



Oregon

Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

635 Capitol Street, Suite 150

Salem, OR 97301-2540

(503) 373-0050

Fax (503) 378-5518

www.lcd.state.or.us

AMENDED NOTICE OF ADOPTED AMENDMENT

December 12, 2007



TO: Subscribers to Notice of Adopted Plan
or Land Use Regulation Amendments

FROM: Mara Ulloa, Plan Amendment Program Specialist

SUBJECT: City of Boardman Plan Amendment
DLCD File Number 006-07

The Department of Land Conservation and Development (DLCD) received the attached notice of adoption. A copy of the adopted plan amendment is available for review at the DLCD office in Salem and the local government office.

Appeal Procedures*

DLCD ACKNOWLEDGMENT or DEADLINE TO APPEAL: December 27, 2007

This amendment was submitted to DLCD for review 45 days prior to adoption. Pursuant to ORS 197.830 (2)(b) only persons who participated in the local government proceedings leading to adoption of the amendment are eligible to appeal this decision to the Land Use Board of Appeals (LUBA).

If you wish to appeal, you must file a notice of intent to appeal with the Land Use Board of Appeals (LUBA) no later than 21 days from the date the decision was mailed to you by the local government. If you have questions, check with the local government to determine the appeal deadline. Copies of the notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR Chapter 661, Division 10). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

***NOTE: THE APPEAL DEADLINE IS BASED UPON THE DATE THE DECISION WAS MAILED BY LOCAL GOVERNMENT. A DECISION MAY HAVE BEEN MAILED TO YOU ON A DIFFERENT DATE THAN IT WAS MAILED TO DLCD. AS A RESULT YOUR APPEAL DEADLINE MAY BE EARLIER THAN THE ABOVE DATE SPECIFIED.**

Cc: Gloria Gardiner, DLCD Urban Planning Specialist
Christine Shirley, FEMA Specialist
Larry Ksionzyk, Community Development Planning Specialist
Barry Beyeler, City of Boardman

<paa> ya

DLCD NOTICE OF ADOPTION

This form must be mailed to DLCD within 5 working days after the final decision per ORS 197.610, OAR Chapter 660 - Division 18

(See reverse side for submittal requirements)

DEPT OF

DEC 10 2007

LAND CONSERVATION AND DEVELOPMENT

Jurisdiction: CITY OF BOARDMAN Local File No.: 07-2007 (If no number, use none)

Date of Adoption: DECEMBER 4, 2007 (Must be filled in) Date Mailed: DECEMBER 6, 2007 (Date mailed or sent to DLCD)

Date the Notice of Proposed Amendment was mailed to DLCD:

- Comprehensive Plan Text Amendment Comprehensive Plan Map Amendment
[X] Land Use Regulation Amendment [X] Zoning Map Amendment
New Land Use Regulation Other:

(Please Specify Type of Action)

Summarize the adopted amendment. Do not use technical terms. Do not write "See Attached."

PAPA 07-2007 ESTABLISHES A FLOOD PLAIN OVERLAY ZONE AND DEVELOPMENT CRITERIA WITHIN THE ZONE IN THE BOARDMAN DEVELOPMENT CODE

Describe how the adopted amendment differs from the proposed amendment. If it is the same, write "Same." If you did not give notice for the proposed amendment, write "N/A."

PENALTIES AND 1% EXCEEDANCE ELEVATIONS HAVE BEEN ADDED TO BASE LANGUAGE FROM FEMA

Plan Map Changed from: to

Zone Map Changed from: GENERAL INDUSTRIAL to FLOOD PLAIN OVERLAY ZONE

Location: 4N 25E Acres Involved: APPROX 60

Specify Density: Previous: N/A New: N/A

Applicable Statewide Planning Goals: #1, #2, #7

Was an Exception Adopted? Yes: No: [X]

DLCD File No.: 006-07(16403)

Did the Department of Land Conservation and Development receive a notice of Proposed Amendment **FORTY FIVE (45) days prior to the first evidentiary hearing.** Yes: No:

If no, do the Statewide Planning Goals apply. Yes: No:

If no, did The Emergency Circumstances Require immediate adoption. Yes: No:

Affected State or Federal Agencies, Local Governments or Special Districts: PORT OF MORROW

US ARMY CORPS OF ENGINEERS

Local Contact: BARRY BEYLER Area Code + Phone Number: 541-481-9252

Address: PO BOX 229

City: BOAROMAN, OREGON Zip Code+4: 97818

ADOPTION SUBMITTAL REQUIREMENTS

This form **must be mailed** to DLCD **within 5 working days after the final decision**
per ORS 197.610, OAR Chapter 660 - Division 18.

1. Send this Form and TWO (2) Copies of the Adopted Amendment to:

**ATTENTION: PLAN AMENDMENT SPECIALIST
DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
635 CAPITOL STREET NE, SUITE 150
SALEM, OREGON 97301-2540**

2. Submit **TWO (2) copies** the adopted material, if copies are bounded please submit **TWO (2) complete copies** of documents and maps.
3. Please Note: Adopted materials must be sent to DLCD not later than **FIVE (5) working days** following the date of the final decision on the amendment.
4. Submittal of this Notice of Adoption must include the text of the amendment plus adopted findings and supplementary information.
5. The deadline to appeal will not be extended if you submit this notice of adoption within five working days of the final decision. Appeals to LUBA may be filed within **TWENTY-ONE (21) days** of the date, the "Notice of Adoption" is sent to DLCD.
6. In addition to sending the "Notice of Adoption" to DLCD, you must notify persons who participated in the local hearing and requested notice of the final decision.
7. **Need More Copies?** You can copy this form on to 8-1/2x11 green paper only ; or call the DLCD Office at (503) 373-0050; or Fax your request to:(503) 378-5518; or Email your request to Larry.French@state.or.us - ATTENTION: PLAN AMENDMENT SPECIALIST.

**CITY OF BOARDMAN
ORDINANCE NO. 9-2008**

**AN ORDINANCE APPROVING POST ACKNOWLEDGEMENT PLAN AMENDMENT
07-2007 AND AMENDING THE BOARDMAN ZONING MAP AND ESTABLISHING
A FLOODPLAIN OVERLAY ZONE**

WHEREAS, the City of Boardman staff has reviewed Federal Emergency Management Agency criteria for the Flood Insurance Program and pursuant to a staff report with recommendation to establish a Floodplain Overlay Zone in the Boardman Development Code and to amend the Boardman Zoning Map, and;

WHEREAS, a Notice of Proposed Amendment was mailed to the Oregon Department of Land Conservation and Development on September 17, 2007, and;

WHEREAS, on Wednesday, November 14, 2007, the Boardman Planning Commission held a public hearing on the proposed language in Boardman Development Code Chapter 3.7 establishing the Floodplain Overlay Zone and the associated amendment to the Boardman Zoning Map and voted to recommend approval to the Boardman City Council of the proposed amendments, and;

WHEREAS, notice for the public hearing before the City Council for consideration of the recommendations of the Boardman Planning Commission was in a newspaper of general circulation on October 31, 2007, and posted on the site and at 4 public places on October 31, 2007, and;

WHEREAS, on November 20, 2007, a public hearing was held before the Boardman City Council, and, at the hearing the Council received the recommendation of the Boardman Planning Commission and heard testimony from the public;

THE PEOPLE OF THE CITY OF BOARDMAN DO ORDAIN AS FOLLOWS:

Section 1. The City Council of the City of Boardman hereby finds the establishment of the proposed Floodplain Overlay Zone by adoption of Chapter 3.7 of the Boardman Development Code proposed language and associated amendments to the Boardman Zoning Map to be consistent with the Comprehensive Plan of the City of Boardman and hereby adopts the above recitals and findings and incorporate them by reference in support of this ordinance.

Section 2. The Boardman Zoning Map is hereby amended as set forth in Exhibit "A" attached hereto and by this reference made a part thereof.

Section 3. The Boardman Development Code is hereby amended to establish the Floodplain Overlay Zone development criteria as set forth in the language of Chapter 3.7 in Exhibit "B" attached hereto and by this reference made part thereof.

Section 4. The Flood Insurance Rate Map is hereby acknowledged as the official Federal Emergency Management Agency flood map panel for the city as set forth in Exhibit "C" attached hereto and by this reference made part thereof.

Section 5. Because this ordinance is necessary for the citizens of the City to obtain flood insurance through the Federal Emergency Management Agency Flood Insurance Program by the effective date, i.e., December 18, 2007, an emergency is declared to exist and this ordinance shall be in full force and effect on December 17, 2007.

Passed by the Council and approved by the Mayor this 4th day of December, 2007.



MAYOR

ATTEST:



CITY RECORDER

CITY of BOARDMAN

Community Development

STAFF REPORT

DATE: November 13, 2007

TO: Boardman City Council

FROM: Barry C. Beyeler, Community Development Director



SUBJECT: Post Acknowledgement Plan Amendment 07-2007

The purpose of the Post Acknowledgement Plan Amendment (PAPA) is to establish Federal Emergency Management Agency (FEMA) required Flood Hazard Area zoning criteria to remain in the FEMA Flood Insurance Program. The Flood Hazard Areas are identified on Flood Insurance Rate Map (FIRM) Panel 0150 of 1400 for Morrow County, Oregon or FIRM Map #41049C0150D (copy attached). This map indicates areas identified by FEMA as Zone A, which is an area where no base flood elevations have been determined. However, because these areas are identified on the map, within the city limits, the city is required to have a flood protection ordinance or code to remain in the FEMA Flood Insurance Program allowing property owner to obtain flood insurance if they so wish. The deadline to have the code criteria approved and implemented, to remain in the FIRM program, is December 18, 2007.

HISTORICAL BACKGROUND

The City of Boardman has not had a flood zone panel in the Morrow County Flood Insurance Rate Maps since the completion of the John Day Dam and subsequent inundation of Lake Umatilla with water backed up by the dam. The areas defined as Zone A areas were identified in the mid-1970's on the Morrow County Flood Insurance Rate Maps. The areas now within the city, which are identified as Zone A, were outside of the city limits at the time the areas were delineated.

As a result of approval of Ordinance #172, on June 27, 1995, the City of Boardman annexed a significant portion of the Port Industrial area into the city. Contained within the annexed area were areas identified as Zone A Flood Hazard Areas in the original mid 1970's FEMA delineation. As Morrow County initiated a Flood Insurance Rate Map Study, in response to requests from the City of Heppner to appropriately identify flood elevations in the Willow Creek and Shobe Creek areas of Heppner, the entire county was included in the study. As a result of the study, the area annexed into the City of Boardman was identified as having areas identified as Zone A Flood Hazard within the city limits, due to the 1995 annexation.

A FEMA designation of Zone A is an area where base flood elevations have not been determined and are generally area which MAY be subject to flooding in high water events. The Zone A criteria on the areas identified with the city are along the river shore and in the industrial areas where shallow ephemeral (intermittent flow) drainages which drained to the

pre-dam river course, such as the area in and around what is known as Messner Pond. The Zone A areas within the Port Industrial area are all associated with remnants of these ephemeral drainages or aggregate(sand & gravel) mining operations where, without a base flood elevation determined MAY be subject to flooding and as such should be assessed prior to development to prevent flooding.

The City of Boardman, in conference with FEMA officials, determined the City would need to demonstrate, with surveyed topographical data, the areas identified on the Flood Insurance Rate Map were above the base flood elevations or adopt criteria for development within the areas identified. However, it was determined the base flood elevations would need to be determined to challenge the accuracy of the Flood Insurance Rate Map. The City officially requested the United States Army Corps of Engineers (USACE) to determine the base flood elevation, which is classified as "the calculated 1% chance exceedance stage at river mile 270.3". This elevation was delivered to the City in a letter dated September 6, 2007.

The City, facing the December 18, 2007, deadline for having flood protection code criteria in place drafted language from the FEMA Flood Protection Model Ordinance to have the language available for implementation. Within the language the recently obtained base flood elevation of 269.7 feet National Geodetic Vertical Datum and 273.01 feet North American Vertical Datum were introduced into the code language to allow for any development in the areas identified as Zone A areas to have an elevation at which any development in the identified areas can avoid the prescriptive development requirements of the code language. In other words, if the development can demonstrate the property is above this elevation the code does not apply and the City will petition FEMA to amend the Flood Insurance Rate Map.

FINDINGS OF FACT

- 1) The City must have Development Code provisions for Flood Protection implemented by December 18, 2007, to meet Federal Emergency Management Agency requirements to remain in the Flood Insurance Program.
- 2) Failure to have this language implemented by the December 18, 2007, date will eliminate the ability of property owners within the city to obtain Flood Insurance through the Flood Insurance Program.
- 3) This is the first time the City has identified flood hazard areas within the city since the completion of construction of the John Day Dam.
- 4) Current identified Zone A Flood Hazard Areas were identified in the mid-1970's, when the identified areas were not within the city.
- 5) Zone A Flood Hazard Areas are areas where no base flood elevation has been determined.
- 6) The City drafted language under Chapter 3.7 of the Boardman Development Code to address the required language of the Federal Emergency Management Agency to allow the city to remain in the Flood Insurance Program upon approval and implementation.
- 7) The City requested the United States Army Corps of Engineers review and determine a base flood elevation for the city.
- 8) On September 6, 2007, the United States Army Corps of Engineers determined "the calculated 1% chance exceedance stage for river mile 270.3 to be 269.7 ft NGVD" (national Geodetic Vertical Datum)

- 9) The determination by the United States Army Corps of Engineers establishes the base flood elevation used in the drafted Development Code Language.
- 10) Upon receipt of the base flood elevation determination from the United States Army Corps of Engineers the City inserted the base flood elevation into the Draft Chapter 3.7 of the Boardman Development Code to complete the proposed language for review and approval.
- 11) On September 17, 2007, a "DLCD NOTICE OF PROPOSED AMENDMENT" was mailed to the Department of Land Conservation and Development to meet the 45-day notice requirement to the Department.
- 12) On October 18, 2007, public notice of the Planning Commission hearings, on this matter, were published in the East Oregonian newspaper, meeting the 20-day public notification requirements of Chapter 4.1 of the Boardman Development Code.
- 13) The Staff Report, Draft Chapter 3.7 of the Boardman Development Code, Post Acknowledgement Plan Amendment package and copies of the Federal Emergency Management Agency Flood Insurance Rate Map were available at Boardman City Hall on October 30, 2007, for review by any interested party.
- 14) The Staff Report, Federal Emergency Management Agency Flood Insurance Rate Map, and Draft Chapter 3.7 of the Boardman Development Code were available on-line at www.cityofboardman.com for review by any interested party.
- 15) On November 7, 2007, the necessary quorum of the Boardman Planning Commission was not available and the Public Hearing was rescheduled for November 14, 2007, at 6:00 PM.
- 16) At the November 7, 2007, meeting of the Planning Commission the doors were open until 8:00 PM and no public showed for the meeting.
- 17) On November 8, 2007, public notice was posted to inform the public of the rescheduling of the public hearing to November 14, 2007, at 6:00 PM.
- 18) Additional information will be made available to the council and public after the hearings of November 14, 2007.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

As a result of the 1995 annexation of properties in the Port of Morrow Industrial area this Post Acknowledgement Plan Amendment was required to allow property owners within the city to pursue flood insurance through the Federal Emergency Management Agency Flood Insurance Program. As this process has a deadline of December 18, 2007, for approval and implementation to remain in the Flood Insurance Program it is important this Amendment be approved.

Staff recommendation is for the City Council to approve the proposed language and map change to meet the requirements necessary to remain in the Federal Emergency Management Agency Flood Insurance Program and to approve Ordinance 9-2008, an implementing ordinance, with an emergency clause to make the changes effective upon approval before the date of December 18, 2007.



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND OR 97208-2946

SEP - 6 2007

Engineering and Construction Division

Mr. Barry Beyeler
Community Development Director
City of Boardman
P.O. Box 229
Boardman, Oregon 97818

Mr. Beyeler:

The U.S. Army Corps of Engineers, (USACE) Portland District - Floodplain Management Services Section (FPMS) has reviewed the City of Boardman's location with respect to our current flood data for the John Day pool of the Columbia River. This letter describes our flood profile estimate for your location.

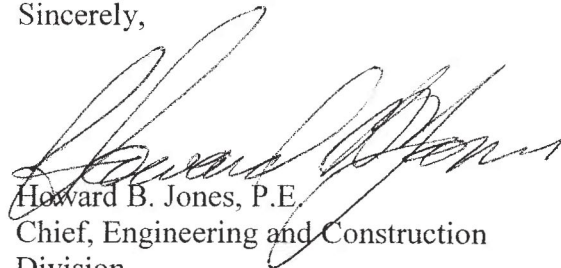
On July 7, 2006, Joseph Weber from Federal Emergency Management Agency (FEMA) Region X copied Portland District FPMS on an e-mail to Mr. Beyeler at the City of Boardman describing the process to redelineate the boundary of the Zone A area in a portion of the City. Mr. Weber referenced USACE as the agency that would have the most recent data on the 1% chance flood profile in the region. This letter is to provide the City of Boardman with an estimate of the 1% chance exceedance profile along the Columbia River at the location of the industrial area shown in the enclosed FIRMette.

The most recent steady state hydraulic model of the John Day pool was run with 1% chance exceedance outflows from McNary Dam reported in the McNary Dam Water Control Manual, May 1982. At the confluence of the Columbia and John Day Rivers, the modeled flow was increased to the 1% exceedance discharge calculated for the Dalles Dam. The existing flood flow frequencies are outdated; however, they represent the best available data from USACE at this time. The downstream boundary condition for the John Day pool model was set at Maximum Flood Control Pool Elevation for the John Day Dam. The model results were compared to flood profile data from the Preliminary John Day Water Control Manual and found to be higher in elevation by a few tenths of a foot. The newest modeling is used for this flood profile estimate.

The industrial area in question (shown in the enclosed FIRMette) is located at Columbia River miles 270.3 in the John Day Pool. The calculated 1% chance exceedance stage at river mile 270.3 based on the most recent data available to USACE is 269.7 ft NGVD.

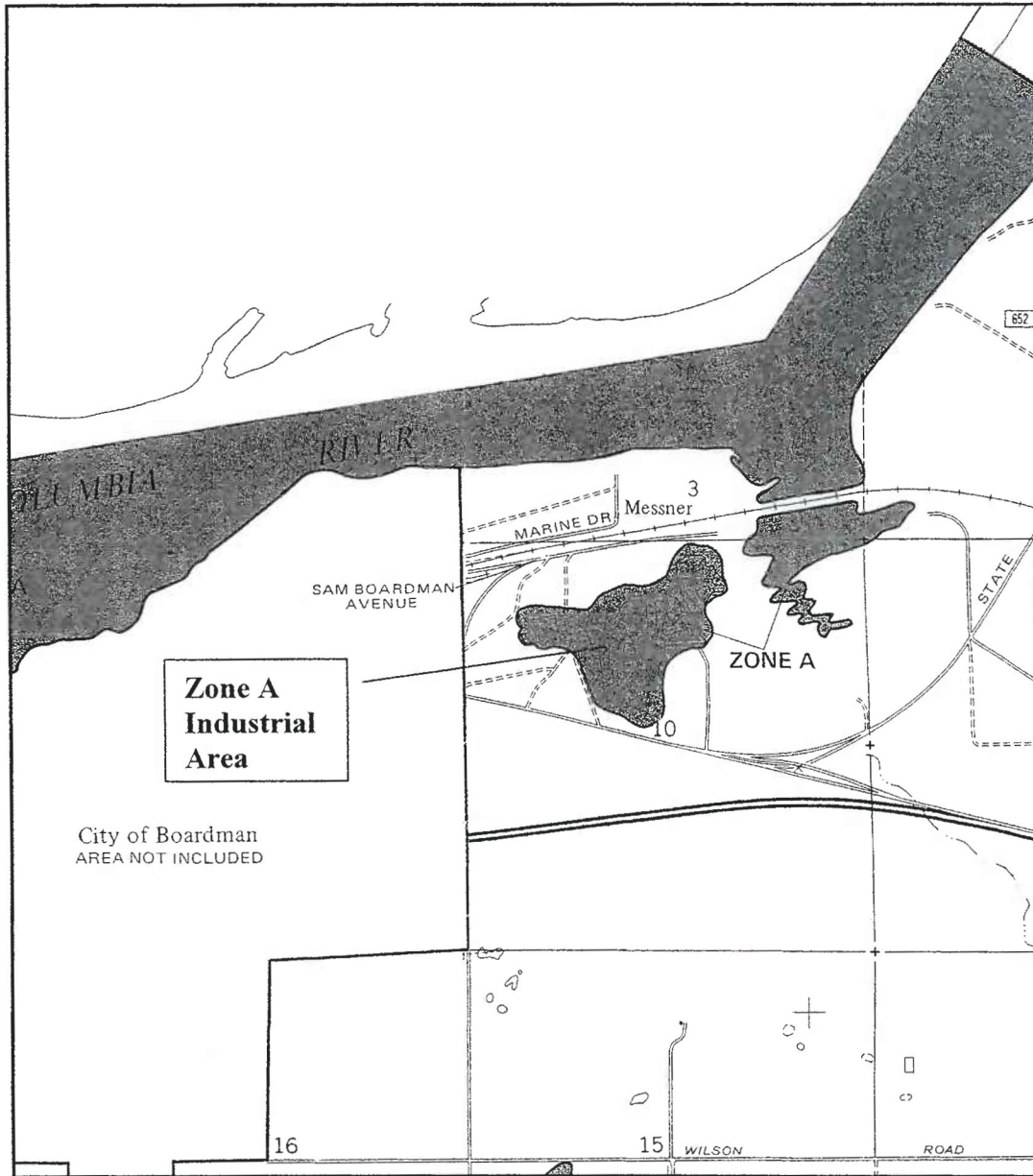
If you require further assistance, please contact Chris Nygaard (503) 808-4874.

Sincerely,



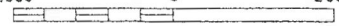
Howard B. Jones, P.E.
Chief, Engineering and Construction
Division

Enclosure



APPROXIMATE SCALE

2000 0 2000 FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

**MORROW COUNTY,
OREGON**
(UNINCORPORATED AREAS)

PANEL 150 OF 1400
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
410173 0150 B

EFFECTIVE DATE:
APRIL 1, 1981



federal emergency management agency
federal insurance administration

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies the FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator zone 11. The horizontal datum was NAD 83, GRS 80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA NNGS12
National Geodetic Survey
SEMC-3 #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>

Base Map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital form at by the Oregon Geospatial Enterprise Office (GEO). This information was compiled from many local sources and includes transportation features, water features, political boundaries, and Public Land Survey System features. Aerial photographs dated 2000-2001 were provided by the United States Geological Survey (USGS).

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate officials for more information.

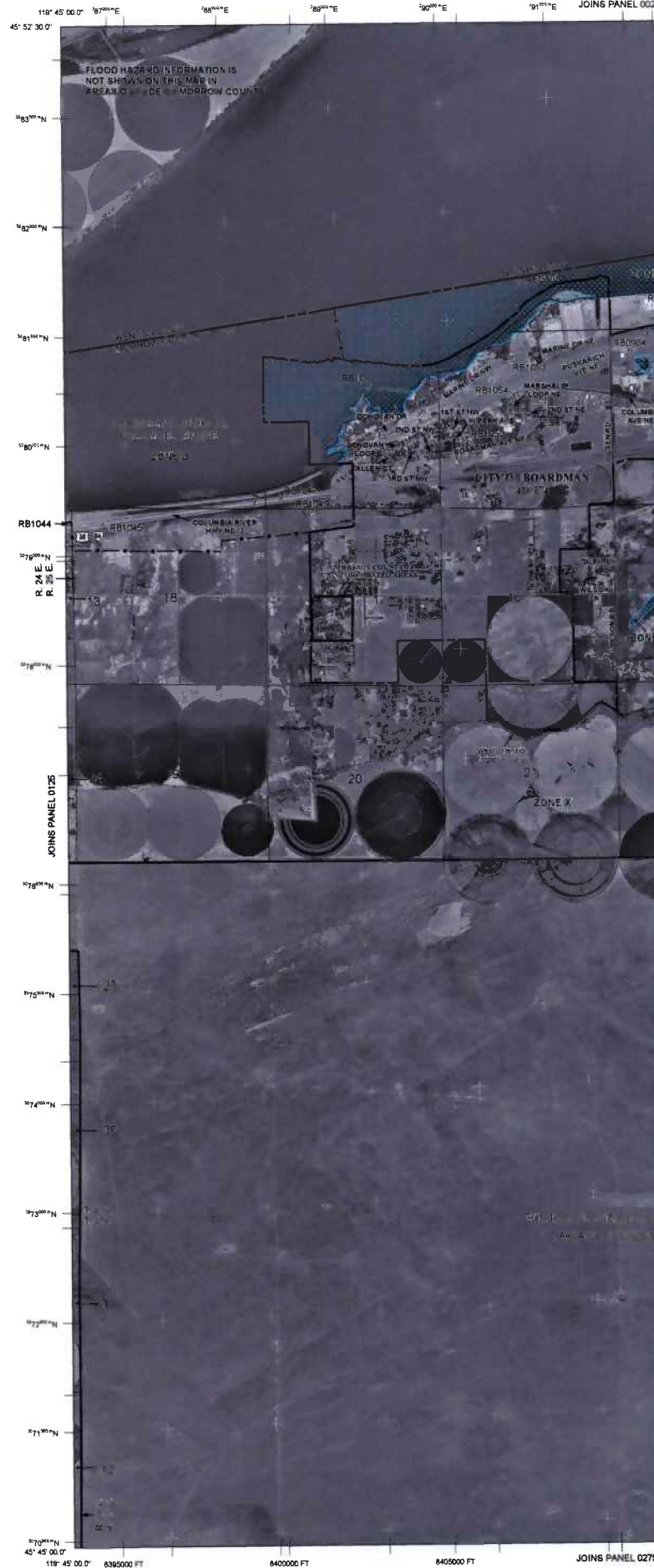
Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

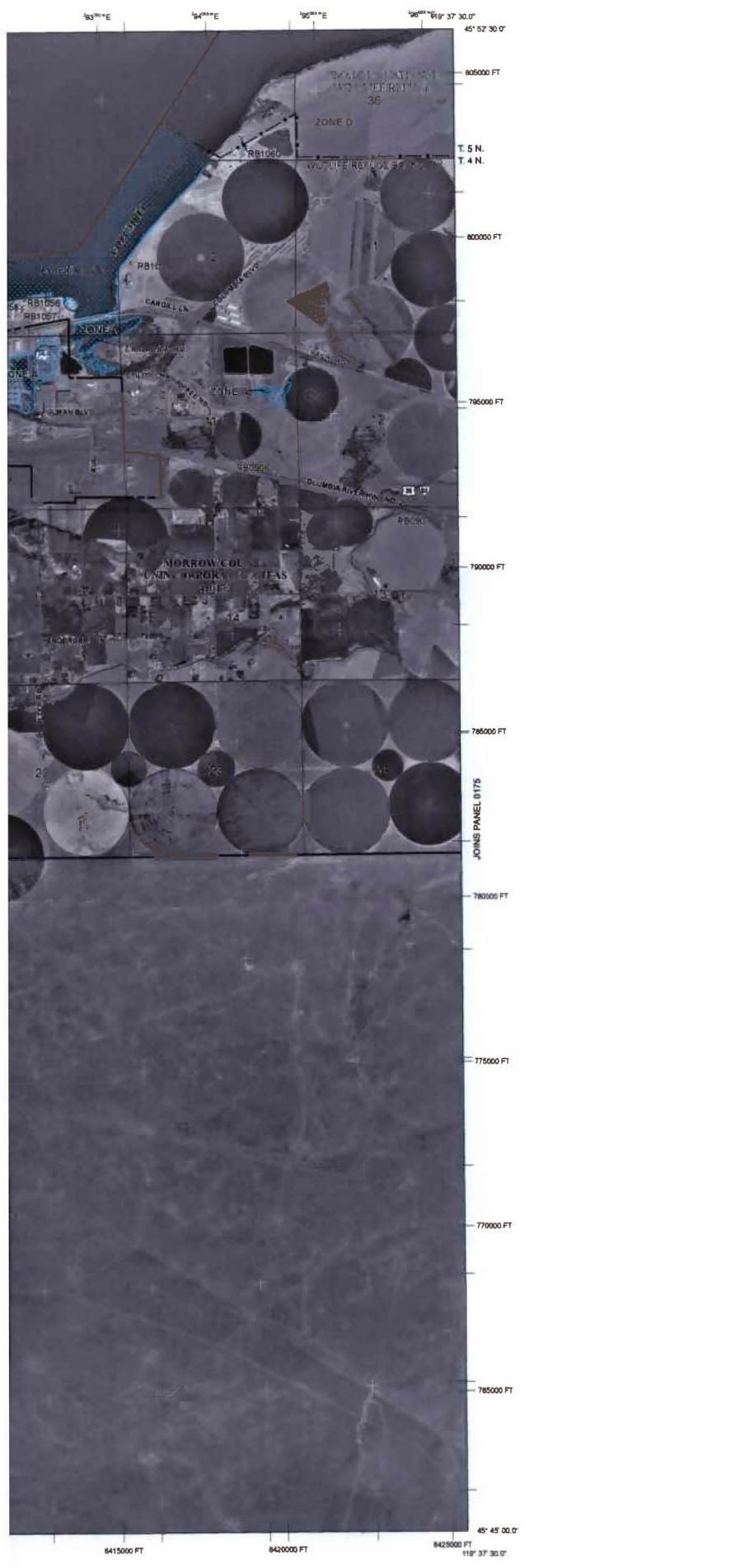
Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov/>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://fema.gov/>.

The "profile base lines" depicted on this map represent the hydraulic modeling base lines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line," in some cases may deviate significantly from the channel centerline or appear outside the SFHA.

EXHIBIT 'A'





LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AD, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AD** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of allowed fee flooding, velocities also determined.
- ZONE AR** Area of special hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently derelict. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood event.
- ZONE A99** Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

- OTHER FLOOD AREAS**
 - ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
 - OTHER AREAS**
 - ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
 - ZONE D** Areas in which flood hazards are undetermined, but possible.
 - COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
 - OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

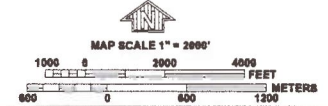
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet *
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1980

○ A — A Cross section line
 ○ 1 — 2 Transsect line
 97°10'30.5" 32°10'30.5" Geographic coordinates referenced to North American Datum of 1983 (NAD 83)
 4760000E 1000-meter Universal Transverse Mercator grid values, zone 11
 600000 FT 5000-foot grid ticks: Oregon State Plane coordinate system, North zone (FIPSZONE 3601), Lambert Conformal Conic projection
 MGS510 Bench mark (see explanation in Notes to Users section of this FIRMs panel)
 • M1.5 River Mile

MAP REPOSITORY
 Refer to listing of Map Repositories on Map Index
 EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
 EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
 To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6629.



PANEL 0150D

FIRM
FLOOD INSURANCE RATE MAP
MORROW COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 0150 OF 1400
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS COMMUNITY	NUMBER	PANEL	SUFFIX
BOARDMAN, CITY OF	410174	0150	D
MORROW COUNTY, UNINCORPORATED AREAS	410173	0150	D

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
41048C0150D
EFFECTIVE DATE

Federal Emergency Management Agency

Chapter 3.7 - Flood Plain Overlay Zone

Sections:

- 3.7.400: Authorization, Findings, Purpose and Objectives
- 3.7.410: Definitions
- 3.7.420: General Provisions
- 3.7.430: Administration
- 3.7.440: Variance Procedure
- 3.7.450: Provisions For Flood Hazard Reduction
- 3.7.460: Wellhead Protection Provisions (Reserved)

3.7.400. – Authorization, Findings, Purpose and Objectives

A) AUTHORIZATION

The State of Oregon has in the Oregon Constitution, Article XI Section 2 delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry in accordance with the approved Boardman Charter of 1985.

B) FINDINGS OF FACT

- (1) The flood hazard areas of the City of Boardman are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- (2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

C) STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- (1) To protect human life and health;
- (2) To minimize expenditure of public money and costly flood control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

3.7.400. – Authorization, Findings, Purpose and Objectives

- (4) To minimize prolonged business interruptions;
- (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- (6) To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- (7) To ensure that potential buyers are notified that property is in an area of special flood hazard; and,
- (8) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

D) METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance includes methods and provisions for:

- (1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- (4) Controlling filling, grading, dredging, and other development which may increase flood damage; and
- (5) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

3.7.400. – Definitions

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

“APPEAL” means a request for a review of the interpretation of any provision of this ordinance or a request for a variance.

“AREA OF SHALLOW FLOODING” means a designated AO, or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

“AREA OF SPECIAL FLOOD HAZARD” means the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

3.7.410 – Definitions *(continued)*

“BASE FLOOD” means the flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.” Designation on maps always includes the letters A or V.

“BASEMENT” means any area of the building having its floor subgrade (below ground level) on all sides.

“BREAKAWAY WALL” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

“COASTAL HIGH HAZARD AREA” means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. The area is designated on the FIRM as Zone V1-V30, VE or V.

“CRITICAL FACILITY” means a facility for which even a slight chance of flooding might be too great. Critical facilities include, but are not limited to schools, nursing homes, hospitals police, fire and emergency response installations, installations which produce, use or store hazardous materials or hazardous waste.

“DEVELOPMENT” means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

“ELEVATED BUILDING” means for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

“EXISTING MANUFACTURED HOME PARK OR SUBDIVISION” means a manufactured home park subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the adopted floodplain management regulations.

“EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION” means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

“FLOOD” OR “FLOODING” means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

3.7.410 – Definitions (continued)

“FLOOD INSURANCE RATE MAP (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

“FLOOD INSURANCE STUDY” means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

“FLOODWAY” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

“LOWEST FLOOR” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building’s lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance found at Section 5.2-1(2).

“MANUFACTURED HOME” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

“MANUFACTURED HOME PARK OR SUBDIVISION” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

“NEW CONSTRUCTION” means structures for which the “start of construction” commenced on or after the effective date of this ordinance.

“NEW MANUFACTURED HOME PARK OR SUBDIVISION” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of adopted floodplain management regulations.

“RECREATIONAL VEHICLE” means a vehicle which is:

- 1) Built on a single chassis;
- 2) 400 square feet or less when measured at the largest horizontal projection;
- 3) Designed to be self-propelled or permanently towable by a light duty truck; and
- 4) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

“START OF CONSTRUCTION” includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the

3.7.410 – Definitions (continued)

installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

“STRUCTURE” means a walled and roofed building including a gas or liquid storage tank that is principally above ground.

“SUBSTANTIAL DAMAGE” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

“SUBSTANTIAL IMPROVEMENT” means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- (1) Before the improvement or repair is started; or
- (2) If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

- (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or
- (2) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

“VARIANCE” means a grant of relief from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this ordinance.

“WATER DEPENDENT” means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations.

3.7.420 - General Provisions**A) LANDS TO WHICH THIS ORDINANCE APPLIES**

This ordinance shall apply to all areas of special flood hazards within the jurisdiction of City of Boardman.

B) BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the City of Boardman," dated December 18, 2007, with accompanying Flood Insurance Maps are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file at Boardman City Hall. The best available information for flood hazard area identification as outlined in Section 4.3-2 shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under section 4.3-2.

C) PENALTIES FOR NONCOMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements may be issued a citation for a Class D Violation, in accordance with Oregon Revised Statute 153, for each day in violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Boardman from taking such other lawful action as is necessary to prevent or remedy any violation.

D) ABROGATION AND GREATER RESTRICTIONS

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

E) INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the governing body; and,
- (3) Deemed neither to limit or repeal any other powers granted under State statutes.

F) WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods

3.7.420 – General Provisions *(continued)*

can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

3.7.430 - Administration

A) ESTABLISHMENT OF DEVELOPMENT PERMIT

1) Development Permit Required

A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 3.7.430. The permit shall be for all structures including manufactured homes, as set forth in the "DEFINITIONS," and for all development including fill and other activities, also as set forth in the "DEFINITIONS."

2) Application for Development Permit

Application for a development permit shall be made on forms furnished by the Community Development or Planning Department and may include but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- a) Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
- b) Elevation in relation to mean sea level to which any structure has been floodproofed;
- c) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 5.2-2; and
- d) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

B) DESIGNATION OF THE CITY MANAGER OR THEIR DESIGNEE AS A LOCAL ADMINISTRATOR.

The City Manager or their designee is hereby appointed to administer and implement this ordinance by granting or denying development permit applications in accordance with its provisions.

C) DUTIES AND RESPONSIBILITIES OF THE CITY MANAGER OR THEIR DESIGNEE AS A LOCAL ADMINISTRATOR.

3.7.430 – Administration (continued)

Duties of the City manager or their designee shall include, but not be limited to:

1) Permit Review

- a) Review all development permits to determine that the permit requirements of this ordinance have been satisfied.
- b) Review all development permits to determine that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required.
- c) Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of Section 5.3(1) are met.

2) Use of Other Base Flood Data (In A and V Zones)

- a) When base flood elevation data has not been provided (A and V Zones) in accordance with Section 3.7.430 (C)(2), BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD, the city manager or their designee shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other source, in order to administer Sections 3.7.450(B), SPECIFIC STANDARDS, and 3.7.430 (C)(2) FLOODWAYS.
- b) In a letter dated September 6, 2007, from the United States Army Corps of Engineers, Engineering and Construction Division, “the calculated 1% chance exceedance stage at river mile 270.3 based on most recent data available to USACE is 269.7 NGVD (National Geodetic Vertical Datum)”.
- c) Qualified survey information showing elevations above 269.7 feet NGVD or 273.01 feet NAVD (North American Vertical Datum) will be considered by the city to begin the amendment process to amend the Federal Emergency Management Administration FIRM (flood insurance rate map) to reflect specific data and remove the area from the Zone A flood zone.

3) Information to be Obtained and Maintained

- a) Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in Section 4.3-2, obtain and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
- b) For all new or substantially improved floodproofed structures where base flood elevation data is provided through the Flood Insurance Study, FIRM, or as required in Section 4.3-2:
 - (i) Verify and record the actual elevation (in relation to mean seal level), and
 - (ii) Maintain the floodproofing certifications required in Section 4.1-2(3).
- c) Maintain for public inspection all records pertaining to the provisions of this ordinance.

4) Alteration of Watercourses

3.7.430 – Administration *(continued)*

- a) Notify adjacent communities and the Department of Land Conservation and Development prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
- b) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

5) Interpretation of FIRM Boundaries

Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 4.4.

NOTE: If you do not include Section 4.4 (Variance Procedure), end the above sentence after the word “interpretation,” and add the following sentence: “such appeals shall be granted consistent with the standards of Section 60.6 of the Rules and Regulations of the National Flood Insurance Program (44 CFR 59-76).”

3.7.440. – Variance Procedure**A) Appeal Board**

- 1) The Boardman City Council shall hear and decide appeals and requests for variances from the requirements of this ordinance.
- 2) The Boardman City Council shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the City of Boardman in the enforcement or administration of this ordinance.
- 3) Those aggrieved by the decision of the Boardman City Council, or any taxpayer, may appeal such decision to the Morrow County District Court.
- 4) In passing upon such applications, the Boardman City Council shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Development Code Chapter, and:
 - a) The danger that materials may be swept onto other lands to the injury of others;
 - b) The danger to life and property due to flooding or erosion damage;
 - c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d) The importance of the services provided by the proposed facility to the community;
 - e) The necessity to the facility of a waterfront location, where applicable;
 - f) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - g) The compatibility of the proposed use with existing and anticipated development;
 - h) The relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - i) The safety of access to the property in times of flood for ordinary and emergency vehicles;

3.7.440 - Variance Procedure *(continued)*

- j) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 - k) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- 5) Upon consideration of the factors of Section 3.7.440 (4) and the purposes of this ordinance, the Boardman City Council may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
- 6) The City Clerk and/or Community Development Department shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.

B) Conditions for Variances

- 1) Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (i-xi) in Section 4.4-1(4) have been fully considered. As the lot size increases the technical justification required for issuing the variance increases.
- 2) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the Statewide Inventory of Historic Properties, without regard to the procedures set forth in this section.
- 3) Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
- 4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- 5) Variances shall only be issued upon:
 - a) A showing of good and sufficient cause;
 - b) A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - c) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in Section 4.1-4(4), or conflict with existing local laws or ordinances.
- 6) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece or property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
- 7) Variances may be issued for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing, where it can be determined that such action will have low damage potential, complies with all other variance criteria except 4.4-2(1), and otherwise complies with Sections 5.1-1 and 5.1-2 of the GENERAL STANDARDS.
- 8) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the

3.7.450 – Provisions for Flood Hazard Reduction

cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

A) GENERAL STANDARDS

In all areas of special flood hazards, the following standards are required:

1) Anchoring

- a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.
- b) All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).

2) AH Zone Drainage

Adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

3) Construction Materials and Methods

- a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- c) Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

4) Utilities

- a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and,
- c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

5) Subdivision Proposals

- a) All subdivision proposals shall be consistent with the need to minimize flood damage;
- b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage;
- c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and,

3.7.450 - Provisions for Flood Hazard Reduction (continued)

- d) Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

6) Review of Building Permits

Where elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source (Section 4.3-2), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

B) SPECIFIC STANDARDS

In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) as set forth in Section 3.2, BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD or Section 4.3-2, Use of Other Base Flood Data (In A and V Zones), the following provisions are required:

1) Residential Construction

- a) New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot above the base flood elevation.
- b) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must be either certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
- (i) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (ii) The bottom of all openings shall be no higher than one foot above grade.
 - (iii) Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

2) Nonresidential Construction

New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated at or above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- a) Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

3.7.450 - Provisions for Flood Hazard Reduction *(continued)*

- c) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 4.3-3(2);
- d) Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in 5.2-1(2);
- e) Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one foot below).

3) Manufactured Homes

- (a) All manufactured homes to be placed or substantially improved on sites:

- (i) Outside of a manufactured home park or subdivision,
- (ii) In a new manufactured home park or subdivision,
- (iii) In an expansion to an existing manufactured home park or subdivision, or
- (iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot above the base flood elevation and be securely anchored to an adequately designed foundation system to resist flotation, collapse and lateral movement.

- (b) Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE on the community's FIRM that are not subject to the above manufactured home provisions be elevated so that either:

- (i) The lowest floor of the manufactured home is elevated one foot above the base flood elevation, or
- (ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately designed foundation system to resist flotation, collapse, and lateral movement.

4) Recreational Vehicles

Recreational vehicles placed on sites are required to either:

- (a) Be on the site for fewer than 180 consecutive days,
- (b) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- (c) Meet the requirements of 5.2-3 above and the elevation and anchoring requirements for manufactured homes.

3.7.450 - Provisions for Flood Hazard Reduction (continued)**C) BEFORE REGULATORY FLOODWAY**

In areas where a regulatory floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

D) FLOODWAYS

Located within areas of special flood hazard established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- (1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) If Section 5.4(1) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 5.0, PROVISIONS FOR FLOOD HAZARD REDUCTION.

E) STANDARDS FOR SHALLOW FLOODING AREAS (AO ZONES)

Shallow flooding areas appear on FIRMs as AO zones with depth designations. The base flood depths in these zones range from 1 to 3 feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

- (1) New construction and substantial improvements of residential structures and manufactured homes within AO zones shall have the lowest floor (including basement) elevated above the highest grade adjacent to the building, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified).
- (2) New construction and substantial improvements of nonresidential structures within AO zones shall either:
 - (i) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - (ii) Together with attendant utility and sanitary facilities, be completely flood proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects

3.7.450 - Provisions for Flood Hazard Reduction *(continued)*

- of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as in section 5.2-2(3).
- (3) Require adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
 - (4) Recreational vehicles placed on sites within AO Zones on the community's FIRM either:
 - (i) Be on the site for fewer than 180 consecutive days,
 - (ii) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - (iii) Meet the requirements of 5.5 above and the elevation and anchoring requirements for manufactured homes.

F) COASTAL HIGH HAZARD AREAS

Located within areas of special flood hazard established in Section 3.2 are Coastal High Hazard Areas, designated as Zones V1-V30, VE and/or V. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions in this ordinance, the following provisions shall also apply:

- (1) All new construction and substantial improvements in Zones V1-V30 and VE (V if base flood elevation data is available) shall be elevated on pilings and columns so that:
 - (i) The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and
 - (ii) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in and given year (100-year mean recurrence interval);
- (2) A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of (i) and (ii) of this Section.
- (3) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-30, VE, and V, and whether or not such structures contain a basement. The local administrator shall maintain a record of all such information.
- (4) All new construction shall be located landward of the reach of mean high tide.
- (5) Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more

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than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

- a) Breakaway wall collapse shall result from water load less than that which would occur during the base flood, and
 - b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).
- (6) If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.
- (7) Prohibit the use of fill for structural support of buildings.
- (8) Prohibit man-made alteration of sand dunes which would increase potential flood damage.
- (9) All manufactured homes to be placed or substantially improved within Zones V1-V30, V, and VE on the community's FIRM on sites:
- a) Outside of a manufactured home park or subdivision,
 - b) In a new manufactured home park or subdivision,
 - c) In an expansion to an existing manufactured home park or subdivision, or
 - d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

meet the standards of paragraphs 5.6(1) through (8) of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the FIRM meet the requirements of Section 5.2-3.

- (10) Recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's FIRM either:
- a) Be on the site for fewer than 180 consecutive days,
 - b) Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
 - c) Meet the requirements of Section 4.1-1 (Permitting requirements) and paragraphs 5.6(1) through (8) of this section.

G) CRITICAL FACILITY

Construction of new critical facilities shall be, to the extent possible, located outside the limits

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of the Special Flood Hazard Area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.



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