

The Charter Township of Chesterfield

Building Department

47275 Sugarbush, Chesterfield Township, MI 48047
586-949-0400

SEAWALL INFORMATION

- 1. Seawall permit Fee \$75.00 with \$100.00 Bond**
- 2. Submit Approved D.E.Q. & Army Corp. of Engineer Permit along with a completed Town ship Building permit application. (Submit for D.E.Q. & Army Corp. permits with the department of permit consolidation unit Lansing Michigan call for app.) 1-517-335-3077**
- 3. Required Inspections Sheeting length, Tie-back and Whaler inspection and backfill inspection.**

Sea Wall Construction for Commercial or Business Property

Seawall construction for commercial or business property shall be designed for the site by a Registered professional Engineer taking into account all backfills as well as any surcharge weight due to parking, building, etc.

Seawall Construction for Residential Property

Seawall construction for residential property shall be in accordance with the following requirements:

- A. The record high-water prior to 1974 was elevation 577.6 (all elevations are based on the U.S. Geodetic Survey datum) based on conditions of no wind or waves. Wind and waves can increase the lake level several feet at shore lines, lakes and canals depending on the direction of the wind and other causes. The top of any seawall constructed under this ordinance shall not be less than elevation 580 which is 0.4 feet above the record high water level, unless Sixty (60%) percent of the highest walls 300 feet on either side of the proposed wall is less than such elevation then and in that event the top elevation may conform to the medium elevation of the highest Sixty (60%) percent of the sea walls 300 feet on either side of the proposed seawall.**

Depending on location and exposure, the owner of the proposed seawall should give consideration to the effects of wind and waves in determining the need for additional height above that elevation.

- B. Wall construction materials shall be either:
 - 1. Interlocking steel sheet piling - minimum 3/16 inch thick or
 - 2. Two inches thick tongue and groove pressure treated on piece wood, or
 - 3. Concrete or other material should be approved by the Township Engineer.

- C. The stability of a seawall is dependent on the bottom section being embedded in the ground to a sufficient extent to provide enough ground resistance to prevent the bottom of the seawall sheeting from sliding laterally. Sliding resistance is dependent on stiffness of the ground and the amount of embedment of the sheeting in the ground. The stiffer the ground the less embedment of the sheeting is required. Therefore walls shall have from 40% to 60% of their total length embedded in the ground with the lesser figure being used for the soft clay ground through which little effort is needed to drive the sheeting during installation. Embedment shall be defined as the part or the total sheeting length driven in the ground below an elevation two (2) feet below the existing lake or canal bottom elevation 568.0 whichever is higher.

- D. Walls shall be complete with whaler, capping, tie-backs and deadman.

- E. Deadman shall consist of one (1) section of steel sheet piling driven vertically with a one (1) foot horizontal such that the bottom of the piling is one(1) foot closer to the wall than the top of the piling. The top of the deadman sheet piling shall be 10 feet long and located not less than 16 feet back of the seawall except that deadman sheet piling installed on sea walls parallel to side lot lines may be a minimum of 10 feet from said seawall but shall be increased in length one (1) foot for each foot less than 16 feet the spacing is between the deadman and the seawall. No deadman shall be less than 10 feet from the seawall. Deadman must be installed within the property on which the seawall is installed.

- F. Tie-backs connecting the whaler and the deadman shall consist of not less than 3/4 inch diameter solid one piece steel rods. Tie-backs shall connect for the deadman sheet piling 3 2 feet below the top of the deadman, however, a whaler shall not be required with steel sheeting, but a whaler shall be required with all wood sea walls.
- G. Deadman and tie-backs shall be spaced a maximum of (8) feet center to center.
- H. Whalers shall be installed 22 to 32 feet below the top of the wall.
- I. Design of the seawall shall take into account all backfill weight as well as any surcharge due to parking, building and the like. However, a minimum for a seawall length shall be 12 feet for canals and rivers and 14 feet for lake construction for the total length of the sheeting.
- J. Standards set forth in items C, E, F, G & H may be varied to other configurations when supported by a solid investigation and a full engineering design substantiating a proposed variation if approved by the Township Engineer.