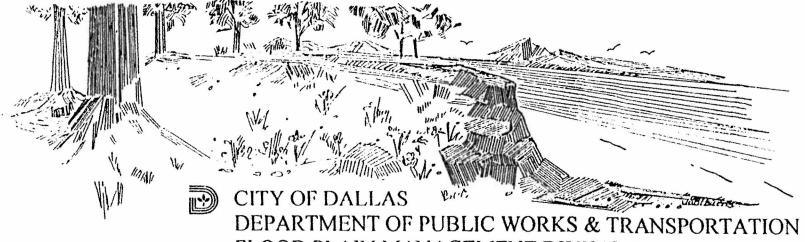


RES FOR FILLING IN A FLOOD PLAIN UNDER THE FLOOD PLAIN MANAGEMENT GUIDELINES



FLOOD PLAIN MANAGEMENT DIVISION

GUIDELINES

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INTRODUCTION

This bookiet provides, for property owners, developers, engineers, and other interested parties, explanations of City of Dallas regulations, guidelines, and procedures for taking land out of a flood plain. The regulations and guidelines described are part of a larger program of flood plain management, which includes flood plain delineation, the development of area-specific flood plain management plans, flood insurance, and flood warning systems. The purpose of the City's flood plain management program are to minimize hazards to life and property, to ensure compliance with the National Flood Insurance Program, and to otherwise promote the health, safety, and general welfare of the community.

Most land in the City, which has a history or potential for flooding, is designated by the Flood Plain "FP" prefix on the official zoning maps. Section 51A-5.101, Dallas City Code, Part II of the Dallas Development Code, describes the flood plain regulations, uses and structures permitted, and also set out the conditions for development in the flood plain and/or removal of the "FP" designation by filling.

The Dallas City Code also sets forth guidelines for evaluating the removal of the "FP" prefix and for alterations of the flood plain not yet designated with an FP prefix on the official zoning district map. Land that is not designated as "FP", but is found to be flood-prone by the City staff in the course of reviewing sub-division plats, building permit review, or other development proposals, will also be governed by these criteria. Flood prone areas that have specific flood plain management plans will be regulated by the management plan requirements in addition to the criteria contained in Section 51A-5.101 of the Dallas City Code.

PERMIT REQUIRED

A person shall not deposit or store fill, place a structure or excavate in an FP area until he has obtained from the Director of Public Works & Transportation a fill permit allowing the property to be developed at a specified elevation in compliance with Section 51A-5.101, Dallas Development Code, Part II, and he obtains all required state and federal permits. The Director of Public Works & Transportation maintains all records of fill permits and flood plain alterations.

FLOOD PLAIN ALTERATION PERMIT. The Director of Public Works and Transportation may issue a flood plain alteration permit if he or she determines that:

- The alteration does not remove the FP designation; and
- The alteration complies with all applicable "ten point" engineering requirements.

EXPLANATION OF THE FLOOD PLAIN MANAGEMENT GUIDELINES

Filling in all flood plains, which do not have adopted management plans, is governed by a set of general guidelines or criteria adopted by City Council Resolution 76-2940 in November 1976, and last amended in October 1999, by Ordinance No. 993486. These criteria were formulated to provide a more systematic approach to review of fill requests for all flood plains not covered by specific guidelines from adopted management plans. The criteria reflect the City's concern that storm water be moved naturally rather than relying on extensive and costly systems of channel improvements. They also reflect the City's philosophy that fill and development which is not unreasonably damaging to the environment should be permitted where it would not create other flood problems and where public acquisition is not required for environmental protection or recreation purposes.

There are three broad types of criteria:

- Engineering criteria, based on the hydraulic effects of filling in the flood plain; these are aimed at protecting life and property while preserving natural features where possible.
- Ecological and scenic resource criteria, which identify areas worthy of preservation as open space and passive recreation
- · Recreation criteria, which identify land suitable for meeting the demand for active recreation space.

These criteria are applied by the staff in review of all fill applications outside of management plan areas. Although there may be considerable overlap, the Department of Public Works & Transportation, Flood Plain Management & Erosion Control Division, Planning and Development, and Park and Recreation assume primary responsibility for applying the engineering, environmental, and recreation criteria, respectively. The Department of Public Works & Transportation is responsible for coordinating all review and recommendations and scheduling for public hearing.

The purpose of the engineering criteria is to assist in determining the merits of the fill request, while the environmental and recreation criteria are used mainly to identify land that is appropriate for public acquisition. The environmental criteria contain both ecological and scenic factors. Ecological factors include maturity and diversity of woodland stands, wildlife habitat potential, and finding of some rare or endangered or locally threatened species. Scenic factors include unique views, compositional effects, and other visual features. Criteria for recreation involve evaluation of the inherent suitability of the land for active and passive recreation purposes as well as the demand for recreation facilities in the local community.

Resolution 76-2940 calls for the application of the flood plain criteria to all creeks and streams, not just those that have flood plain zoning. As an interim administrative guideline, staff will require applicants who are subdividing or building on land along a creek that has a minimum contributing drainage area of more than 130 acres to also comply with these criteria if any alteration is proposed within that creek's flood plain.

INITIATION OF FILL PERMIT PROCESS

APPLICATION

An applicant for a fill permit or flood plain alteration permit shall submit to the Director of Public Works and Transportation on a form approved by the Director and signed by all owners of their property. An application form is provided in the "Data Requirements for Fill Requests Under Flood Plain Management Guidelines".

NOTIFICATION SIGNS

An applicant is responsible for obtaining the required number of notification signs and posting them on the property that is subject of the application. Notification signs must be obtained from the Flood Plain Management & Erosion Control Division at the time the application is made.

- <u>The number of signs required</u> for tracts of five acres or less, only one notification is required. An additional notification sign is required for each additional five acres or less, except that no applicant is required to obtain and post more than five notifications signs on the property, regardless of its size.
- <u>Posting of signs</u>. The applicant shall post the required number of notification of signs on the property at least 15 days before the date of the scheduled public hearing before the city council. The signs must be posted at a prominent location adjacent to a public street and be easily visible from the street.
- Failure to comply. If the city council determines that the applicant has failed to comply with the provisions of this section, it may postpone the public hearing.

PROCEDURES FOR REMOVING THE "FP" PREFIX

The sequence and timing of procedures for review of fill requests in areas designated by the "FP" prefix are outlined in the accompanying chart. The procedures can be divided into a number of stages: pre-application, application and review, neighborhood meeting, notice and public hearing, decision on application, fill operation and verification, FEMA update, and zoning map revision.

PRE-APPLICATION CONFERENCE

Particularly in areas not governed by a management plan, staff encourages the potential applicant to arrange a meeting with representatives from all three departments to discuss the criteria and their relationship to his site prior to preparing or submitting any documents for his application. This will often reduce the cost and time of his preparation, and the City's review of the application.

The Department of Public Works & Transportation will assist consulting engineers by supplying them with an electronic data file of the existing hydraulic conditions model, if available, and discussing additional cross sections that may be needed to describe the fill area. Planning and Development will be able to identify any special environmental features on the proposed site and discuss the nature of environmental concerns in the area. The possibilities of public acquisition or incentives for preserving the flood plain as private open space could also be explored in this stage; before the applicant invests in detailed engineering design for his property.

APPLICATION AND REVIEW

When the applicant has all materials necessary for formal application, he submits his fill permit application, CDC permit application, if applicable, and materials along with a filing fee to the Department of Public Works & Transportation, Flood Plain Management Division. Copies of the appropriate materials are then routed by this division to the other departments, as well as other City agencies that may be affected by the proposal, including the Corps of Engineers and NCTCOG where a Corridor Development Certificate (CDC) is required. If the project is located within the non-encroachment area of the regulatory floodway as established by FEMA, then the applicant must secure a Conditional Letter of Map Revision (CLOMR) from FEMA prior to any City approval. The applicant will be promptly notified if his application is incomplete, in which case processing will halt until all additional material required for adequate staff review has been provided.

The complete application is then reviewed by the Department of Public Works & Transportation, Department of Planning and Development, Park and Recreation Department, Dallas Water Utilities, Economic Development and City Arborist, using the management plan guidelines or the criteria adopted by the Council in Resolution 76-2940. The Director of Planning and Development and the Director of Park and Recreation shall review the application and advise the Director of Public Works and Transportation of the environmental impacts of the project. They shall also determine whether the applicant's property should be considered for public acquisition due to its ecological, scenic, historic or recreational value.

The Director of Public Works and Transportation shall provide a report to the City Council on each application regarding environmental impacts and public acquisition issues.

If some major issues are raised, such as potential purchase for parkland or non-compliance with one or more of the engineering criteria, the applicant will be notified and given the opportunity to meet with representatives from one or more of the departments to discuss those issues. The applicant may then decide to proceed with his request as originally submitted, or to revise his submission in response to staff comments, or to hold or withdraw his application while exploring possible park land acquisition or incentives which would modify or eliminate the need for a fill permit. In all cases the applicant must meet all the ten point criteria as a minimum in order to receive a staff recommendation of approval.

If the applicant decides to modify his proposal to overcome problems identified by staff review, scheduling of his case will be delayed and the applicant given adequate time to modify and resubmit his proposal. Such modifications should be submitted to the Flood Plain Management Division for rerouting of the fill permit application.

NEIGHBORHOOD MEETING

The Department of Public Works and Transportation shall schedule and conduct a neighborhood meeting on each fill permit application. The applicant or the applicant 's representative must attend the neighborhood meeting. The Director of Public Works and Transportation shall send written notice of the meeting to the applicant, to all owners of real property within 500 feet from the boundary of the subject property, and to persons and organizations on the early notification list on file with the Department of Planning and Development. Measurements include the streets and alleys. The notice must be given not less than 10 days before the date set for the neighborhood meeting by depositing the notice properly addressed and postage paid in the United States mail to the property owners as evidenced by the last approved City tax roll. This notice must be written in English and Spanish if the area of request is located wholly or partly within a census tract in which 50 percent of more of the inhabitants are persons of Spanish origin or descent according to the most recent federal decennial census.

NOTICE AND PUBLIC HEARING

After the neighborhood meeting, the Director of Public Works & Transportation shall schedule a public hearing on the application. The city secretary shall give notice of the public hearing in the official newspaper of the city at least 15 days before the date of the public hearing. The Director shall also send written notice of the public hearing to the applicant, to all owners of real property within <u>500</u> feet from the boundary of the subject property, and to persons and organization son the early notification list on file with the Department of Planning and Development. Written notice must be given in the same manner required for the neighborhood meeting.

DECISION ON APPLICATION

After notice and a public hearing the City Council shall approve or deny the application for a fill permit. The City Council may only deny an application if:

- (A) The application does not meet the "ten point engineering criteria" or
- (B) The City Council has, by resolution, authorized acquisition of the property under the laws of eminent domain, and denial of the application is necessary to preserve the status quo until the property is acquired.

In connection with its approval of a fill permit, the City Council may grant a variance to the requirements of the ten point engineering criteria if the variance will not violate any provision of the federal or state law, or endanger life or property.

If the City Council approves a fill permit application, the "FP" designation for the filled area may be removed from the official zoning district upon compliance by the applicant with the specifications for filling.

FILL OPERATION AND VERIFICATION

If the City Council approves a fill permit, the applicant will obtain a fill permit letter from the Director of Public Works & Transportation. Filling operations must comply with the following requirements:

. SOIL AND EROSION CONTROLS

You must have soil and erosion controls on every project regardless of the size. These controls keep the soil and sediment from leaving the site during rain or being tracked off site during construction. Many different approaches are available to control erosion. They include: silt fences, grass mesh strips, sediment basins, covered storm drain inlets, concrete wash-out areas, stabilized construction entrance, curlex logs, dikes, swales, grass buffer strips.

If compliance with an NDPES permit is required for construction activities, a copy of the Notice Of Intent (NOI) or individual SWPPP must be submitted before beginning fill operations.

FILL DIRT & SOIL BORINGS

Fill dirt is one of the basic pieces for your construction site. Choosing the right material for fill gives your building a strong foundation and can eliminate problems later. Select fill is used when it is important that the foundation soil not move. Before construction begins a soil boring made on your site lets you know what kind of soil you are building on and if you need to bring in additional select fill. Select fill has been tested so you know how it will react to water and other elements and is better for compaction.

Fill material must consist of natural materials, such as soil, rock, gravel, or concrete with no re-bar. Anything that will rot over time such as metal containers, cardboard, lumber, brush, and limbs from clearing the land cannot be used as fill material. Improper fill will decay causing foundations to settle unevenly and can cause the buildings to crack.

Once the entire fill is down you must compact the loose material. Fill must be compacted to 95% standard proctor density. A standard proctor test - ASTM D - 698 - tells you if your fill material is compacted properly and shall be submitted to the Flood Plain Management Division as part of the completion of the fill permit.

• FILL REQUIREMENTS

Any excavation required by the specifications of the approved fill application must be conducted before or at the same time as placing the fill.

Building pad sites must be filled to an elevation of at least two feet above the design flood elevation. The lowest floor of any structure must be constructed at least three feet above the design flood elevation.

Fill dirt shall be placed no more than five feet above the design flood elevation, except where necessary to match the existing elevation of the adjacent property as determined by the Director of Public Works & Transportation. In determining when it is necessary to match the existing elevation, the director shall consider the effects on local drainage and storm water management, the access needs of the property, and other public health and safety concerns.

A copy of the approved fill permit must be posted and maintained at the fill site for inspection purposes until the filling operations have been completed.

Upon completion of the fill, the applicant shall submit certification to the Director of Public Works & Transportation that the proper fill elevations, compaction requirements, and all other specifications of the approved application have been followed. A copy of the Letter of Map Revision (LOMR) request to FEMA shall also be submitted to Flood Plain Management Division.

FEMA UPDATE - LETTER OF MAP AMENDMENT (LOMA) / LETTER OF MAP REVISION (LOMR)

The City of Dallas Flood Plain Administrator is responsible for ensuring that the community meets its obligations as a participant in the National Flood Insurance Program. To provide a sound basis for flood plain management and insurance rating, NFIP maps must present flood risk information that is correct and up to date. The NFIP regulations require that each participating community inform the Federal Emergency Management Agency (FEMA) of any physical changes that may affect the base flood elevation (BFE) in the community and within 6 months of the date such changes occur, submit data that shows effects of those changes. When a map revision is warranted, the individual property owner, developer or engineer who wishes to have the NFIP map revised must submit a request to FEMA. The requestor should coordinate with the City's Flood Plain Administrator for support of the project.

If the project is in compliance with the City's "Ten Point" engineering criteria, a letter will be provided to FEMA in support of the project. The City will not however, be responsible for submitting any required material, technical or non-technical, or be responsible for any of the fees charged by FEMA for revision of the map. Requests should be addressed to FEMA's Technical Evaluation Contractor:

FEMA

P.B. S. & J – FEMA Map Coordination Contractor 12101 Indian Creek Court Beltsville, MD 20705 Phone: 1-800-697-7275

Fax: 301-210-5157

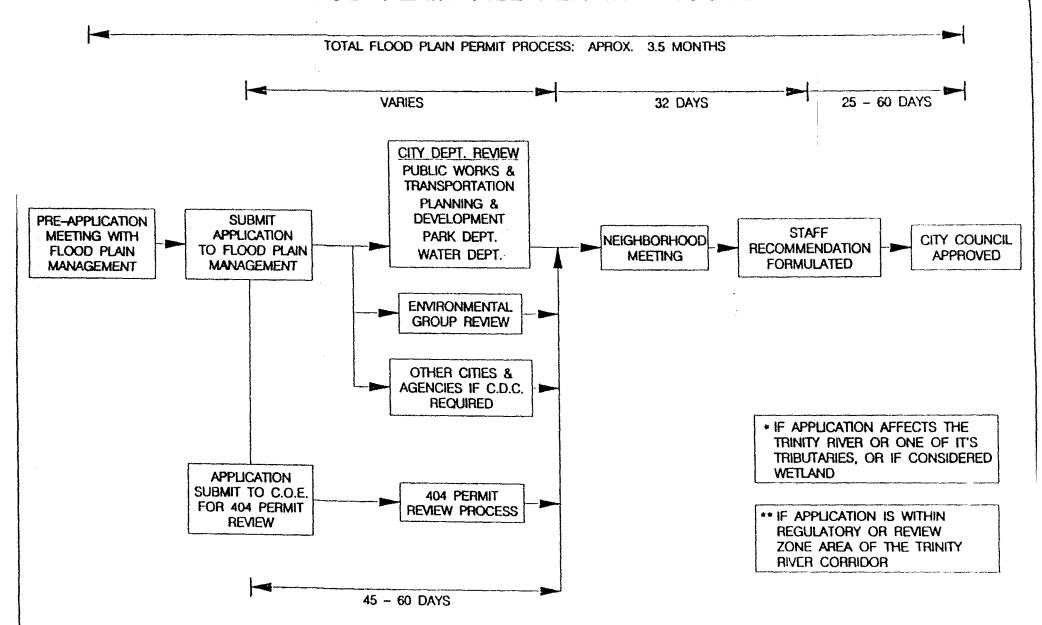
NOTE: In order to expedite the final processing of obtaining a LOMA/LOMR from FEMA the applicant should consider submitting an application for a Conditional Letter of Map Revision (CLOMR) as the City's fill permit is being processed. This will allow the applicant to obtain the LOMA/LOMR by submitting as built plans and as filled survey to FEMA. A building permit may be issued for construction of underground utilities if a Conditional Letter of Map Revision (CLOMR) is obtained; however no building permit or construction of a structure may be issued until Letter of Map Revision (LOMR) is obtained.

For questions regarding FEMA's fees for flood mitigation projects contact and/or other FEMA facts contact: the Federal Emergency Management Agency at 1-877-FEMA-MAP (1-877-336-2627) or visit FEMA's Web Site at http://www.fema.gov/nfip/

ZONING MAP REVISION

Upon compliance with all applicable requirements of the ordinance, in order for the flood plain "FP" prefix to be removed from the official City zoning map, the applicant must receive a Letter of Map Amendment/Letter of Map Revision from the Federal Emergency Management Agency (FEMA). It is the applicant's responsibility for securing the LOMA/LOMR from FEMA. Once the City of Dallas receives official notification that a LOMA/LOMR will be issued for revision of the Flood Insurance Rate Map (FIRM), the Director of Public Works & Transportation shall notify the Director of Planning and Development to revise the official zoning district maps by removing the "FP" prefix.

FLOOD PLAIN FILL PERMIT PROCESS

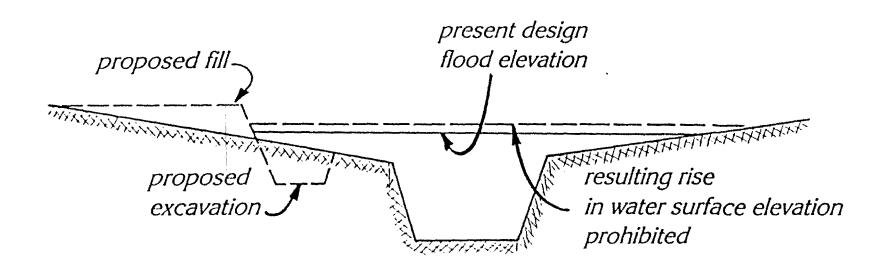


ENGINEERING CRITERIA FOR FILL REQUESTS UNDER FLOOD PLAIN MANAGEMENT GUIDELINES

Following are the ten engineering criteria which were originally adopted by the City Council, in Resolution 76-2940, for fill requests outside of "management plan" areas, along with explanatory text and diagrams. It should be noted that the applicant must meet all ten criteria as a minimum in order to receive a staff recommendation for approval.

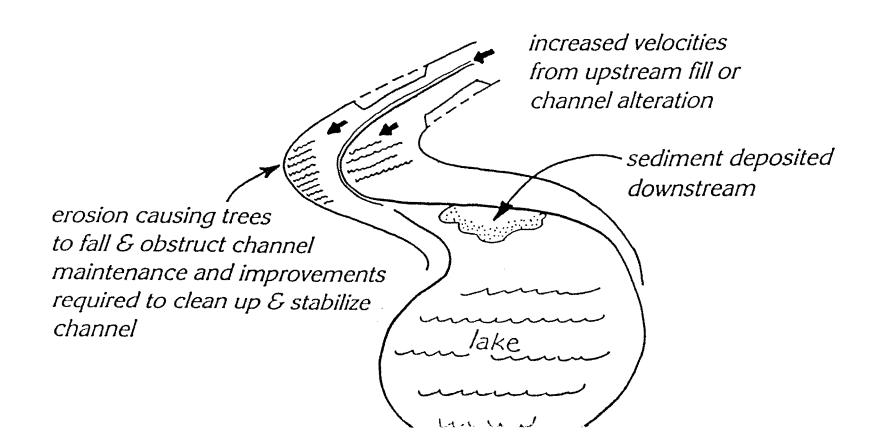
1. Except for detention basins, alterations of the FP flood plain area may not increase the water surface elevation of the design flood of the creek upstream, downstream, or through the project area. Detention basins may increase the water surface elevation of the design flood provided the increase is within the detention basin's boundaries as approved by the Director of Public Works & Transportation.

No alteration of the channel or adjacent flood plain will be permitted which would result in any degree of increased flooding to other properties, adjacent, upstream, or downstream. Increased flood elevation could cause inundation and damage to areas not presently inundated by the "design flood". The "design flood" for a creek is defined as the 100-year frequency flood - the flood having a one percent chance of being equaled or exceeded at least once in any given year .



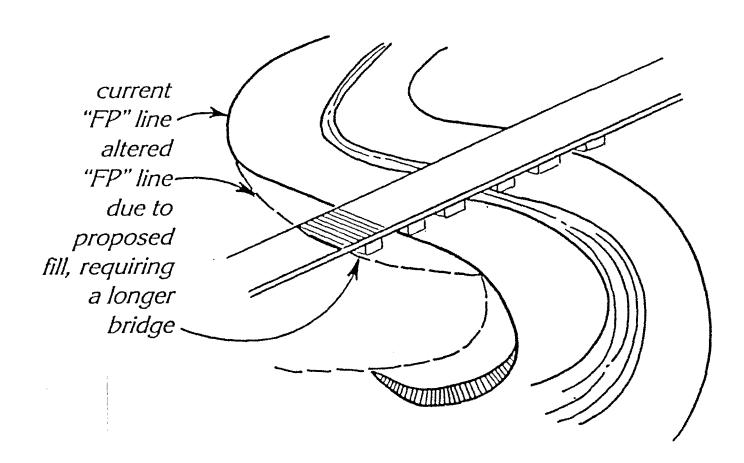
2. Alterations of the FP flood plain area may not create or increase an erosive water velocity on off-site. The mean velocity of stream flow at the downstream end of the site after fill may not exceed the mean velocity of the stream flow under existing conditions.

No alteration to the flood plain will be permitted which would increase velocities of flood waters to the extent that significant erosion of flood plain soils will occur either on the subject property or on other property up or downstream. Soil erosion results in loss of existing vegetation as well as augments destructive sedimentation downstream. Eventual public costs in channel improvements and maintenance (such as removal of debris and dredging of lakes) can be expected as a result. Staff's determination of what constitutes an "erosive" velocity will be based on analysis of the surface material and permissible velocities for specific cross-sections affected by the proposed alteration, using standard engineering tables as a general guide.



3. The effects of the existing or proposed public and private improvements will be used in determining water surface elevations and velocities.

Calculations for delineating flood elevations and evaluating requests for fill and/or excavation will be based on recognition of existing and "committed" flood plain improvements (e.g. private fill requests previously approved by City Council; bridges, channel improvement schemes, etc. with authorized funding). Design of <u>public</u> improvements will also be governed by these criteria to the extent possible. However, it should be recognized that some proposed public improvements, in order to meet overriding public needs (e.g. a remedy to an existing severe flooding problem) may not be capable of design in conformance with all the criteria.



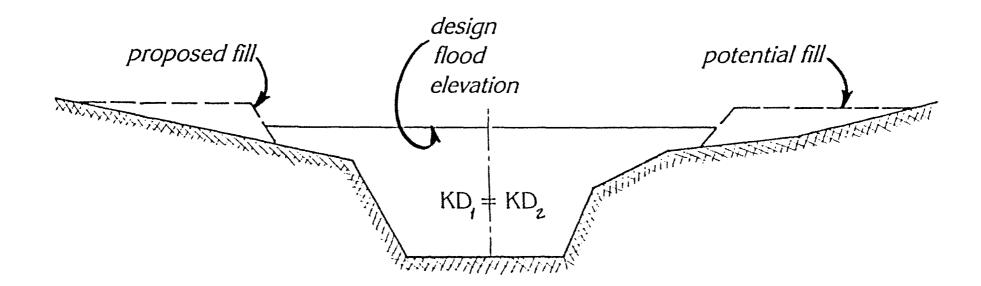
4. a) The "FP" flood plain area may be altered only to the extent permitted by equal conveyance reduction on both sides of the natural channel.

Staff's calculation of the impact of the proposed alteration will be based on the "equal conveyance" principle in order to ensure equitable treatment for all property owners. Under equal conveyance, if the City allows a change in the flood carrying capacity (capacity to carry particular volume of water per unit of time) on one side of the creek due to a proposed alteration of the flood plain, it must also allow an equal change to the owner on the other side. The combined change in flood carrying capacity, due to the proposed alteration plus a corresponding alteration to the other side of the creek, may not cause either an increase in flood elevation or an erosive velocity (criteria 1 and 2) or violate the other criteria. Conveyance is mathematically expressed as

KD = 1.486 AR 2/3

n

where n = Manning's friction factor, A = cross sectional area, and R = hydraulic radius

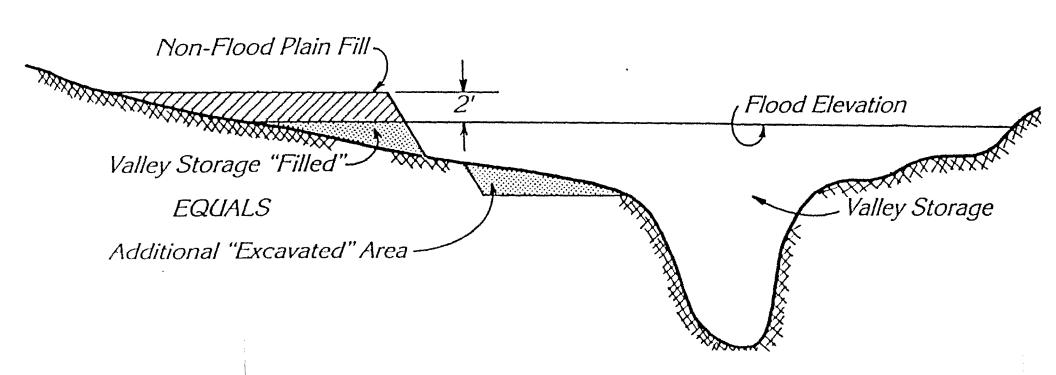


b) The following valley storage requirements apply to all "FP" areas except those governed by a city council adopted management plan that contains valley storage regulations, in which event the valley storage regulations contained in the plan apply:

Staff's calculation of the impact of the proposed alteration will be based on the preservation of valley storage in order to insure that no loss of valley storage is permitted along a stream with a drainage area of three square miles or more. Valley storage losses along streams with a drainage area between 130 acres and three square miles may not exceed 15% loss as calculated on a site by site basis. Valley storage losses along streams with a drainage area of less than 130 acres is not limited. Hydrologic computations may be performed to evaluate basin-wide storage loss impacts on the design flood discharge. If computations demonstrate that valley storage losses do not result in increases in the design flood discharge at any point downstream of the project, valley storage losses in excess of the above limitations may be approved.

VALLEY STORAGE PRESERVATION

Area of Excavation "OFFSETS" Area of Fill



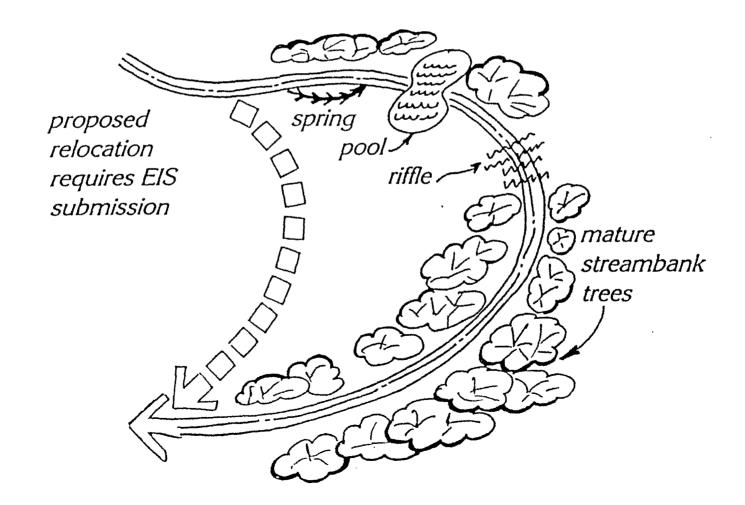
- 5. An environmental impact study and a complete stream rehabilitation program must be approved before relocation or alteration of the natural channel or alteration of an environmentally significant area. The net environmental impacts of the proposal may not be negative. The environmental impact study must contain the following items:
 - A. A description of the existing conditions of the site, adjacent properties, upstream and downstream creek sections for approximately 1,000 feet (unless conditions require additional information in the opinion of the Director of Public Works & Transportation), and creek and overbank areas. The description of these conditions must include:
 - 1) the characterization of creek features such as bed quality and material, pool-riffle sequences, natural ground water, springs, seeps, magnitude and continuity of flow, water quality (including biological oxygen demand, dissolved oxygen, and nutrient loadings), bank quality and material, vegetative cover and patterns, bank erosion, topographic relief, disturbances of the natural character of the creek, animal and aquatic life, and the extent and character of wetland areas; and
 - 2) soil types and land uses of the site and surrounding area.
 - B. A description of the proposed project. This description must include:
 - 1) the intended ultimate use of the site, or if that is not known, a description of the interim site plan, including construction access,
 - 2) reasons why the creek or flood plain alteration is necessary; and
 - 3) a site plan showing the flood plain and construction access necessary to perform the work.
 - C. A description of at lease three possible ways of handling the creek and flood plain, including:
 - 1) an alternative that assumes the creek and flood plain are not changed:
 - 2) the applicant's proposed action; and
 - 3) alternatives proposed by the Director of Public Works and Transportation.
 - D. An identification of the impacts created by each alternative, describing in detail all of the positive and negative impacts upon the existing conditions described in Subparagraph (A), that would be created by each alternative.

A recommended course of action based upon evaluation of the alternatives.

E.

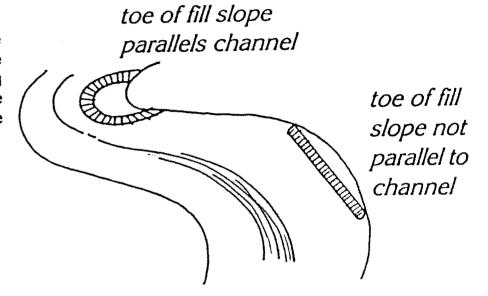
Proposed strategies to mitigate adverse impacts. Example of strategies including tree wells, temporary construction and permanent erosion and sedimentation controls, vegetative buffers, and replacement planting.

Protection of the natural channel is a prime objective of the fill criteria. Relocation or alteration such as widening, deepening, enclosing in a pipe, or lining of the natural channel often involves steepening of the gradient and/or increasing velocities, which can cause increased peak discharges, flood elevations, and erosion and sedimentation downstream. These effects are covered by criteria 1,2, and 4. However, some actions may not violate these criteria but may still result in significant negative environmental impacts. This criterion requires submission by the applicant of an environmental impact study for any proposed channel relocation or alteration. The EIS should be prepared by qualified experts.



6. The toe of any fill slope must parallel the natural channel to prevent an unbalanced stream flow in the altered FP flood plain area.

If the alignment of the proposed fill slope departs from the contours of the natural flood plain, the flow characteristics of the flood waters may be altered, causing possible damaging erosional and depositional effects in the altered flood plain. If the fill slope follows the natural channel it will also tend to minimize the visual impact of the alteration.



7. To insure maximum accessibility to the FP flood plain area for maintenance and other purposes and to lessen the probability of slope erosion during periods of high water, maximum slopes of the filled area may not exceed four to one for 50 percent of the length of the fill and six to one for the remaining length of the fill. The slope of any excavated area may not exceed four to one unless the excavation is in rock. Vertical walls, terracing and other slope treatments may be used provided no unbalancing of stream flow results and the slope treatment is approved as a part of a landscaping plan for the property.

The purposes of the slope restrictions are to maintain stability and prevent erosion of the slopes, to ease maintenance (e.g. Mowing) on the slopes themselves, and to provide accessibility to the areas below the slopes. Being more frequently inundated and therefore subject to greater hazard of erosion, cut slopes must be shallower than fill slopes.

4:1 maximum fill slope

6:1 maximum

fill slope for at

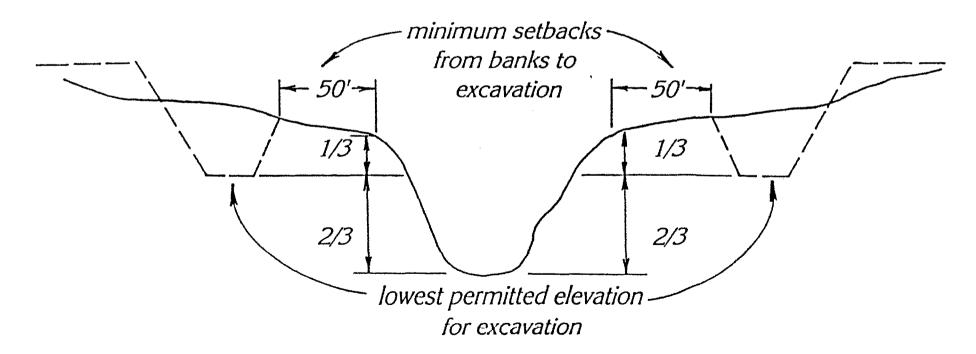
least 1/2 the

8. The elevation of excavated areas in the FP flood plain area may not be lower than one-third of the depth of the natural channel, as measured from the adjacent bank, except for excavation of lakes. Excavation must be at least 50 feet from the bank of the natural channel, except as necessary to provide proper drainage. The excavated area may not exceed 25 percent of the total area of the tract's unfilled flood plain.

The limitations on excavations are designed to protect the integrity of the natural channel. Natural stream morphology and ecology are protected by preserving the natural channel cross-section, such that excavation will not alter normal flow and flow from smaller, more frequent greater than 1 year frequency) storms.

The "buffer" between the natural channel and excavated areas is designed to preserve stream side vegetation, whose root systems stabilize the stream banks and which, together with the protection of surface cover, helps protect against bank erosion. Excavation should not enter the drip line of any trees whose root systems are important to the stability of the bank. Excavation must be at least 50 feet from the bank of the channel.

A "lake" is a permanent impoundment of water having a relatively constant depth and perimeter. Lakes may be constructed in-channel or outside. Proposals for in-channel lakes must be accompanied by impact studies as per criterion 5. (Lakes over 200 acre-feet for all but livestock or domestic uses and/or on streams determined to be state waters must also be permitted by the Texas Natural Resources Conservation Commission, Austin, Texas).

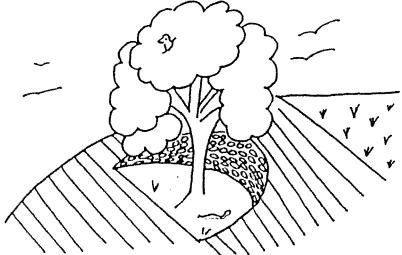


- 9. A landscape and erosion control plan must be submitted and approved. Landscaping must incorporate natural materials (such as earth, rock, stone) on cut and filled slopes when possible. The definitions of Section 51A-10.101 of the Dallas Development Code apply to this subsection. Except as otherwise provided, the preservation and mitigation requirements contained in the tree preservation regulations, Division 51A-10.130 of the Dallas Development Code, apply. Each landscape plan must comply with the following criteria;
 - A. The size, type, and location of all trees within the existing flood plain that are six-inch caliper and larger must be shown. The plans must indicate which of the trees are to be preserved and which will be lost due to development activities in the flood plain.
 - B. Trees must be protected if they are more than six-inches in caliper and located in sloped areas of flood plain fill with a depth of four feet or less. If trees are protected by tree wells, the wells must be at or beyond the dripline of the tree and must provide positive drainage. A well may not exceed four feet in depth unless designed and certified by a registered land scape architect. Tree wells are required if either of the following conditions occur at the base of the tree to be protected:
 - 1) a fill of greater than six inches, or
 - 2) a cut greater than six inches.
 - 3) the size, type, and location of all proposed replacement trees to mitigate the loss of existing trees must be shown. The tree types must be selected in accordance with the provisions of Section 51A-10.134 and must be approved by the City arborist as suitable for use under local climate and soil conditions.
 - 4) Where a swale is proposed, tree replacement is required for the loss of existing trees with a six-inch caliper or great er located within the proposed swale. The applicant must indicate replacement of either 35 percent of the number of trees displaced, or the minimum number of trees necessary to provide a spacing equivalent to 50 feet on center, whichever is less. At least 50 percent of the replacement trees must have a caliper of at least six inches. The remainder of the trees must have a caliper of at least three inches.
 - 5) The specific plant materials proposed to protect fill and excavated slopes must be indicated. Plant materials must be suitable for use under local climate and soil conditions. In general, hydro seeding or sodding bermuda grass is acceptable during the summer months (May 1st to August 30th). Winter rye or fescue grass may be planted during times other than the summer months as a temporary measure until such time as the permanent planting can be accomplished.
 - 6) The proposed methods of erosion and sedimentation control, such as hay bales and sedimentation basins, to be used during construction must be shown in detail.
 - 7) The fill case applicant, current owners, and subsequent owners must maintain and assure the survival of all planted material until the property is developed and a permanent maintenance plan of record is established. Maintenance responsibility must be reflected in the submitted plans or supporting documents.

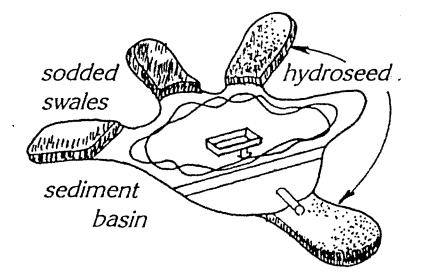
Applicant should show in the plan the natural and extent of existing vegetation on the tract, and which areas will be preserved, altered, or removed as a result of the proposed alterations. Locations and construction details should be provided showing how

trees will be preserved in the area which will be altered by filling or paving within the drip line of those trees. Applicant should also submit plans showing location, type, and size of new plant materials and other landscape features planned for altered flood plain areas.

Erosion control plans should demonstrate how the developer intends to minimize soil erosion and sedimentation from his site during and after the fill operation. Plans should include a timing schedule showing anticipated starting and completion dates for each step of the proposed operation. Area and time of exposed soils should be minimized, and existing vegetation cover should be retained and protected wherever feasible. Disturbed areas should be sodded or covered with mulch and /or temporary vegetation as quickly as possible. Structural measures (e.g. drop structures, sediment ponds, etc.) should be utilized where necessary for effective erosion control, but measures should also minimize structures and materials which detract from the natural appearance of the flood plain.



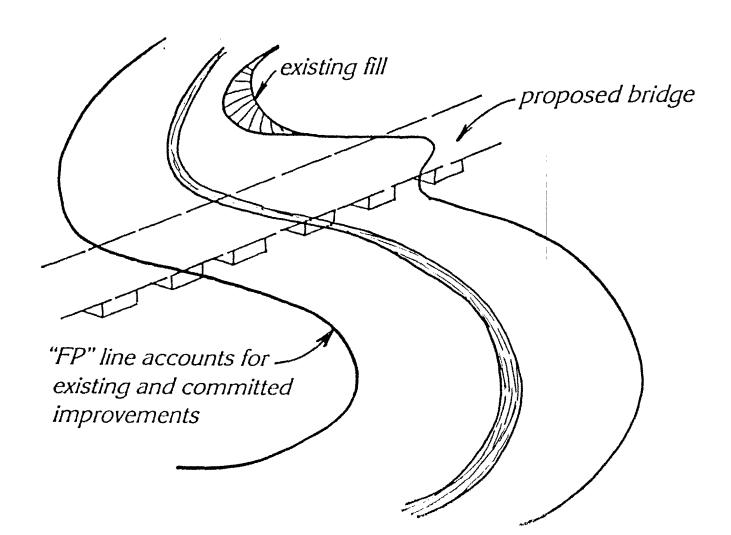
maintain existing grades within dripline or install drywall around trees to be preserved



typical erosion control measures

10. Any alteration of the FP flood plain area necessary to obtain removal of an FP prefix may not cause any additional expense in any current or projected public improvements.

No reclamation request will be approved if it would result in additional burdens to Dallas taxpayers due to probable increased capital improvements costs (e.g. longer bridges, new channel improvements).



DATA REQUIREMENTS FOR FILL REQUESTS UNDER FLOOD PLAIN MANAGEMENT GUIDELINES

In order to adequately review fill requests for compliance with the engineering criteria, staff has developed standard data requirements to be submitted for all requests. These requirements include a letter of request, a fill permit application form, engineering text and exhibits, and appropriate filing fee.

LETTER OF REQUEST

The purpose of the letter is to identify the applicant and to provide a general description of his plans for fill and development of the property. The letter should be signed by the owner of record and addressed to the Director of Public Works.

- 1. Stating that he is the owner of the area of request and/or that the request (if under contract) is made with his consent,
- 2. Requesting a "Fill Permit" for that area of the flood plain to be filled, including acreage figures for the entire tract, the area currently designated as flood plain, and the area proposed to be removed from flood plain designation, and
- 3. Providing a short description of the intended use(s).

FILL PERMIT APPLICATION FORM

The following page is a fill permit application form to be completed and submitted with the letter of request.

FILL PERMIT APPLICATION

(PLEASE TYPE OR PRINT LEGIBLY) APPLICANT: ADDRESS: CITY: STATE: PHONE: NAME OF PROPERTY OWNER IF DIFFERENT FROM APPLICANT: ADDRESS: CITY: STATE: PHONE: STATUS OF APPLICANT: OWNER: ENGINEER: DESCRIPTION OF PROPERTY BY ADDRESS: LEGAL DESCRIPTION: LOT: BLOCK: CREEK: TOTAL ACRES IN TRACT: TOTAL FLOODPLAIN ACRES: TOTAL ACRES TO BE REMOVED FROM FLOODPLAIN: INTENDED USE OF PROPERTY: ZONING: ZONING CHANGE PENDING: YES NO REPLAT: YES NO CITY OF DALLAS FILL PERMIT APPLICATION FEES TRINITY RIVER AND ELM FORK FLOODPLAIN...... \$ 6,000.00 SINGLE FAMILY LOT \$ 6,000.00 ALL OTHER APPLICATIONS...... \$ 6,000.00 NOTE: AREA OF NOTIFICATION FOR PUBLIC MEETING AND COUNCIL HEARING FOR A FILL PERMIT APPLICATION IS 500 FEET. I UNDERSTAND THAT SIGNS MUST BE POSTED ON THE PROPERTY ADVISING THE PUBLIC OF THE PENDING REQUEST WHILE THE APPLICATION IS BEING PROCESSED. I ALSO UNDERSTAND TO COMPLY WITH THE CITY OF DALLAS TREE ORDINANCE AND NOT TREES WILL BE REMOVED FROM THE SITE UNTIL A TREE SURVEY HAS BEEN PERFORMED AND /OR THE CITY OF DALLAS ARBORISTS' HAVE FIELD INSPECTED THE SITE. I ALSO UNDERSTAND THAT NO FILL MAY BE PLACED ON THE PROPERTY UNTIL I HAVE RECEIVED CITY COUNCIL APPROVAL AND A STORM WATER MANAGEMENT POLLUTION PREVENTION PLAN IS IN PLACE, OTHERWISE I MAY BE SUBJECTED TO TICKETING AND FINING FOR UNAUTHORIZED FILLING OF THE FLOODPLAIN. RESPECTIVELY SUBMITTED. (SIGNATURE OF APPLICANT)

ENGINEERING TEXT (6 COPIES)

The purpose of the text is to locate the property to describe the methodology used in designing the proposed fill, to supplement the engineering exhibits, and to explain how the fill operation will be handled so as to minimize soil erosion and sedimentation. The text should address the "ten point" engineering criteria in relationship to the proposed project and should be certified by a registered professional engineer. The engineering text should provide the following:

- 1. VICINITY MAP (1"=800')
- 2. DESCRIPTION OF PROJECT
 - a. Creek description
 - b. Project description
- 3. DESCRIPTION OF HYDROLOGIC AND HYDRAULIC ANALYSIS
 - a. Method used to determine design water surface profile for project
 - b. Historical stream data hydrographs and high water marks used to calibrate the model
 - c. References for erosive velocity values
- 4. Engineering Hydraulics
 - a. Hydraulic model used WSP3, HEC2, HEC-RAS, NU-DALLAS
 - b. Disk with all fill permit models provided
 - c. List of models submitted with the 10, 50, 100, and 500 year profiles
 - i. Duplicate effective model & file name
 - ii. Corrected effective model & file name
 - iii. Existing or pre-project conditions model & file name
 - iv. Revised or post project conditions model & file name
- 5. Mapping Requirements
 - a. Provide source of topographic information City of Dallas GIS data, detailed flood study information obtained from the City of Dallas, or as-surveyed field topography.
- 6. TEN-POINT ENGINEERING CRITERION DESCRIPTION
 - a. Address each engineering criterion and how your project meets the criterion
 - b. Provide a table comparison of the existing and proposed water surface elevations and velocities
 - c. Provide a table showing equal conveyance and valley storage calculations

7. TREE INVENTORY AND MITIGATION PLAN

a. A tree survey of all the trees on the site and a mitigation plan is to be submitted to the City Arborist for approval. Provide a description of the existing vegetation on the site and how your project will be mitigated for any tree loss, replacement trees, trees in fill slopes protected and trees to be replaced.

8. LANDSCAPE AND EROSION CONTROL TEXT

- a. Development schedule showing anticipated starting and completion dates for each step of fill operation and corresponding erosion control activities.
- b. Construction details as appropriate for
 - i. Compliance with an NDPES permit, and a copy of the Notice Of Intent (NOI) or individual SWPPP
 - ii. Provide detail of the soil and erosion controls that is now required on all projects regardless of the project size. These controls include: silt fences, grass mesh strips, sediment basins, covered storm drain inlets, concrete washout areas, stabilized construction entrance, curlex logs, dikes, swales, grass buffer strips, and temporary or permanent erosion control structures.
 - iii. Provide description of tree protection where grades are to be paved or altered within the drip line of the tree.
 - iv. List references used NCTCOG, Stormwater Quality Best Management Practices for Construction Activities, Federal Register, and Part II of EPA, Requirements for Stormwater Discharges from Construction Sites.

ENGINEERING EXHIBITS (7 COPIES)

These materials are necessary for the staff to adequately and efficiently review the fill request for compliance with the adopted criteria. They must include plans and cross sectional drawings necessary to describe all existing and proposed conditions. A registered professional civil engineer must certify all exhibits and text. Exhibits should include the following:

- 1. TABLE OF VALUES FOR ANALYSIS OF FIRST 4 CRITERION
- 2. WATER SURFACE PROFILE
 - a. Scale
 - b. Channel flow line labeled
 - c. Existing design water surface and discharges
 - d. Plot the 10, 50, 100, and 500 year profiles
 - e. Show recorded high water marks with dates and elevations used in the calibration if available
 - f. Cross sections labeled and darkened
 - g. Title block date, tract, creek, design discharge
 - h. Engineering seal

- 3. PLAN VIEW PRINTS ON 2' X 3' PAPER
 - a. Scale and north arrow
 - b. Bearings and dimension on the boundary lines referenced to the nearest street intersection or addition corner.
 - c. Existing and proposed 2 foot contour intervals
 - d. Inundation limits, existing and proposed, with metes and bounds description of the area being "taken out" of the flood plain
 - e. Toe and top of slope labeled
 - f. Adjacent stream bank labeled
 - g. Slope values and lateral limits
 - h. Cross sections labeled and darkened
 - i. Title block date, tract, creek
 - i. Location of existing and proposed dedications and permanent improvements
 - k. Engineering Seal.
- 4. PLOTTED CROSS SECTIONS ON 2' X 3' PAPER
 - a. Scale
 - b. Existing and proposed ground surface
 - c. Rock probes, soil boring locations
 - d. Existing design and 1-year water surface elevations
 - e. Existing and proposed "n" values labeled and limits
 - f. Amount of conveyance change by project
 - g. Equal conveyance location
 - h. Valley storage location
- 5. OVERALL MAP OF THE PROJECT AREA
 - a. 1"=200' scale topography
 - b. North arrow
 - c. Title Block
- 6. LANDSCAPE AND EROSION CONTROL PLAN AND TREE SURVEY the landscape and erosion control plan must comply with the Landscape and Tree Preservation Regulations in Article X of the Dallas Development Code, as amended. Overlay the project on or at the same scale as the plan sheet showing existing and proposed contours.
 - a. Define existing vegetation, any proposed loss of vegetation, and proposed mitigation of any losses.
 - b. Show size type and location of all trees within the existing flood plain 6" caliper and above.
 - c. Show which trees to be preserved and which trees to be lost due to fill or excavation.
 - d. Show all trees that must be protected if they are more than 6 inches in caliper in sloped areas of fill with a depth of 4 feet or less. If trees are to be protected by tree wells, the well must be at or beyond the drip line of the tree. A well may not exceed 4 feet in depth unless designed and certified by a registered landscape architect. Tree wells are required if a fill of greater than six inches, or a cut greater than six inches occurs at the base of the tree to be protected.

- e. Show the size, type, and location of all replacement trees to mitigate loss of existing trees. The tree types must be selected in accordance with the provisions of Section 51A-10.134 and must be approved by the City Arborist as suitable for use under local climate and soil conditions.
- f. Where a swale is proposed, the applicant is responsible for replacing the loss of existing trees with a 6 inch caliper or greater. They must indicate replacement of either 35% of the number of trees displaced, or the minimum number of trees necessary to provide a spacing equivalent to 50 feet on centers, whichever is less. At least 50% of the replacement trees must have a caliper of at least six inches. The remainder of the trees must have a caliper of at least three inches.
- g. Define specific plant material to be used on fill and/or excavated slopes. Types shall be suitable for use under local climate soil conditions. In general, hydro seeding with Bermuda or sodding is acceptable from May to August 30. Winter rye or fescue grass may be planted as a temporary measure until such time as the permanent planting can be established during the specified period.
- h. Provide detailed methods of erosion/sedimentation control to be used during construction such as hay bales and sedimentation basins to be used during construction.
- i. The fill applicant, current owner, and subsequent owners is responsible to maintain and assure the survival of all planted material until the property is developed and a permanent maintenance plan of record is established. Maintenance responsibility must be reflected in the landscape plan or supporting documents.
- 7. Environmental Impact Study an environmental impact study applies when a channel is channelized, relocated, enclosed or altered in any way. An environmental impact study and a complete stream rehabilitation program must be approved before relocation or alteration of the natural channel or alteration of an environmentally significant area. The net environmental impacts of the proposed may not be negetative. At a minimum, an EIS shall:
 - a. Describe the existing conditions of the site and adjacent properties, and provide cross sections upstream and downstream of the site for approximately 1000 feet unless conditions require additional information requested by the Director of Public Works. Include creek and over bank areas. Characterize such creek features such as bed quality and material, pool riffle sequence, natural ground water, springs, seeps, magnitude and continuity of flow, water quality and bank quality and material, vegetative cover and patterns, bank erosion, topographic relief, disturbances to the natural character of the creek, animal and aquatic life, and the extent and character of wetlands areas. Give soil types and land uses of the site and surrounding area.
 - b. Describe the proposed project characterize the intended ultimate use of the site. If that is not known, then provide a description of interim site plan, including construction access, etc. State why the creek and flood plain alteration is necessary. Provide a site plan showing the floodplain and the construction access necessary to perform the work.
 - c. Proposed alternative actions describe at least three possible ways of handling the creek and the floodplain. One of the proposed alternatives must be the No Action alternative, in which the creek and flood plain are not changed; the applicants proposed action, and other alternatives proposed.
 - d. Identify the impacts created by each alternative describe in detail all of the positive and negative impacts upon the existing condition that would be created by each alternative. Include upstream, downstream, and other off-site impacts as well as short term and long-term impacts as it relates to characteristics described in item #1.

- e. Recommend a course of action state which alternative is chosen based upon the evaluation of the alternatives and why it is preferable to others.
- f. Proposed any strategies to mitigate adverse impacts example strategies include tree wells, temporary and permanent erosion and sedimentation controls, vegetative buffers, and replacement planting.

TERM OF PERMIT VALIDITY AND EXTENSION PROCEDURES

PERMITS ISSUED AFTER OCTOBER 11, 1996

A fill permit is valid for a five-year period from the date of issuance. The fill permit automatically terminates if the filling operations have not been completed within the five-year time period. The Director of Public Works & Transportation may grant a one time extension of a fill permit for an additional three year time period upon receipt of a written request made at least 30 days before the expiration of the original permit, the applicant for permit extension must demonstrate that the project fully complies with the floodplain regulation s that were in effect at the time that the original permit was approved.

NEW PERMIT REQUIRED UPON EXPIRATION

When a fill permit terminates the applicant must apply for a new permit before filling the property. The new application must comply with the floodplain regulations that are in effect at the time the request is considered by the City Council.

PRESUMPTION OF COMPLETION

Filling operations are deemed complete when the applicant submits:

- a. Certification to the Director of Public Works and Transportation that proper fill elevations have been achieved and the specifications of the approved application have been followed, and
- b. A Letter Of Map Revision (LOMR) from FEMA is approved.

We hope that this booklet has been helpful to you in describing the regulations for filling in the flood plain within the City of Dallas. If you have any questions about the flood plain ordinance, the engineering and data requirements, specific flood plain management studies, or administrative procedures, we would be glad to address your concerns. You can also access the website for the Dallas Development Code, Article V, Floodplain Regulations at http://www.amlegal.com/dallas_tx.

Department of Public Works and Transportation Flood Plain Management Division 320 E. Jefferson Blvd., Room 321 Dallas, Texas 75203 Phone (214) 948-4690 Fax (214) 948-4657

The City of Dallas web site is http://www.dallascityhall.com

APPENDIX A

WHEREAS, there is a need to develop an overall flood plain management program including a systematic approach to decisions on applications for removal of the "FP" zoning prefix; and

WHEREAS, there is a concern on the part of the City that storm water be moved naturally rather than relying on extensive and costly systems of channel improvements, that development be permitted where it would not create other flood problems and where acquisition of property is not required for ecological, scenic, or recreational reasons, that the City maintains its eligibility in the Federal Flood Insurance Program by assuring protection against loss of lives and property in the flood plain, that ecologically and scenically valued areas in the flood plain are preserved where possible, and that a reasonable amount of the flood plain be provided in public ownership to meet the recreational open space needs of the community; Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS. TEXAS:

Section 1. That the City Council hereby adopts the attached engineering criteria, ecological and scenic resource criteria, and recreation criteria, as interim administrative guidelines to be applied to all creeks which do not have special adopted flood plain management plans.

Section 2. That the City Manager and Park Board be and are hereby instructed to seek all possible sources of revenue for acquisition of flood plain land for open space and recreation use where warranted.

Section 3. That these criteria are to be reviewed periodically, with the first report in six (6) months after passage of this resolution. That the periodic review cover the effectiveness of the criteria based on experience and their effect on flood plains, and further that the Department of Urban Planning and Park Department continue with current studies, specifically the creek study and the up-date of the recreation of open space plan. These studies will result in more precise standards and guidelines as well as the refinement of the open space component of the Comprehensive Plan.

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

Approved as to form:

LEE E. HOLT, City Attorney

CITY COUNCIL

APPROVED BY

APPENDIX B: EXCERPT FROM PART II OF THE DALLAS DEVELOPMENT CODE - FLOODPLAIN REGULATIONS

SECTION 51A-5.102, DESIGNATION OF FP AREAS.

A) Initiation. A flood plain designation is not a zoning classification, but refers to a specific area subject to flooding. When this designation is noted by a "FP" prefix on the official zoning map, the area designated is referred to in this article as a FP area. FP areas include the areas that have been identified as areas of special flood hazards by the Federal Emergency Management Agency in the March 16, 1983, flood insurance study, as revised, for Dallas, Texas, and that has been officially designated as FP areas by the City Council. The addition to or removal from the official zoning district of an FP prefix may be initiated in the following ways:

- 1. The Director of Public Works may recommend to the City Council that an FP prefix be added to or removed from the official zoning district map based on continuing hydraulic and hydrologic engineering studies.
- 2. An owner of property located within an FP area may not apply for a fill permit and removal of the FP prefix by the following procedure outlined in Section 51A-5.105.
- 3. The Director of Public Works may cause an FP prefix for an area to be removed from the official zoning district map without a public hearing and without the approval of the City Council if he determines, based on engineering studies or a field survey, that the area is not subject to flooding.

SECTION 51A-5.103.1. VEGETATION ALTERATION IN FLOODPLAIN PROHIBITED.

- A) A person commits an offense if he removes or injures any vegetation within a floodplain.
- B) It is a defense to prosecution under Subsection(a) if the act is:
- 1. authorized in advance in writing by the Director of Public Works:
- 2. in conformance with a landscape plan approved by the Director of Public Works;
- 3, routine maintenance of vegetation such as trimming or cutting designed to maintain the healthy or attractive growth of the vegetation; or
- routine maintenance of the flood plain to maintain the floodwater conveyance capacity of the floodplain performed, required, or authorized by the City (Ord. Nos. 19455;19786).

SECTION 51A-5.104. USES AND STRUCTURES PERMITTED

A) <u>Uses Permitted</u>. To allow for appropriate development of land which is subject to flooding without unduly endangering life and property, the following uses are permitted in an FP area provided they are permitted in the underlying zoning district and comply with the requirements of Section 51A-5.105(g) and all applicable elevation requirements of the Federal Emergency Management Agency:

- 1. Farm or Ranch
- 2. Local utilities, electrical substation, detention basin, water reservoir or pumping station, and water treatment plant.
- 3. Sanitary landfill and refuse transfer station.
- 4. Public park or playground, private recreation club or area, private community center, and golf course.
- 5. Outside commercial amusement approved by a specific use permit.
- 6. Helistop approved by a specific use permit.
- 7. Radio, television, or microwave tower, and amateur communications tower.

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- 1. A structure customarily associated with a use listed in Subsection (a) may be constructed with an FP area only if the director of public works determines that the proposed structure meets the same engineering requirements applicable to filling in Section 51A-t.105(g) and issues a fill permit.
- 2. The owner of a structure in an FP area shall not make any improvements to the structure without first obtaining approved from the Director of Public Works. The Director of Public Works may approve a one-time improvement that does not exceed 50 percent of the assessed value of improvements on the property. No substantial improvements are permitted. Any improvements must comply with Section 51A-5.105(g).
- 3. The board of adjustments may grant a special exception to allow the reconstruction of a structure in an FP area upon a showing of good and sufficient cause, a determination that failure to allow the reconstruction would result in exceptional hardship to the property owner, and a determination that the reconstruction will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimize of the public, or conflict with other local laws. The board may not grant a special exception to authorize reconstruction within any designated floodway if any increase in flood levels during the base flood discharge would result. Any special exception granted must be the minimum necessary, considering the flood hazard, to afford relief. The reconstruction of a structure in an FP area may not increase the lot coverage of the structure.

SECTION 51A-5.106, SETBACK FROM NATURAL CHANNEL REQUIRED.

NATURAL CHANNEL SETBACK LINE means that setback line described below located farther beyond the crest:

- A) That line formed by the intersection of the surface of the land and the vertical plane located a horizontal distance of 20 feet beyond the crest.
- B) That line formed by the intersection of the surface of the land beyond the crest and a plane passing through the toe and extending upward and outward from the channel at the designated slope. For purposes of this paragraph, the designated slope is:
 - four to one if the channel contains clay or shale soil; and
 - three to one in all other cases.

CREST means that line at the top of the bank where the slope becomes less than four to one.

TOE means that line at the bottom of the bank where the slope becomes less than four to one.

- 1. Except as otherwise provided in Subsection (c), all structures must be located behind the natural channel setback line.
- 2. A structurally engineered retention system approved by the Director of Public Works may be substituted for the setback required in Subsection (b), (Ord. 19786),

APPENDIX C: EXCERPT FROM PART II OF THE DALLAS DEVELOPMENT CODE - ENFORCEMENT.

SECTION 51A-1,103, CRIMINAL PROSECUTION.

- 1. A person who violates any provision of this chapter is guilty of a separate offense for each day or portion of a day during which violation is continued. Each offense is punishable by a fine of not more than \$2,000, nor less than \$200. The minimum fine established in this paragraph shall be doubled for the second conviction of the same offense within any 24-month period and tripled for the third and subsequent convictions of the same offense within any 24 month period. At no time shall the minimum fine exceed the maximum fine established in this paragraph.
- 2. A person is criminally responsible for a violation of this chapter if:
 - a) the person commits the violation or assists in the commission of the violation; or
 - b) the person owns part or all or the land or a structure on the land where the violation exists.
- 3. The person may not use land or a structure on land located in the city for other than those uses designated as permitted uses in accordance with the provisions of this chapter.
- 4. It is a defense to prosecution under this chapter that a person is in compliance with an order of the board of adjustment that specifically authorizes otherwise unlawful conduct.
- 5. It is a defense to prosecution under this chapter that a use or structure is nonconforming unless the nonconforming rights attendant to the use or structure have been lost or terminated under Section 51A-4.704.
 - a. Civil action. This chapter may be enforced through civil court action as provided by state law.
 - b. Utility Disconnection, The building official may order city or private utilities to be disconnected upon failure to comply with this chapter or the building laws.
 - c. Enforcement Authority. This chapter may be enforced by the building official or any other representative of the city. (Ord. Nos. 19455; 19963; 20236; 20599)



A City of Dallas Publication
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Flood Plain Management Division
Department of Public Works and Transportation
Revised November 2002