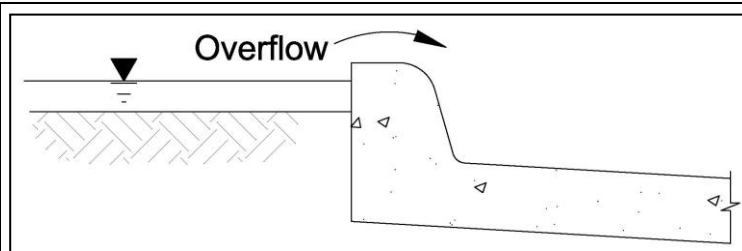


3.2 Depressed Grade (Curb Cut-Back) Sediment Trap

(Source: Modified from City of Plano BMP SP-12)

Sediment Control



Description: A depressed grade sediment trap is a sediment barrier created by grading or leaving the grade of an area at the back of curb or edge of pavement depressed to detain the surface flow until overflows onto the pavement.

KEY CONSIDERATIONS

DESIGN CRITERIA:

- Minimum 4 feet width and 1.5 inch depth
- Maximum 2 percent longitudinal slope and 3 percent transverse slope
- Erosion control blankets required at low point (sag) curb inlets

ADVANTAGES / BENEFITS:

- Inexpensive sediment trap for very small areas
- Alternative to inlet protection for projects within rights-of-way
- May be used on individual residential lots in certain situations

DISADVANTAGES / LIMITATIONS:

- May be disturbed and altered by construction equipment driving through it
- Limited application to very small areas along rights-of-way and residential lots

MAINTENANCE REQUIREMENTS:

- Inspect regularly
- Use a shovel or blade to remove sediment
- Re-grade as necessary
- Inspect erosion control blankets and repair as needed

TARGETED POLLUTANTS

- Sediment
- Nutrients & Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Construction Wastes

APPLICATIONS

Perimeter Control

Slope Protection

Sediment Barrier

Channel Protection

Temporary Stabilization

Final Stabilization

Waste Management

Housekeeping Practices

Fe=0.50-0.75

(Depends on soil type)

IMPLEMENTATION CONSIDERATIONS

- Capital Costs
- Maintenance
- Training
- Suitability for Slopes > 5%

Other Considerations:

- None

3.2.1 Primary Use

Depressed grade sediment traps are used to intercept and trap flows from very small drainage areas (i.e. parkways, medians, and pavements).

3.2.2 Applications

Depressed grade sediment traps are used at construction sites within rights-of-way to control small drainage areas. It can be used at the back of curb or edge of pavement where the drainage area is limited to the parkway or median. It can also be used where sections of pavement are removed and replaced for pavement repair or underground utility installation.

3.2.3 Design Criteria

- The width of the excavated area when installed back of curb shall be a minimum of 4 feet.
- The longitudinal slope along the back of curb depression cannot exceed 2 percent and the transverse slope toward the back of curb cannot exceed 3 percent. Steeper slopes require additional sediment controls.
- The maximum width of the right-of-way draining into the sediment trap shall be 11.5 feet. No other drainage area may contribute runoff to the sediment trap.
- The depressed grade sediment trap may be used back of curb for sediment control on single residential lots if no other drainage area contributes runoff to the depressed area. The designer shall calculate the minimum width of the depressed area, based on a 1.5 inch depth, the length of the curb at the front of the lot, and the volume of runoff from the lot for the temporary control design storm (2-year, 24-hour).
- Erosion control blankets (ECBs) are required at low or sag points along the curb where flow may become more concentrated. Criteria for ECBs are in [Section 2.3 Erosion Control Blankets](#).
- The excavation of the cut may be offset a maximum distance of 5 feet from the curb to avoid utility boxes.
- When a curb cut for a driveway is encountered and no driveway has been constructed, securely install a plank of wood (2x4, 4x4) across the curb cut in order to continue the curb.

3.2.4 Design Guidance and Specifications

No specification for depressed grade sediment trap is currently available in the Standard Specifications for Public Works Construction – North Central Texas Council of Governments.

3.2.5 Inspection and Maintenance Requirements

Depressed grade sediment traps should be inspected regularly (at least as often as required by TPDES Construction General Permit). Inspect the depression area periodically to ensure that the necessary storage volume is available. Use a shovel or blade to remove sediment from the area back of curb as needed. Re-grade the depression if it's disturbed by construction traffic.

The low points where this method is used should also be monitored during rain events to ensure the erosion control blankets are adequate to prevent sediment from flowing onto the pavement. Additional controls shall be added as needed.

3.2.6 Example Schematics

The following schematics are example applications of the construction control. They are intended to assist in understanding the control's design and function.

The schematics are **not for construction**. They may serve as a starting point for creating a construction detail, but they must be site adapted by the designer. In addition, dimensions and notes appropriate for the application must be added by the designer.

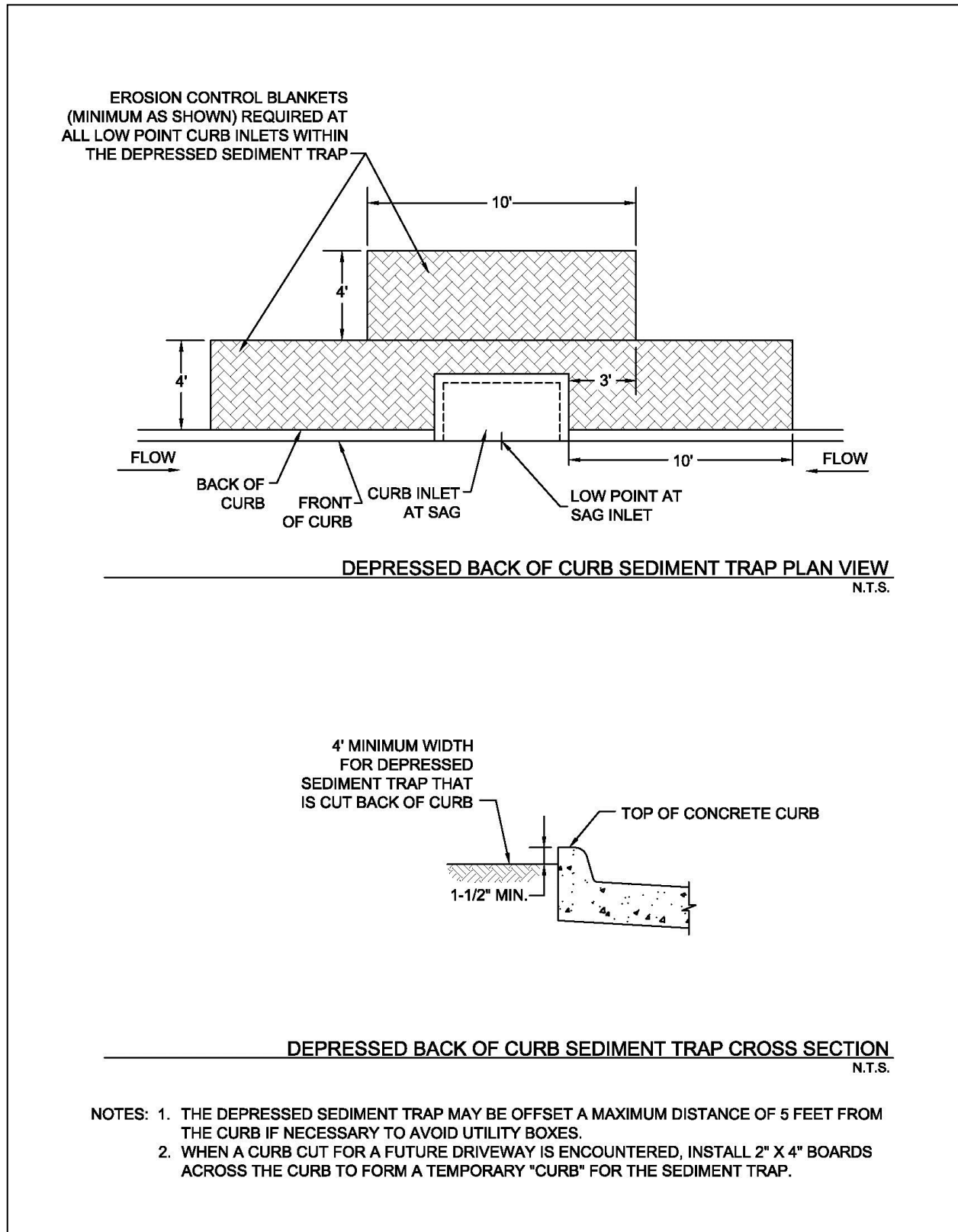


Figure 3.2 Schematics of Depressed Grade (Curb Cut-Back) Sediment Trap

(Source: City of Plano BMP SP-12)

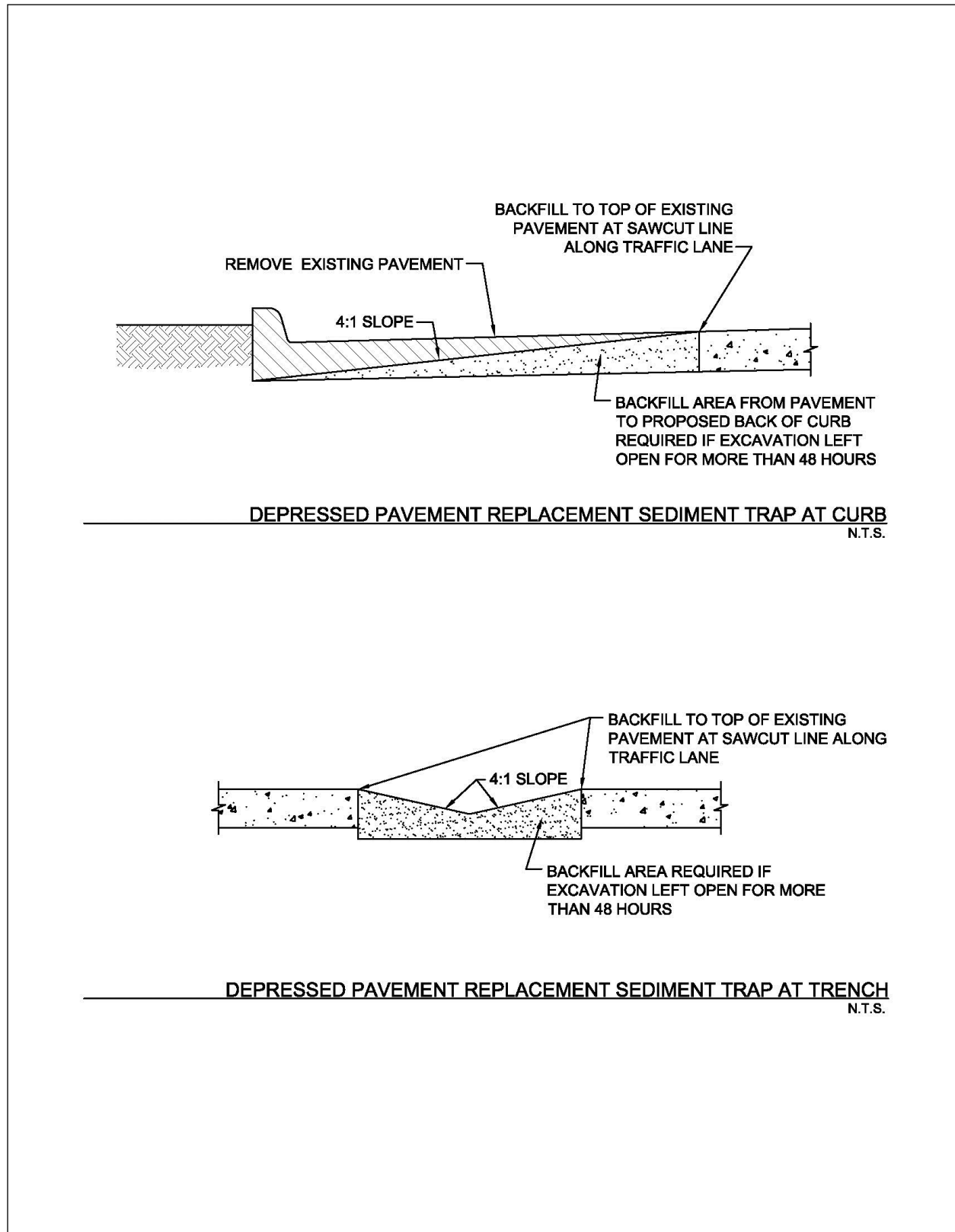


Figure 3.3 Schematics of Depressed Pavement Replacement Sediment Trap
(Source: City of Plano BMP SP-12)