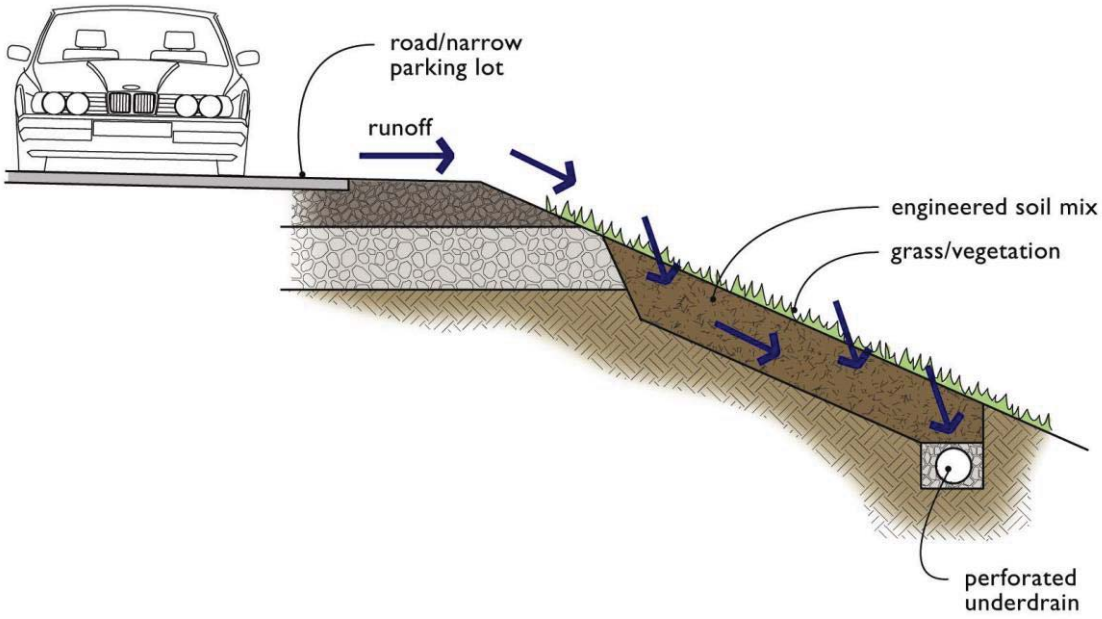
3.22 Ecology Embankment

An ecology embankment is a filter strip designed for impervious areas with flow paths of 30 feet or less that can drain along their widest dimension to grassy areas. Typical applications of ecology embankments are for roads with limited right-of-way widths or for narrow parking strips.



Ecology Embankment Checklist

		Date						
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
M	No Vegetation Zone adjacent to pavement					Erosion, scour, or vehicular damage	No vegetation zone is uneven or clogged so that flows are not uniformly distributed.	Level the area and clean so that flows are spread evenly.
M	No Vegetation Zone adjacent to pavement					Sediment accumulation on edge of pavement	Flows no longer sheeting off of roadway. Sediment accumulation on pavement edge exceeds top of pavement elevation.	Remove sediment deposits such that flows can sheet off of roadway.
M	Vegetated Filter					Sediment Accumulation on Grass	Sediment depth exceeds 2 inches.	Remove sediment deposits, re-level so slope is even and flows pass evenly through Ecology Embankment.
M	Vegetated Filter					Excessive vegetation or undesirable species.	When the grass becomes excessively tall; when nuisance weeds and other vegetation starts to take over or shades out desirable vegetation growth characteristics.	Mow grass, control nuisance vegetation, such that flow not impeded. Grass should be mowed to a height that encourages dense even herbaceous growth.
M	Vegetated Filter					Erosion, scour, or vehicular damage.	Eroded or scoured areas due to flow channelization, high flows, or vehicular damage.	For ruts or bare areas less than 12 inches wide, repair the damaged area by filling with suitable topsoil. (The grass will creep in over the rock in time). If bare areas are large, generally greater than 12 inches wide, the filter strip should be re-graded and re- seeded. For smaller bare areas, overseed when bare spots are evident.
M	Media Bed					Erosion, scour, or vehicular damage.	Eroded or scoured areas due to flow channelization, high flows, or vehicular damage.	For ruts or areas less than 12 inches wide, repair the damaged area by filling with suitable media. If bare areas are large, generally greater than 12 inches wide, the media bed should be re-graded.
M	Media Bed					Sediment Accumulation on Media Bed.	Sediment depth inhibits free infiltration of water.	Remove sediment deposits, re-level so slope is even and flows pass freely through Media Bed.
M	Underdrains					Sediment	Depth of sediment within perforated pipe exceeds 0.5”.	Flush underdrains through access ports and collect flushed sediment.

Ecology Embankment Checklist (Continued)

		Date						
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
M	General					Trash and Debris Accumulation	Trash and debris which exceed 5 cubic feet per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size garbage can). In general, there should be no visual evidence of dumping. If less than threshold all trash and debris will be removed as part of next scheduled maintenance.	Remove trash and debris.
M	General					Flows are bypassing Ecology Embankment	Evidence of significant flows down-slope (rills, sediment, vegetation damage, etc.) of Ecology Embankment.	Remove sediment deposits, re-level so slope is even and flows pass evenly through Ecology Embankment. If Ecology Embankment is completely clogged it may require more extensive repair or replacement.

If you are unsure whether a problem exists, please contact a Professional Engineer.

Comments:

Key:
(M) Monthly from November through April.
(A) Once in late summer (preferable September)
(S) After any major storm (use 1-inch in 24 hours as a guideline).