Below are general recommendations for maintenance of retaining walls.

The performance of retaining walls depends not only on proper design and construction, but also on proper maintenance. A properly designed and constructed retaining wall may still experience distress due to surcharge loads resulting from modifications of the surrounding grades and/or the installation of adjacent structures, excavations, or underground utility lines.

Sprinkler Systems:
Main sprinkler lines should not be placed next to the retaining wall. Instead, main sprinkler lines and heads should be located a minimum horizontal distance of six feet (6'-0") away from the perimeter of the retaining wall and discharge toward the retaining wall.

Grading:
Increasing the grade slopes behind the high side and/or at the low side of the retaining wall should not be performed without consulting an engineer.

Drainage:
No subsurface drainage or below grade utilities should be installed adjacent to a retaining wall, unless the design has been reviewed and approved by an engineer. All drainage behind the high side of a retaining wall should be surface drainage only. This drainage is typically designed by the civil engineer of record for the subdivision or lot. All thru-face and behind-wall drainage pipes are to be maintained so that they are kept clear and free from obstructions. Drainage grades along the base of a retaining wall should be maintained to be positive (slope away from the base of the wall) and the drainage grades along the top of a retaining wall should generally be maintained flush with the top of the retaining wall.

Fences:
Fences located on the high side of the retaining wall shall be embedded in the top of the retaining wall or located behind the top of the retaining wall. Fence posts shall not penetrate the filter drain. If details and specifications for the embedment of fence posts are required, or if a fence is not explicitly shown on retaining wall design drawings, consultation with an engineer is recommended. Fences on the high side of retaining walls should not be revised from an "open" design to a "solid" design, as "solid" designs place additional lateral wind loads on retaining walls that the wall may not be designed for or capable of withstanding.

Adjacent Structures and Excavations:
Consultation with an engineer is recommended prior to the construction of any structures or excavations that occur within a horizontal distance less than the height of the retaining wall (including embedment) which are not explicitly shown on the retaining wall design drawings.

Retaining Wall Height:
Increasing the retaining wall height by vertically extending the top of the retaining wall, by placing additional fill behind the high side of the retaining wall, or by removing soil from the base of the retaining wall is strictly prohibited. The height of a retaining wall should not be increased without first consulting an engineer.

Trees:

Studies have shown that trees and large shrubs located adjacent to a ground supported structures (i.e. residential foundations, retaining walls, etc.) can be a potential contributing factor to distress. Over time, vegetation will remove moisture from clay soil, resulting in shrinkage of the subgrade. This shrinkage may cause settlement to occur beneath ground supported structures. Large trees located close to retaining walls may result in additional pressure on the wall from the root system resulting in isolated distress. It is recommended to monitor foundations and retaining walls located in close proximity to trees for any salient signs of distress. It is generally recommended to install a root barrier between trees and ground supported structures for trees located closer than one-and-a-half (1-1/2) times the mature height of the free from the ground supported structure. As a minimum, a root barrier should consist of a four-inch (4") wide, six feet (6'-0") deep, lean concrete wall. A minimum six (6) mil thick polyethylene sheet, draped within the excavation and backfilled using sand or gravel, can be used as an alternative to concrete. Vegetation shall be planted outside of the root barrier, away from the foundation. It is recommended to consult with a certified arborist regarding root barrier depth and installation based on site-specific information (height, age, species, distance, etc.).

Please let me know if there are any questions.

Sincerely,
Joseph Roberts