4820.1

ENGINEERING ANALYSIS

FOR

TITLE X LAND DEVELOPMENT PROJECTS

JANUARY 1973

HUD STAFF

A HUD HANDBOOK

HOUSING PRODUCTION AND MORTGAGE CREDIT-FEDERAL HOUSING ADMINISTRATION

U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT WASHINGTON, D. C. 20410

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U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

CIRCULAR 4820.1

January 30, 1973

SUBJECT: Engineering Analysis for Title X Land Developments Projects

- This Circular Transmits the Following: HUD Handbook 4820.1, Engineering Analysis for Title X Land Development Projects
- 2. Purpose:

This Handbook provides HUD staff with basic instructions and procedures regarding engineering analysis for a land development project proposed for mortgage insurance under Title X of the National Housing Act.

3. Applicability:

The basic contents of this Handbook are the policies and procedures that were in effect as of December 31, 1972.

4. Cancellations:

The following issuances are cancelled:

Handbook - FHA 3560 and Addenda 1 and 2

Circulars - FHA 4460.1 - Review Responsibility Title X, Land Development Proposals dated May 6, 1970

FHA 4460.2 - Title X: Procedures for Release of 10% Rentention Fund dated May 30, 1972

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FOREWORD

The Architectural and Engineering Sections of the Field Offices are responsible for the engineering analysis of projects insured under this program. As with land planning, the highest standards of engineering competence are urged for these land development projects. Their competitive advantage over other lot developments will largely depend upon the skills of the land planner and the engineer. There should be close coordination between these disciplines and cost analysis and valuation sections.

It will often be necessary to confer with the engineering representatives of local municipalities since much of the engineering construction will ultimately be taken over by these agencies for permanent maintenance. Advances in engineering technology bring about changes in municipal codes and the awareness of such a need for change on the part of the engineer representing the local public authorities can do much to bring about these modifications in a timely and orderly manner to the mutual benefit of both parties.

References:

- (1) 4460.1 Architectural Analysis and Inspections for Project Mortgage Insurance Section 207
- (2) FHA 4517.1 (4940.2)* Minimum Design Standards for Community Water Supply Systems
- (3) 4940.3 Minimum Design Standards for Community Sewerage Systems

Cancellations: This Handbook cancels Handbook FHA 3560 and Addenda 1 and 2, together with Circulars FHA 4460.1 and FHA 4460.2.

^{*}The information in parentheses indicates the location of the referenced material in the new classification system.

CHAPTER 1. ENGINEERING ANALYSIS

- 1-1. GENERAL. The Architectural Section (Insuring Offices) and the Architectural and Engineering Section (Area Offices) will be responsible for engineering analysis and inspection matters pertaining to land development projects insured under this title. Generally, policies and procedures will follow instructions outstanding for project mortgages insured under Section 207, adapted to land development improvements.
- 1-2. HUD-FHA Technical Specialists.
 - a. The services of area and regional land planning specialists, site engineers, sanitary engineers, soils engineers, and other engineering specialists will be utilized throughout the analysis and review of all land development projects proposed for mortgage insurance and during the construction stage.
 - b. Generally, the basic pattern of land use is set by the land planner. The execution of this in its necessary detail is usually the responsibility of the civil engineer. A harmonious coordination of these skills in combination with the advice of other technical specialists is essential for the completion of a successful land development venture.
- 1-3. LOCAL GOVERNMENTAL APPROVALS.
 - a. The insured land development project shall comply with materials, local ordinances, codes, zoning restrictions, and other applicable local and state requirements and regulations.
 - b. Where local and state approvals permit lower standards than the applicable minimum standards required by HUD-FHA, the HUD-FHA standards shall apply.
 - c. In the event local approvals preclude compliance with HUD minimum standards, the project may not be eligible for mortgage insurance unless the stated objectives set forth in HUD-FHA standards may be satisfactorily achieved by alternate means.
- 1-4. PROCESSING AND CONSTRUCTION. Engineering specialists will function in much the same way as the architect does in his relationship to the design representative where a major residential building is involved. These roles and responsibilities should follow the format set forth in Reference (1) of the Foreword, adapted to a land development project, for the various stages of processing and construction.

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- 1-5. UTILITIES. After development, each insured land development project must be served by public water and public sewerage facilities, except that a privately or cooperatively owned water or sewer system, or extension thereof, may be approved by the Secretary as set forth heroin.
 - a. Minimum Design Standards. If the extension of public facilities to the project is not feasible, the construction of a community water supply system and/or a community sewerage system must meet the design standards set forth in References (2) and (3) of the Foreword.
 - b. Regulation. Ownership and control of a privately or cooperatively owned system must be regulated by:
 - (1) A public agency, or
 - (2) In the absence of public regulation, otherwise regulated in a manner acceptable to the Secretary with respect to user charges and rates, capital structure, methods of operation, rate of return, and the conditions of any sale or transfer.
 - c. Existing Systems. Where existing privately or cooperatively owned systems located off the site are to be extended to serve the project, such systems must meet the statutory requirements for minimum design standards and ownership and control set forth above.
 - d. Legal Documents. Franchise agreements and other legal documents and exhibits pertaining to regulation, ownership, and control shall be forwarded to the Area Counsel or Regional Counsel for review and appropriate recommendation.
- 1-6. ALLOCATION OF IMPROVEMENT BENEFITS. In certain instances, installation of site development improvements, such as access roads, drainage, and bridges, for example, will provide benefits to the local community as well as the insured land development. In those instances where it is determined that an installation will benefit the local community principally, with only nominal advantage to the project, the cost of the benefit allowable to the community is not allowable as a part of mortgage proceeds. Technical consultation may be required to assist the developer in working out an appropriate sharing of cost by local government.

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