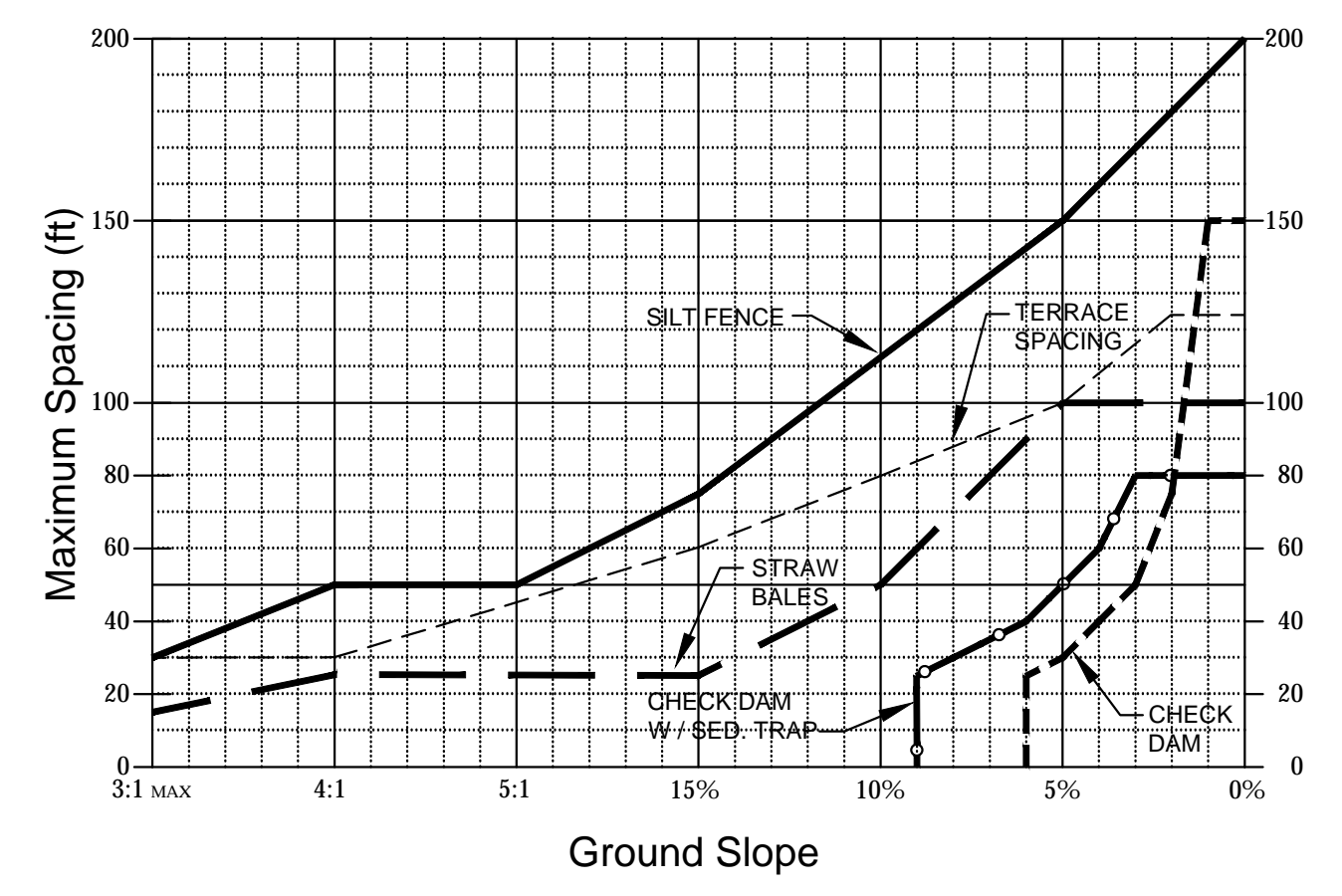


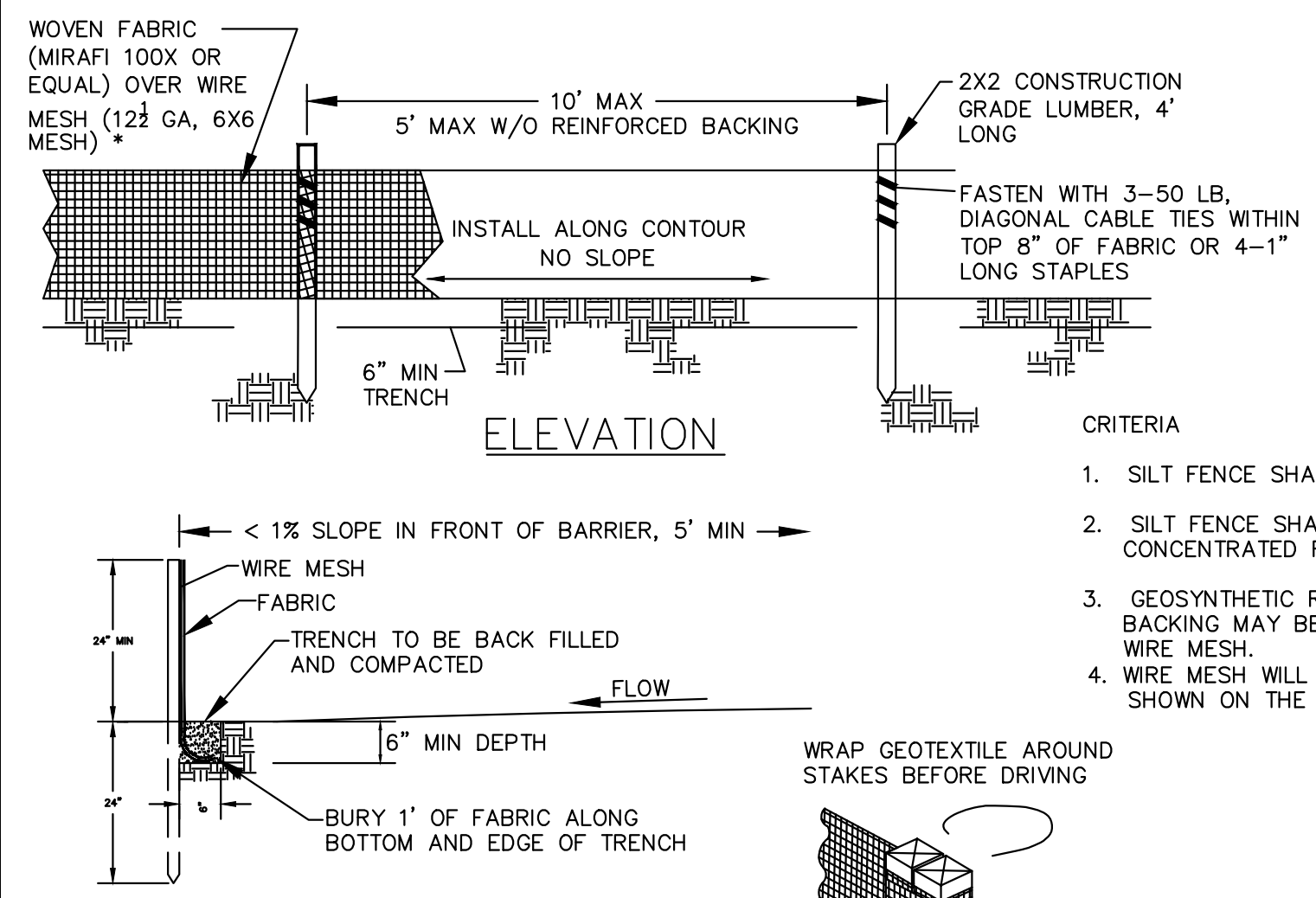
| ISSUE | REMARKS/DATE                 |
|-------|------------------------------|
| 1     | INITIAL SUBMITTAL 07-25-2017 |
| 2     | CITY & CLIENT REV. 09-08-17  |
| 3     | CITY REV. 10-16-17           |
| 4     | CITY REV. 10-27-17           |



- 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, WATLES & FILTER SOCKS.

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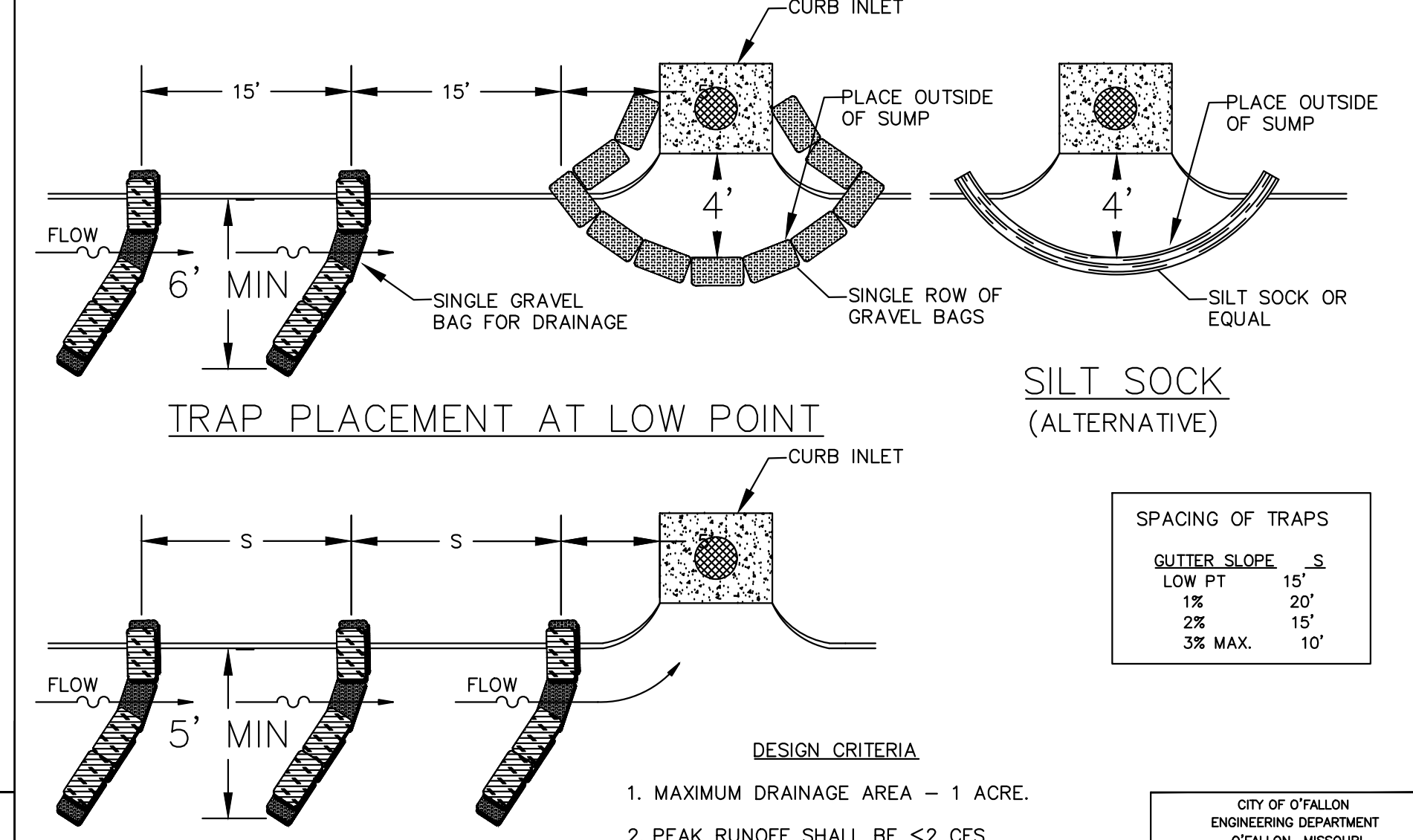
**SPACING CHART FOR ESC DEVICES**



- 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)**



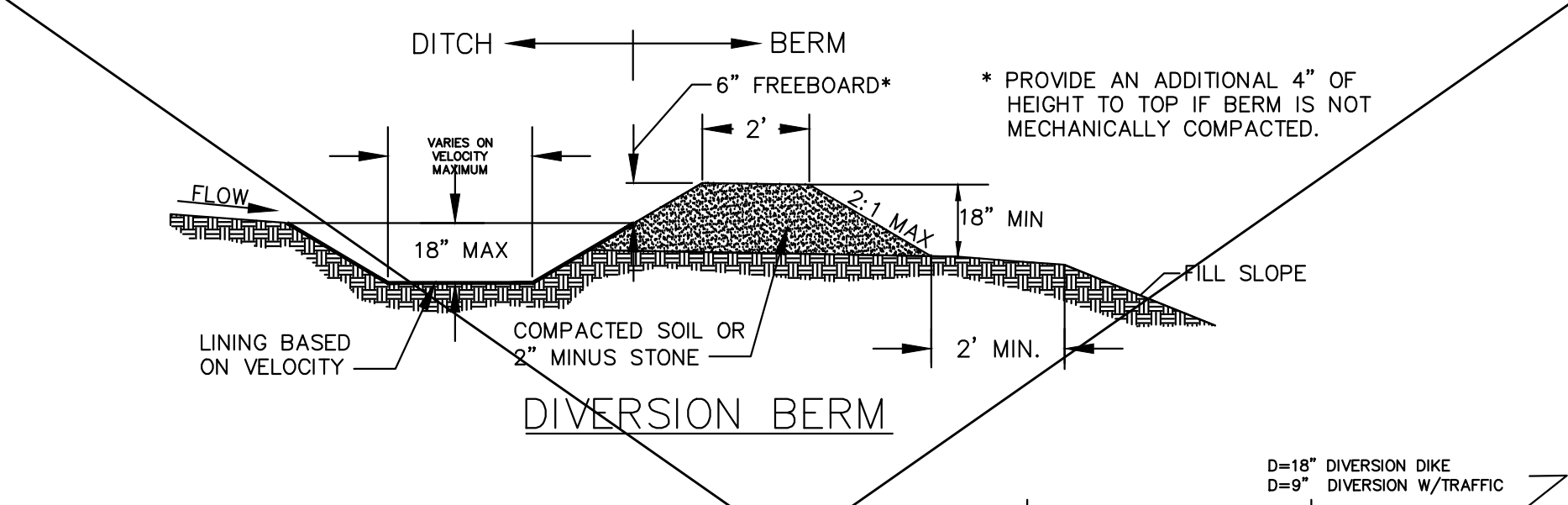
**SPACING OF TRAPS**

| GUTTER SLOPE | S   |
|--------------|-----|
| LOW FT       | 15' |
| 1%           | 20' |
| 2%           | 15' |
| 3% MAX.      | 10' |

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

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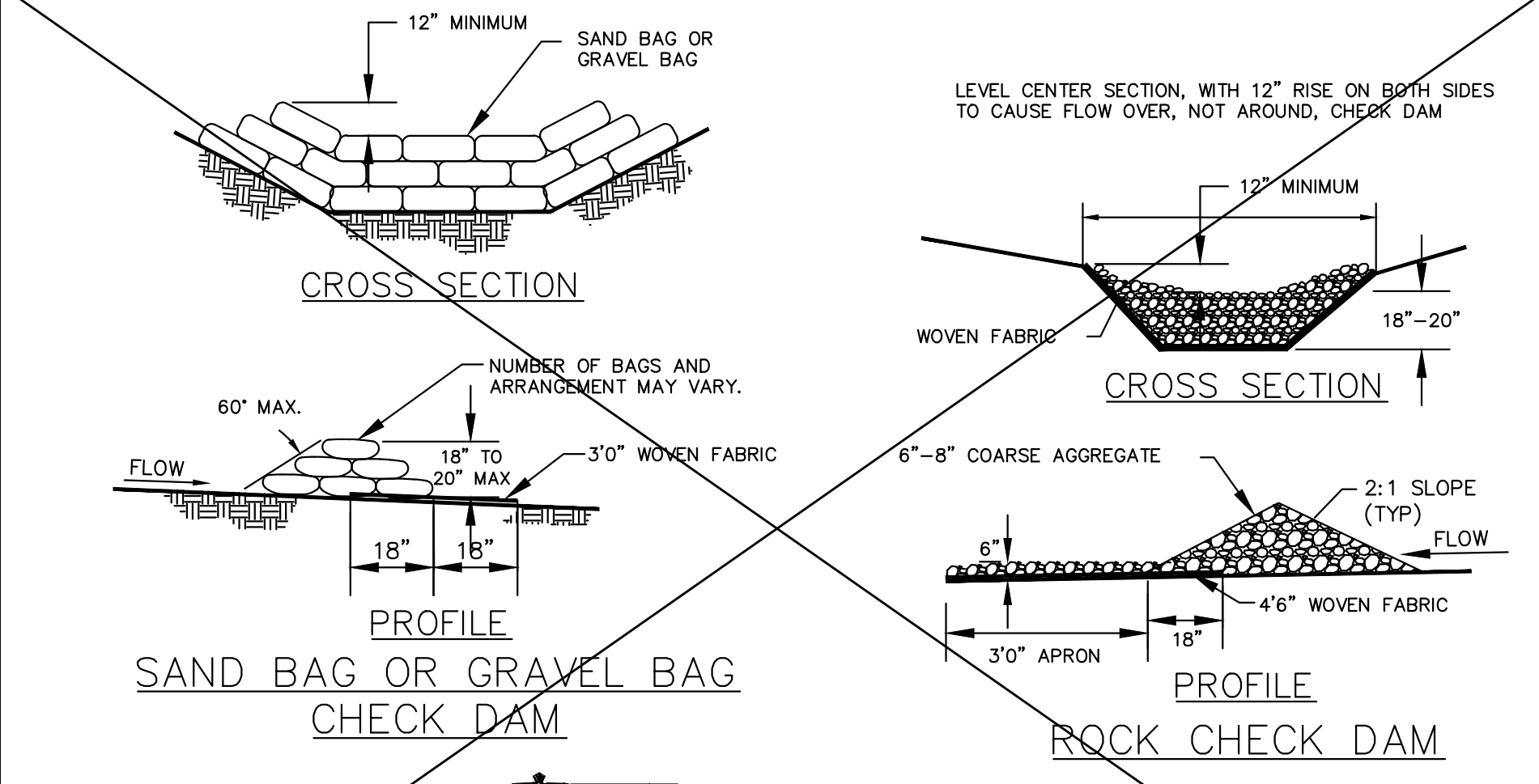
**CURB INLET PROTECTION**



- DESIGN CRITERIA**
- DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS ≤ 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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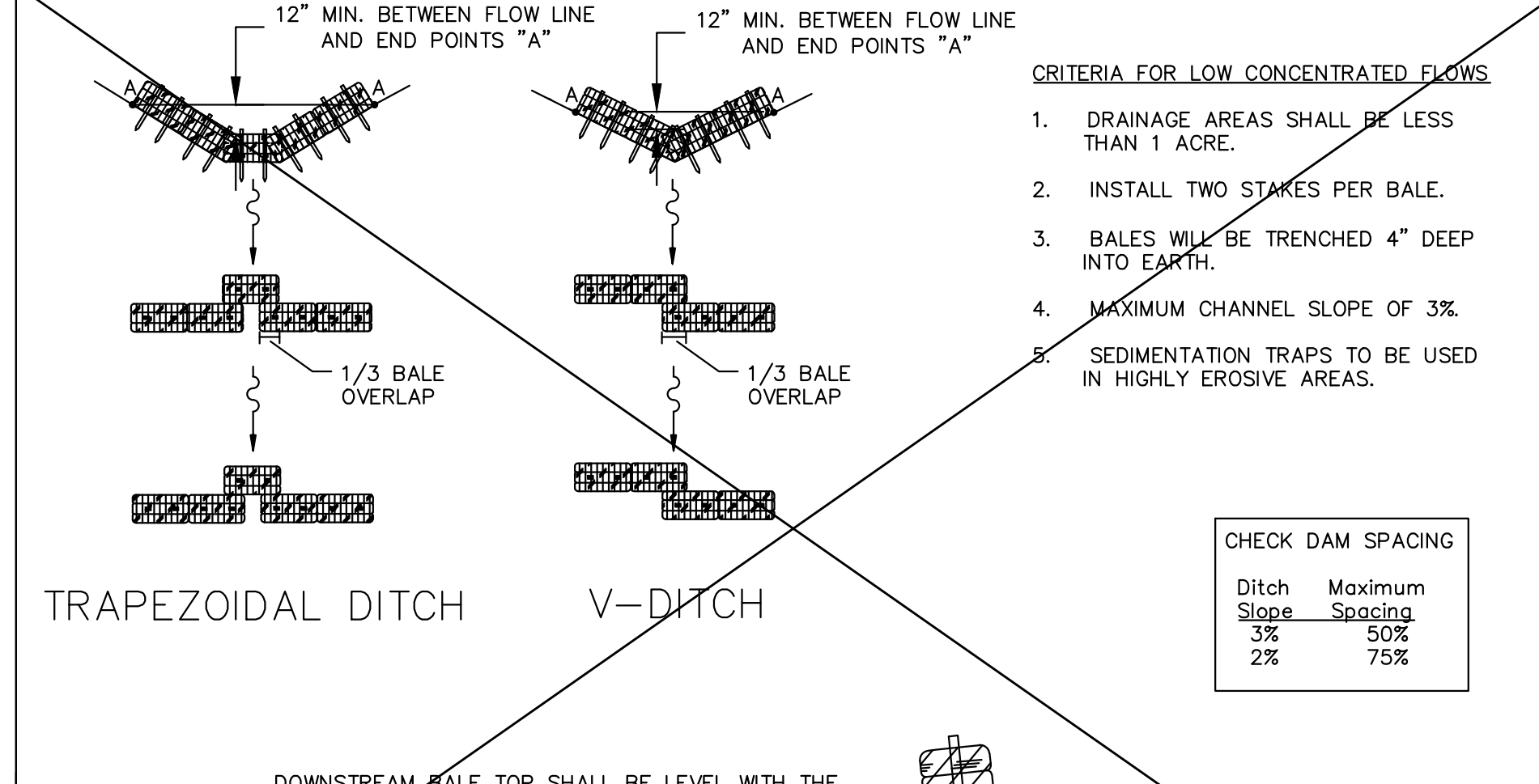
**DIVERSION BERMS + DIKES**



- 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**



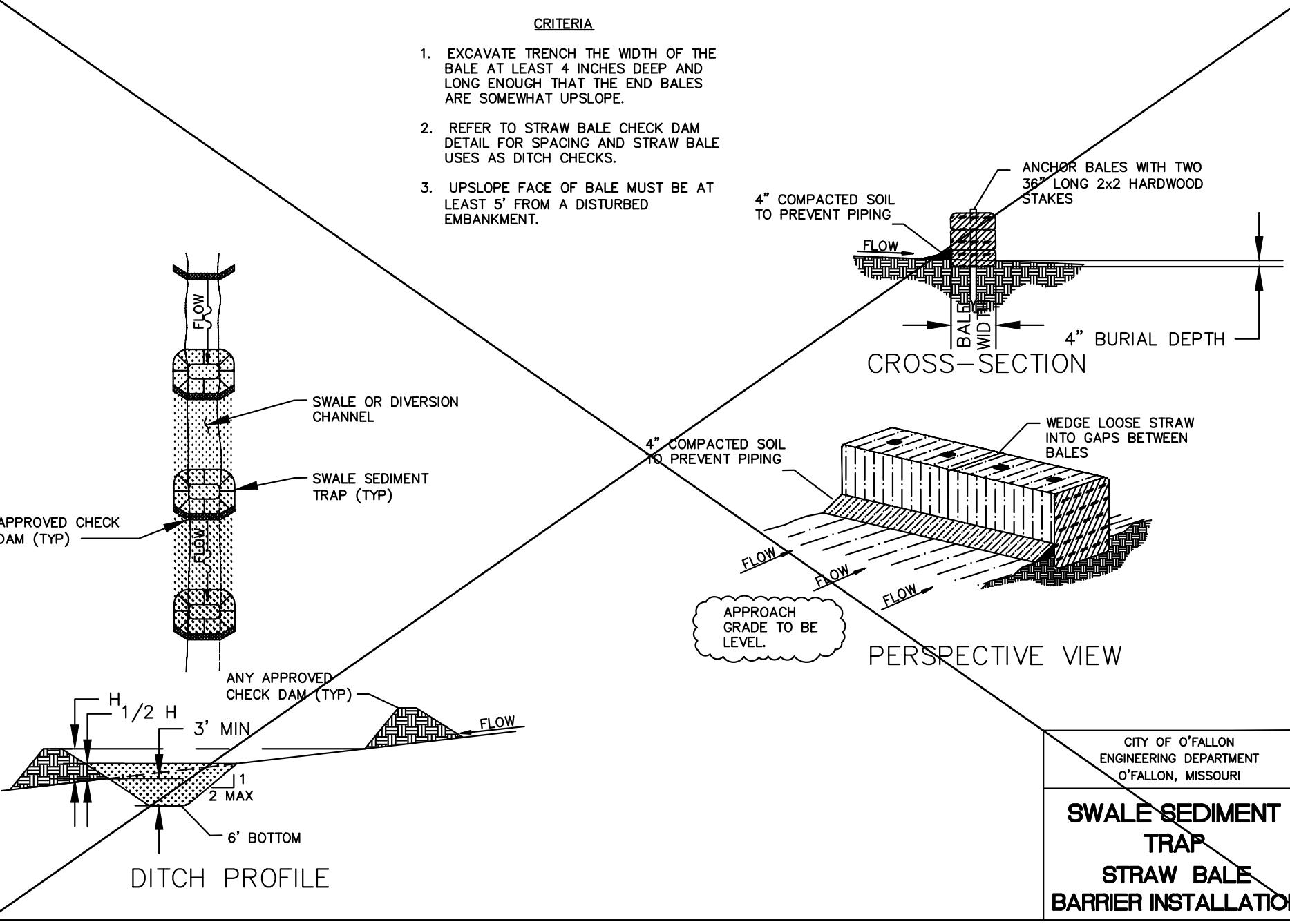
- CRITERIA FOR LOW CONCENTRATED FLOWS**
- DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
  - INSTALL TWO STAKES PER BALE.
  - BALES WILL BE TRENCHED 4" DEEP INTO EARTH.
  - MAXIMUM CHANNEL SLOPE OF 3%.
  - SEDIMENTATION TRAPS TO BE USED IN HIGHLY EROSION AREAS.

**CHECK DAM SPACING**

| Ditch Slope | Maximum Spacing |
|-------------|-----------------|
| 3%          | 50'             |
| 2%          | 75'             |

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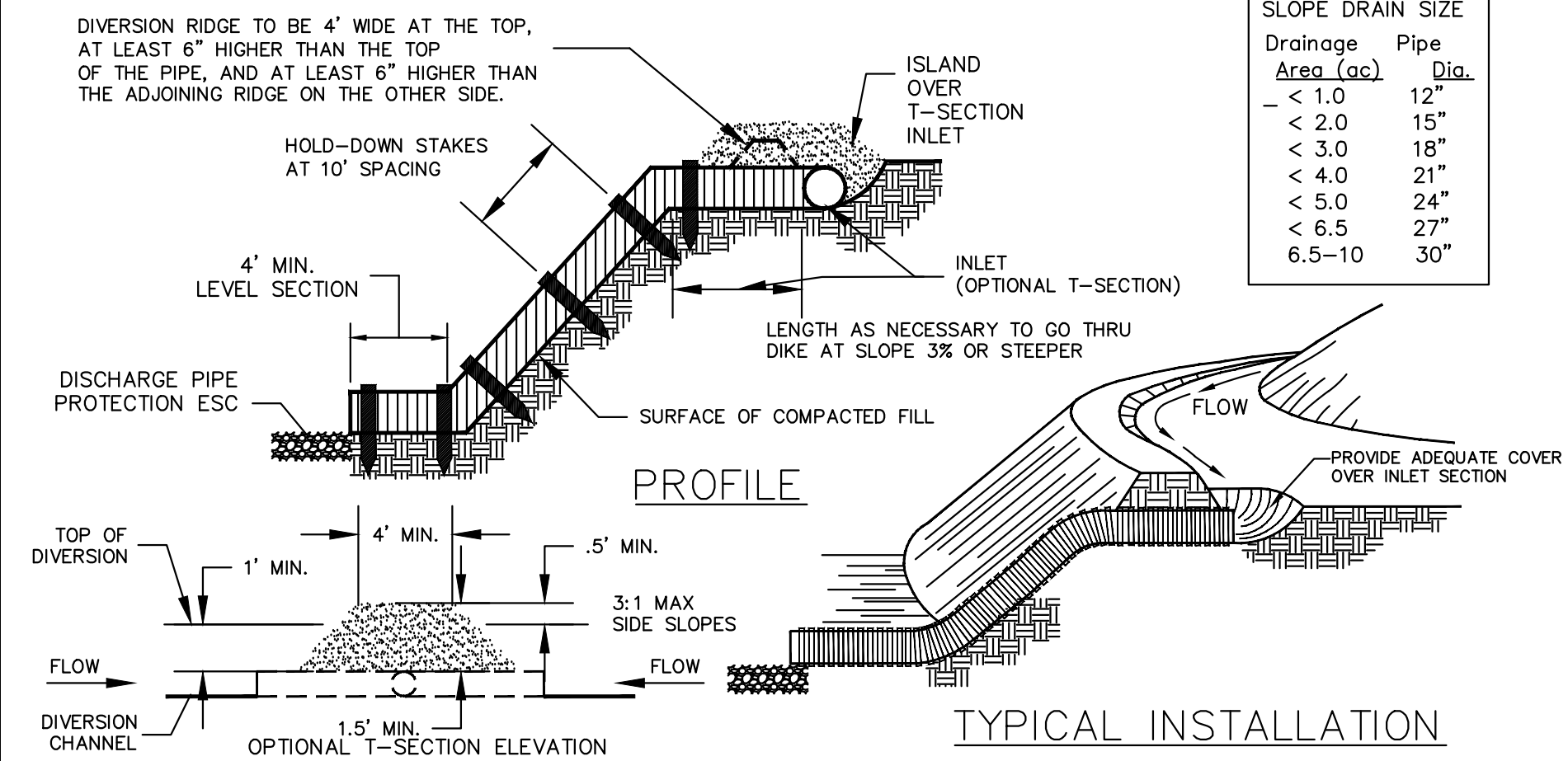
**STRAW BALE CHECK DAM**



- CRITERIA**
- EXCAVATE TRENCH THE WIDTH OF THE BALE 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 BALE MUST BE AT LEAST 5' FROM A DISTURBED ENGAGEMENT.

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**SWALE SEDIMENT TRAP STRAW BALE BARRIER INSTALLATION**

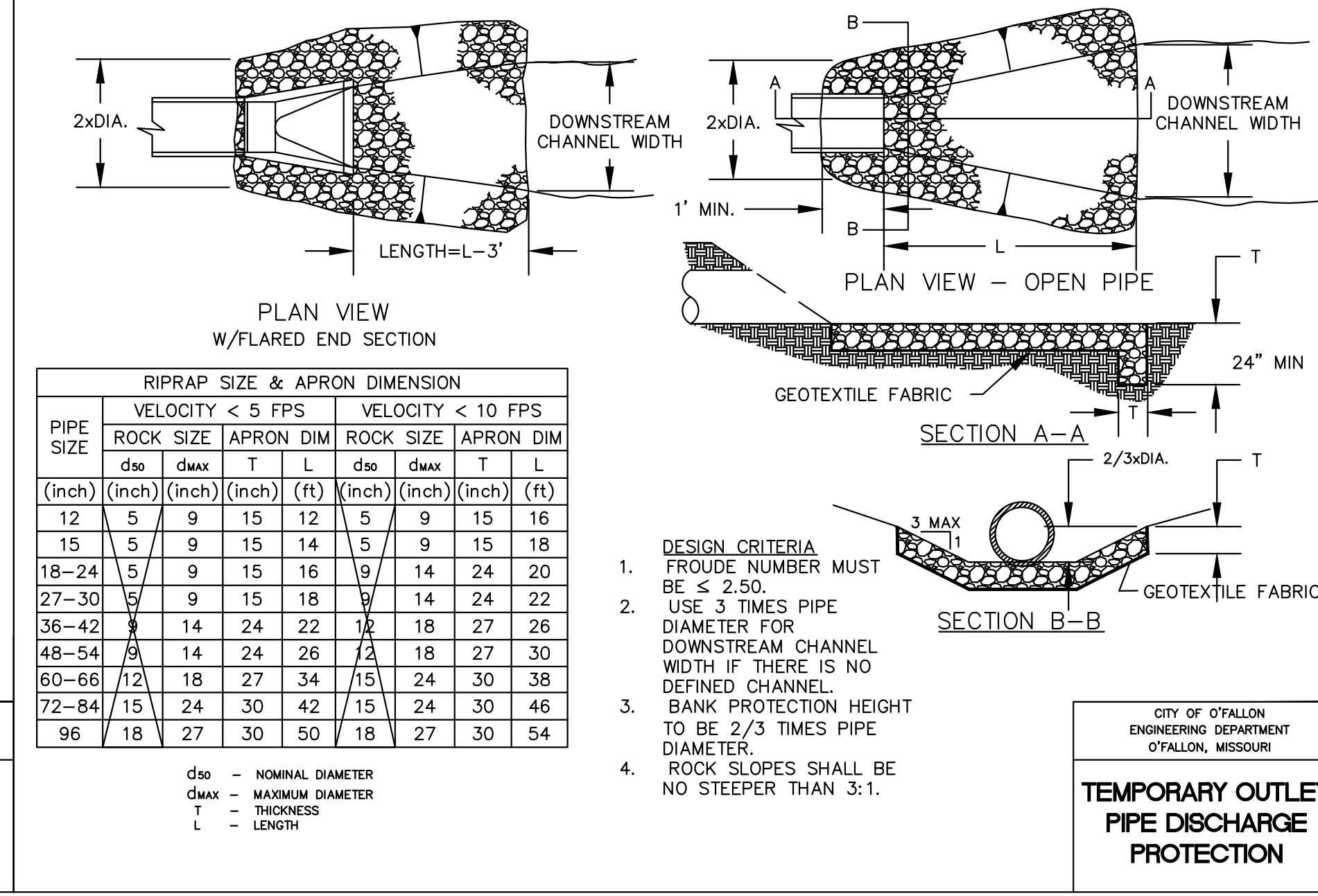


**SLOPE DRAIN SIZE**

| Drainage Area (ac) | Pipe Dia. |
|--------------------|-----------|
| < 1.0              | 12"       |
| < 2.0              | 15"       |
| < 3.0              | 18"       |
| < 4.0              | 21"       |
| < 5.0              | 24"       |
| < 6.5              | 27"       |
| 6.5-10             | 30"       |

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**TEMPORARY SLOPE DRAIN**



**RIPRAP SIZE & APRON DIMENSION**

| PIPE SIZE | VELOCITY < 5 FPS |           |           |           | VELOCITY < 10 FPS |           |           |           |
|-----------|------------------|-----------|-----------|-----------|-------------------|-----------|-----------|-----------|
|           | ROCK SIZE        | APRON DIM | ROCK SIZE | APRON DIM | ROCK SIZE         | APRON DIM | ROCK SIZE | APRON DIM |
| 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     | 8                | 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        |

- DESIGN CRITERIA**
- FROUDE NUMBER MUST BE ≤ 2.50.
  - USE 3 TIMES PIPE DIAMETER FOR DOWNSTREAM CHANNEL WIDTH IF THERE IS NO DEFINED CHANNEL.
  - BANK PROTECTION HEIGHT TO BE 2/3 TIMES PIPE DIAMETER.
  - ROCK SLOPES SHALL BE NO STEEPER THAN 3:1.

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**TEMPORARY OUTLET PIPE DISCHARGE PROTECTION**

**PROJECT TITLE**

# BROOKSIDE FOREST

O'FALLON, MISSOURI

**THE STERLING CO.**  
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**P+Z No.** 02-17.01  
**City No.**  
**Date:** Nov. 7, 2017  
**Job No.** 16-09-274  
**Page No.** 3.5  
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