

**One- and Two-Family Residential Construction
Erosion Prevention and Sediment Control
Best Management Practices Manual**

City of Murfreesboro

PURPOSE

The City of Murfreesboro, under the requirements of an NPDES permit issued by the State of Tennessee, must address water quality for storm water runoff from construction activities. The primary water quality component of concern is sediment although building materials, chemicals, wastes, trash debris and similar materials common to the residential construction industry should be controlled as well. The goal of this manual is to provide guidance to the builder of one- and two-family dwellings on Best Management Practices (BMPs) for erosion prevent and sediment control. The manual contains information on the procedures, practices, and guidelines applicable to one- and two-family residential construction in the City of Murfreesboro under the authority of the Storm Water Management Ordinance.

This manual contains standard practices and plans for erosion prevention and sediment control sufficient for typical one- and two-family residential construction; it is not intended to address all circumstances that may be encountered on residential construction lots. These practices are intended to minimize erosion and reduce sediment leaving the lots. It is the responsibility of each residential builder to develop, install, maintain and inspect an erosion prevention and sediment control plan that is effective from the start of construction on the lot through the establishment and stabilization of the lawn. For residential lots, the primary target for protection is the City's storm water management system, which includes the ditches, pipes, curb inlets, and area drains common in a residential subdivision. Perimeter controls will be the primary sediment control practice implemented for protection of these elements. Since the curb and gutter system along City streets serves as a part of the City's overall storm water management system, it is important that City streets be protected from excessive mud and sediment. There will be situations that are not covered by the standard practices presented in this manual. In these situations, the builder should implement an erosion prevention and sediment control plan that meets the objectives of protecting the City's storm water management system from sediment and City streets from excessive mud and sediment.

It is intended to implement the requirements of this manual through the City's existing residential building permit, inspection, and approval process. No additional plans will be required for construction of one- and two-family residences to be in compliance with this manual. Failure of the builder to comply with this manual and to prevent sediment for entering the street and/or City's storm water management system may result in delayed inspections, Stop Work orders, notices of violation, citations, fines, and/or penalties as described in the City's Storm Water Management Ordinance. In addition, failure by the developers, builders, and others in the construction industry to implement an effective storm water program for construction projects can result in damage to adjacent properties, damage to the City's storm water management system, and increases in pollution of our streams, lakes, and rivers. If you have any questions regarding this manual, feel free to contact the Building and Codes Department. We are committed to successful implementation of this program and will provide assistance to all who are involved with this process.

Betts Nixon
Chief Building Official

PROCEDURES

Administrative Procedures

This section describes the administrative procedures that should be followed by the builder from the issuance of a building permit through final lot stabilization for compliance with this manual.

- Obtain building permit from Building and Codes Department.
- Develop an erosion prevention and sediment control (EPSC) concept for lot.
- Identify and assign responsibility to key personnel for the installation, inspection, and maintenance of EPSC measures.
- Install initial EPSC measures before beginning construction on lot.
- At a minimum, the initial EPSC measures must include a stabilized construction entrance (See BMP-CE) and down stream sediment control barriers (See Typical Lot Diagrams).
- Prepare lot for footing inspection.
- Building and Codes inspector must approve the adequacy and installation of the initial EPSC measures and will not inspect or approve footing until the initial EPSC measures are in place. Additionally, the inspector may require the installation of additional EPSC measures if those initially installed are not adequate.
- Install appropriate EPSC measures as necessary as construction progresses. For example, protection of soil stockpiles and changes in drainage patterns due to lot grading may dictate the need for additional EPSC measures.
- Inspect and maintain EPSC measures during the project to ensure function of the measures including replacing failed measures, installing additional measures as warranted, and maintaining active measures by removal of accumulated sediment.
- At a minimum, the Building and Codes inspector will review and accept the adequacy and maintenance of the EPSC measures before conducting further building inspections and reinspections. Failure of the builder to adequately maintain EPSCs will result in failed EPSC inspections. The EPSC measures inspection must pass before the inspector can conduct requested building inspections.
- The builder is responsible for maintenance of the EPSC measures until the lot is not a significant potential source of sediment. Typically, this point is reached when a good cover of grass is established over the lot. A final Certificate of Occupancy cannot be issued until the yard is seeded and strawed or sodded.

Builders Guidelines

This section provides guidelines (Dos and Don'ts) to the builder that should be followed during the construction of a one- or two-family dwelling.

- The builder is the single responsible party for the proper implementation of an EPSC associated with a lot. This includes the responsibility for the actions/inactions of employees, subcontractors, and/or suppliers.
- Periodic inspections, repair, and maintenance are essential for proper EPSC.
- The builder is responsible for preventing mud, sediment, debris, dirt, rock and other matter from entering the street. In the event that these materials enter the street, they should be removed immediately to prevent tracking by vehicles and/or washing by rain.
- The temporary construction exit should be maintained as necessary to provide a clean stable area off the street for access, parking, storage, delivery, etc. Geotextile fabrics are recommended and can be used under the gravel to increase the useful life and prevent deterioration of the exit especially in muddy or wet conditions. As the construction exit accumulates mud and sediment, it should be dressed with new stone or the upper layer removed to expose clean a rock surface underneath.
- From time to time, EPSC measure may need to be removed temporarily to allow completion of construction activities. Examples include removal of silt control barrier to allow the completion of water and sewer connections or finished grading of the lot for seeding or sodding. In these instances, the measures may be removed temporarily but must be replaced at the end of the construction activity or at the end of each workday if more than one day is needed. In any event, the BMPs should be maintained until the final yard is stabilized.
- A builder or homeowner cannot modify the City's storm water management system including the pipes, inlets, area drains, ditches and related elements typically within the street or within a drainage easement without the prior written approval of the City Engineer or designee.
- The street should remain free of construction materials/debris, waste bins, portable toilets, or other items to ensure that these items or materials in them do not easily enter the City's storm water system and to maintain access on the City street.
- Drainage easements and ditches should remain free of stockpiled soil, sediment, mud, construction materials/waste, etc at all times.
- Utilize downspout extenders as soon as gutters and downspouts are installed to divert roof drainage away from exposed soils and to stable areas such as street driveway, sidewalk, or vegetated area.
- Sediment, mud, paints, chemicals, debris, concrete wastes/exposed aggregate washdown, construction wastes and similar materials should not be "washed down" to the street or City storm water management system. This includes final cleanup of the lot. The use of pressure washers and other types of wet cleaning

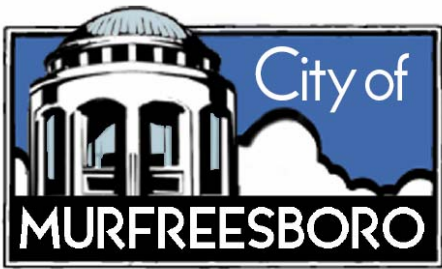
are strongly discouraged and are illicit discharges if the activity produces a discharge to the City street or City storm water managements system.

- Temporarily or permanently stabilize bare soil areas and soil stockpiles as soon as practical when the area is inactive or has reached finished grade.
- Preserve vegetated areas as long as practical or permanently if possible. Limit clearing to the minimum necessary to accomplish construction.
- Restrict vehicle (construction and street) access to lots to the construction exit area. Access restriction can be enhanced by the use of temporary construction fencing or other barriers.
- Discourage vehicles traveling across lot areas to allow only those absolutely necessary to complete construction. Temporary barriers such as berms or temporary fences may be effective in discouraging these types of activities.
- Correct deficiencies within 72-hour period. Failure to correct EPSC deficiencies may result in delayed inspections, notices of violation, citations, fines, penalties, and/or stop work orders.
- Install additional EPSC measures if sediment is leaving your site. Failure to contain sediment to your site may result in delayed inspections, notices of violation, citations, fines, penalties, and/or stop work orders.

- **PRACTICES**

This section provides details on the most commonly used EPSC practices for small residential lots. In addition, several typical lot diagrams are included that provide a standard EPSC plan for some of the most common lot configurations. These typical lot diagrams may not address every lot configuration and elements of more than one typical lot diagram may need to be used for an effective EPSC plan. Finally, a checklist is provided as a guideline to implementation of an effective EPSC plan for your project.

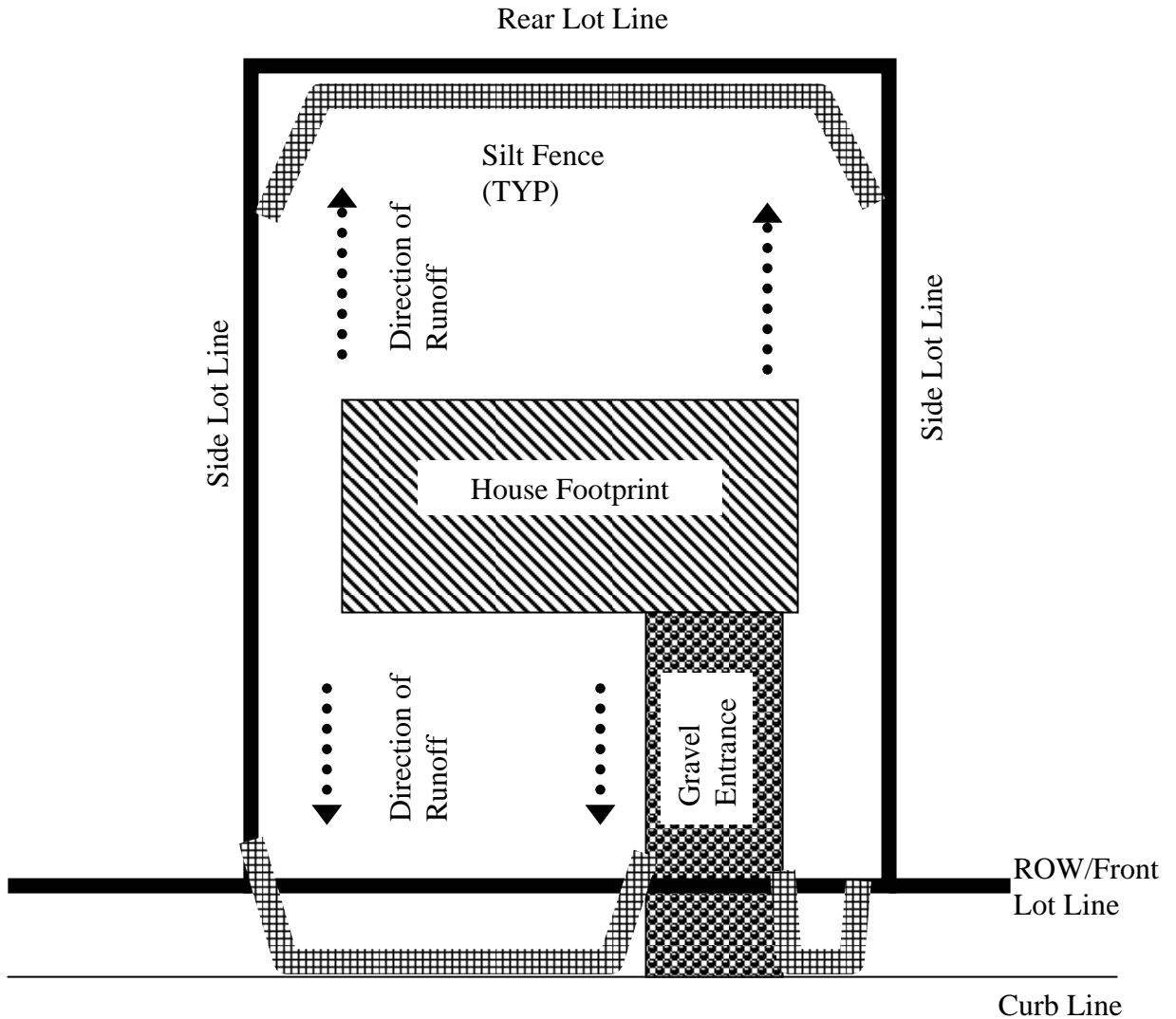
It is the responsibility of each residential builder to develop, install, maintain and inspect an erosion prevention and sediment control plan that is effective in preventing sediment from leaving the lots from the start of construction on the lot through the establishment and stabilization of the lawn. Measures other than those included in this manual may be necessary to meet the intent of this manual. The Tennessee Erosion and Sediment Control Handbook available from the State of Tennessee Division of Water Pollution Control and other similar handbooks provide detailed information on erosion prevention and sediment control practices applicable to the residential construction industry.







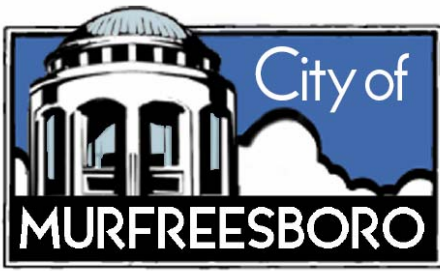
T E N N E S S E E

One and Two Family Erosion Prevention and Sediment Control Plan

Type A (Lot Slopes to Rear and Street)



-  Lot Line
-  Silt Control Barrier
-  Gravel Entrance
-  Direction of Surface Water Runoff



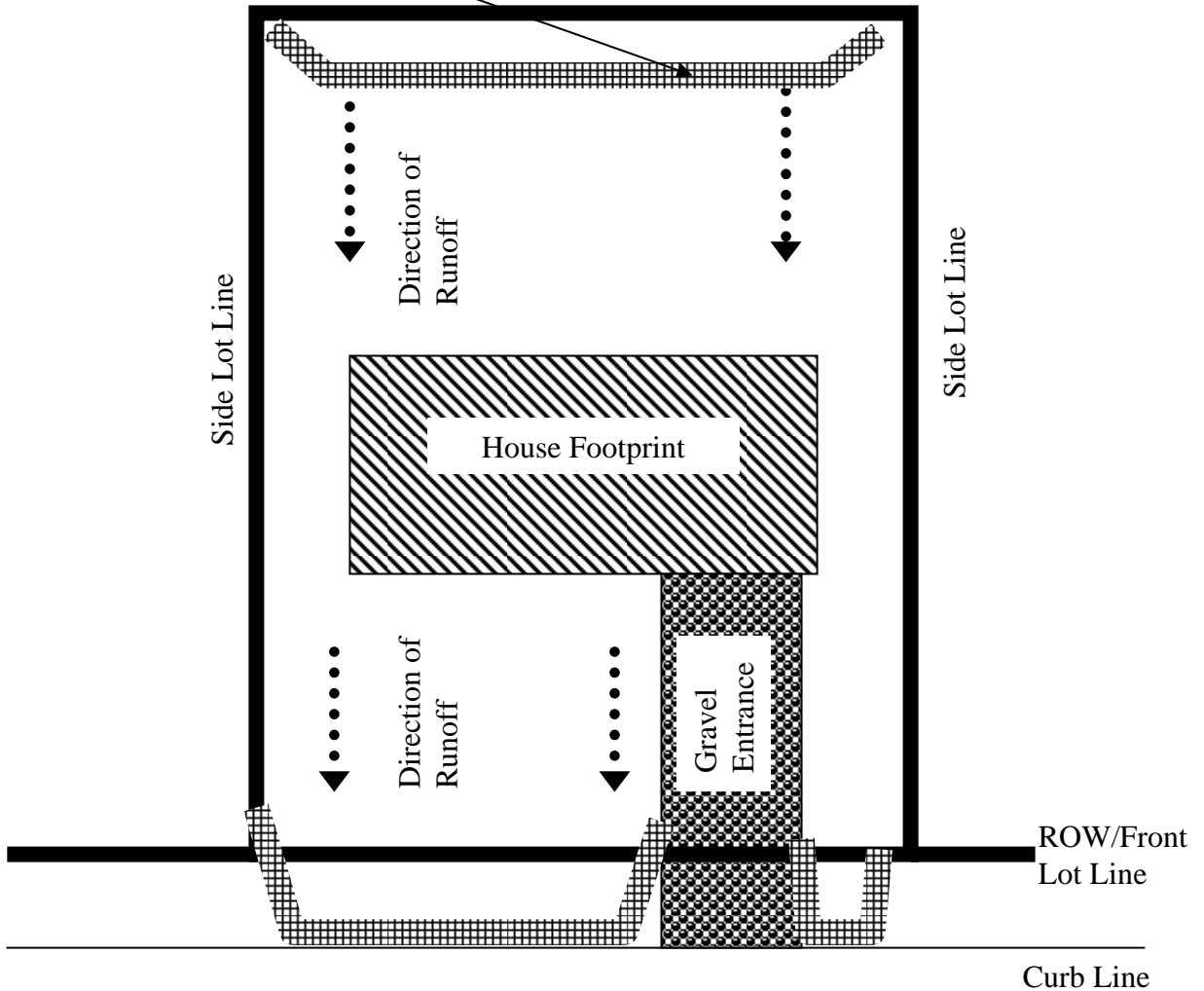
T E N N E S S E E

One and Two Family Erosion Prevention and Sediment Control Plan

Type B (Lot Slopes Street)

Silt Control Barrier (If Needed for Run-on Control)

Rear Lot Line



Lot Line



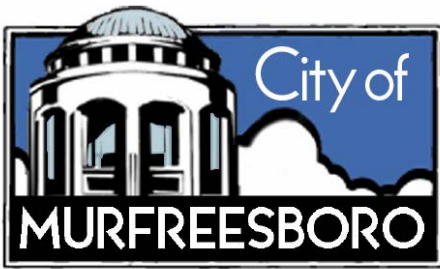
Silt Control Barrier



Gravel Entrance



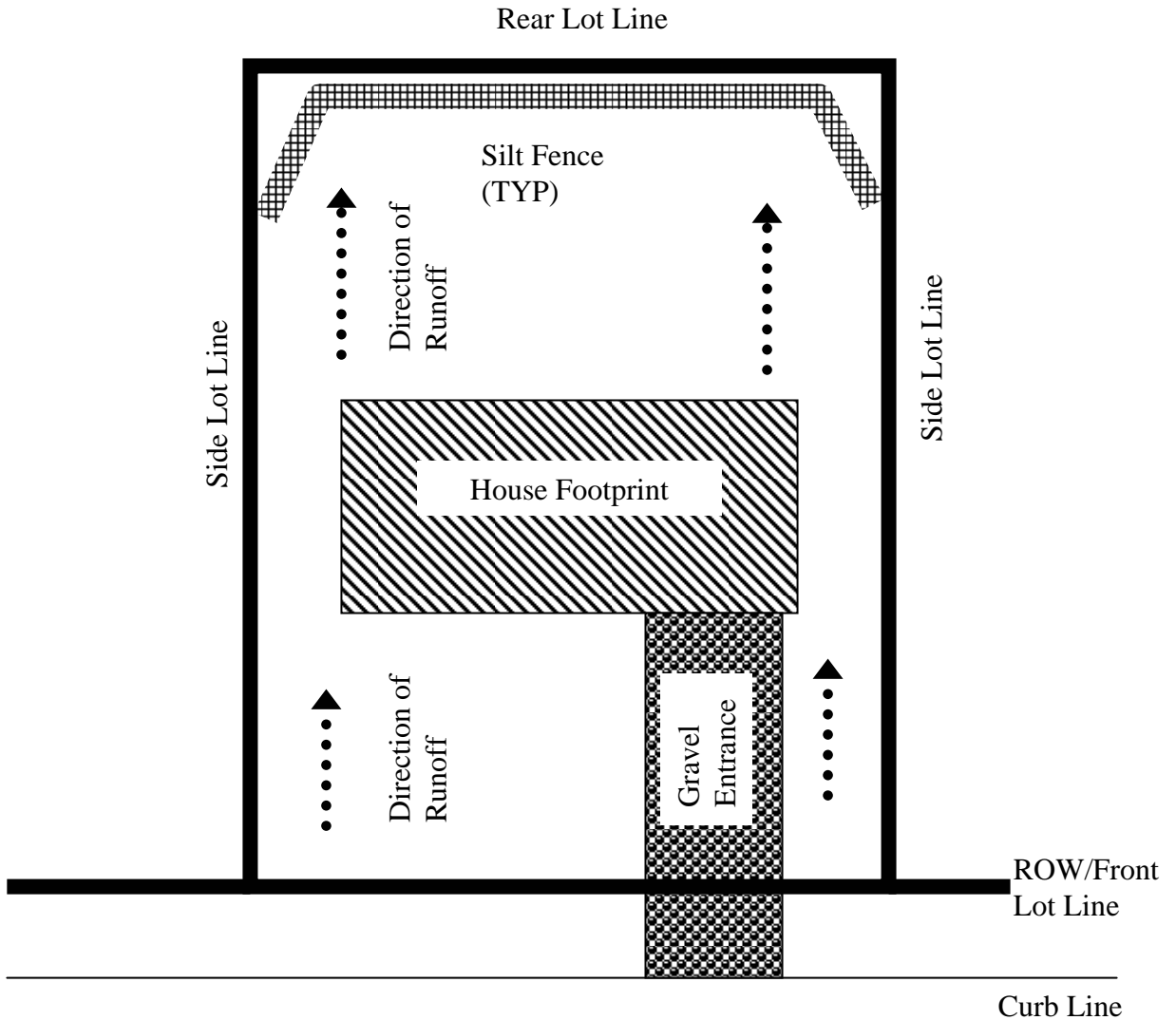
Direction of Surface Water Runoff



T E N N E S S E E

One and Two Family Erosion Prevention and Sediment Control Plan


Type C (Lot Slopes to Rear)

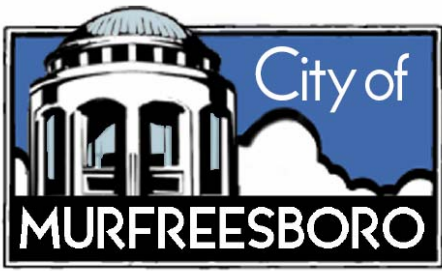


 Lot Line

 Silt Control Barrier

 Gravel Entrance

 Direction of Surface Water Runoff

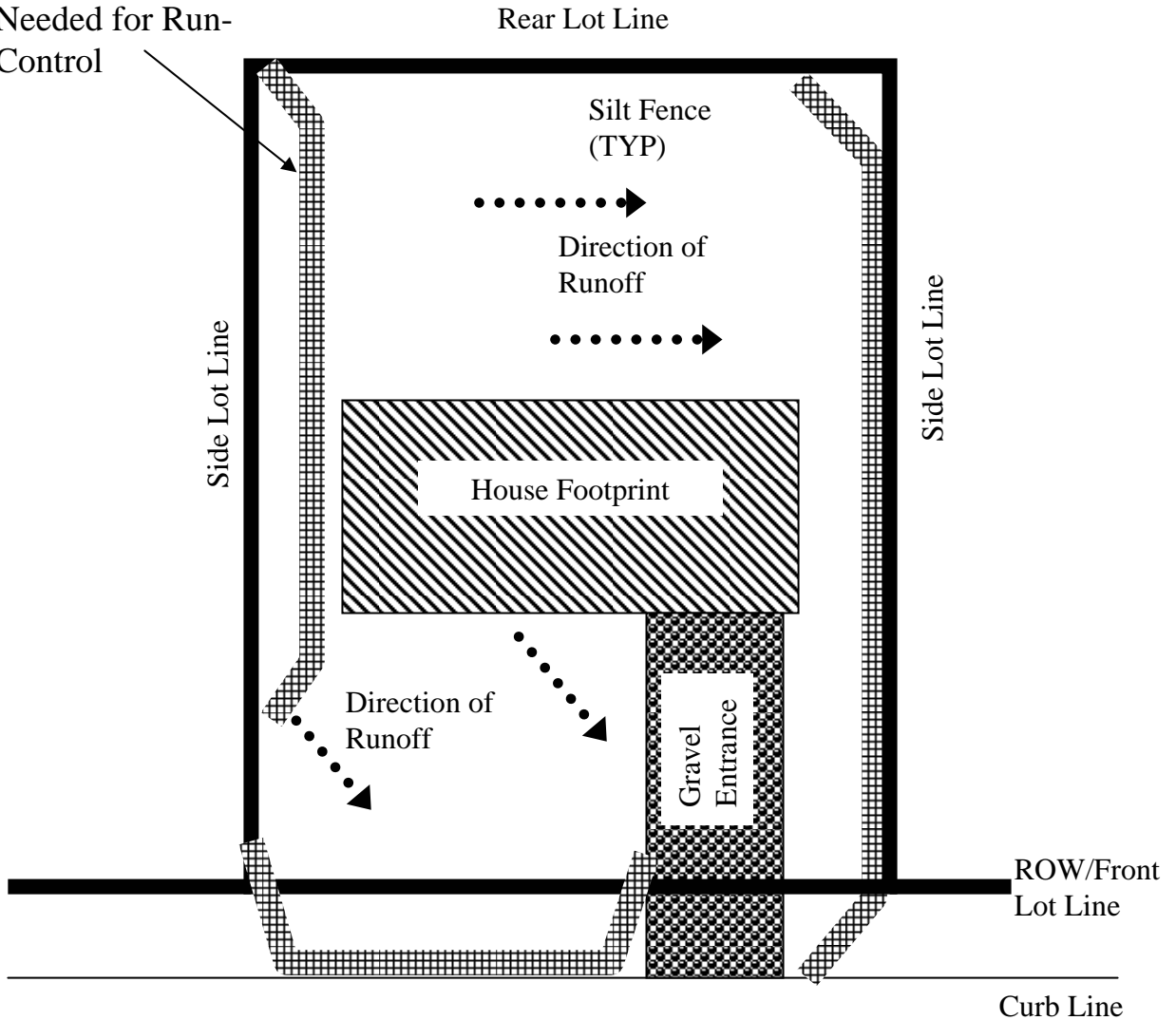


T E N N E S S E E

One and Two Family Erosion Prevention and Sediment Control Plan

Type D (Lot Slopes to Side)

Silt Control Barrier
(If Needed for Run-
on Control



Lot Line



Silt Control Barrier



Gravel
Entrance



Direction of Surface
Water Runoff