



Hatch Mott MacDonald

Infrastructure and Environment
100 Willowbrook Road
Freehold, NJ 07728
T 732.780.6565 www.hatchmott.com

April 22, 2005

Mayor William Dunbar
Borough of Mantoloking
Borough Hall
Downer Avenue
P.O. Box 247
Mantoloking, NJ 08738-0247

RE: Draft Ordinance – Bulkheads
Job No. 218391AA01

Dear Mayor,

Please find enclosed one (1) copy of the Avalon Borough Bulkhead Ordinance and recent amendment. This ordinance was developed and refined as part of Avalon's Flood Mitigation Activities approximately ten (10) years ago and could stand to be updated to present day standards or more environmentally friendly preservatives. Through copy of this letter with attachments to the Borough Engineer and Code Official, I am requesting their review of same and ask that they provide comments to your office that are specific to the needs of Mantoloking.

In accordance with our review of the Borough's most recent NFIP Flood Insurance Study (see attached), the anticipated backbay stillwater flood elevations are as follows as correlated to storm return period frequency:

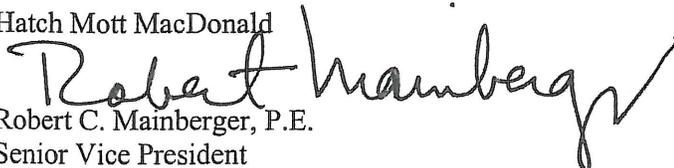
10 Year	Elevation 4.4	NGVD 29
50 Year	Elevation 5.5	NGVD 29
100 Year	Elevation 6.0	NGVD 29
500 Year	Elevation 7.3	NGVD 29

Following review of the above it has been determined through graphical interpolation that the 25 year stillwater backbay flood level will be approximately Elevation 5.0 NGVD.

Please do not hesitate to call should you require further assistance or have specific questions regarding the above or attached.

Very truly yours,

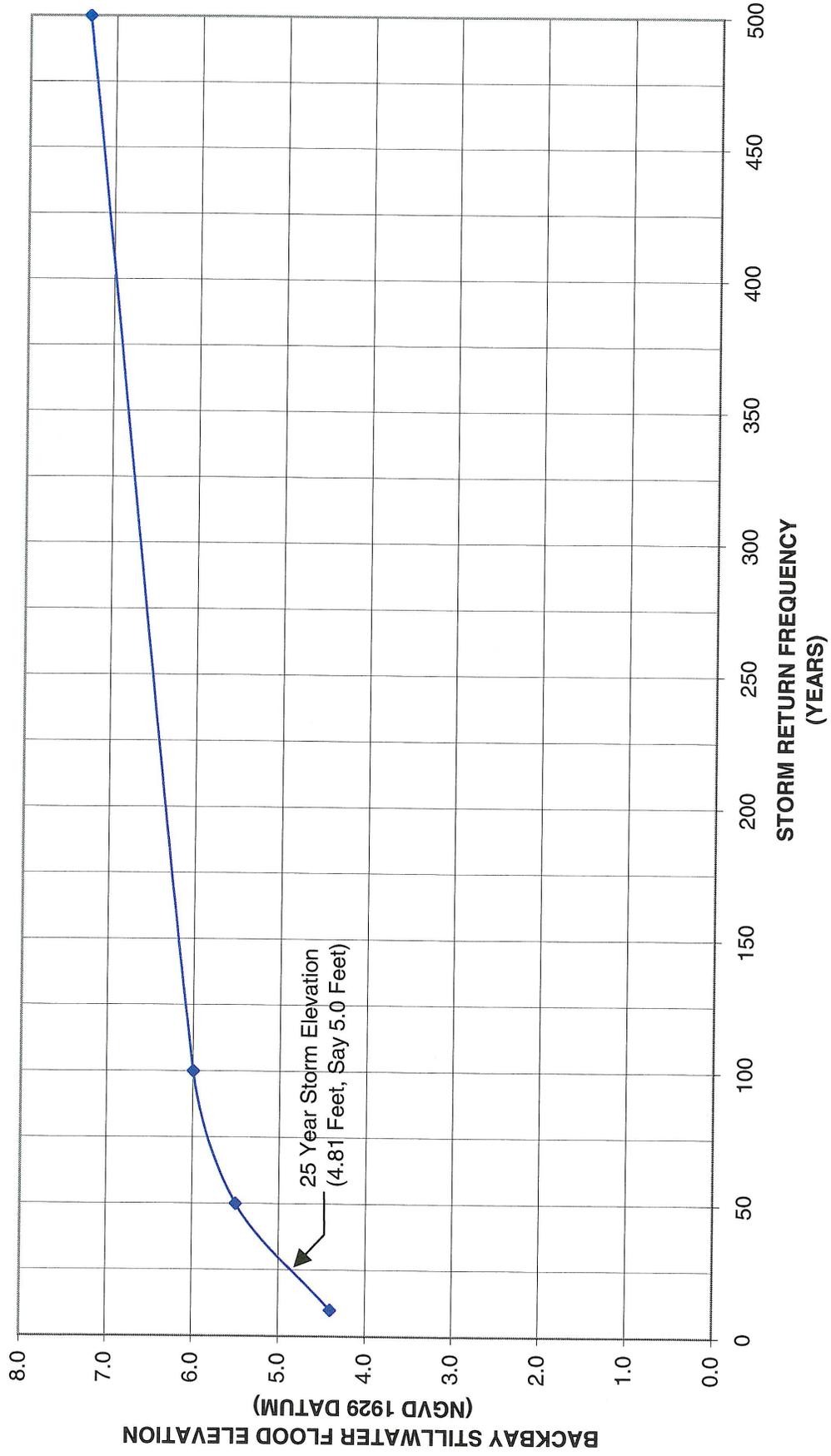
Hatch Mott MacDonald


Robert C. Mainberger, P.E.
Senior Vice President
T 732.780.6565 F 732.577.0551
robert.mainberger@hatchmott.com

cc: John Wardell
Tom Guldin, P.E.,
Nancy Klumb for F.H.M. Committee Distribution
Frank X. Bruton

Hatch Mott MacDonald

BOROUGH OF MANTOLOKING Twenty Five Year Storm Backbay Stillwater Flood Elevation Determination



BOROUGH OF AVALON
CAPE MAY COUNTY
NEW JERSEY

ORDINANCE NO. 549-2005

AN ORDINANCE AMENDING CHAPTER 20 OF THE CODE OF THE BOROUGH OF
AVALON, SECTION 20:6.2 PERTAINING TO THE LOCATION OF BULKHEADS

BE IT ORDAINED by the Borough Council, in the Borough of Avalon, County of Cape May and State of New Jersey, as follows:

SECTION 1: Chapter 20, Section 20:6.2 of the Code of the Borough of Avalon entitled "Location of Bulkheads" shall be amended to read as follows:

20:6-6.2 Location of Bulkheads; Elevation Certificate

The location of the construction of any bulkheads shall be along the established line thereof as shown on the Official Tax Map of the Borough of Avalon and the finished elevation thereof shall be 7.5 feet above mean sea level based on N.G.V.D. 1929 datum provided, however, that in case of a dispute as to location, height or construction requirements, the same shall be determined by the Construction Official. Prior to the issuance of a Certificate of Compliance by the Borough confirming compliance by the Owner with the provisions of this Chapter, the Owner shall submit to the Construction Official an elevation certificate from a licensed professional certifying that the finished elevation of the bulkhead is at least 7.5 feet above mean sea level as required herein. Where drainage related issues are in dispute, the Borough Engineer shall review same with the Construction Official. Owners shall eliminate storm water drainage impact to adjacent properties through installation of necessary drainage devices.

SECTION 2: Chapter 20, Section 20:2-16 of the Code of the Borough of Avalon entitled "Bulkheads" shall be amended to read as follows:

The fee for installation, construction, and repair of bulkheads shall be Seven (7) Dollars for each foot or fraction thereof. The minimum fee shall be Forty (\$40.00) Dollars.

SECTION 3: REPEALER: All Ordinances or parts of Ordinances which are in conflict or inconsistent herewith are hereby repealed to the extent of such inconsistency or conflict only.

SECTION 4: SEVERABILITY: If any section, paragraph, subdivision, subsection, clause or provision of this Ordinance shall be adjudged invalid, such adjudication shall apply only to the section, paragraph, subdivision, subsection, clause or provision declared invalid and the remainder of this Ordinance shall remain in full force and effect and shall be enforceable.

SECTION 6: EFFECTIVE DATE: This Ordinance shall take effect immediately upon final adoption and publication and in the manner prescribed by law.

Ordinance No. 549-2005

Page 2

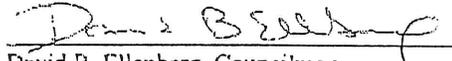
Motion: Council Vice President Dean


Charles P. Covington, Council President

Seconded: Councilman Tipping

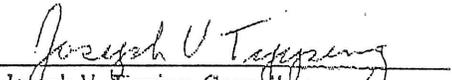

Richard E. Dean, Council Vice President

Dated: March 23, 2005


David B. Ellenberg, Councilman


Amy W. Gleuskens,
Borough Clerk


Nancy M. Hudanich, Councilwoman


Joseph V. Tipping, Councilman

ROLL CALL VOTE:

AYES-----Dean, Ellenberg, Hudanich, Tipping, Covington
NAYES-----None
ABSTAINING-----None
ABSENT-----None

NOTICE OF PENDING ORDINANCE

The Ordinance published herewith was introduced and passed upon first reading of the Municipal Council of the Borough of Avalon on March 9, 2005, 2005. It will be further considered for final passage after public hearing thereon, at a meeting of said Municipal Council to be held in the Municipal Building in said Borough on March 23, 2005 at 7:35 o'clock P.M., and during the week prior to and up to and including the date of such meeting, copies of said Ordinance will be made available at the Clerk's Office in said Municipal Building to the members of the general public who shall request the same.

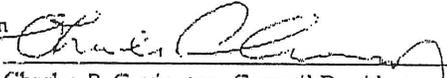
AMY W. KLEUSKENS
Borough Clerk

TO BE PUBLISHED IN THE March 16, 2005 EDITION OF THE WILDWOOD LEADER, ALSO APPEARING IN THE CAPE MAY COUNTY GAZETTE.

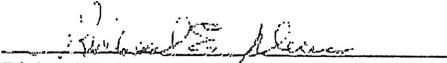
BOROUGH OF AVALON
CAPE MAY COUNTY
NEW JERSEY

ORDINANCE NO. 549-2004

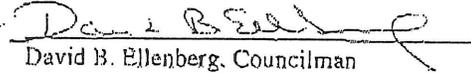
AN ORDINANCE AMENDING CHAPTER 20 OF THE CODE OF THE BOROUGH
OF AVALON SECTION 20:6.2 PERTAINING TO THE LOCATION OF
BULKHEADS

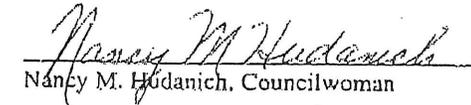
Motion: Council Vice President Dean 
Charles P. Covington, Council President

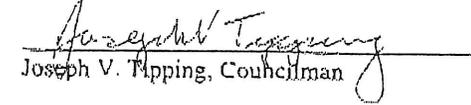
Seconded: Councilman Tipping

Dated: March 23, 2005 
Richard E. Dean, Council Vice President


Amy W. Kleuskens
Borough Clerk


David B. Ellenberg, Councilman


Nancy M. Hudanich, Councilwoman


Joseph V. Tipping, Councilman

ROLL CALL VOTE:

AYES-----Dean, Ellenberg, Hudanich, Tipping, Covington
NAYES-----None
ABSTAINING-----None
ABSENT-----None

NOTICE OF ADOPTION

The aforementioned ordinance was duly passed by the Borough Council of the Borough of Avalon, Avalon, New Jersey, on first reading at a meeting of said Council held on the 9th day of March, 2005 and was taken up for second reading, final passage, and was adopted at a meeting of said Council held on the 23rd day of March, 2005 in the Meeting Room of the Municipal Building, Avalon, New Jersey at 7:35 P.M. Said ordinance was approved by the Mayor on March 23, 2005.

AMY W. KLEUSKENS
Borough Clerk

TO BE PUBLISHED IN THE March 30, 2005 ISSUE OF THE WILDWOOD LEADER,
ALSO APPEARING IN THE CAPE MAY COUNTY GAZETTE.

ORDINANCE NO. 549-2005

Passed by Council of the Borough of Avalon, New Jersey

March 23, 2005

Attest: [Signature] Borough Clerk

Attest: [Signature] President of Council

Presented by me to the Mayor of the Borough of Avalon,

New Jersey March 23, 2005

[Signature] Borough Clerk

Approved and signed by me March 23, 2005

[Signature] Mayor

20:6 BULKHEADS

20:6.1 ERECTION OF BULKHEADS; PERMITS

Applications for permits to construct or reconstruct a bulkhead shall be accompanied with plans showing size, shape, configuration and location of such bulkhead, and specifications of material to be used in such construction and the manner in which such material shall be incorporated into the bulkhead.

20:6.2 LOCATION OF BULKHEADS

The location of the construction of any bulkheads shall be along the established line thereof as shown on the Official Tax Map of the Borough of Avalon and the finished elevation thereof shall be 7.5 feet above mean sea level based on N.X.V.D. 1929 datum provided, however, that in case of a dispute as to location, height or construction requirements, the same shall be determined by the Construction Official. Where drainage related issues are in dispute, the Borough Engineer shall review same with the Construction Official. Owners shall eliminate storm water drainage impact to adjacent properties through installation of necessary drainage devices.

20:6.3 MINIMUM SPECIFICATIONS

The minimum specifications covering the construction and reconstruction of bulkheads shall be as follows:

- All piles shall have a butt diameter of not less than 10 inches and a tip diameter of not less than 5 inches and shall have a length at least four feet (4') greater than the sheet piles. All piles shall be fir, oak or pine and shall be a net retention of twelve pounds (12 lbs.) of creosote oil per cubic foot treatment by the full cell process with creosote oil meeting the latest A.W.P.A. specifications. As an alternative, sheathing, wales and main piles shall be preservative treated to a net retention of 2.5 pounds per cubic foot of chromated cooper arsenate (CCA). Anchor piles shall be treated to a net retention of 1.0 pounds per cubic foot of CCA. This shall be in accordance with A.W.P.A. specifications C2, C3, and C18, as applicable.
- All timber sheet piles and wales shall be creosote No. 1 common fir or north carolina pine and shall have a net retention of twelve pounds (12 lbs.) of creosote oil per cubic foot treatment by the full cell process with creosote oil meeting the latest A.W.P.A. specifications. Sheet piles shall be 2 inches x 8 inches or 2 inches x 10 inches and shall have a penetration of at least forty percent (40%) of the actual length of sheathing. Wales shall be 4 inches x 6 inches. At least two wales will be required. A third wale shall be used where the finished top of bulkhead extends more than 7 feet 6 inches above the existing bottom. All wale joints shall be staggered at pilings. It shall be permissible to use CCA treated materials in accordance with the specifications set forth in subparagraph (a) of this Section.

- Aluminum Construction:

Sheeting material	aluminum alloy 6061-TS ASTM B221
Allowable moment	5067 ft-lbs.
Thickness	0.150 inches

- Vinyl Construction:

Sheeting material	PVC Class 1-4013-13-0101 ASTM D4216
Allowable moment	3750 ft-lbs.
Thickness	0.250 inches

- Whenever a bulkhead design does not meet the specifications of this Ordinance, then such design shall be prepared by a New Jersey Licensed Professional Engineer and shall be in accordance with generally accepted engineering principles and standards. It shall be the obligation of the property owner and the owner's engineer to provide any supplemental information which may reasonably be required by the Construction Official and/or the Borough Engineer in order to evaluate and approve the proposed bulkhead design. A permit shall only be issued by the Construction Official after consultation with and review of the alternate design by the Borough Engineer. Designs which strictly comply with this Ordinance do not require preparation by a Professional Engineer and the same shall come under the review responsibilities of the Construction Official.
- The decision of the Borough Construction Official and Engineer shall be final as to all issues related to construction material and bulkhead design. A property owner may be entitled to a relaxation of the requirements of this Ordinance based upon a showing of exceptional circumstances, hardship or other good cause. The decision of the Construction Official in such matters shall be binding unless the property owner appeals that decision to the Borough Council. Nothing contained herein shall be construed as limiting or attempting to limit the right of any property owner to seek judicial review from a court of competent jurisdiction under appropriate circumstances.

20:6-4 MAINTENANCE; DUTY TO REPAIR

All private bulkheads within the Borough of Avalon shall be maintained in such a manner so as to pose no danger to the health, safety or welfare of the citizens of Avalon and so as not to pose any threat or danger to person or property. Said bulkhead shall be kept in such a state of repair as to prevent erosion or danger to abutting, adjacent or adjoining properties. Whenever a bulkhead has deteriorated to such a degree that it poses a danger, the Construction Official shall notify the property owner, in writing, of the nature of the deterioration and require the property owner to make necessary repairs. The property owner shall submit a plan of corrective action to the Construction Official not later than thirty (30) days from receipt of the notice. Upon approval of the corrective action by the Construction Official, the property owner shall complete all necessary repairs forthwith. If permits are required from the State of New Jersey or the federal government or any agency or instrumentality thereof and such permits are required before any work can