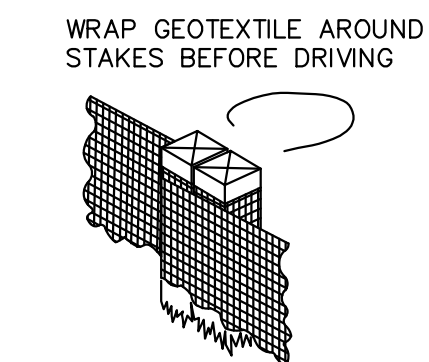
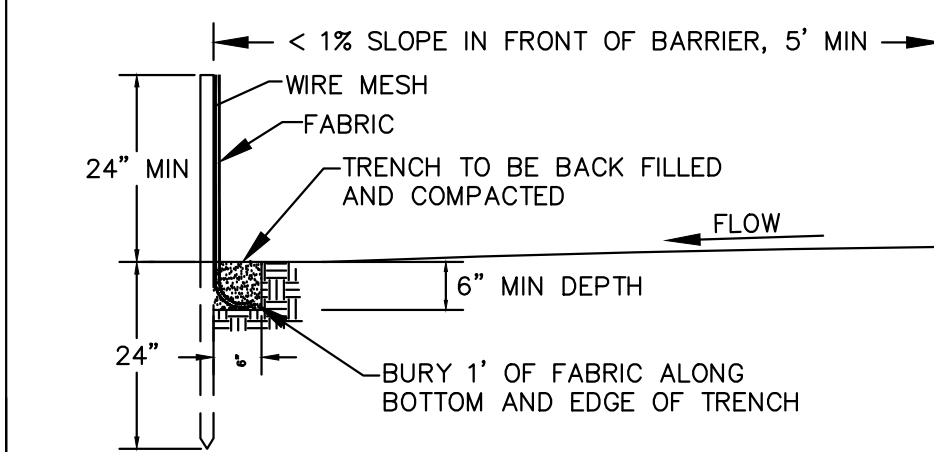
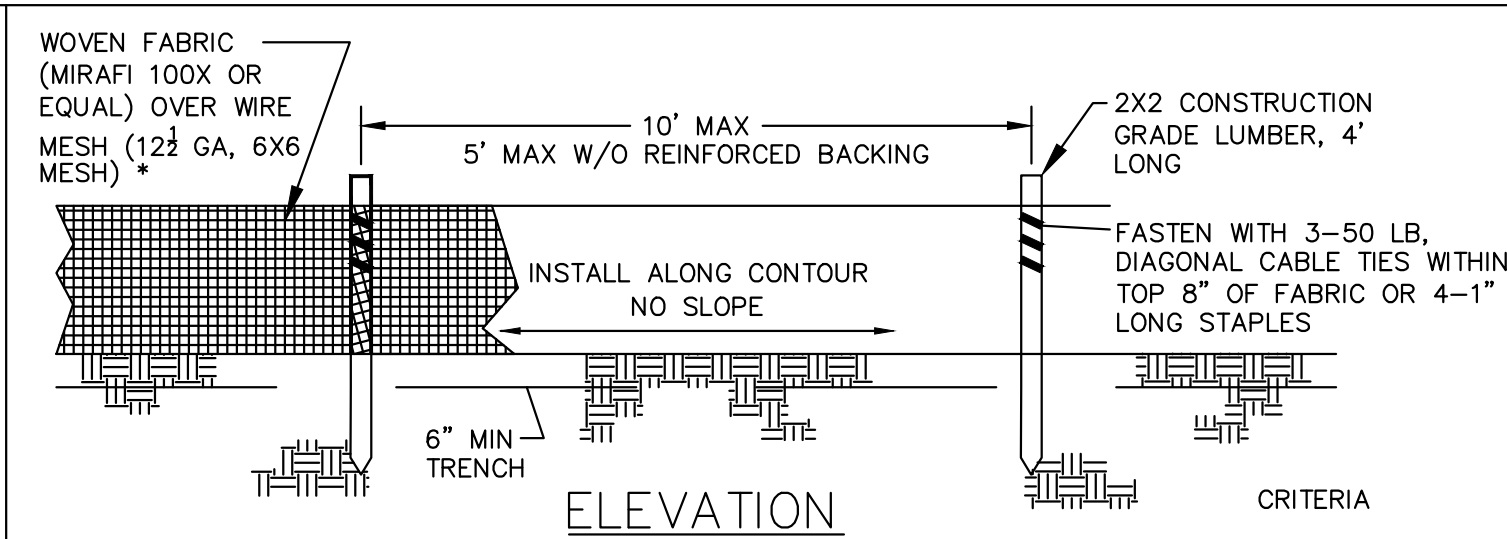


- DESIGN CRITERIA**
- SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
  - STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
  - REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
  - TERRACING INCLUDES LOGS, WATTLES & FILTER SOCKS.

**SPACING CHART FOR ESC DEVICES**

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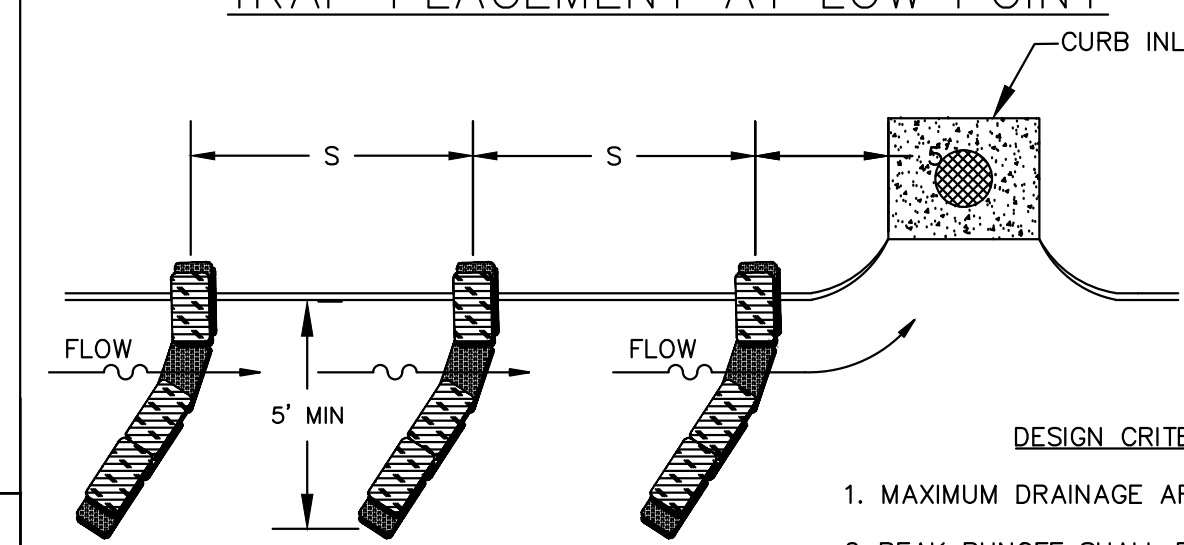
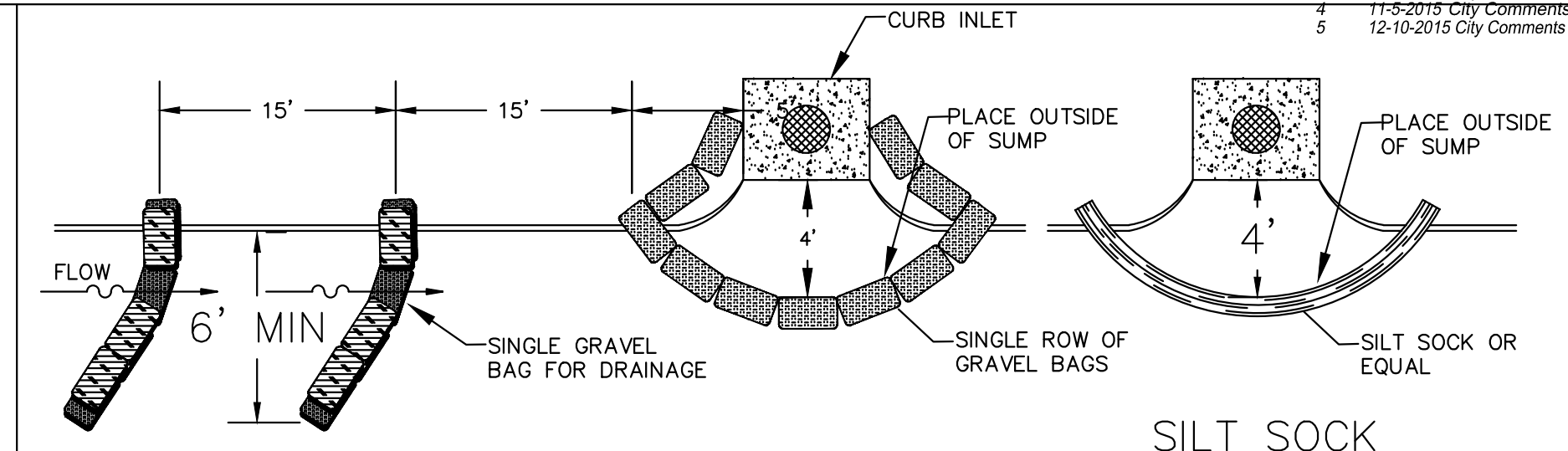
NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

**JOINING SECTIONS OF SILT FENCE**

- CRITERIA**
- SILT FENCE SHALL BE 24 INCHES HIGH.
  - SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
  - GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
  - WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

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**SILT FENCE INSTALLATION (SHEET FLOW ONLY)**



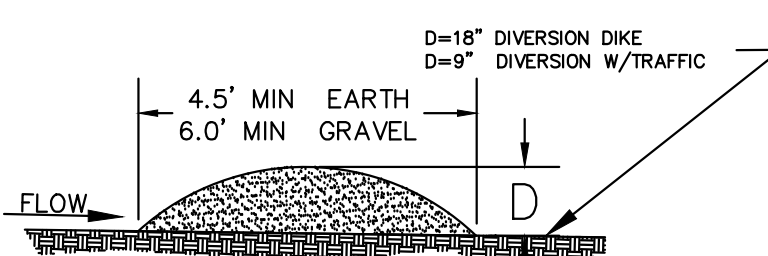
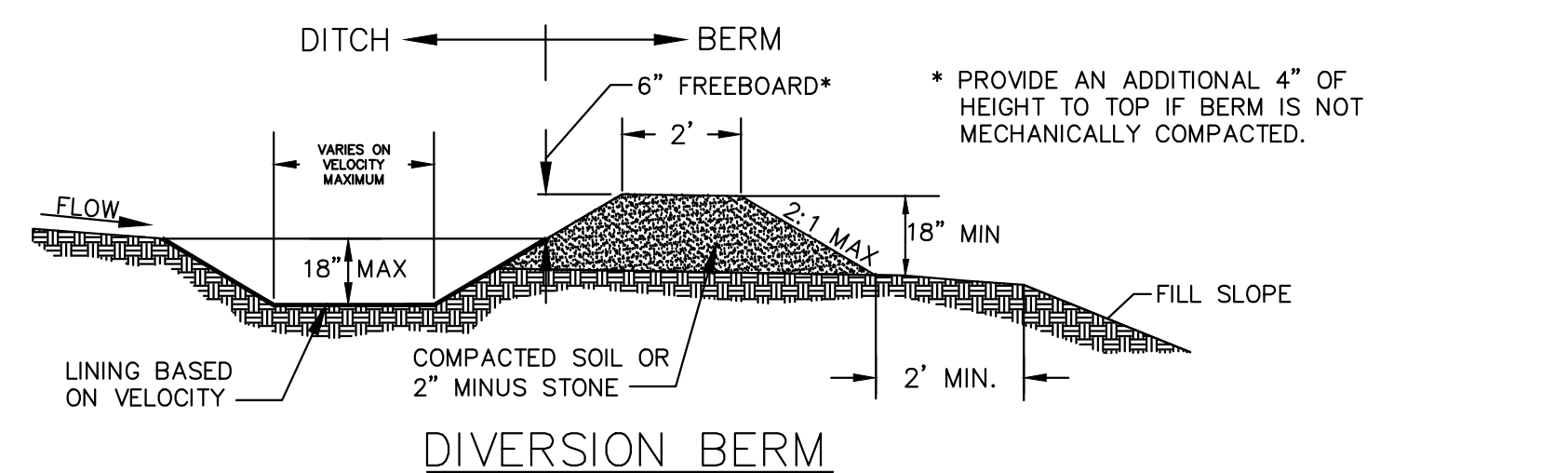
**SPACING OF TRAPS**

GUTTER SLOPE	LOW PT	INTERMEDIATE
1%	15'	20'
2%	15'	15'
3% MAX.	10'	10'

- DESIGN CRITERIA**
- MAXIMUM DRAINAGE AREA - 1 ACRE.
  - PEAK RUNOFF SHALL BE  $\leq 2$  CFS BASED ON THE 6-MONTH STORM.
  - STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

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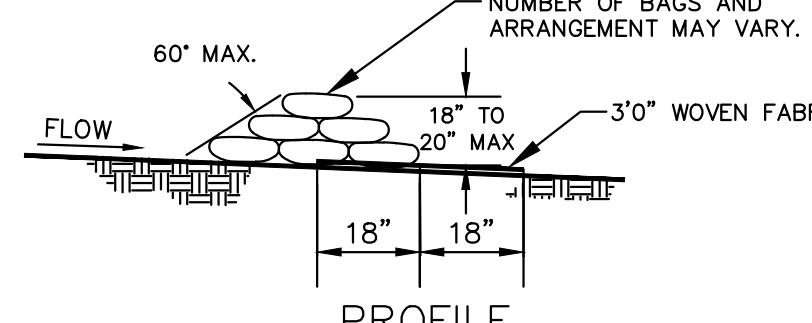
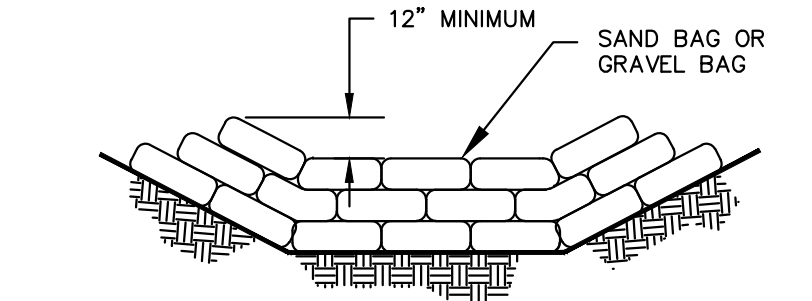
**CURB INLET PROTECTION**



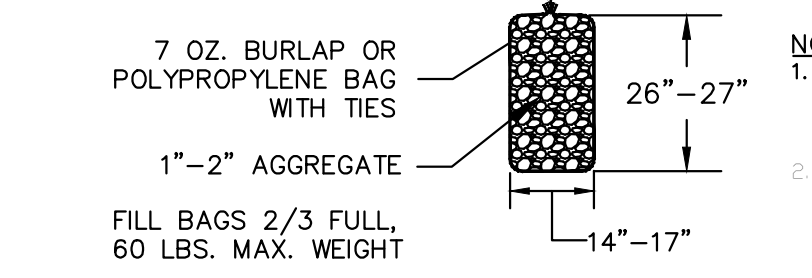
- DESIGN CRITERIA**
- DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS  $\leq 3$  ACRES.
  - DIVERSION CHANNELS SHALL BE DESIGNED TO CONVEY THE 6-MO STORM AT NON-EROSIVE VELOCITIES.
  - CRITICAL LOCATIONS SHALL BE DESIGNED FOR THE 15YR / 20Min. STORM.
  - MAXIMUM CHANNEL SLOPE OF 3% WITHOUT CHECK DAMS.
  - SWALE SEDIMENT TRAPS ARE TO BE USED IN HIGHLY EROSION AREAS.
  - CHANNELS SHALL BE PROTECTED USING APPROPRIATE CHANNEL LINERS.
  - CHANNEL OUTLETS MUST BE STABILIZED.
  - STORM SEWERS MAY BE USED IN LIEU OF OPEN CHANNELS.

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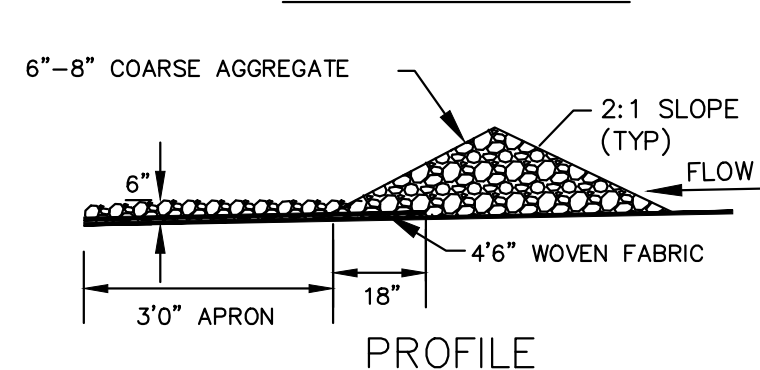
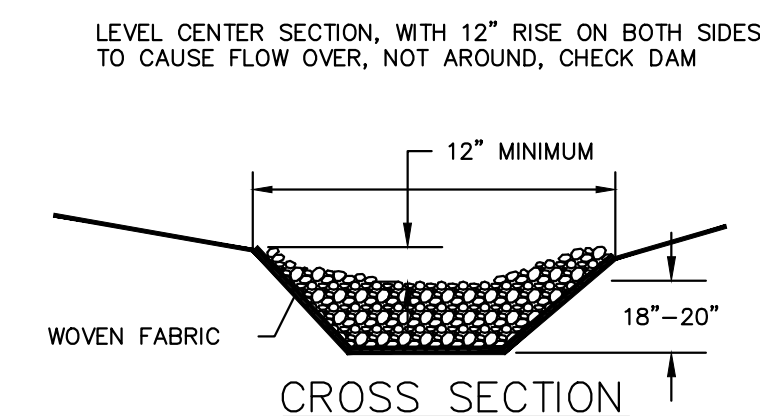
**DIVERSION BERMS + DIKES**



**SAND BAG OR GRAVEL BAG CHECK DAM**



**GRAVEL BAG**

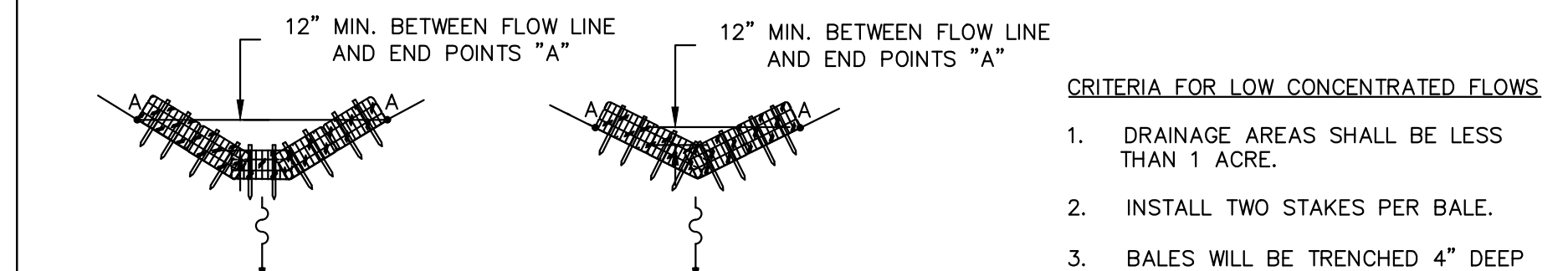


**ROCK CHECK DAM**

- NOTE:**
- CHECK DAMS MAY BE CONSTRUCTED OF SEVERAL ESC CHECK DAM PRODUCTS.
  - SEE TABLE 60-12 AND ESC 1 FOR CHECK DAM SPACING.

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**CHECK DAMS**



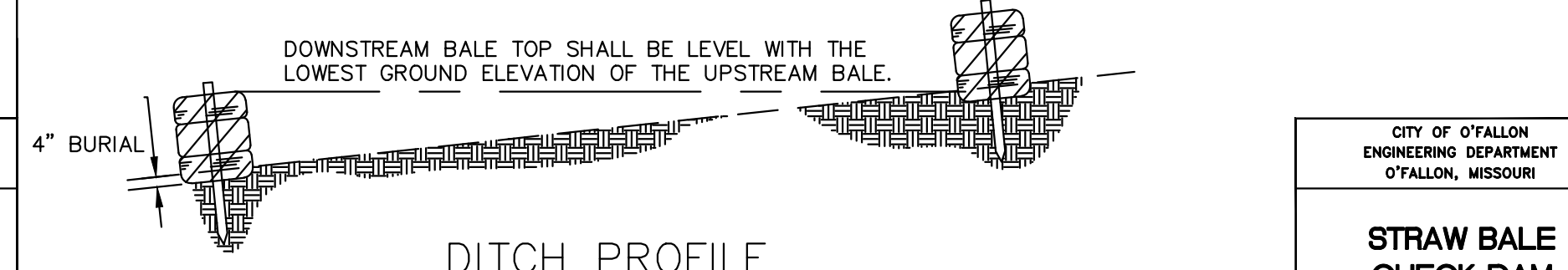
- CRITERIA FOR LOW CONCENTRATED FLOWS**
- DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
  - INSTALL TWO STAKES PER BALE.
  - BALES WILL BE TRENCHED 4" DEEP INTO EARTH.
  - MAXIMUM CHANNEL SLOPE OF 3%.
  - SEDIMENTATION TRAPS TO BE USED IN HIGHLY EROSION AREAS.

**CHECK DAM SPACING**

Ditch Slope	Maximum Spacing
3%	50%
2%	75%

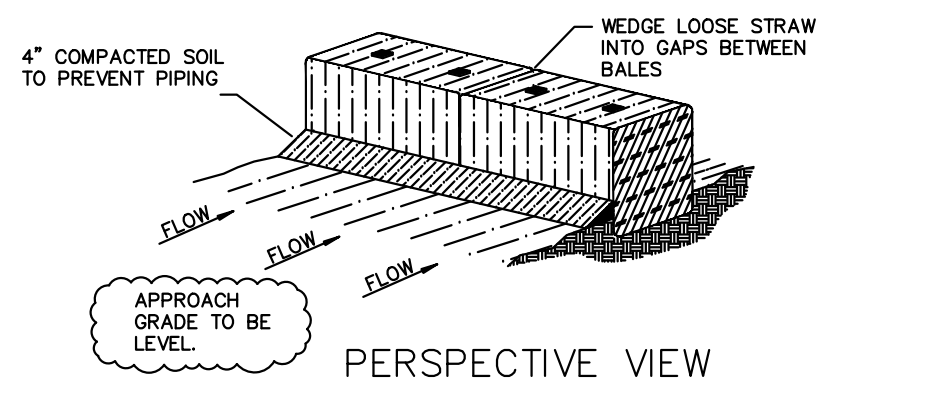
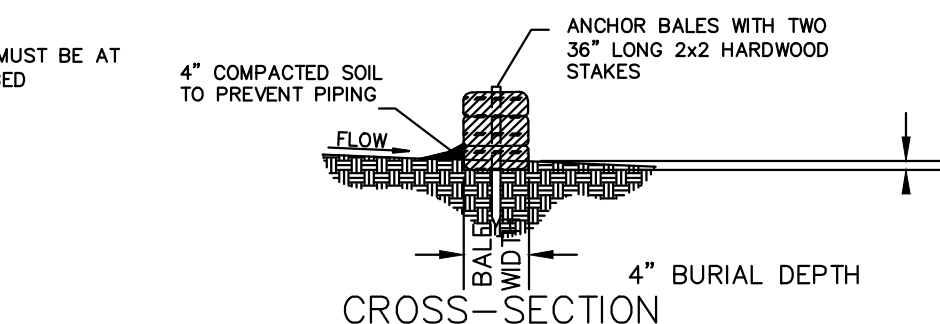
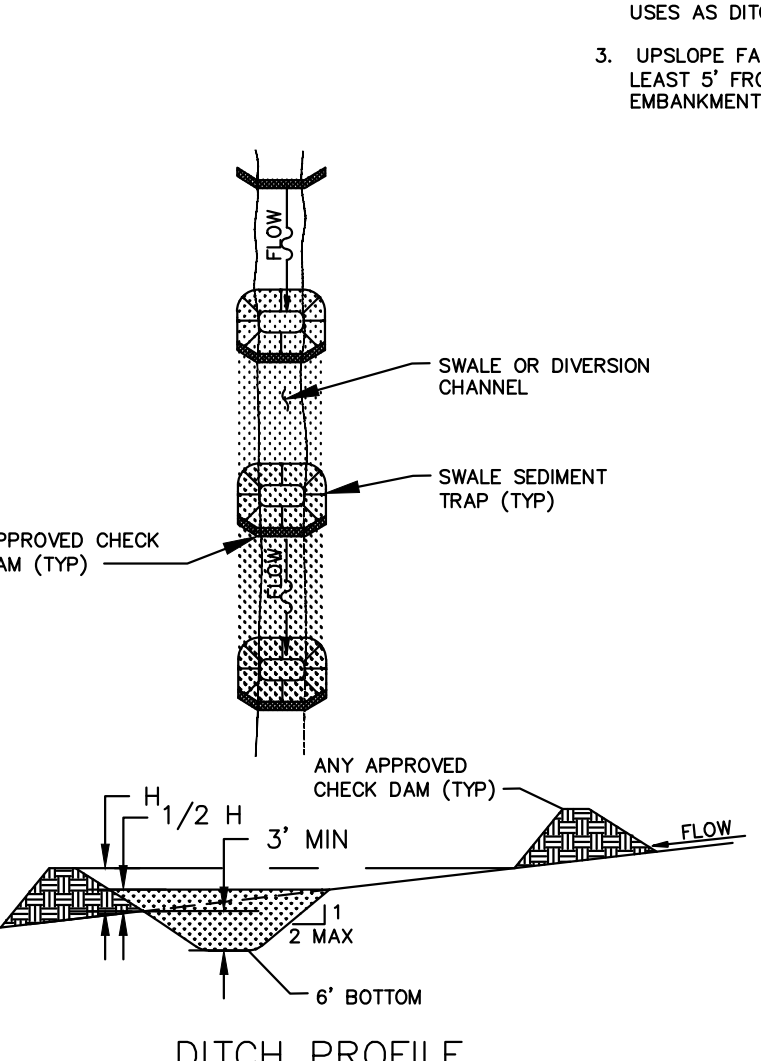
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**STRAW BALE CHECK DAM**



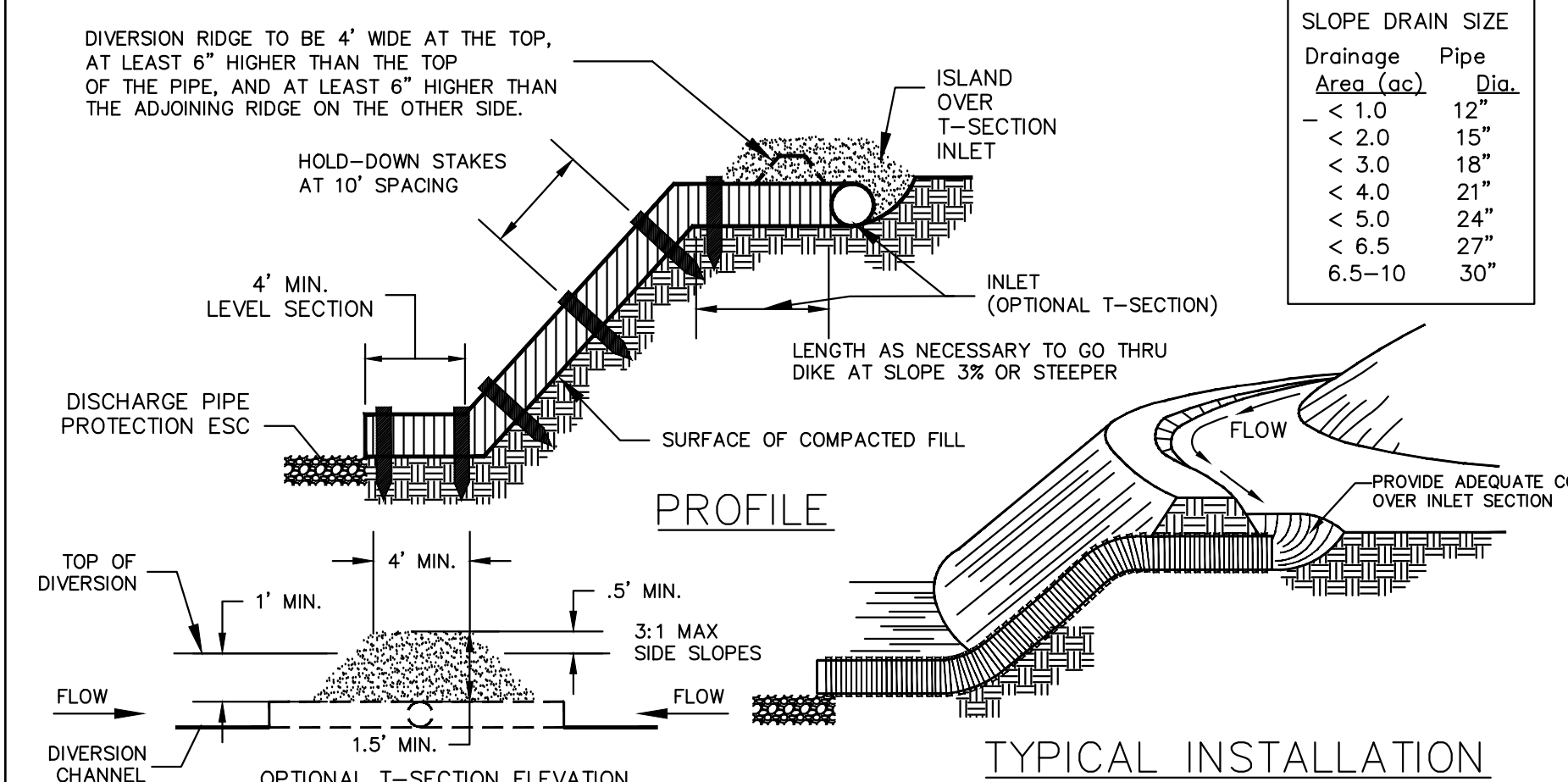
**DITCH PROFILE**

- CRITERIA**
- EXCAVATE TRENCH THE WIDTH OF THE BALES AT LEAST 4 INCHES DEEP AND LONG ENOUGH THAT THE END BALES ARE SOMEWHAT UPSLOPE.
  - REFER TO STRAW BALE CHECK DAM DETAIL FOR SPACING AND STRAW BALE USES AS DITCH CHECKS.
  - UPSLOPE FACE OF BALES MUST BE AT LEAST 3' FROM A DISTURBED EMBANKMENT.



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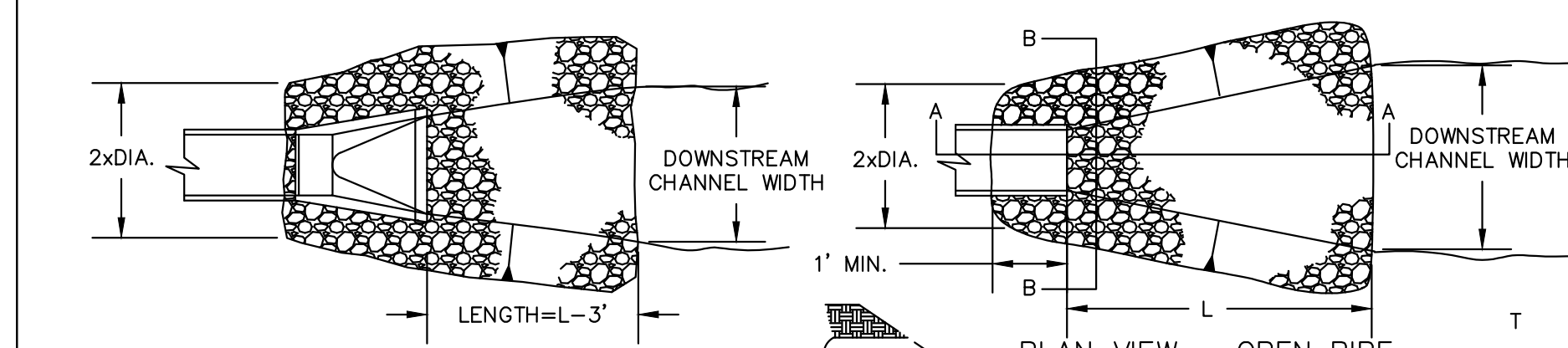
**SWALE SEDIMENT TRAP STRAW BALE BARRIER INSTALLATION**



- NOTE:**
- PIPE CAN BE CMP, PVC, FLEXIBLE TUBING, OR SIMILAR.
  - THIS METHOD MUST BE USED IN CONJUNCTION WITH OTHER ESC DEVICES. THIS IS NOT A STAND ALONE CONTROL DEVICE.

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**TEMPORARY SLOPE DRAIN**



**RIPRAP SIZE & APRON DIMENSION**

PIPE SIZE (inch)	VELOCITY < 5 FPS				VELOCITY < 10 FPS			
	d <sub>50</sub> (inch)	d <sub>max</sub> (inch)	T (inch)	L (inch)	d <sub>50</sub> (inch)	d <sub>max</sub> (inch)	T (inch)	L (inch)
12	5	9	15	12	5	9	15	16
15	5	9	15	14	5	9	15	18
18-24	5	9	15	16	9	14	24	20
27-30	5	9	15	18	9	14	24	22
36-42	9	14	24	22	12	18	27	26
48-54	9	14	24	26	12	18	27	30
60-66	12	18	27	34	15	24	30	38
72-84	15	24	30	42	15	24	30	46
96	18	27	30	50	18	27	30	54

d<sub>50</sub> - NOMINAL DIAMETER  
d<sub>max</sub> - MAXIMUM DIAMETER  
T - THICKNESS  
L - LENGTH

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**TEMPORARY OUTLET PIPE DISCHARGE PROTECTION**

**PROJECT TITLE**  
*The Villages at Shady Creek*  
OFALLON, MISSOURI

**THE STERLING CO.**  
ENGINEERS & SURVEYORS  
5055 New Baumgartner Road  
St. Louis, Missouri 63129  
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Corporate Certificate of Authority #001348

STATE OF MISSOURI  
RODNEY ARNOLD  
NUMBER  
PE-2002016612  
PROFESSIONAL ENGINEER

Date: 12/10/2015  
RODNEY ARNOLD  
LICENSE # PE-2002016612  
Civil Engineer

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**City No.** 15-162-SP  
**Date:** 12/10/2015  
**Job No.** 14-03-087

**Page No.**  
**DTL-1** IMP

**EROSION CONTROL DETAILS**