

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON

ORDINANCE NO. 996

Amending MCC Chapter 29 to Add Grading and Erosion Control and Flood Hazard Regulations Needed to Implement the Policies of the West of Sandy River Rural Area Transportation and Land Use Plan and to Comply with Metro Functional Plan Title 3 Requirements for Water Quality Protection

Multnomah County Ordains as follows:

Section 1. MCC Chapter 29, Building Regulations, is amended to add §§ 29.320-29.325 as follows:

WEST OF SANDY RIVER GRADING AND EROSION CONTROL

§ 29.320 Purposes.

The purposes of the Grading and Erosion Control ordinance are to promote the public health, safety and general welfare, and minimize erosion and related environmental damage in the West of Sandy River Plan Area of unincorporated Multnomah County, all in accordance with ORS 215, LCDC Statewide Planning Goal No. 6 and the County Comprehensive Framework Plan Policies 13 and 14. This subdistrict is intended to:

- (A) Protect human life;
- (B) Protect property and structures;
- (C) Minimize expenditures for rescue and relief efforts associated with earth movement failures;
- (D) Control erosion, production and transport of sediment;
- (E) Regulate land development actions including excavation and fills, drainage controls and protect exposed soil surfaces from erosive forces; and
- (F) Control stormwater discharges and protect streams, ponds, and wetlands.

§ 29.321 Erosion Control Related Definitions.

For the purpose of this subchapter, the following definitions shall apply unless the context requires a different meaning.

CERTIFIED ENGINEERING GEOLOGIST. Any person who has obtained certification by the state as an engineering geologist.

CUT.

- (1) An excavation;
- (2) The difference between a point on the original ground surface and the point of lowest elevation on the final grade;
- (3) The material removed in excavation work.

DEVELOPMENT. Any manmade change defined as buildings or other structures, mining, dredging, paving, filling, or grading in amounts greater than ten (10) cubic yards on any lot or excavation. Any other activity that results in the removal of more than 10 percent of the existing vegetation in a Water Resource Area or Habitat Area on a lot or parcel. *(Title 3)*

DEVELOPMENT AREA. The total area of alteration of the naturally occurring ground surface resulting from construction activities whether permanent or temporary.

DRAINAGE AREA. The subject property together with the watershed (acreage) contributing water runoff to and receiving water runoff from the subject property.

DRAINAGEWAY. Any natural or artificial stream, swale, creek, river, ditch, channel, canal or other open water-course.

EARTH MOVEMENT. Any type of land surface failure resulting in the downslope movement of material. The term includes, but is not limited to, soil creep, mudflow, rockslides, block failures, and massive landslides.

EROSION. The wearing away or removal of earth surface materials by the action of natural elements or forces including, but not limited to, wind, water or gravity.

EXCAVATION. Any act by which earth, sand, gravel, rock or any similar material is dug into, cut, quarried, uncovered, removed, displaced, relocated or bulldozed, including the conditions resulting therefrom.

FILL.

(1) Any act by which earth, sand, gravel, rock or similar material is pushed, placed, dumped, stacked, pulled, transported, or in any way moved to a new location above the existing natural surface of the ground or on the top of a stripped surface, including the condition resulting there from.

(2) The difference in elevation between a point on the original ground surface and the point of higher elevation on a finished grade.

(3) The material used to make a fill.

GEOTECHNICAL ENGINEER. A civil engineer, licensed to practice in the state, who by training, education and experience is competent in the practice of geotechnical or soils engineering practices.

GEOTECHNICAL REPORT. Any information required in addition to Form 1 which clarifies the geotechnical conditions of a proposed development site. Examples of this would be reports on test hole borings, laboratory tests or analysis of materials, or hydrologic studies.

GRADING. Any stripping, cutting, filling, stockpiling or any combination thereof, including the land in its cut or filled condition.

HDP FORM-1. The form required for specified developments subject to the Hillside Development and Erosion Control Subdistrict. It contains a geotechnical reconnaissance and stability questionnaire which must be filled out and certified by a certified engineering geologist or geotechnical engineer.

LAND-DISTURBING ACTIVITIES. Any act which alters earth, sand, gravel, or similar materials and exposes the same to the elements of wind, water, or gravity. Land-disturbing activities include: excavations or fills, site grading, and soil storage.

MULCH. Materials spread over the surface of the ground, especially freshly graded or exposed soils, to prevent physical damage from erosive agents such as storm water, precipitation or wind, and which shield soil surfaces until vegetative cover or other stabilization measures can take effect.

ORDINARY HIGH WATER MARK. Features found by examining the bed and banks of a stream and ascertaining where the presence and action of waters are so common and usual, and so long maintained in all ordinary years, as to mark upon the land a character distinct from that of the abutting upland, particularly with respect to vegetation. For streams where such features cannot be found, the channel bank shall be substituted. In braided channels and alluvial fans, the ordinary high water mark shall be measured to include the entire stream feature.

SLOPE.

- (1) Any ground whose surface makes an angle from the horizontal; or
- (2) The face of an embankment or cut section.

SLOPE HAZARD MAP. A series of maps (Figures 1A through 6A.) prepared by Shannon & Wilson, Inc., dated September, 1978, and on file in the Office of the director, Department of Environmental Services.

SPOIL MATERIAL. Any rock, sand, gravel, soil or other earth material removed by excavation or other grading activities.

STREAM. Areas where surface waters flow sufficient to produce a defined channel or bed. A defined channel or bed is indicated by hydraulically sorted sediments or the removal of vegetative litter or loosely rooted vegetation by the action of moving water. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, stormwater runoff devices or other entirely artificial watercourses unless they are used to convey Class 1 or 2 streams naturally occurring prior to construction. Those topographic features resembling streams but which have no defined channels (such as, swales) shall be considered streams when hydrologic and hydraulic analyses performed pursuant to a development proposal predict formation of a defined channel after development.

STREAM PROTECTION. Activities or conditions which avoid or lessen adverse water quality and turbidity effects to a stream.

TOPOGRAPHIC INFORMATION. Surveyed elevation information which details slopes, contour intervals and drainageways. Topographic information shall be prepared by a registered land surveyor or a

registered professional engineer qualified to provide such information and represented on maps with a contour interval not to exceed ten feet.

VEGETATION. All plant growth, especially trees, shrubs, grasses and mosses.

VEGETATIVE PROTECTION. Stabilization of erosive or sediment-producing areas by covering the soil with:

- (1) Permanent seeding, producing long-term vegetative cover;
- (2) Short-term seeding, producing temporary vegetative cover;
- (3) Sodding, producing areas covered with a turf or perennial sod-forming grass; or
- (4) Netting with seeding if the final grade has not stabilized.

WATER BODY. Areas permanently or temporarily flooded which may exceed the deepwater boundary of wetlands. Water depth is such that water, and not the air, is the principal medium in which prevalent organisms live. Water bodies include rivers, creeks, lakes, and ponds.

WATERCOURSE. Natural and artificial features which transport surface water. **WATERCOURSE** includes a river, stream, creek, slough, ditch, canal, or drainageway.

('90 Code § 9.40.050) (Ord. 847, passed 1996)

§ 29.322 Permits Required.

(A) **Grading and erosion control permit.** All persons proposing land disturbing activities or development :

- (1) Where the volume of soil or earth material disturbed, stored, disposed of or used as fill exceeds 10 cubic yards;
- (2) Which obstructs or alters a drainage course; or
- (3) Which takes place within 100 feet by horizontal measurement from the top of the bank of a watercourse, the mean high watermark (line of vegetation) of a body of water, or within the wetlands associated with a watercourse or water body, whichever distance is greater, shall obtain a grading and erosion control permit as prescribed by this Subdistrict, unless exempted by §§ 29.323(B)(2) through (6) or (C) of this subchapter. Development projects subject to a hillside development permit do not require a separate grading and erosion control permit.

(B) **Grading and erosion control permit.** All persons proposing land-disturbing activities within the Tualatin River and Balch Creek Drainage Basins shall first obtain a grading and erosion control permit, except as provided by § 29.323(C) of this subchapter.
(‘90 Code § 9.40.010) (Ord. 847, passed 1996)

§ 29.323 Exempt Land Uses And Activities.

The following are exempt from the provisions of this subchapter:

(A) **Prior development.** Development activities approved prior to February 20, 1990; except that within such a development, issuance of individual building permits for which application was made after February 20, 1990 shall conform to site-specific requirements applicable herein.

(B) **General exemptions.** Outside the Tualatin River and Balch Creek Drainage Basins, all land-disturbing activities outlined below shall be undertaken in a manner designed to minimize earth movement hazards, surface runoff, erosion, and sedimentation and to safeguard life, limb, property, and the public welfare. A person performing such activities need not apply for a permit pursuant to this Subdistrict if:

- (1) Natural and finished slopes will be less than 25%;
- (2) The disturbed or filled area is 20,000 square feet or less;
- (3) The volume of soil or earth materials to be stored is 10 cubic yards or less;
- (4) Rainwater runoff is diverted, either during or after construction, from an area smaller than 10,000 square feet;
- (5) Impervious surfaces, if any, of less than 10,000 square feet are to be created; and
- (6) No drainageway is to be blocked or have its stormwater carrying capacities or characteristics modified.

(C) **Categorical exemptions.** Notwithstanding divisions (A) and (B)(1) through (6) of this section, the following activities are exempt from the permit requirements:

- (1) An excavation below finished grade for basements and footings of a building, retaining wall, or other structure authorized by a valid building permit. This shall not exempt any fill made with the material from such excavation, nor exempt any excavation having an unsupported finished height greater than five feet.
- (2) Cemetery graves, but not cemetery soil disposal sites.
- (3) Excavations for wells, except that sites in the Tualatin Basin shall require Erosion Control Plans for spoils or exposed areas consistent with OAR 340-41-455(3).
- (4) Mineral extraction activities as regulated by the county zoning code.
- (5) Exploratory excavations under the direction of certified engineering geologists or geotechnical engineers.
- (6) Routine agricultural crop management practices.
- (7) Residential gardening and landscape maintenance at least 100 feet by horizontal measurement from the top of the bank of a watercourse, or the mean high watermark (line of vegetation) of a body of water or wetland.
- (8) Emergency response activities intended to reduce or eliminate an immediate danger to life, property, or flood or fire hazards.

(9) Forest practices as defined by ORS 527 (the State Forest Practices Act) and approved by the state Department of Forestry. ('90 Code § 9.40.020) (Ord. 847, passed 1996)

§ 29.324 Application Information Required.

An application for development subject to the requirements of this Subdistrict shall include the following:

(A) A map showing the property line locations, roads and driveways, existing structures, trees with eight-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s) and trees proposed for removal.

(B) An estimate of depths and the extent and location of all proposed cuts and fills.

(C) The location of planned and existing sanitary drainfields and drywells.

(D) Narrative, map or plan information necessary to demonstrate compliance with applicable provisions of the county zoning code. The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting.
(90 Code § 9.40.030) (Ord. 847, passed (1996))

§ 29.325 Grading And Erosion Control Permit Standards.

Approval of development plans on sites subject to a grading and erosion control permit shall be based on findings that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards:

(A) *Design standards for grading and erosion control.*

(1) *Grading standards.*

(a) Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The director may require additional studies or information or work regarding fill materials and compaction;

(b) Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified;

(c) Cuts and fills shall not endanger or disturb adjoining property;

(d) The proposed drainage system shall have adequate capacity to bypass all sheet flow through the development from a storm of ten-year design frequency and maintain the existing flood carrying capacity of all watercourses passing through the property; (Ord. 931, passed 1999)

(e) Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the existing flood carrying capacity for the altered portion of the stream. (Ord. 931, passed 1999)

(2) *Erosion control standards.*

(a) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion, stabilize the soil as quickly as practicable, and expose the smallest practical area at any one time during construction;

(b) Development plans shall minimize cut or fill operations and ensure conformity with topography so as to create the least erosion potential and adequately accommodate the volume and velocity of surface runoff;

(c) Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development;

(d) Whenever feasible, natural vegetation shall be retained, protected, and supplemented;

1. A 100-foot undisturbed buffer of natural vegetation shall be retained from the top of the bank of a stream, or from the ordinary high watermark (line of vegetation) of a water body, or within 100 feet of a wetland;

2. The buffer required in subsection (d)1. may only be disturbed upon the approval of a mitigation plan which utilizes erosion and stormwater control features designed to perform as effectively as those prescribed in the currently adopted edition of the "Erosion Prevention & Sediment Control Plans Technical Guidance Handbook" and the "City of Portland Stormwater Quality Facilities, A Design Manual (1995)" and which is consistent with attaining equivalent surface water quality standards as those established for the Tualatin River Drainage Basin in OAR 340;

(e) Permanent plantings and any required structural erosion control and drainage measures shall be installed as soon as practical;

(f) Provisions shall be made to effectively accommodate increased runoff caused by altered soil and surface conditions during and after development. The rate of surface water runoff shall be structurally retarded where necessary;

(g) Sediment in the runoff water shall be trapped by use of debris basins, silt traps, or other measures until the disturbed area is stabilized;

(h) Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surface of fills by installation of temporary or permanent drainage across or above such areas, or by other suitable stabilization measures such as mulching or seeding;

(i) All drainage provisions shall be designed to adequately carry existing and potential surface runoff to suitable drainageways such as storm drains, natural watercourses, drainage swales, or an approved drywell system;

(j) Where drainage swales are used to divert surface waters, they shall be vegetated or protected as required to minimize potential erosion;

(k) Erosion and sediment control devices shall be required where necessary to prevent polluting discharges from occurring. Control devices and measures which may be required include, but are not limited to:

1. Energy absorbing devices to reduce runoff water velocity;

2. Sedimentation controls such as sediment or debris basins. Any trapped materials shall be removed to an approved disposal site on an approved schedule;

3. Dispersal of water runoff from developed areas over large undisturbed areas.

(l) Disposed spoil material or stockpiled topsoil shall be prevented from eroding into streams or drainageways by applying mulch or other protective covering; or by location at a sufficient distance from streams or drainageways; or by other sediment reduction measures;

(m) Such non-erosion pollution associated with construction such as pesticides, fertilizers, petrochemicals, solid wastes, construction chemicals, or wastewaters shall be prevented from leaving the construction site through proper handling, disposal, continuous site monitoring and clean-up activities.

(B) Responsibility

(1) Whenever sedimentation is caused by stripping vegetation, regrading or other development, it shall be the responsibility of the person, corporation or other entity causing such sedimentation to remove it from all adjoining surfaces and drainage systems prior to issuance of occupancy or final approvals for the project;

(2) It is the responsibility of any person, corporation or other entity doing any act on or across a communal stream, watercourse or swale, or upon the floodplain or right-of-way thereof, to maintain as nearly as possible in its present state the stream, watercourse, swale, floodplain, or right-of-way during such activity, and to return it to its original or equal condition.

(C) Implementation.

(1) Performance bond. A performance bond may be required to assure the full cost of any required erosion and sediment control measures. The bond may be used to provide for the installation of the measures if not completed by the contractor. The bond shall be released upon determination the control measures have or can be expected to perform satisfactorily. The bond may be waived if the director determines the scale and duration of the project and the potential problems arising therefrom will be minor.

(2) Inspection and enforcement. The requirements of this subdistrict shall be enforced by the planning director. If inspection by county staff reveals erosive conditions which exceed those prescribed by the Hillside Development Permit or Grading and Erosion Control Permit, work may be stopped until appropriate correction measures are completed.

(D) **Final approvals.** A certificate of occupancy or other final approval shall be granted for development subject to the provisions of this subdistrict only upon satisfactory completion of all applicable requirements.

('90 Code § 9.40.040) (Ord. 847, passed 1996)

Section 2. MCC Chapter 29, Building Regulations, is amended to add §§ 29.620-29.630 as follows:

WEST OF SANDY RIVER FLOOD HAZARD REGULATIONS

29.620 Purposes.

The purposes of the Flood Hazard Standards are to promote the public health, safety and general welfare, to reduce the risk of flooding and maintain the functions and values of floodplains such as allowing for the storage and conveyance of stream flows through existing and natural flood conveyance systems, and to minimize public and private losses due to flood conditions in specific areas and to allow property owners within the West of Sandy River Plan Area of unincorporated Multnomah County to participate in the National Flood Insurance Program.(Title 3)

29.621 Definitions.

For the purpose of this subchapter, the following definitions shall apply:

ALTERATION. To modify, change or make different.

DEVELOPMENT. 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 located within the areas shown within 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA), the area of inundation for the February 1996 flood, and any watercourse.

DESIGN FLOOD ELEVATION. The elevation of the 100-year flood as defined by FEMA Flood Insurance Rate Maps, or in areas without maps, the elevation of the 25-year storm, or the edge of mapped flood prone soils or similar methodologies.

ELEVATION CERTIFICATE. The document used to certify the FIRM Zone and base flood elevation of the development area of a property, and to determine the required elevation or floodproofing requirements of new and substantially improved structures.

ENCROACHMENT. To fill, construct, improve, or develop beyond the original bank line of the watercourse. Bank stabilization or restoration of a watercourse which does not protrude beyond the original banks line is not considered an encroachment by this subdistrict.

FLOOD MANAGEMENT AREA. All lands contained within the the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA), and the area of inundation for the February 1996 flood.(Title 3)

FLOODWAY. 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.

RECREATIONAL VEHICLE. A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, self-propelled or permanently towable by a light duty truck and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

SUBSTANTIAL DAMAGE. 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. 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 costs to repair must be calculated for full repair to "before-damage" condition, even if the owner elects to do less. The total costs to repair include both structural and finish materials and labor.
- (3) Substantial Improvement does not, however, include either:
 - (a) The portion of 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 local building officials and which are the minimum necessary to assure safe living conditions or
 - (b) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

WATERCOURSE. Natural and artificial features which transport surface water. Watercourse includes a river, stream, creek, slough, ditch, canal, or drainageway.

§ 29.622 Areas Affected.

(A) The provisions of MCC 29.620 - 29.630 shall apply within the West of Sandy River Plan Area to all areas within the 100-year flood boundary as identified on the Flood Boundary and Floodway Maps and the Flood Insurance Rate Maps as published by the Federal Emergency Management Agency (FEMA), the area of inundation for the February 1996 flood, and any watercourse as defined by MCC 29.621.(Title 3)

(1) These maps may be periodically revised or modified by FEMA in accordance with prescribed procedures pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (P.L. 92-234). In order to employ the best available information and maintain compliance with Federal Flood Insurance Program regulations, Multnomah County shall utilize any such revisions or modifications upon their effective date.

(2) On the Multnomah County Zoning Map, all areas depicted as being Flood Fringe (FF), Floodway (FW) or Flood Hazard (FH) with this ordinance are repealed from requiring a Flood Hazard Permit.

§ 29.623 Permits.

(A) No structure, dwelling or manufactured home shall be erected, located, altered, improved, repaired or enlarged and no other new development including but not limited to grading, mining,

excavation and filling shall occur on lands within Flood Management Areas unless a Floodplain Development Permit specifically authorizing the proposal has been obtained from Multnomah County.

(1) Improvements to a structure, dwelling or mobile home, which does not require a land use permit, grading permit or building permit, are exempted from obtaining a Flood Hazard Permit.

(B) Alterations, modifications or relocations to any watercourse as defined in MCC 29.621 are subject to a Flood Hazard permit and the Watercourse Relocation requirements of MCC 29.629.

(1) Regular maintenance of ditches and dikes within the Sauvie Island Drainage District is exempted from obtaining a Flood Hazard Permit.

§29.624 Exemption from Development Standards.

The following are exempt:

(A) Land may be exempted from the requirements of MCC 29.626 upon review and approval by the Director of an acceptable elevation survey, certified by a State of Oregon Registered Professional Engineer or Land Surveyor, which demonstrates that the entire subject parcel is at least one foot above the base flood level.

(B) The reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Historic Sites Inventory may be permitted without regard to the requirements of MCC 29.626.

(C) Forest practices conducted under the Forest Practices Act.

§ 29.625 Application Information Required.

An application for development subject to a Floodplain Development Permit shall include the following:

(A) A map showing the property line locations, the boundaries of the 100 year floodplain on the parcel, roads, and driveways, existing structures, watercourses and the location of the proposed development(s), topographic elevations for the proposed development and areas of grading or filling required for the project.

(B) Detailed construction drawings showing compliance with the development standards specified in MCC 29.626. A licensed engineer or architect shall stamp the plans and include a statement that the plans meet the requirements of MCC 29.626.

(C) An elevation certificate signed by a Registered Professional Land Surveyor, Engineer or Architect. The certificate shall be accompanied by a plan of the property which shows the location and elevation of a benchmark on the property.

(D) A written narrative specifying building materials and methods that will be utilized to comply with the requirements of the Floodplain Permit.

(E) Evidence that the applicant has obtained, when necessary, prior approval from those Federal, State and/or local governmental agencies with jurisdiction over the proposed development.

§ 29.626 Development Standards.

The following standards shall apply to all new construction, substantial improvement or other development in Flood Management Areas:

(A) General Development Standards

(1) Development, excavation and fill shall be performed in a manner to maintain or increase flood storage and conveyance capacity and not increase design flood elevations.

(2) All fill placed at or below the design flood elevation in Flood Management Areas shall be balanced with at least an equal amount of soil material removal.

(3) Excavation shall not be counted as compensating for fill if such areas will be filled with water in non-storm winter conditions.

(4) Temporary fills permitted during construction shall be removed.

(5) Uncontained areas of hazardous materials as defined by DEQ shall be prohibited in Flood Management Areas.(Title 3)

(B) All Structures.

(1) All new construction and substantial improvement shall:

(a) Comply with Oregon State Building Codes.

(b) Have the electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(c) Use materials resistant to flood damage.

(d) Using methods and practices that minimize flood damage.

(e) For areas that are fully enclosed below the lowest floor and that are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

1. Designs for meeting this requirement must either be certified by a registered professional engineer or architect and must meet or exceed the following minimum criteria:

a. 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.

b. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(C) Residential Structures.

New construction and substantial improvement of any residential structure, including manufactured homes, shall:

(1) Have the lowest floor, including basement, elevated to at least one foot above the base flood level as indicated on the Elevation Certificate. For purposes of this section, an unfinished garage (either attached or detached) may be considered a non-residential structure.

(2) Be placed on a permanent foundation and shall be anchored to resist flotation, collapse and lateral movement by providing tie downs (anchor bolts, seismic tie-downs) and anchoring as specified in OAR 814-23-005 through 080 and State of Oregon 1 and 2 Family Dwelling Specialty Code, as appropriate to the construction type.

(3) Conduct an as-built elevation survey of the lowest floor. This survey shall be completed by a State of Oregon Registered Professional Engineer or Land Surveyor and must certify that the structure's lowest floor was elevated to at least one foot above the base flood level.

(a) The as-built elevation survey shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.

(b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as-built elevation survey is submitted. The deposit/bond may be used to obtain the elevation survey, without notice, if it is not completed and submitted prior to occupancy of the dwelling. The performance bond or cash deposit shall be released upon submittal of the as-built elevation survey, unless utilized to obtain compliance.

(D) Nonresidential Structures.

New construction and substantial improvement of any commercial, industrial or other non-residential structure shall:

(1) Have the lowest floor including basement, elevated at least one foot above the base flood level; or, together with attendant utility and sanitary facilities, shall:

(a) Be floodproofed such that the structure, including the attendant utility and sanitary facilities, shall be substantially impermeable to the passage of water to an elevation at least one foot above the base flood level; and

(b) Have structural components capable of withstanding hydrostatic and hydrodynamic loads, effects of buoyancy, flood depths, pressures, velocities and other factors associated with the base flood; and

(c) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.

(2) Provide an as-built elevation survey of the lowest floor completed by a State of Oregon Registered Professional Engineer or Land Surveyor certifying that the structure's lowest floor was elevated to at least one foot above the base flood level; or submit a stamped documentation by a State of Oregon Registered Professional Engineer certifying the structure has been built in compliance with MCC 29.626(D)(1)(a) through (c).

(a) The as-built elevation survey or stamped documentation shall be submitted to Multnomah County Land Use Planning prior to occupancy of the structure.

(b) Prior to issuance of a building permit or start of development, a performance bond or cash deposit of \$1000.00 shall be required to assure that the as-built elevation survey or stamped documentation is submitted. The bond/deposit may be used to obtain the elevation survey or documentation, without notice, if it is not completed and submitted prior to occupancy or use of the structure or development. The performance bond or cash deposit shall be released upon submittal of the as-built elevation survey or stamped documentation, unless utilized to obtain compliance.

(E) On Site Waste Disposal Systems, Wells, Water Systems and Sewer Systems.

All new and replacement water and sewer systems, including on-site waste disposal systems, shall be designed to:

- (1) Minimize infiltration of floodwaters into the system;
- (2) Minimize discharge from systems into floodwaters;
- (3) Avoid impairment or contamination during flooding.

(F) Recreational Vehicles in Campground or Recreational Development

Recreational vehicles utilized on sites within Zones A1-A30, AH and AE on the community's FIRM shall either:

- (1) Be on the site for fewer than 180 consecutive days, or
- (2) Be fully licensed and ready for highway uses, 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
- (3) Meet the requirements of MCC 29.626(B) and (C).

§ 29.627 Floodway Requirements.

In areas identified as floodway on the Flood Boundary and Floodway Maps, the following restrictions, in addition to the requirements of MCC 29.626, shall apply:

(A) No development shall be permitted that would result in any measurable increase in base flood levels.

(1) Encroachment into the floodway is prohibited, unless a detailed step backwater analysis and conveyance compensation calculations, certified by a Registered Professional Engineer, are provided which demonstrates that the proposed encroachment will cause no measurable increase in flood levels (water surface elevations) during a base flood discharge.

§ 29.628 Procedure When Base Flood Elevation Data is Not Available.

(A) For the purposes of administering MCC 29.626 in areas where detailed base flood elevation data has not been provided by FEMA, the Land Use Planning Division shall obtain, review and

utilize any base flood elevation and floodway data available from federal, state or local sources to assure that the proposed construction will be reasonably safe from flooding and may exercise local judgment based on historical data.

(B) In areas where detailed base flood elevation data has not been provided by FEMA, all proposals for subdivisions or other new developments greater than 50 lots or five acres, whichever is less, shall provide detailed base flood elevation data and floodway data.

§ 29.629 Watercourse Relocation and Alteration.

Prior to approving any relocation, encroachment or alteration of a watercourse, the Land Use Planning Division shall provide mailed notice of the proposal to adjoining communities and to the Department of Land Conservation and Development Floodplain Coordinator. Copies of such notice shall also be provided to the Federal Insurance Administration.

(A) No relocation, encroachment or alteration of a watercourse shall be permitted unless a detailed hydraulic analysis, certified by a Registered Professional Engineer, is provided which demonstrates that:

- (1) The flood carrying capacity for the altered or relocated portion of the watercourse will be maintained;
- (2) The area subject to inundation by the base flood discharge will not be increased;
- (3) The alteration or relocation will cause no measurable increase in base flood levels.

§ 29.630 County Records.

Multnomah County or its designee shall obtain and maintain on file the actual elevation (in relation to NGVD) of the lowest floor, including basement, of all new or substantially improved structures in areas subject to the provisions of this Section.

(A) For all new or substantially improved floodproofed structures in areas subject to the provisions of this Section, Multnomah County shall obtain and maintain on file the actual elevation (in relation to NGVD) of the floodproofing and shall also maintain the floodproofing certifications required pursuant to MCC 29.626(D)(1)(b) and (c).

Section 3. Time extension for submittal of applications for Design Review, Hillside Development Permits, and Grading and Erosion Control Permits for certain Type II and III decisions. A time extension until January 1, 2004 shall be allowed for submitting applications for Design Review, Hillside Development Permits, and Erosion Control Permits under the applicable provisions of MCC 11.15 and MCC 29.300. Those applications shall be “follow-up applications” to developments already approved as Type II or III decisions in which application for the development was submitted prior

to January 1, 2003 and the approval has not expired under the provisions of MCC 37.0690, 37.0700, or 37.0750.

Section 4. The effective date of this ordinance shall be January 1, 2003.

FIRST READING:

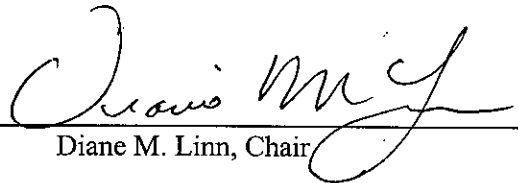
October 24, 2002

SECOND READING AND ADOPTION:

October 31, 2002



BOARD OF COUNTY COMMISSIONERS
FOR MULTNOMAH COUNTY, OREGON


Diane M. Linn, Chair

REVIEWED:

THOMAS SPONSLER, COUNTY ATTORNEY
FOR MULTNOMAH COUNTY, OREGON

By 
Sandra N. Duffy, Deputy County Attorney