

RICHLAND COUNTY COUNCIL
WORK SESSION
JANUARY 29, 2008
3:00 P.M.

CALL TO ORDER

1. An Ordinance amending the Richland County Code of Ordinances; Chapter 26; Land Development; Section 26-104, FP Floodplain Overlay District; Subsection (D), Standards in the Floodplain; Paragraph (2), Specific Standards; Subparagraph (J) Fill; So as the allow the use of fill in the floodplain;

ADJOURNMENT

As presented at 7-24-07 Zoning Public Hrg

STATE OF SOUTH CAROLINA
COUNTY COUNCIL FOR RICHLAND COUNTY
ORDINANCE NO. ___-07HR

AN ORDINANCE AMENDING THE RICHLAND COUNTY CODE OF ORDINANCES; CHAPTER 26, LAND DEVELOPMENT; SECTION 26-104, FP FLOODPLAIN OVERLAY DISTRICT; SUBSECTION (D), STANDARDS IN THE FLOODPLAIN; PARAGRAPH (2), SPECIFIC STANDARDS; SUBPARAGRAPH (J), FILL; SO AS TO ALLOW THE USE OF FILL IN THE FLOODPLAIN.

Pursuant to the authority granted by the Constitution and the General Assembly of the State of South Carolina, BE IT ENACTED BY THE RICHLAND COUNTY COUNCIL:

SECTION I. The Richland County Code of Ordinances, Chapter 26, Land Development; Article V, Zoning Districts and District Standards; Section 26-104, FP Floodplain Overlay District; Subsection (d), Standards in the Floodplain; Paragraph (2), Specific Standards; Subparagraph (j), Fill; is hereby amended to read as follows:

- j. ~~Fill. Fill is discouraged because its use removes storage capacity from floodplains. Elevating buildings by other methods must be considered. An applicant shall demonstrate, using a registered engineer, that fill is the only alternative to raising the building to at least two (2) feet above the base flood elevation, and that the amount of fill used will not affect the flood storage capacity or adversely affect adjacent properties. Any change to the flood flow within a regulatory floodplain through fill must be approved by FEMA in addition to review by the flood coordinator. If fill is used for new construction in a floodplain to raise the floor of the building to at least two (2) feet above the base flood elevation, the structure must be constructed on properly designed and compacted fill (ASTM D-698 or equivalent) that extends beyond the building walls before dropping below the base flood elevation and has appropriate protection from erosion and scour. The fill design or the fill standard must be approved by a licensed professional engineer. Other alternatives for elevating a structure are: (a) foundation wall with flood vents; or (b) piers and pilings. Any change to the flood flow within a regulatory floodplain through fill must be approved by FEMA in addition to review by the floodplain coordinator.~~
1. *Floodway.* Filling of floodway areas, dumping of salvaged or scrap material, or the placing of material or obstruction within a floodway area in such a manner as to impede free flow of water during a time of flood or in such a manner that the elevation of flood waters will be increased is prohibited.
 2. *Nontidal wetlands or waters.* Fill activities may not take place in nontidal wetlands or waters without the required state and federal permits.
 3. *Dredged material.* Dredged material may be used as fill only upon certification of suitability by a land surveyor, engineer or architect authorized

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by law to certify such information. Landfills, rubble fills, dumps, and sanitary fills are not permitted in the floodplain.

4. *Standards.* Fill used to support structures must comply with ASTM Standard D-698, and its suitability to support structures certified by a licensed professional engineer.
5. *Fill slopes.* Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.
6. *Effect on neighboring properties.* The use of fill shall not increase flooding or cause drainage problems on neighboring properties.
7. *Compensating excavations.* The volume of space occupied by any authorized fill below the base flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood elevation. All such excavations shall be constructed to drain freely to the watercourse. No area below the waterline of a pond or other body of water can be credited as a compensating excavation. In lieu of compensating excavation, a no-rise certification by a registered engineer will satisfy this condition.

SECTION II. Severability. If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected thereby.

SECTION III. Conflicting Ordinances Repealed. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION IV. Effective Date. This ordinance shall be enforced from and after _____, 2007.

RICHLAND COUNTY COUNCIL

BY: _____
Joseph McEachern, Chair

ATTEST THIS THE _____ DAY

OF _____, 2007

Michielle R. Cannon-Finch
Clerk of Council

As presented at 7-24-07 Zoning Public Hrg

RICHLAND COUNTY ATTORNEY'S OFFICE

Approved As To LEGAL Form Only
No Opinion Rendered As To Content

First Reading: June 5, 2007
Public Hearing: July 24, 2007
Second Reading: July 24, 2007
Third Reading:

Planning Commission (10-29-07)

STATE OF SOUTH CAROLINA
COUNTY COUNCIL FOR RICHLAND COUNTY
ORDINANCE NO. ___-07HR

AN ORDINANCE AMENDING THE RICHLAND COUNTY CODE OF ORDINANCES; CHAPTER 26, LAND DEVELOPMENT; SECTION 26-104, FP FLOODPLAIN OVERLAY DISTRICT; SUBSECTION (D), STANDARDS IN THE FLOODPLAIN; PARAGRAPH (2), SPECIFIC STANDARDS; SUBPARAGRAPH (J), FILL; SO AS TO ALLOW THE USE OF FILL IN THE FLOODPLAIN.

Pursuant to the authority granted by the Constitution and the General Assembly of the State of South Carolina, BE IT ENACTED BY THE RICHLAND COUNTY COUNCIL:

SECTION I. The Richland County Code of Ordinances, Chapter 26, Land Development; Article V, Zoning Districts and District Standards; Section 26-104, FP Floodplain Overlay District; Subsection (d), Standards in the Floodplain; Paragraph (2), Specific Standards; Subparagraph (j), Fill; is hereby amended to read as follows:

Lands to which article applies.

This article shall apply to all areas of special flood hazard within the jurisdiction of the county.

Basis for establishing areas of special flood hazard.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its flood insurance study for the county, and any other supporting data, and any revisions thereto, are adopted by reference and declared to be a part of this article.

Development permit required.

A development permit shall be required in conformance with the provisions of this article prior to the commencement of any development activities.

Compliance with applicable regulations.

No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this article and other applicable regulations.

j. *Fill.* Fill is discouraged because its use removes storage capacity from floodplains. Elevating buildings by other methods must be considered, such as constructing a foundation wall with flood vents or by using piers and pilings.

1. Standards for use of fill. For all floodplain property on which fill is proposed, a plan must be submitted that demonstrates conformance to the following standards:

[a] Fill must be properly designed and compacted (ASTM D-698 or equivalent) and extend beyond the building walls before dropping below

Planning Commission (10-29-07)

the base flood elevation and have appropriate protection from erosion and scour.

[b] Fill shall be performed in a manner to maintain or increase slope stability and maintain or decrease erosive velocities. Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.

[c] Dredged material may be used as fill only upon certification of suitability by a land surveyor, engineer, or architect authorized by law to certify such information. Landfills, rubble fills, dumps, and sanitary fills are not permitted in the floodplain as authorized by state law.

- ~~12.~~ *Floodway.* Filling of floodway areas, dumping of salvaged or scrap material, or the placing of material, storage of materials or any obstruction within a floodway area ~~in such a manner as to impede free flow of water during a time of flood or in such a manner that the elevation of flood waters will be increased~~ is prohibited.
- ~~23.~~ *Nontidal wetlands or waters.* Fill activities may not take place in nontidal wetlands or waters without the required state and federal permits.
- ~~3.~~ ~~*Dredged material.* Dredged material may be used as fill only upon certification of suitability by a land surveyor, engineer or architect authorized by law to certify such information. Landfills, rubble fills, dumps, and sanitary fills are not permitted in the floodplain.~~
- ~~4.~~ ~~*Standards.* Fill used to support structures must comply with ASTM Standard D-698, and its suitability to support structures certified by a land surveyor, engineer, or architect authorized by law to certify such information.~~
- ~~5.~~ ~~*Fill slopes.* Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.~~
- ~~64.~~ *Effect on neighboring properties.* The use of fill shall be designed such that it will not have a significant adverse impact ~~increase flooding or cause drainage problems~~ on neighboring properties as determined by a South Carolina Professional Engineer.
- ~~7.~~ ~~*Compensating excavations.* The volume of space occupied by any authorized fill below the base flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood elevation. All such excavations shall be constructed to drain freely to the watercourse. No area below the waterline of a pond or other body of water can be credited as a compensating excavation.~~

Planning Commission (10-29-07)

5. A South Carolina registered professional engineer shall certify that all of the above standards and requirements within this section, § 26-104 (j), have been met.

Warning and disclaimer of liability.

The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This article shall not create liability on the part of the county or by any officer or employee thereof for flood damages that result from reliance on this article or any administrative decision made there under.

SECTION II. Severability. If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected thereby.

SECTION III. Conflicting Ordinances Repealed. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION IV. Effective Date. This ordinance shall be enforced from and after _____, 2007.

RICHLAND COUNTY COUNCIL

BY: _____
Joseph McEachern, Chair

ATTEST THIS THE ____ DAY

OF _____, 2007

Michielle R. Cannon-Finch
Clerk of Council

RICHLAND COUNTY ATTORNEY'S OFFICE

Approved As To LEGAL Form Only
No Opinion Rendered As To Content

Planning Commission (10-29-07)

First Reading: June 5, 2007
Public Hearing: July 24, 2007
Second Reading: July 24, 2007
Third Reading:

Staff Recommendation

STATE OF SOUTH CAROLINA
COUNTY COUNCIL FOR RICHLAND COUNTY
ORDINANCE NO. ___-08HR

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- j. Fill. Fill is discouraged because storage capacity is removed from floodplains, natural drainage patterns are adversely altered and erosion problems can develop and wildlife habitat can be diminished. The use of fill shall be limited to the elevation of individual structures, essential utilities, necessary infrastructure and public road crossings. Other methods of elevating structures should be considered first.
 1. To allow the elevation of individual structures, the amount of fill used shall be the minimum necessary. Floodplain authorization for fill shall be based on findings by the county engineer that the minimum fill being used for raising the structure is the most feasible alternative.
 2. Fill, if approved, shall meet the following conditions:
 - [a] The flood storage capacity of the floodplain shall not be affected and flood heights shall not be increased (0.00 feet) unless compensatory storage is provided on the same parcel. The space occupied by the authorized fill below Base Flood Elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the Base Flood Elevation. All such excavations shall be constructed to drain freely to the watercourse.
 - [b] Flooding from any source shall not be increased for neighboring properties. Neighboring and adjacent properties shall not be adversely affected in any way nor shall drainage problems be caused or aggravated as a result of fill.
 - [c] Fill shall not be placed in the floodway except for essential utilities and necessary infrastructure.

Staff Recommendation

- [d] Fill shall not be placed in nontidal wetlands without the required state and federal permits.
- 3. In the event buildings on adjacent properties are known or determined to be subject to flooding under current conditions, the county engineer may require submission of hydrologic and hydraulic analyses to adequately demonstrate that the effects of the proposed fill will not increase flooding on neighboring properties. Additional fill for landscaping purposes is not permitted.
- 4. Where allowed, fill material shall meet the following additional requirements:
 - [a] Fill shall consist of soil or rock materials only. Landfills, dumps and sanitary soil fills shall not permitted. Dredged material may be used as fill only upon certification of suitability by a registered professional engineer.
 - [b] Fill material shall be compacted to 95% of the maximum density. Obtainable with the standard proctor test method issued by The American Society For Testing And Materials (ASTM standard D-698) to provide the necessary stability and resistance to erosion, scouring or settling.
 - [c] Fill slopes shall be no steeper than one vertical to two horizontal, unless substantiating data justifying steeper slopes are submitted to and approved by the county engineer.
 - [d] Fill shall be performed in such manner as to maintain or increase flood storage and conveyance capacity, and to not increase FEMA base flood elevations.
 - [e] Fill shall not cause an increase in the base flood elevation. Applicants shall further demonstrate that the cumulative effect of the proposed development, when combined with all other existing development, will not increase the base flood elevation at any point within the county.
 - [f] All fill placed at or below the flood elevation in the floodplain shall be balanced with at least an equal amount of soil material removal from the same parcel(s). Compensatory storage required to offset floodplain fill must be created before the project begins and should be available throughout the construction period. The required volume of compensatory storage must be provided within the property limits. The applicant shall demonstrate, using a South Carolina registered professional engineer, no net loss of floodplain storage for 10, 50, and 100 year storm events.
 - [g] Excavation shall not be counted as compensating for fill if such areas will be filled with water in non-storm conditions.

Staff Recommendation

- [h] Fill shall be performed in a manner to maintain or increase slope stability and maintain or decrease erosive velocities. Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.
 - [i] Applicants must submit an as-built survey certification by a South Carolina registered professional engineer that demonstrates that the required volume of storage has been created on site in order to ensure no net loss as outlined and demonstrated per the approved plans.
 - [j]. The use of fill shall not have an adverse impact on neighboring properties
 - ~~[k]—Filling of floodway areas in any manner is prohibited.~~
5. The county engineer shall inspect the fill activity. A certification sealed by a professional engineer registered in South Carolina shall be submitted prior to approval of a building permit for compliance with this section. The engineer must provide calculations and complete the county's engineering No Impact Certification form. Any change in the flood flow within a regulatory floodplain through fill must be submitted and approved through the FEMA Letter of Map Revision process in addition to review by the flood coordinator and county engineer. The county engineer shall provide a copy of the letter of approval, approved site plans and signed No Impact Certification for to the floodplain coordinator.
6. A South Carolina registered professional engineer shall certify that all of the above standards and requirements within this section, § 26-104 (j), have been met.

SECTION II. Severability. If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected thereby.

SECTION III. Conflicting Ordinances Repealed. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

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