 1400] Rolled erosion control product, type xx [ACRE]

Updates

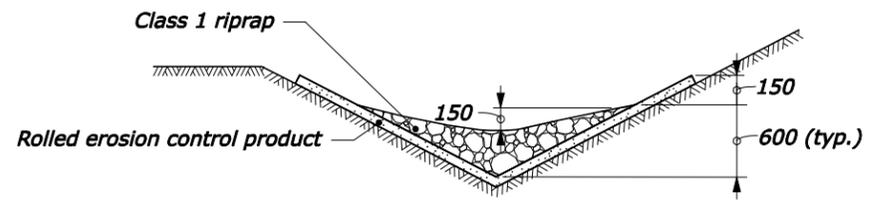
January 2011

- Updated FLH Standard drawing by adding RECP under check dams

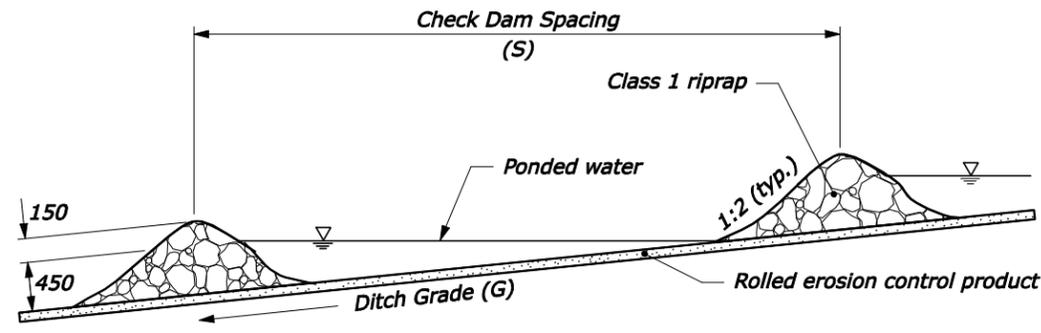
REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
.

NOTE:

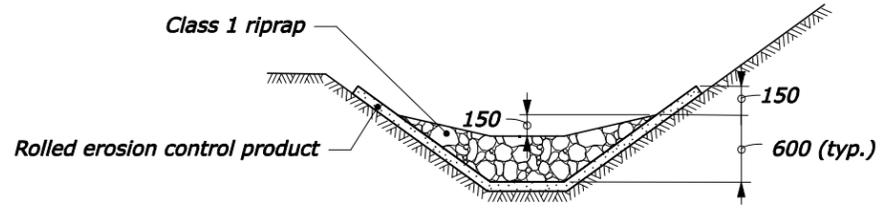
1. Repair all rills or gullies prior to installation.
2. Install check dams in ditches perpendicular to the flowline.
3. Dimensions without units are millimeters.



CROSS SECTION V DITCH



PROFILE VIEW



CROSS SECTION TRAPEZOIDAL DITCH

RIPRAP CHECK DAM SPACING	
DITCH GRADE (G)	CHECK DAM SPACING (S) max. (m)
7%	6
8% and 9%	4.5
≥10%	3

RIPRAP CHECK DAM WITH ROLLED EROSION CONTROL PRODUCT

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U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
METRIC DETAIL CHECK DAM WITH ROLLED EROSION CONTROL PRODUCT	
DETAIL APPROVED FOR USE 01/2011	DETAIL CM157-54
REVISED:	

NOTES TO THE DESIGNER

Last Updated: January 2011

General Information

1. **Appropriate Applications.** Check dams reduce scour in a channel or ditch and provide runoff treatment by reducing flow velocity and encouraging sediment deposition. Appropriate applications include:
 - Use riprap check dams in conjunction with RECP lining in ditches steeper than 5% or 6%
 - Steep channels where storm water runoff velocities exceed 1 m/s
 - During the establishment of grass linings in ditches
2. **Limitations.**
 - Not used in live streams
 - Drainage areas 4 hectares or less
3. **Layout Guidance.**
 - Install the first check dam about 5 m from the outfall and at regular intervals based on slope gradient and soil type (steeper slopes and more erosive soils (e.g. loose sand or silt) will require shorter spacing between check dams).
 - When installing a series of check dams in a channel, install outlet stabilization measures below the final dam, such as riprap or geotextile, to minimize erosion potential.
 - The type of RECP to use is site-specific. Coordinate with Hydraulics to select the type of RECP.

Applicable SCRs

1. Section 157:
http://www.cflhd.gov/design/documents/construction/scr_03/S157-03M.doc
2. Section 713:
http://www.cflhd.gov/design/documents/construction/scr_03/S713-03M.doc

Typical Pay Item Used

- 15706-0200 Soil erosion control, check dam [EA]
- 62901-[0100 through 1400] Rolled erosion control product, type xx [m²] or 62901-[0100 through 1400] Rolled erosion control product, type xx [ha]

Updates

January 2011

- Updated FLH Standard drawing by adding RECP under check dams