



**LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS**

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

**GUIDELINES
FOR
OVERBUILDING AND AIR RIGHTS**

CONSTRUCTION DIVISION - PERMITS AND SUBDIVISIONS SECTION

REVISED JUNE 2004

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GUIDELINES FOR OVERBUILDING AND AIR RIGHTS

A. INTRODUCTION

The purpose of these guidelines is to provide information relative to the various possible uses by other parties of the District's rights of way for overbuilding open channels and covered storm drains to create surface areas, to identify and resolve areas of incompatibility, and to provide the basic requirements for specific proposals that will maximize the long-range benefits to the public and the District.

The guidelines recognize that channels and their rights of way, in addition to providing flood protection, have the potential as transportation, utility, and recreational corridors, for overbuilding for public housing development, and are also desired by some communities as open space areas. Requirements are included to protect the District's interest to ensure that proper operation and maintenance of the channels and other uses can be accomplished.

Private parties are encouraged to use District's rights whenever a proposal is found to be compatible with District's needs and authorized or planned uses by others. To this end, the District's goal is to allow utilization of its rights of way to the most efficient degree possible.

B. GENERAL REQUIREMENTS

1. Joint Use Right of Way

Interested public agencies and developers should consult the District at an early stage regarding joint use, the extent of the rights held by the District, and the areas that may be reserved for other public uses. In some instances, competitive bidding for use of the right of way and air rights may be required. In those instances where District's holding is not of sufficient size to be useful in itself and a proposal is received to utilize District's open channel in conjunction with adjoining ownership, a bidding proposal will not be undertaken.

For operating right of way, overbuilding by others will be allowed provided District needs for flood control and all existing foreign uses authorized by the District are protected or provided for as further described in Item 3 below. Proposed uses must accommodate recreational, utility, transportation, public housing, and open space requirements that are programmed for the channel in question.

2. Master Planning

District is developing a Property Use Plan (PUP) for each major flood control channel to ensure that the channel rights of way are developed in a manner compatible with the adjoining properties and yield the maximum benefit to the local community. Proposals should be in conformance with the plan; however, if a desired use is different, the applicant will be required to submit a change (amendment) to the plan for approval. An amendment may be acceptable, provided the change for a particular reach of channel is between successive streets and approved by the local planning agency. Also, all environmental requirements will have to be fulfilled to the satisfaction of the lead agency.

3. Compatibility

- a. Joint use will have to provide for District's paramount right to use its right of way for flood control purposes and shall not adversely affect design, construction, operation, maintenance, or integrity of District's existing or proposed facilities.
- b. A facility that may affect any non-District installations shall be designed, constructed, operated, and maintained to be compatible with them. All approvals required of other agencies and parties shall be the responsibility of the applicant. District will make its records available regarding other permittees and users of its right of way.
- c. Public agencies needs, including, but not limited to, recreation, transportation, overbuilding for public housing, and open space, either authorized or proposed, will have to be accounted for by joint use. Recreation and transportation standards will be provided by the District for each proposal.
- d. Joint uses will have to comply with all State, County, and local zoning and building regulations. The District wishes to remain a "good neighbor" to the surrounding area and will not allow a use that it or the local community would find objectionable. Therefore, proposals should be aesthetically pleasing, compatible with surrounding areas, conducive to long-term use, and reflect good planning.

4. Indemnifications and Insurance

Unless otherwise waived by the District, upon a showing of adequate ability to indemnify the District, all users shall furnish the District a policy of insurance coverage naming the District (and the U.S. Army Corps of Engineers, when applicable) as coinsured. The coverage shall indemnify the District against any loss or damage as may be required by the District but not less than \$250,000/\$1,000,000 for liability and \$250,000 for property damage, all as further described in the lease document to be entered into by applicant. Applicant will also be required to provide a policy of fire and extended coverage insurance. The amount of the insurance will be dependent on the full replacement value of the channel cover and appurtenant structures.

C. CONSTRUCTION REQUIREMENTS

1. Types of Overbuilding

The methods introduced here serve as a general guidelines only. Each case is different and will have to be considered case by case. There are three basic methods of overbuilding (see pages 11, 12, and 13 of Section I). Method "A" is to keep the cover above the channel as low as possible and do away with District access roads and fences. Method "B" is to keep the structure well above the top of the channel so as to allow continuous access to the channel for cleaning and maintenance of the channel, recreational trails, and transportation or utility corridors. In general, Method "A" can be used for channels less than 25 feet wide. Method "B" can be used for channels over 60 feet wide. Method "A" may be used for channels between 25 feet and 60 feet wide if it can be shown to the District's satisfaction that no special side drainage, channel maintenance, recreation, or corridor use problems exist. Method "C" is for building over underground conduits.

2. Criteria for Design and Analysis of Overbuilding

Plans and calculations submitted for overbuilding must be signed by a civil or structural engineer licensed to practice in the State of California.

Cover systems, protective devices, and conduits shall be designed and/or analyzed based on loads and criteria consistent with the intended use of the area, but shall result in a system not less than one meeting the following requirements:

a. Dead Loads:

Earth Loads:

Vertical and lateral loads are to be in accordance with the District's Structural Design Manual. Overburden must be shown on the drawings.

Structure Loads:

The loads to be used are the actual direct loads or as transmitted through earth fill as determined by a recognized method (e.g. Boussinesq).

b. Live Loads:

Railroad Bridges or Crossings:

Cooper E Loads are to be determined by servicing or franchised railroad. Distribution of loads and impact is to be as shown in District's Structural Design Manual.

Highway Bridges, Street Crossing, and Ingress and Egress Routes:

HS-20 truck loading with impact in accordance with ASSHTO Standard Specifications for Highway Bridges is to be used.

Parking or Exterior Storage:

A uniform load consistent with type of storage or parking is to be used, 100 psf minimum, plus one HS-20 truck with impact, placed at locations to provide maximum stresses. The uniform load does not have to occupy the area of the truck. Minimum truck impact shall be 10 percent of the live load.

Interior Storage and Other Structures:

The load shall be consistent with use as accepted by the jurisdictional Building Department.

Other Areas not Normally Accessible by Vehicles or Covered by a Structure:

H-15 truck with impact of at least 10 percent is to be used.

c. Wide and Seismic Loads:

The loads are to be as accepted by the jurisdictional Building Department.

d. Design Methods and Stresses:

Railroad Bridges or Crossing:

Design is to be in accordance with the AREA Manual for Railroad Engineering.

Highway Bridges, Street Crossings, and Ingress and Egress Routes:

Design is to be in accordance with the AASHTO Standard Specifications for Highway Bridges. Concrete design may be either working stress or strength in accordance with American Concrete ACI 318 except that load factors for strength design shall be per AASHTO. Concrete structures maintained by the District are to be analyzed using the working stress method only.

All Others:

Design is to be in accordance with the AISC Manual of Steel Construction, Nation Design Specification for stress-grade lumber or ACI 318, as appropriated, nothing that concrete structures maintained by the District are to be analyzed using the working stress method.

e. Foundations:

Directly on drain:

- 1) Structure must be removable if not required for stability of the drain.
- 2) The storm drain must not be over-stressed by the structure. An engineering analysis of all elements of the storm drain structure must be submitted. The analysis is to be based on methods and loads shown in the District's Structural Design Manual in addition to surcharge loads due to permit work.
- 3) Where appropriate, a soil investigation and report will be required.

Independent but Surcharge Drain (including surcharge fill):

- 1) Same as No. 2 above.
- 2) The structure must provide a minimum of 6-inches horizontal clearance from any element of the drain, including subdrain pipes and at least 18-inches vertical clearance from a box or pipe conduit, and 6-inches vertical clearance from an open channel.
- 3) A soils engineer must analyze the foundation. Analysis is to include a soil investigation and report. Exploratory excavations must extend below foundation. Analysis must also include uplift pressures on the invert where appropriate.

No Effect on Drain:

- 1) Same as No. 2 and 3, above (independent but surcharge drain). Piles must be sleeved, as necessary; to prevent drag forces on the drain and bearing areas must be sufficiently deep so as not to produce uplift pressures.
- 2) The hydraulic capacity of flood control facility will have to be maintained. Normally, no construction will be allowed below the top of the channel walls if it encroaches within the design freeboard area. Types of structure for the covering will be specified to allow for standardizing the types of construction whenever possible.
- 3) The U.S. Army Corps of Engineers is conducting a hydrologic study of various drainage areas (LACDA project). Therefore, any proposed development may have to provide for existing channels to be widened or for channel walls to be heightened. The District will provide information relative to the status and/or requirements of this study or other controls that must be met.
- 4) Any proposed development should provide a means for local run-off to enter the channel after said channel has been covered. Side drainage problems also should be investigated where a channel is below the surrounding ground level and existing side drains are inadequate or designed to a lesser frequency than the main channel. In these cases, interested parties will be required to do one or all of the following: (1) construct additional drainage inlets, (2) leave a section of channel uncovered, or (3) use Method "B" for overbuilding (see page 13). Channel covering usually requires that access facilities to the channel invert be constructed also. See Section D, Operational Requirements, for more information.

3. Aesthetic Requirements

Surface structures shall be constructed to be aesthetically compatible with the area and District's facilities based on current standards and economic feasibility. Landscaping or other aesthetic measures may be required to mitigate the impact of structures on its environs.

D. OPERATIONAL REQUIREMENTS

To optimize safety and ensure the hydraulic and structural integrity of a particular flood control channel, the District and the U.S. Army Corps of Engineers have a number of operational requirements that must be met by every joint use proposal. The following is a list of the major requirements. Please note that this list should not be considered complete or absolute. The requirements are:

1. Access into a covered channel is required every 500 feet. This access is usually of a pedestrian nature and could be in the form of manholes, ladders, etc.
2. Adequate clearances inside the channel (a minimum height of channel wall) must be maintained throughout the channel for the transportation of heavy equipment used in channel repair, bridge, and bridge abutment repair, etc.

3. In the event the channel is to be covered, adequate ventilation must be provided to prevent the build-up of noxious or volatile fumes. A short reach of the channel, 30 feet or so, to remain uncovered, thereby aiding channel maintenance and repair in that equipment and material could be lowered into or removed from the channel.

E. RIGHT OF WAY AVAILABILITY

1. Operating Right of Way

a. Fee Title

Generally, joint uses may be authorized on rights of way held in fee by the District. However, there may be legal encumbrances in the form of prior easements, leases, and rental agreements, which may have to be cured prior to the proposed joint use. Also, "paper streets" or unused easements for public street purposes may exist. There also may be other conditions, covenants, and restrictions to the District's title. Since perfecting title is very time-consuming, all proposals for joint use should be submitted as early as possible for right of way clearance.

b. Much of the District's right of way is in the form of flood control easements. Where long reaches of fee are interspersed with short reaches of easements, it may be economically feasible to acquire the underlying fee.

c. All costs attendant to perfecting title or acquiring the underlying fee will be borne by the proposed developer or public agency.

2. Excess Right of Way

District has, in addition to its operating right of way, excess property holdings, both in fee and easement. In most instances, the fee property can be incorporated into the joint use proposal. For an easement area, approval of the underlying fee owner will be required.

F. OTHER REQUIREMENTS

1. Where the applicant is a private organization, after approval of the concept by the District, for fee-owned rights of way, an agreement to lease (option) will be entered into between District and applicant. This will give the applicant assurance that the right of way is available for consideration by the applicant as to duration and terms.
2. In addition to the General Provisions of District's standard permit to be issued for construction, special provisions may be required because of the nature, design, or location of proposed installation.
3. Construction must commence within six months of date of permit unless otherwise approved by Chief Engineer and be completed in accordance with an approved schedule.
4. Construction work within the channel rights of way involving removal and restoration of the channel structure, excavation, and backfill shall be accomplished during the period of April 15 to October 15.
5. As-built drawings and installation of identification markers for subsurface structures will be required by the District. Markers must not be placed so as to interfere with use of District's vehicular service roads.

6. Any relocation of survey monuments defining District's right of way boundaries will be performed by District's surveyors with the permittee underwriting the costs of such relocation.

G. DOCUMENTS

The District will allow overbuilding and use of air rights by a long-term lease over fee-owned property. These lease documents will provide for protection of the District's interest if nonpayment occurs, liability, etc.

The lease will contain requirements that will protect the District's interest and provide for rental income. The District will monitor the lease throughout its term to ensure compliance with provisions. The term of the lease will be for a period long enough for a developer to amortize the cost of covering the channel and his construction loan, plus an additional time period (usually ten years) to obtain a return on his investment.

The amortization of the cost to cover the channel may be reflected in the rent. The rent will be based on Fair Rental Value (FRV) of the property. If the appraisal approach considers channel cover as an on-site improvement, there will not be an amortization period for the cost of cover. Periodically, increases in rent based on fixed step increases or changes in the Wholesale Price Index (WPI) or periodic review of FRV, as the situation calls for, will be assessed.

The lease will contain an option period to provide a developer time to complete the environmental considerations, complete the permit process, and obtain a lender.

Where District has easement rights, overbuilding by the underlying fee owner can most likely be handled by permit with some type of mutually agreed upon maintenance agreement. In addition, because the District's easement for flood control purposes is, in some instances, tantamount to having the fee ownership, compensation will be required from the permittee because of the reduction in the District's use of its right of way to that of an easement for a covered drain; i.e., loss of surface use. Should the permittee be someone other than the underlying fee owner, evidence of approval of the fee owner would also be required.

H. PROCEDURE TO BE FOLLOWED FOR USE OF DISTRICT'S FACILITIES BY OTHERS

1. Prospective users must submit a written application for overbuilding or covering of open channels for proposed surface use and/or air rights use. This application should be addressed to:

Los Angeles County Department of Public Works
Construction Division
Permits and Subdivisions Section - 8th Floor
900 South Fremont Avenue
Alhambra, CA 91803-1331

Early application, particularly for a major installation, is recommended. The following information is required:

- a. Six sets of preliminary drawings showing the location of the proposed covering, the desired surface use, the existing flood control facilities and stationing, and the District's right of way.
- b. Owner of proposed improvement.
- c. Preliminary construction program.
- d. Required time of land use.

District's review will be to determine the overall acceptability of the proposal and, if readily available, the approximate annual cost for leasing should the District's property be fee owned. If the District responds favorable to this application, a meeting will be arranged with the applicant and representatives of the District's Mapping and Property Management Division to discuss the criteria to be used for submittal of preliminary plans and general terms for leasing the District's properties and/or maintenance responsibilities.

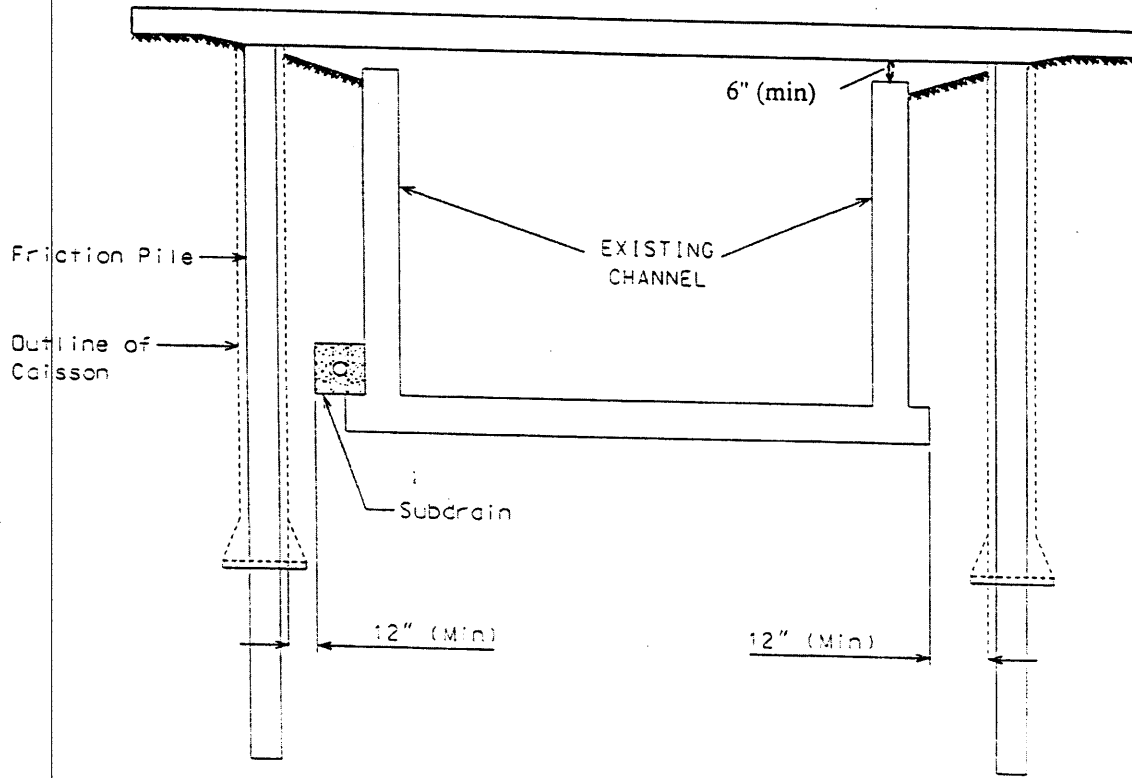
2. Applicant shall submit six sets of preliminary plans and design calculations, structural and hydraulic, if necessary for approval, and two copies of the Draft Environmental Impact Report (if required by an appropriate authority) when available. At this time, a deposit for the plan review will be required. The fees for checking of plans for covering of channels, including structural or hydraulic or other review as deemed necessary by the District are based on the current fee schedule adopted by the Board of Supervisors. Presently the fees are: Case I; clear span, actual cost to the District (\$500 min.) and Case II; all others, actual cost to the District (\$600 min.). After preliminary plans have been approved, a final submittal must be made prior to issuance of construction permit. This final submittal should contain the following:
 - a. Four sets of final construction plans signed by a civil or structural engineer licensed to practice in California, showing proposed covering of channel. Plans should show existing improvements (both District and foreign in the construction area) and proposed improvements over proposed covering, District right of way limits, working areas, existing utilities, etc. In connection therewith, applicant will be responsible for inspecting the right of way, searching all available records, and ascertaining all foreign users of the rights of way. The District will aid in providing all its information regarding permits issued by the District.
 - b. Inspection fees\deposits are based upon estimated actual cost determined by District; should the cost be less, the District will refund the difference. If the cost is more, applicant will submit additional amount.
3. Upon review and approval of the final submittal, and payment of all fees, including deposit for first year's rental for leases, District will issue a construction permit. Approval of construction will be valid only to the extent of District jurisdiction. Also, the District may require a performance bond and liability insurance to protect the District's interest.
4. After the District responds favorably to this application, an Agreement to Lease (option) can be entered into between District and applicant. This commitment will be honored by the District for a period of one full year or longer, if so specified in the Agreement. At this time, the applicant will be required to deposit funds for preparation of the Agreement and the appraisal to determine the annual lease cost. These costs will be credited to applicant in the first year's rent should lease be finalized, otherwise the fees deposited will be waived. Note: In the event the applicant needs to know the cost prior to preparation of preliminary plans and finalization of the lease arrangement, applicant will be required to deposit funds for the District's cost for the work. Cost will be credited for first year's rent as stated above.
5. Applicant may proceed with construction under terms and conditions of the permit. Construction must be initiated within one year of the date of issuance of permit unless otherwise approved by the Chief Engineer.
6. The District will prepare the appropriate document or lease, in accordance with the terms of the Agreement previously entered into.

7. Upon completion of construction, one set of reproducible as-built drawings shall be submitted to the District within 180 days.
8. In the event time warrants, one document only (lease) may be used for the right of way negotiations. The document should be fully executed (signed by both parties) prior to submittal of final plans and before a construction permit is issued. Execution of the lease first is satisfactory with District provided applicant understands and accepts the fact that the plan review and issuance of the permit takes 30 to 60 days to complete. If there is a deadline for the applicant, the plans should include this time period.

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I. **EXAMPLES OF OVERBUILDING**

TYPE OF OVERBUILDING
METHOD A

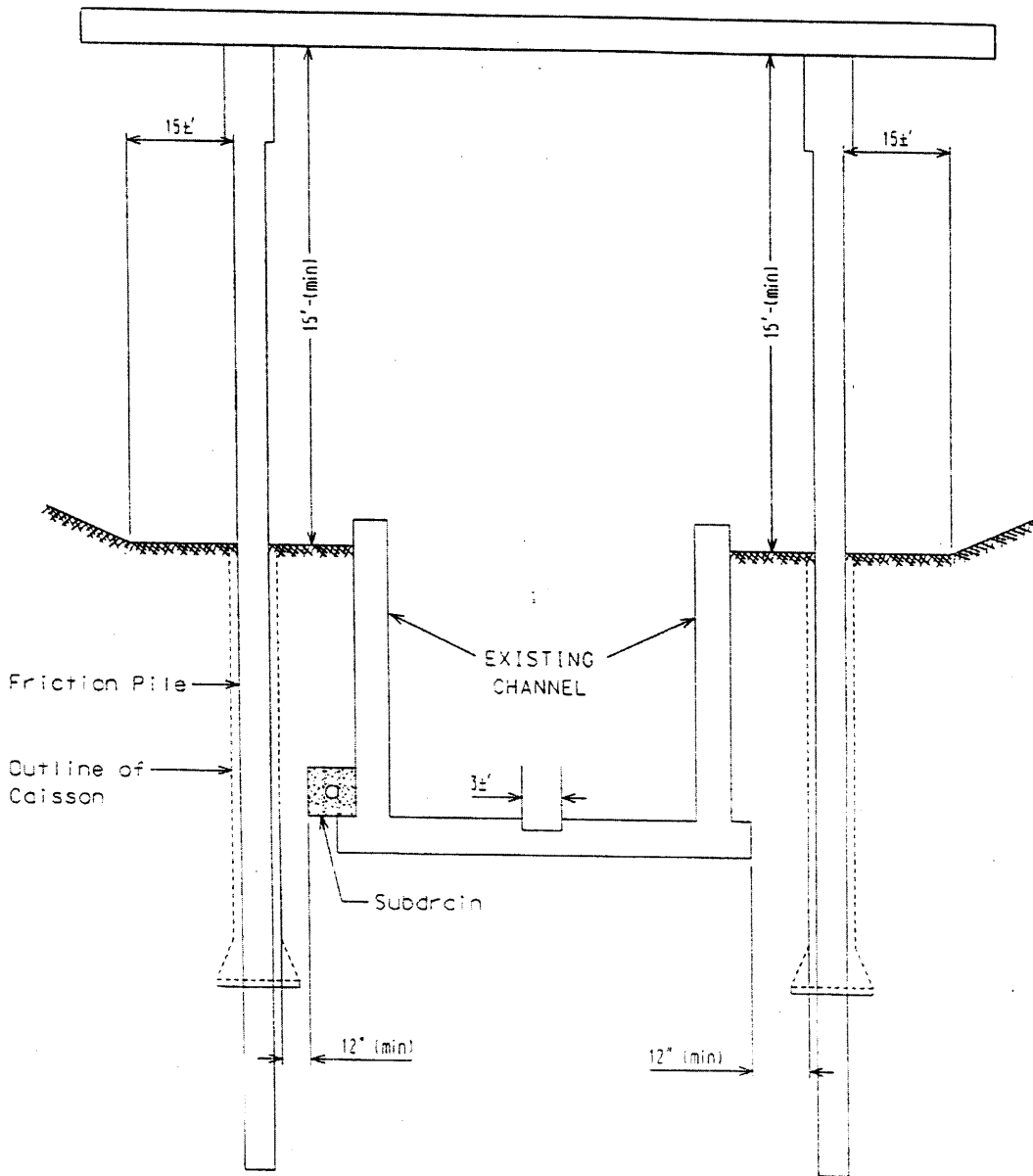


LOS ANGELES COUNTY
 DEPARTMENT OF PUBLIC WORKS
 Construction Division

PERMIT AND SUBDIVISIONS SECTION

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**TYPE OF OVERBUILDING
METHOD B**

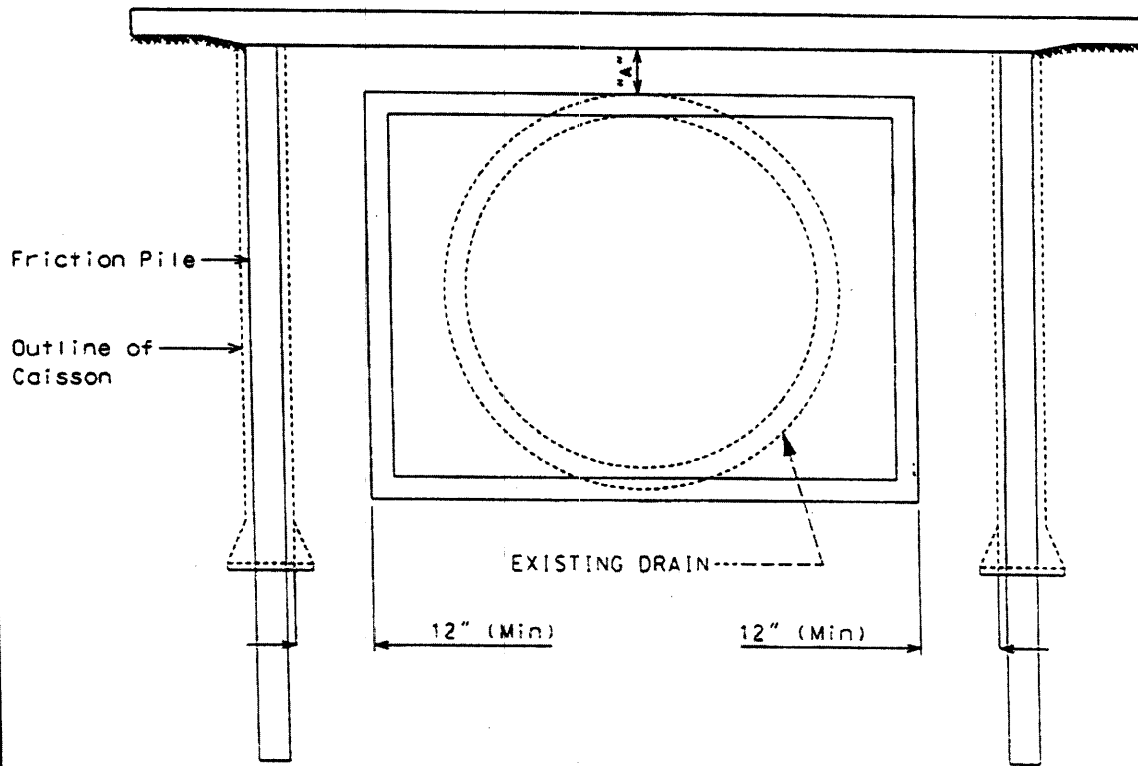


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PERMIT AND SUBDIVISIONS SECTION

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TYPE OF OVERBUILDING
METHOD C



"A" 18" Min

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