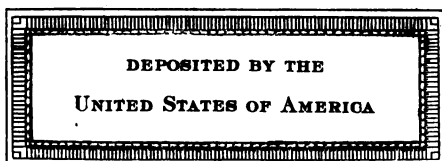
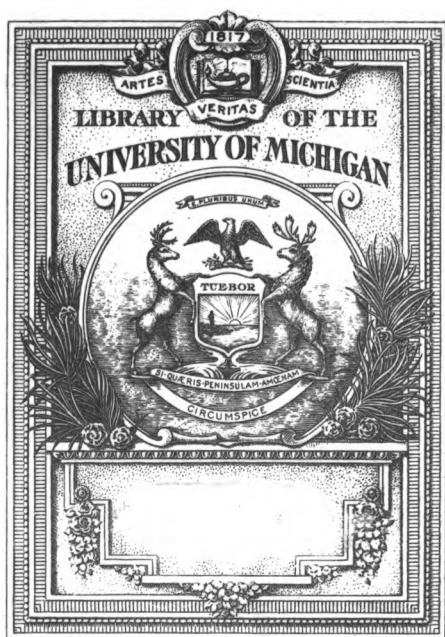


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UNDERWRITING MANUAL

FEDERAL HOUSING ADMINISTRATION
WASHINGTON, D. C.



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UNDERWRITING MANUAL

UNDERWRITING AND VALUATION PROCEDURE
UNDER TITLE II
OF THE
NATIONAL HOUSING ACT

U. S. FEDERAL
HOUSING ADMINISTRATION



With revisions to April 1, 1936

WASHINGTON, D. C.

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UNDERWRITING MANUAL

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UNDERWRITING MANUAL

PREFACE

1. This Underwriting Manual is issued by the Federal Housing Administration. It contains instructions and regulations governing the procedure to be followed by Underwriting Departments in Insuring Offices.

2. The Manual describes the techniques used by the Federal Housing Administration to determine whether or not mortgages are eligible for insurance under Title II of the National Housing Act. Eligibility is determined by risk rating. This process consists of an examination of mortgage risk and embraces valuation.

3. The salaried underwriting staff and duly-appointed fee consultants are furnished with loose-leaf Underwriting Manuals. Each of these manuals, including contents and binder, is numbered and remains the property of the Federal Housing Administration. Copies assigned to staff members or fee consultants are listed in Washington in the name of the individual to whom assigned. They may not be destroyed or transferred and shall be surrendered upon demand of the Federal Housing Administration.

4. Revisions of this manual are issued by supplying new or substitute pages for the loose-leaf edition. Such pages indicate the dates upon which their contents become effective. They are to be inserted in their proper places as indicated by the page numbers. Page numbers correspond to the paragraph numbers.

5. In order to promote a broad understanding of the underwriting and valuation principles and procedure adopted and advocated by the Federal Housing Administration, the Underwriting Manual is made available to individuals and institutions. Such manuals are bound and contain an imprint on the cover indicating the date to which revisions have been made.

UNDERWRITING MANUAL

PART I

SECTION 1

ORGANIZATION AND PROCEDURE

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PART I
SECTION 1
ORGANIZATION AND PROCEDURE

OBJECTIVES

101. Title II of the National Housing Act establishes a system of mutual insurance of mortgages secured by residential property. The general objectives of Title II are the creation of a sound mortgage structure for loans of this type and the improvement of housing standards. The Act provides that no mortgage shall be accepted for insurance unless it is economically sound. It anticipates that eventually any liability will be that of the Mutual Mortgage Insurance Fund; and requires that mortgages accepted for insurance be classified into groups of similar risk characteristics so that the mortgagor may have the opportunity of receiving any benefits arising from the mutual feature. These and other requirements of the Act presuppose the insurance of sound mortgages only.

102. Specifically, the major objectives of Title II of the National Housing Act include the following:

(a) To increase the security of home ownership by making funds available at reasonable rates and on terms within the borrower's capacity to pay. This anticipates a single mortgage amortizing completely in a definite period of time, as compared with more hazardous methods of mortgage financing.

(b) To induce lending institutions to lend on mortgage security in the residential field by offering to them the benefits of the single mortgage system.

(c) To establish standards of quality with respect to neighborhoods, construction, architecture, and factors contributing to more satisfactory housing in order to encourage improvement in housing standards and conditions. Improvements in housing standards and conditions will result in better mortgage security as well as benefits to owners.

(d) To initiate a program of home construction in localities where housing is needed. Such a program provides employment for wage earners in building trades and allied industries.

(e) To initiate statistical surveys and economic studies for the purpose of determining suitable fields for mortgage investment, guiding the development of housing, and assisting mortgage investors and home owners or buyers in the formulation of sound judgments and policies.

(f) To create a structure in which the mortgages are readily salable.

103. One of the means of achieving these objectives is to require those who process and analyze mortgages submitted for insurance to adhere to sound underwriting practices. The purpose of this manual is to prescribe uniform and sound techniques.

ORGANIZATION

104. **General Organization.** The authority vested in the Administrator in connection with Titles II and III of the National Housing Act is delegated to a Deputy Administrator with headquarters in Washington, D. C.

105. The organization to operate Titles II and III includes Washington headquarters, State Offices, and District Offices. The Washington headquarters includes the administrative and technical personnel located in Washington or traveling out of Washington on supervisory missions. State Offices are in the charge of State Directors and District Offices are in the charge of District Directors.

106. Each Insuring Office has jurisdiction over a definitely outlined area. The area generally follows state or district lines. In some cases territory has been added to or subtracted from the state area in connection with the processing of applications in the Insuring Office.

107. The Insuring Office positively must not process any application involving property outside of its established jurisdiction.

108. The accompanying map shows the locations of Insuring Offices. The counties assigned to each of the Insuring Offices are indicated in special instructions issued by the Deputy Administrator for Titles II and III.

109. Insuring Offices are indicated by the names of the cities in which they are located (for example: Seattle Insuring Office, Albany Insuring Office). The following cities contain Insuring Offices:

Albany, N. Y.

Atlanta, Ga.

Baltimore, Md.

Birmingham, Ala.

Bismarck, N. Dak.

Boise, Idaho

Boston, Mass.

Buffalo, N. Y.

Burlington, Vt.

Charleston, S. C.

Cheyenne, Wyo.

Chicago, Ill.

Cincinnati, Ohio

Cleveland, Ohio

Columbus, Ohio

Concord, N. H.

Dallas, Tex.

Denver, Colo.

Des Moines, Iowa

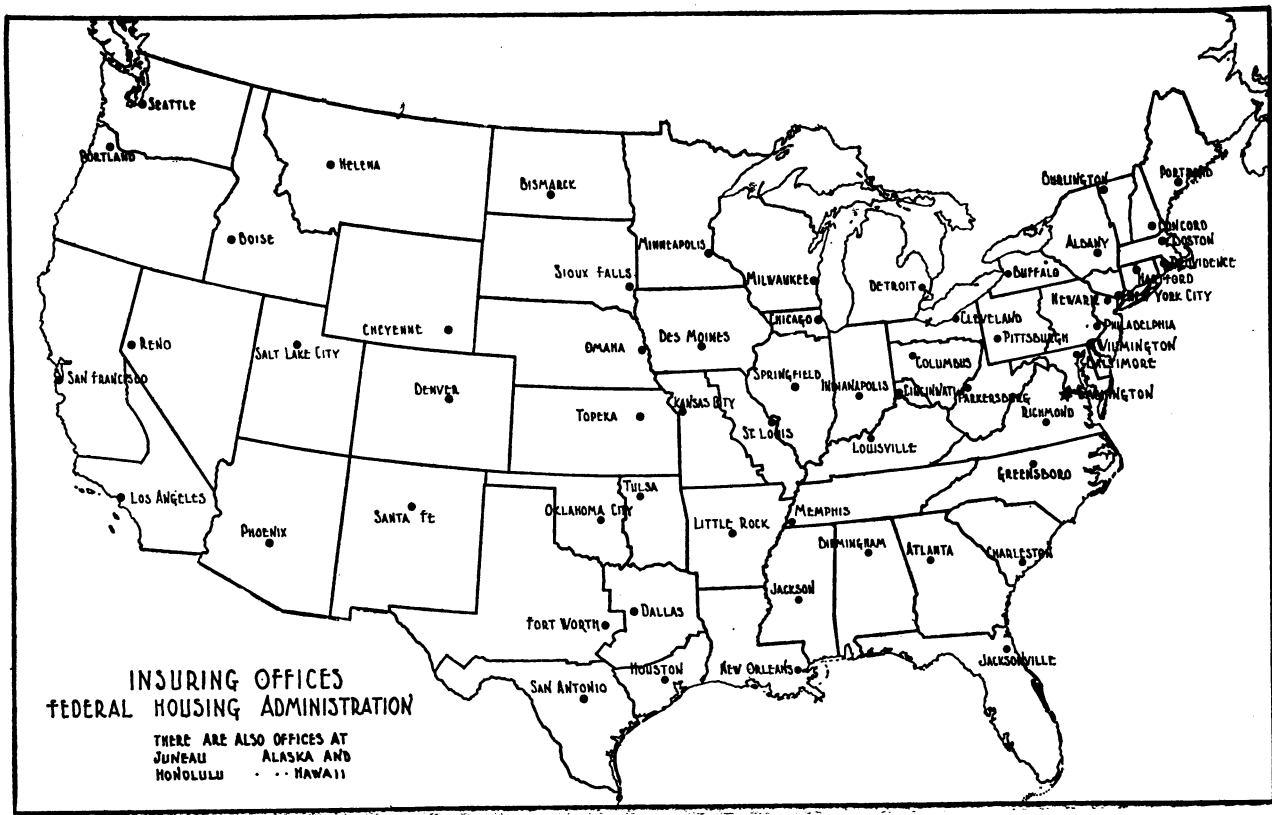
Detroit, Mich.

Fort Worth, Tex.

Greensboro, N. C.

Hartford, Conn.

Helena, Mont.



Honolulu, T. H.
Houston, Tex.
Indianapolis, Ind.
Jackson, Miss.
Jacksonville, Fla.
Juneau, Alaska
Kansas City, Mo.
Little Rock, Ark.
Los Angeles, Calif.
Louisville, Ky.
Memphis, Tenn.
Milwaukee, Wis.
Minneapolis, Minn.

Newark, N. J.
New Orleans, La.
New York, N. Y.
Oklahoma City, Okla.
Omaha, Nebr.
Parkersburg, W. Va.
Philadelphia, Pa.
Phoenix, Ariz.
Pittsburgh, Pa.
Portland, Maine
Portland, Oreg.
Providence, R. I.
Reno, Nev.

Richmond, Va.
St. Louis, Mo.
Salt Lake City, Utah
San Antonio, Tex.
San Francisco, Calif.
Santa Fe, N. Mex.
Seattle, Wash.
Sioux Falls, S. Dak.
Springfield, Ill.
Topeka, Kans.
Tulsa, Okla.
Washington, D. C.
Wilmington, Del.

110. When the volume of business justifies, additional Insuring Offices may be opened and existing jurisdictions divided in an appropriate manner. Each Insuring Office contains several departments, one of which is the Underwriting Department. The instructions contained in this manual apply to the personnel and operations of such Underwriting Departments.

111. In certain cases service offices are established to expedite the handling of business. When such offices are manned with underwriting personnel, such personnel reports directly to the Underwriting Department in the Insuring Office having jurisdiction.

112. Organization for Underwriting Activities. The underwriting activities are comprised of all the operations which concern inspection, valuation, and analysis of security, borrowers, and mortgages, and the making of risk ratings with regard to 28 risk factors, i. e., all underwriting procedure after the listing of the application by the Office Manager until a rating is given to the mortgage and a final recommendation is made by the Underwriting Department to the Director.

113. The underwriting organization in Insuring Offices includes salaried employees and approved fee consultants engaged in the analysis of cases to determine eligibility for mortgage insurance. This analysis embraces the inspections and findings made by the staffs of the Architectural, Valuation, Mortgage Risk, and Review Sections, and the Chief Underwriter.

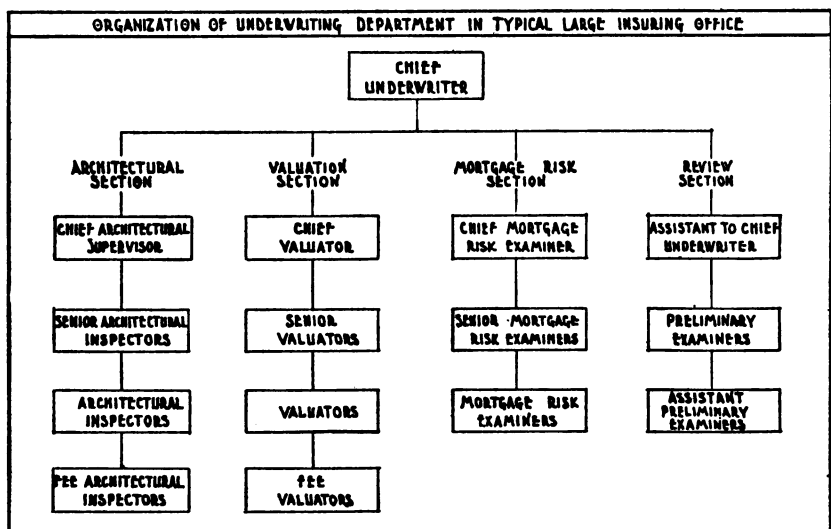
114. The organization for underwriting activities is a part of the Mortgage Insurance Division of the Federal Housing Administration. The underwriting personnel is comprised of:

(a) The staff of the Chief of the Underwriting Section of the Mortgage Insurance Division, Washington headquarters. This staff includes executive and policy-forming personnel permanently stationed in Washington and Underwriting Supervisors who travel out of Washington headquarters.

(b) The personnel of Underwriting Departments in Insuring Offices and service offices. These are permanently stationed in the field.

115. Members of the organization for underwriting activities are selected and duly accredited by the Underwriting Section, Washington, D. C. No persons are permitted to engage in underwriting activities before they are duly accredited.

116. The Technical Section of the Mortgage Insurance Division, Washington headquarters, establishes or approves eligibility requirements as to property standards, subdivision standards, and new methods of dwelling construction. The underwriting organi-



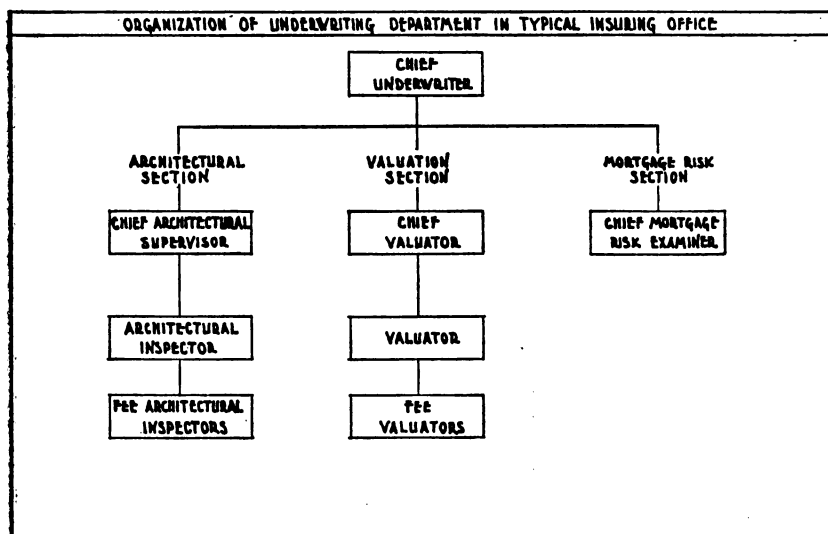
zation is charged with the responsibility of securing compliance with such standards and other eligibility requirements.

117. The Underwriting Department in each Insuring Office is operated by a Chief Underwriter. He reports to the Director in charge of the office to which he is attached on all matters pertaining to discipline, organization, and routine, and to the Underwriting Section, Washington, D. C., on all matters pertaining to procedure, qualifications of Underwriting personnel, technical standards, methods of valuation, methods of cost estimation, methods of compliance inspection, methods of research, and rating of mortgage loans. All correspondence of the Underwriting Department directed outside the Insuring Office shall be signed by the Chief Underwriter.

118. *The Chief Underwriter.*—The Chief Underwriter shall organize the Underwriting Department into four sections:

(a) Architectural Section, (b) Valuation Section, (c) Mortgage Risk Section, and (d) Review Section.

119. The three accompanying charts indicate the lines of authority in typical Underwriting Departments and show the division into sections. They do not show procedure or the routing of reports. The charts cover offices of different sizes and are intended to indicate that in certain instances it is desirable to combine the duties described in this manual so that one person discharges several of the functions. In subsequent sections of the Manual the procedure in a typical large office is described.



120. *Architectural Section.*—The Chief Architectural Supervisor is in charge of the Architectural Section. His responsibilities and duties include:

(a) Supervision and executive control of all activity in the Architectural Section.

(b) Verification of the ratings and cost estimates ascribed to cases by Architectural Inspectors. (See Part I, Section 4, and Part II, Section 1.)

(c) Supervision of the work of inspectors engaged in the making of compliance inspections. (See Paragraphs 184-186.)

121. *Valuation Section.*—The Chief Valuator is in charge of the Valuation Section. His responsibilities and duties include:

(a) Supervision and executive control of all activity in the Valuation Section.

(b) Interpretation and application of valuation and location standards and techniques established by the Underwriting Section, Washington, D. C.

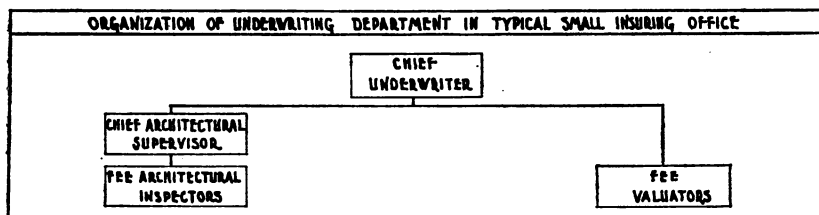
(c) Verification of the valuations, cost estimates, and ratings ascribed to cases by Valuators. (See Part I, Sections 3 and 4, and Part II, Sections 1 and 2.)

122. Mortgage Risk Section.—The Chief Mortgage Risk Examiner is in charge of the Mortgage Risk Section. His responsibilities and duties include:

(a) Supervision and executive control of all activity in the Mortgage Risk Section.

(b) Interpretation and application of standards and techniques for the rating of borrowers established by the Underwriting Section, Washington, D. C.

(c) Verification of the ratings ascribed to borrowers by the Mortgage Risk Examiners.



123. Review Section.—The Assistant to the Chief Underwriter is in charge of the Review Section. His responsibilities and duties include:

(a) Supervision of preliminary examination.

(b) Serving as secretary of the Review Committee.

(c) Completion of assignments by the Chief Underwriter, such as the informal review of cases, or the preparation of the form "Report of Chief Underwriter", and coordination of the activities of the several sections in the Underwriting Department so that applications for insurance will be handled with maximum speed and efficiency.

124. The Review Section makes the preliminary examination of new applications to determine whether full examinations by the Architectural, Valuation, and Mortgage Risk Sections are warranted.

125. A Review Committee reviews the reports made by the Architectural, Valuation, and Mortgage Risk Sections in those cases where unusual problems have been presented. The Review Committee is appointed by the Chief Underwriter who may also serve as a member. In large offices it usually consists of the Assist-

ant to the Chief Underwriter (who acts as secretary), the Chief Valuator, the Chief Architectural Supervisor, and the Chief Mortgage Risk Examiner. In small offices the Chief Underwriter appoints the committee from qualified staff members who are available for such work.

126 (1). Deputizing Staff Members. The Chief Underwriter may deputize the Chief Valuator, the Chief Architectural Supervisor, the Chief Mortgage Risk Examiner, or the Assistant to the Chief Underwriter to act in his stead during a temporary absence on his part from the Insuring Office, or in the event he is ineligible to act on a given case, as for example, because of some personal interest he has or has had in the property involved. The Chief Underwriter may deputize a staff member to discharge the duties of a Section Chief temporarily absent. A deputy shall sign documents as follows:

HENRY JONES, *Chief Valuator*,
By JOSEPH DOE, *Deputy*.

126 (2). In certain cases it will be advisable for the Chief Underwriter to request the Underwriting Section, Washington, D. C., to designate a deputy to assume the Chief Underwriter's duties and responsibilities. This delegation of authority may apply to the processing of a single case, to a group of cases, or to all cases to be handled during a period of time.

UNDERWRITING PERSONNEL

127. The Underwriting organization is comprised of selected and duly accredited employees and fee consultants. No persons are permitted to engage in underwriting activities before they are duly accredited by the Underwriting Section, Washington, D. C. The personnel of Underwriting Departments in Insuring Offices and service offices are compensated in accordance with established scales of salary determined by the responsibility and technical requirements of each position. Fee consultants are paid for each assignment completed according to an established scale of fees.

128 (1). Salaried-Staff Underwriting Personnel. Applicants for positions on the salaried staff in the underwriting organization are expected to have the qualifications outlined in paragraphs below. These are presented here to guide the judgment of Directors and Chief Underwriters when selecting applicants for positions.

128 (2). Applicants for the position of *Architectural Inspector* should have at least the following qualifications:

(a) A high school education or its equivalent.

(b) Extensive knowledge of and actual experience in the design or supervision of residential construction.

(e) Reputation for personal integrity and ethical conduct.

128 (3). Applicants for the position of *Valuator* should have at least the following qualifications:

(a) A high school education or its equivalent.

(b) Extensive general real estate and residential sales experience or mortgage-lending experience.

(c) Experience in appraising residential properties for mortgage-lending purposes.

(d) A practical knowledge of and experience in residential construction.

(e) A knowledge of valuation techniques.

(f) Reputation for personal integrity and ethical conduct.

128 (4). Applicants for the position of *Mortgage Risk Examiner* should have at least the following qualifications:

(a) A high school education or its equivalent.

(b) Experience in credit rating and ability to collect and analyze credit data.

(c) Ability to analyze financial statements.

(d) Mortgage-lending experience.

(e) Reputation for personal integrity and ethical conduct.

128 (5). Applications for salaried-staff positions in Underwriting Departments shall be directed to the Insuring Office. Before appointment can be made the Underwriting Section, Washington, D. C., must be able to certify that the applicant is qualified for the position and that the additional personnel is necessary. Such certification shall be denied unless:

(1) The applicant's experience meets with the requirements for the particular position.

(2) There is a definitely demonstrated need for the additional personnel.

(3) The recommendation for appointment bears favorable comments and signatures of the Insuring Office Director, the Chief Underwriter, and the Chief of the Section in which the appointee will work.

(4) The file includes the proper forms accompanied by the required letters of recommendation.

(5) The file, in the case of an applicant for a position in the Valuation Section, includes a copy of a residential appraisal report made solely by the applicant.

(6) The file, in the case of an applicant for a position in the Architectural Section, contains evidence that the applicant has designed or supervised the construction of residential buildings.

128 (6). Reports and the contents of reports made for the Federal Housing Administration by members of the underwriting

staff are confidential and may be made known only to the Chiefs of Sections or the Chief Underwriter except with the authority and approval of the Chief Underwriter or Director. An Architectural Inspector may make his findings known to the Valuator assigned to the same case.

128 (7). Staff members are required to refuse assignments in connection with any property or mortgage in which they have directly or indirectly any past, present, or prospective interest. In such event, the staff member shall promptly notify his immediate superior.

128 (8). In no case shall a staff member accept an assignment on a case or property if he has been previously employed by the mortgagee, the applicant, the borrower, or the broker in connection with the same case or property.

128 (9). Staff members are not allowed to engage in political activities of any nature and may not be candidates for or hold any political office except one of minor nature, and then only with the approval of the Underwriting Section, Washington, D. C. Such activities, even though purely informal, are prohibited where there is any possibility of causing embarrassment to the Federal Housing Administration.

128 (10). No member of the underwriting staff in any Insuring Office shall:

(a) Place, as agent, broker, or otherwise, any new hazard insurance on properties on which mortgages are insured or on which there is application for mortgage insurance.

(b) Endeavor to influence any party to a mortgage insured or submitted for insurance to place hazard insurance on the property involved, with or through him or any particular agent, broker, or company.

(c) Enter into any arrangement, or agreement, formal or informal, with an insurance agent, broker, or company to furnish any information or do anything to assist in the writing of new hazard insurance on properties on which there are mortgages insured or applications for mortgages to be insured by the Federal Housing Administration.

128 (11). It is the intention of the Federal Housing Administration that none of its staff members shall use any information coming into their possession through the channels of the Administration for their own personal gain, or use it in any way that may interfere with the activities of private persons or corporations engaged in hazard insurance or other lines of business.

129 (1). **Fee Consultants.** Fee consultants may not be used except for the purpose of processing cases in remote locations at lower expense or to expedite the processing of cases when there is an

unusual rush of business. They shall not be used unless the Chief Underwriter can demonstrate that such action is necessary either to save travel expense or to expedite the processing of cases during an emergency.

129 (2). Applicants for approval and appointment to positions as fee consultants in the underwriting organization are expected to have the same qualifications as those outlined for salaried-staff underwriting personnel. Applicants for approval as Fee Architectural Inspectors should have the qualifications outlined in Paragraph 128 (2). Applicants for approval as Fee Valuers should have the qualifications outlined in Paragraph 128 (3).

129 (3). Application for appointment as fee consultant shall be directed to the Insuring Office. The procedure is the same as that outlined in Paragraph 128 (5) above.

129 (4). Fee consultants are engaged to supplement the salaried underwriting staff. Fee Architectural Inspectors discharge the duties outlined for Architectural Inspectors. Fee Valuers discharge the duties of Valuers.

129 (5). Reports and the contents of reports made for the Federal Housing Administration by fee consultants are confidential and may be made known only to the Chiefs of Sections or the Chief Underwriter except with the authority and approval of the Chief Underwriter or Director. A Fee Architectural Inspector may make his findings known to the Valuator assigned to the same case.

129 (6). Fee consultants are required to refuse assignments in connection with any property or mortgage in which they have directly or indirectly any past, present, or prospective interest. In such event, the fee consultant shall promptly notify the Chief Underwriter.

129 (7). A fee consultant shall not accept an assignment on a case or property if he has been previously employed by the mortgagee, the applicant, the borrower, or broker in connection with the same case or property.

129 (8). Fee consultants are not allowed to engage in political activities of any nature and may not be candidates for or hold any political office except one of minor nature, and then only with the approval of the Underwriting Section, Washington, D. C. Such activities, even though purely informal, are prohibited where there is any possibility of causing embarrassment to the Federal Housing Administration.

129 (9). No Fee Consultant shall:

(a) Place, as agent, broker, or otherwise, any new hazard insurance on properties on which mortgages are insured or on which there is application for mortgage insurance.

(b) Endeavor to influence any party to a mortgage insured or submitted for insurance to place hazard insurance on the property involved, with or through him or any particular agent, broker, or company.

(c) Enter into any arrangement or agreement, formal or informal, with an insurance agent, broker, or company to furnish any information or do anything to assist in the writing of new hazard insurance on properties on which there are mortgages insured or applications for mortgages to be insured by the Federal Housing Administration.

129 (10). Fee consultants engaged in the business of soliciting or writing hazard insurance of any kind may rewrite policies they have previously written on properties involved in mortgage insurance applications but their appointments as fee consultants for the Federal Housing Administration will be immediately terminated if they violate the instructions promulgated hereinabove.

129 (11). It is the intention of the Federal Housing Administration that none of its fee consultants shall use any information coming into their possession through the channels of the Administration for their own personal gain, or use it in any way that may interfere with the activities of private persons or corporations engaged in hazard insurance or other lines of business.

130 (1). **Training of Underwriting Personnel.** It is the declared policy of the Federal Housing Administration to train its underwriting personnel. This is considered to be a continuing activity and to apply to all ranks within the organization. Schools for instruction of staff men recently employed are conducted periodically. Each man, regardless of position, is instructed in every phase of underwriting principles, methods, and procedure. At the conclusion of each school, each individual is thoroughly examined and rated according to his ability, experience, and aptitude. Men found to be unsatisfactory are not retained. Such schools are under the direct supervision of the Underwriting Section, Washington, D. C.

130 (2). Training conferences for fee consultants are held periodically in Insuring Offices. The instruction embraces all phases of underwriting procedure. Special emphasis is given to the duties and responsibilities of Architectural Inspectors and Valuers. Such conferences are under the direct supervision of the Chief Underwriter.

UNDERWRITING PROCEDURES

131 (1). The procedures followed in the Underwriting Departments of Insuring Offices are concerned with two general types of investigation: (1) The determining of the eligibility for insurance of mortgages preliminary to the issuance of notices of

rejection or commitments to insure, and (2) the inspecting of properties after the issuance of commitments, but before insurance is granted, to determine whether or not there is compliance with the conditional requirements specified on the commitments.

131 (2). The process of examining cases for the purpose of determining eligibility results in a recommendation by the Chief Underwriter to issue: (1) a commitment to insure the loan described in the application, (2) a commitment to insure a modified loan or the loan applied for subject to specified conditional requirements, (3) a conditional commitment to an approved mortgagee or an operative builder indicating the terms of a loan which will be accepted for insurance provided a satisfactory borrower is presented, or (4) a notice of rejection. The examinations made for this purpose follow procedures outlined below. Different kinds of cases require different procedures depending upon their characteristics.

131 (3). *Regular procedure* applies to all cases of new construction and to certain cases of existing construction that involve unusual problems. The regular procedure is described below in paragraphs 132 to 171.

131 (4). *Modified procedure* applies to all other cases of existing construction; namely, those which present no unusual problems. The modified procedure applicable to such cases is described below in paragraphs 172 to 180.

131 (5). *Special procedures* apply to all cases involving unknown borrowers and to all cases located in undeveloped subdivisions or in partially developed residential areas. In every such case the special procedure is prescribed as additional to the regular or modified procedure. The special procedure applicable to cases involving unknown borrowers is presented in paragraph 181 below. The special procedure applicable to, and a definition of, Undeveloped Subdivisions is presented in paragraph 182 below. The special procedure applicable to, and a definition of, Partially Developed Residential Areas is presented in paragraph 183 below. Applications for mortgage insurance secured by large-scale housing projects provided for in section 207 of the National Housing Act are not processed or analyzed by Insuring Offices but are forwarded to Washington, D. C.

131 (6). Other procedures are available for use in the processing of cases where institutions present a large number of loans at one time in connection with refinancing operations. The use of such procedures is not permitted without the approval of the Underwriting Section, Washington, D. C., for each group of loans.

131 (7). The making of inspections of property after the issuance of commitments to insure, but before insurance is granted, to determine whether or not there is compliance with the conditional

requirements specified on the commitments, results in recommendations from the Chief Underwriter to the Director to withhold the granting of insurance only in those cases where noncompliance is found and where the interests of the Federal Housing Administration are adversely affected. No mortgage may be insured until there is compliance with the conditions of the commitment and the Director shall not insure until the Chief Underwriter has reported satisfactory compliance. It is expressly understood that compliance inspections are for no other purpose and are not to be represented as being made in the interests of borrowers or mortgagees. There are three kinds of compliance inspections as outlined in following paragraphs.

131 (8). *Regular Compliance Inspections* are made in all cases of proposed new construction. In each case there are three inspections during the course of construction, designated respectively, "First Compliance Inspection", "Second Compliance Inspection", and "Third Compliance Inspection". Regular Compliance Inspections are made according to the procedure described in paragraph 184 below.

131 (9). *Additional Compliance Inspections* are made in selected cases of new construction at such times between or after the regular compliance inspections as are necessitated by the nature of the cases. Additional compliance inspections are made according to the procedure described in paragraph 185 below.

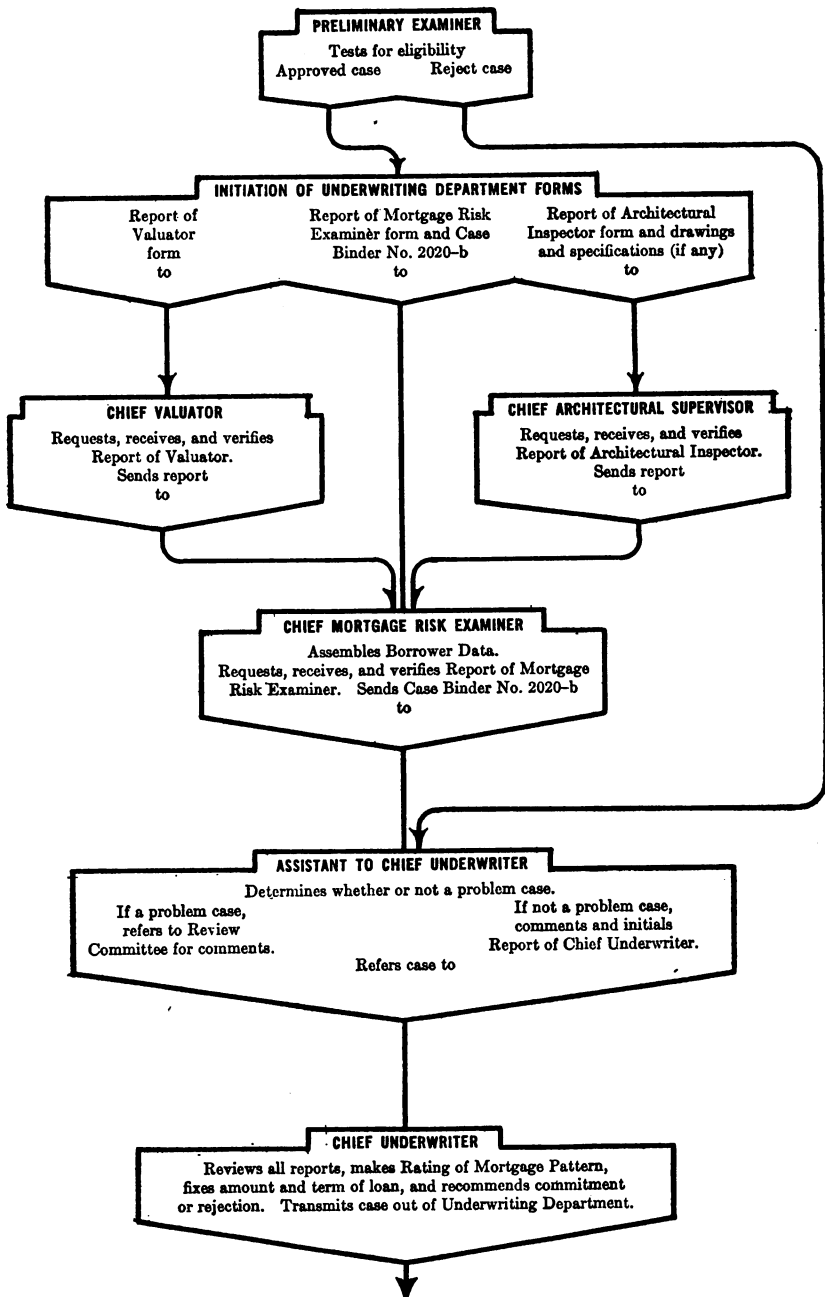
131 (10). *Repair Compliance Inspections* are made in certain cases where repairs, alterations, or additions are required or contemplated in connection with existing construction. Repair compliance inspections are made according to the procedure described in paragraph 186 below.

131 (11). The specific lines of organization and the routing of cases prescribed herein apply to the typical large office. Minor variations from the prescribed procedure are permitted and encouraged if, in the discretion of the Chief Underwriter, modifications serve to adapt the system to local problems and to expedite the handling of cases.

131 (12). The several reports made by the Underwriting Department are confidential and for the use of the Federal Housing Administration only. However, the amount of the Federal Housing Administration Valuation may be made available to the mortgagee in a specific case if the Director authorizes the Chief Underwriter to make it known. In all cases involving new construction a copy of each Compliance Inspection Report shall be furnished to the mortgagee.

131 (13). Occasions arise where new reports are made. In such cases, the Section Chief shall mark across the face of the

ROUTING DIAGRAM—UNDERWRITING DEPARTMENT



former reports, "Superseded by new report" and date and initial this notation. All superseded reports shall remain in the case binders.

131 (14). If a case receives approval by the Preliminary Examiner for further consideration all the prescribed inspections, analyses, and reports shall be made by the Underwriting Department, even though "Reject" recommendations are made by the Chiefs of Sections. If, in the discretion of the Director or Chief Underwriter, extraordinary circumstances justify final disposition of the case without completing all such inspections, analyses, and reports, completion of the several investigations and reports is not necessary. However, in most cases completion of the underwriting analysis is necessary so that all reasons for rejection may be ascertained.

132. Regular Procedure in Review Section.—Preliminary Examination. When an application is submitted by an approved mortgagee it is routed to the Preliminary Examiner who checks it to determine whether or not the case is eligible and is in proper form for analysis by the underwriting staff. If he finds some deficiency that can be remedied he may recommend that the applicant endeavor to have the deficiency corrected. Otherwise, he must recommend rejection of the case.

133. The Preliminary Examiner recommends rejection of all cases that do not comply with the provisions of Title II of the National Housing Act and with regulations and standards established by the Federal Housing Administration. In some cases he may feel certain that the valuation or risk-rating analyses will result in rejection or it may be obvious that the proposed transaction cannot qualify for insurance. In such instances the Preliminary Examiner may recommend rejection. However, he must not do so unless there is clearly no doubt as to the correctness of his decision. He is not to make decisions which rightly should be made only after the necessary inspections and analyses of the Architectural, Valuation, and Mortgage Risk Sections have been completed.

134. If the Preliminary Examiner recommends rejection of the case he forwards the file to the Assistant to the Chief Underwriter and reports his reasons for rejection on FHA Form No. 2039, Recommendation of Preliminary Examiner. The case may then be submitted to the Review Committee. If the Review Committee considers these reasons sufficient for rejection, it approves the recommendation. The Chief Underwriter signs the report and transmits the case to the Director.

135. If the case is approved by the Preliminary Examiner for further investigation the Architectural, Valuation, and Mortgage Risk Sections immediately begin their examinations and analyses.

136. In instances where the Preliminary Examiner or the Review Committee recommends rejection either the Chief Underwriter or the Director may order that the case be processed by the Architectural, Valuation, and Mortgage Risk Sections in the regular manner.

137. As occasion arises, members of the staffs of the Architectural, Valuation, and Mortgage Risk Sections may be assigned to work with the Preliminary Examiner for the purpose of reducing the number of cases processed beyond preliminary examination when rejection is inevitable. Such services are always available to the Preliminary Examiner in the form of advisory assistance and may be made available by actual assignment of personnel under the provisions of this paragraph.

138. **Regular Procedure in Architectural Section.** Upon receipt of a case in the Architectural Section the Chief Architectural Supervisor requests an Architectural Inspector to make an investigation and report the results on Report of Architectural Inspector, FHA Form No. 2014. Whenever practicable he shall use the salaried personnel of the Section.

139. The Architectural Section is responsible for the completion of the Report of Architectural Inspector. The form indicates whether or not the property was improved at the time of inspection and the report must show whether or not the Architectural Inspector made an inspection of an existing building or worked from drawings and specifications submitted by the mortgagee. The Architectural Inspector is required to make a thorough personal inspection of the premises in cases where he reports on existing structures. Besides inspecting the main building, he is required to make a thorough inspection of the rest of the property and to report on other improvements, including driveways, garages, servants' quarters, and other accessory buildings, if any. Working drawings and specifications submitted with the application are transmitted to the Architectural Inspector for his use in making his analyses and risk ratings. In cases where drawings and specifications are not submitted the Chief Architectural Supervisor shall advise the Architectural Inspectors as to the nature and character of sketches that shall accompany the report.

140. In cases where proposed new buildings are to be erected the Architectural Inspector will not, in most instances, find it necessary to visit the site. The drawings and specifications are given to him when the assignment of the case is made and he bases his ratings and conclusions upon these documents. Information regarding the contour of the lot, topography, and neighborhood data

can be obtained from the Valuator and used, where necessary, in completing the Report of Architectural Inspector.

141. After the Architectural Inspector has made a complete investigation of the architectural, structural, and other features of the property, both interior and exterior, he is required to make a Rating of Physical Security in accordance with the instructions in Part II, Section 1, Rating of Property.

142. The Architectural Inspector is required to give an estimate of the replacement cost of the building improvements in new condition in accordance with the instructions in Part I, Section 4, Methods of Dwelling Cost Estimation. He is also required to indicate the distribution of his total estimate among the major items of which it is composed.

143. After the Architectural Inspector completes and signs the report he returns it to the Chief Architectural Supervisor who reviews it. The Chief Architectural Supervisor may change a Rating of Physical Security or an Estimate of the Cost Required to Replace Building Improvements as reported by an Architectural Inspector when he is certain that errors have been made. When such changes are made, a signed notation in red ink must be added to the report by the Chief Architectural Supervisor. The Chief Architectural Supervisor may likewise modify the Architectural Inspector's estimate of remaining physical life if the estimate appears to be incorrect. If the Chief Architectural Supervisor agrees with the conclusions contained in the Report of Architectural Inspector he approves the report and sends it to the Mortgage Risk Examiner.

144. In cases where new construction is involved the Chief Underwriter will, after commitment has been issued, execute "Request for Compliance Inspections", FHA Form No. 2050, so that required periodic inspections during process of construction may be made by staff members or Fee Architectural Inspectors. Similar procedure is followed where repairs, alterations, or additions are planned or required, and special inspections are necessitated. All additional compliance and repair compliance inspections must be authorized by the Chief Underwriter.

145 (1). *Rulings on New Methods of Construction.* In cases where the methods of construction used are not customary or are not the generally accepted practice, it is required that before a commitment may be issued the particular methods shall receive the approval of the Technical Section, Mortgage Insurance Division, Washington, D. C. In general, requests for approval of new methods of construction shall be made only in conjunction with an application for mortgage insurance. However, where there is assurance

that this method of construction will have a broad market, or that it is contemplated that a number of houses will be built using this method, request for approval may be made without submitting an application for mortgage insurance.

145 (2). In the event the request for approval is made direct by the sponsors of the method of construction, it may be directed to the Technical Section, Washington, D. C., by the sponsors. However, in the event the request for approval originates in an Insuring Office it shall be forwarded to the Underwriting Section, Washington, D. C., over the signature of the Chief Underwriter.

145 (3). In general, the following customary methods of construction are acceptable when good materials and good workmanship are applied:

- (1) Wood frame with wood siding or shingles.
- (2) Wood frame with masonry veneer.
- (3) Wood frame with stucco.
- (4) Brick masonry or masonry block.
- (5) Poured in place concrete.
- (6) Adobe brick.

145 (4). Sponsors of new methods of construction are required to demonstrate that the method proposed is a dependable and durable type of construction. Evidence will usually be required to show adequate tests demonstrating the characteristics of the materials and method used. Evidence supporting the claims of the sponsors should be submitted with each request for approval together with descriptions, drawings, photographs, and samples of the materials. The presentation should include a description of the materials, their composition and size, and the method of assembling; together with other pertinent data. Attested reports of tests performed by recognized laboratories or authorities may also be included. Drawings should include wall sections showing footings, foundations, floor intersections, roof intersections, partitions, framing about doors, windows and other openings, structural details, flashing, and other pertinent details. Drawings should indicate sizes and materials at a scale large enough to permit examination. Photographs should show the various stages of construction. Samples of materials not in common use should be submitted. If possible, a construction assembly either in full size or as a model should be submitted.

145 (5). After a thorough examination a ruling on the method of construction will be issued by the Technical Section for the guidance of all Insuring Offices. Rulings concerning new methods of construction will be limited to those methods which have been tried out in actual construction by the erection of at least one house from which definite conclusions may be drawn regarding

structural soundness, resistance to use, and resistance to elements. These rulings are not to be construed as general acceptance of the types of construction. Each individual property, in order to qualify for an insured mortgage, will be considered on its own merits.

146. Regular Procedure in Valuation Section. Upon receipt of a case in the Valuation Section the Chief Valuator requests a Valuator to make an investigation and report the results in Report of Valuator, FHA Form No. 2015. Whenever practicable he shall use the salaried personnel of the Section.

147. The report forms for Architectural Inspector, FHA Form No. 2014, and Valuator, FHA Form No. 2015, are initiated at the same time. This permits the Architectural and Valuation Sections to work at the same time and together if they find it practicable to do so, and avoids unnecessary consumption of time in the processing of applications.

148. The Valuation Section is responsible for the completion of the Report of Valuator. In the regular procedure the Valuator does not fill out those parts of the report which cover items appearing on FHA Form No. 2014, Report of Architectural Inspector. These portions are stamped "See Form 2014." This notation is made at the time that Report of Valuator, FHA Form No. 2015, is headed prior to being routed to the Valuation Section. The form indicates whether the Valuator made an inspection of an existing building or inspected a vacant site and made his valuation from drawings and specifications submitted with the application.

149. The Valuator is required to make a thorough personal inspection of the premises, both exterior and interior, and the surrounding neighborhood. He must verify the items transcribed from FHA Forms Nos. 2004 and 2004(a) but he is not required to verify the correctness of the legal description furnished to him. This description is supplied to the Valuator so that he can locate and positively identify the property in connection with which he must make his report.

150. The Valuator may have the use of the Report of Architectural Inspector. In every case he must know the conclusions which the report contains, including the Rating of Physical Security and the estimate of replacement cost in new condition. The Report of Valuator shall show the percentage ascribed to the Total Rating of Physical Security by the Architectural Section but the individual ratings ascribed to the first seven features are not transcribed. If proposed new construction is involved the Valuator is required to study the drawings and specifications with sufficient thoroughness to permit him to visualize the structure in completed condition. He may also be requested to furnish information regard-

ing the site and its surroundings to the Architectural Section in cases where new buildings are planned so that inspection of the site by an Architectural Inspector may be obviated.

151. After the Valuator has made a complete investigation of the property and neighborhood he is required to make a rating of the feature, Adjustment for Nonconformity, complete the computation of the Rating of Property, and make the Rating of Location, in accordance with the instructions contained in Part II, Sections 1 and 2.

152. The Valuator is required to make an independent valuation of the property and to distribute the total valuation between the major items of which it is composed, in accordance with the instructions contained in Part I, Section 3. He does not have access to the Mortgagee's Application for Insurance nor any other information except certain items transcribed from the Mortgagee's Application for Insurance and the Mortgagors' Statement. These items are placed on the Report of Valuator before the case is assigned to a particular Valuator. After the Valuator has completed and signed his report he returns it to the Chief Valuator.

153. The Chief Valuator reviews the conclusions in the Valuator's report. He may modify them in certain respects. The FHA Valuation in no event can be fixed at an amount in excess of the valuation reported by the Valuator, except as permitted in paragraph 168. Specific rules governing the establishment of the FHA Valuation are outlined in paragraph 168.

154. The Chief Valuator may modify the rating ascribed to Adjustment for Nonconformity or features of the Rating of Location reported by a Valuator by either increasing or decreasing the reported ratings, if he finds it necessary to make such changes in order to correct obvious errors or to maintain consistency with regard to such ratings in different reports involving properties in similar neighborhoods. Such modifications shall be effected by the Chief Valuator by making notations in red ink on Report of Valuator in the proper columns and in the blank space at the bottom of the rating grids to the left of the words, "Total Rating ____ %", which words must be crossed out with red ink. The notation shall be as follows: "Approved Rating ____ %, (date), John Doe, Chief Valuator". The Chief Valuator may likewise modify the Valuator's estimate of remaining economic life if the estimate appears to be incorrect. There should always be a consistent relationship between the estimates of remaining economic life and remaining physical life. The former should never exceed the latter in any case.

155. If the Chief Valuator agrees with the conclusions contained in the Report of Valuator he approves the report and sends it to the Mortgage Risk Section.

156. Regular Procedure in Mortgage Risk Section. Upon receipt of the case binder, the Chief Mortgage Risk Examiner assigns the case to a Mortgage Risk Examiner for analysis. In every instance, Mortgage Risk Examiners are salaried employees in the Underwriting Department. Fee consultants are not used for mortgage risk examination. The conclusions of the Mortgage Risk Examiner are submitted in Report of Mortgage Risk Examiner, FHA Form No. 2016 or 2016(a).

157. Factual Data Reports on borrowers are made available to Mortgage Risk Examiners. These reports shall be furnished by commercial credit reporting agencies approved by the Underwriting Section, Washington, D. C., and under contract to the Federal Housing Administration for this purpose. In certain instances Factual Data Reports may not be necessary, especially where the borrower is named in connection with several applications. Care should be taken to avoid the ordering of unnecessary reports.

158. Two alternative methods of securing Factual Data Reports are made available to Insuring Offices. One or the other or the two methods in combination are authorized. Insuring Offices shall adopt the methods best suited to their particular requirements. The two alternative methods are as follows:

(1) The approved mortgagee may order a Factual Data Report from one of the accredited agencies before submitting the application to the Federal Housing Administration and attach the report to Mortgagee's Application for Insurance.

(2) The Preliminary Examiner may order a Factual Data Report from one of the accredited agencies at the time he renders his report, Recommendation of Preliminary Examiner, provided he recommends that the case be processed by the other Sections of the Underwriting Department.

159. The Mortgage Risk Section is responsible for the completion of the Report of Mortgage Risk Examiner in accordance with the instructions contained in Part II, Section 3. In determining the Rating of Borrower, the Mortgage Risk Examiner gives special consideration to the relationship existing between the borrower's financial status and the mortgage program he is about to undertake, as well as to his reputation and credit standing.

160. Upon completion of the Report of Mortgage Risk Examiner it is submitted to the Chief Mortgage Risk Examiner for verification. The Chief Mortgage Risk Examiner may modify the rating assigned to the borrower by indicating and initialing such

change in red ink and stating reasons justifying the modification. The Chief Mortgage Risk Examiner then inserts the Report of Mortgage Risk Examiner in the case binder and forwards the binder to the Assistant to the Chief Underwriter.

161. There are instances in which the Chief Underwriter finds it necessary to suggest counter-proposals. Some of these counter-proposals are such major changes of the conditions and provisions of the mortgage described in the application that revision of the Report of Mortgage Risk Examiner is necessary. Such cases are returned to the Mortgage Risk Section by the Assistant to the Chief Underwriter in accordance with the instructions in paragraph 164 below. Upon receipt of such a returned case the Mortgage Risk Section makes all necessary modifications to take account of the conditions in the counter-proposal by indicating in red ink the revised items, ratings of features, and total rating in the Rating of Borrower grid. The revisions are initialed by the Chief Mortgage Risk Examiner, and the case binder is resubmitted to the Review Section.

162. **Regular Procedure in Review Section.—Review.** Upon receipt of a case from the Mortgage Risk Section the Assistant to the Chief Underwriter reviews the entire contents of the case binder and then prepares the Report of Chief Underwriter, FHA Form No. 2017, except for the portions representing the final conclusions and recommendations of the Chief Underwriter. The Assistant to the Chief Underwriter makes a tentative Rating of Mortgage Pattern. In addition he makes such notations as will assist the Chief Underwriter to form the final conclusion with respect to the case. It is expressly understood that all the above operations are tentative and are performed solely to assist the Chief Underwriter. The responsibility belongs to the Chief Underwriter and the duties here assigned to the Assistant to the Chief Underwriter are performed under the supervision of the Chief Underwriter.

163. Upon the completion of the above review and preparatory work by the Assistant to the Chief Underwriter, he initials FHA Form No. 2017, Report of Chief Underwriter, in the lower left-hand corner and submits the cases to the Chief Underwriter, segregating those which he feels to be finished except for the final analysis and signature of the Chief Underwriter from those which he believes warrant attention by the Review Committee. If the Chief Underwriter decides to submit cases to the Review Committee, the Assistant to the Chief Underwriter requests the committee to assemble. The cases are discussed. No record of deliberations of the Review Committee is required but it is permissible for the committee to render signed statements setting forth opinions on particular cases or aspects of particular cases. These statements may be placed

in the case binders. The Review Committee has no authority and has completely discharged its duty when it has expressed an opinion or made a recommendation to the Chief Underwriter. The comments and recommendations made by the Review Committee shall be placed in the appropriate space on the reverse side of the Report of Mortgage Risk Examiner. These comments and recommendations include any matters which the Review Committee considers should be especially emphasized and brought to the Chief Underwriter's attention. They should also contain matters such as adverse factors constituting unusual elements of risk, inconsistencies in reports, and suggested conditional requirements or counter-proposals.

164. In cases where it is necessary to make counter-proposals the Review Section and the Chief Underwriter analyze the mortgage terms and determine the conditions and provisions of an acceptable loan. Some of these counter-proposals are such major changes in the conditions and provisions of the mortgage described in the application that revision of the Report of Mortgage Risk Examiner is necessary. The Assistant to the Chief Underwriter returns such cases to the Mortgage Risk Section with a request that the necessary revisions be made in Report of Mortgage Risk Examiner. When these cases are returned again to the Review Section they are processed to completion in the regular manner.

165. **Regular Procedure of the Chief Underwriter.** The Assistant to the Chief Underwriter makes a tentative preparation of certain portions of FHA Form No. 2017, Report of Chief Underwriter, as described above in paragraph 162. Complete case binders, including this form in this condition, are submitted to the Chief Underwriter to enable him to arrive at his final conclusions and to render his recommendations to the Director.

166. The office of Chief Underwriter in an Insuring Office requires a person who has discriminating judgment, analytical and executive ability, successful experience in mortgage lending, and the capacity to make important decisions. The Chief Underwriter directs the Underwriting Department in the Insuring Office. He must be well informed with regard to all matters relating to the functions of the several Sections which comprise his department. This means that he must understand real estate valuation principles and procedure, mortgage-lending practices, and have a broad understanding of the elements which create and affect risk in mortgage-lending transactions and the mortgage insurance program of the Federal Housing Administration. He must determine whether or not the mortgage submitted for insurance is economically sound; and he must review all recommendations which are made by members of the Underwriting Department. The responsibilities placed upon him are great, and

discharge of them cannot be entrusted to any individual except one who is known to have unquestioned integrity, a high degree of intelligence, wisdom, knowledge, and executive and administrative ability.

167. While the Chief Underwriter may delegate some of his authority to certain members of his staff, such as the Assistant to the Chief Underwriter, he cannot be relieved of any of his responsibility. None of his responsibility can be shifted, and he will be held strictly accountable for the reasonableness of the Federal Housing Administration Valuation; for the correctness of his opinion regarding the economic soundness of the project with respect to which the insured mortgage is executed; and for the adequacy of reasons advanced as a justification for his recommendation that an application be rejected.

168. The prescribed rules covering the establishment of the Federal Housing Administration Valuation are as follows:

(1) The Valuator makes an estimate of value in the Report of Valuator and submits it to the Chief Valuator.

(2) The Chief Valuator shall submit an approved valuation. In determining his approved valuation he has three alternatives:

(a) He may accept the estimate of value made by a Valuator and establish it as his approved valuation.

(b) He may establish his approved valuation at an amount lower than the estimate of value made by a Valuator.

(c) He may order another Valuator to render a new Report of Valuator and he may then establish his approved valuation in accordance with the foregoing two alternatives.

(3) The Chief Underwriter shall fix the Federal Housing Administration Valuation. The FHA Valuation is distinguished from the Chief Valuator's approved valuation. In fixing the FHA Valuation the Chief Underwriter has four alternatives:

(a) He may fix the FHA Valuation at an amount equal to or less than the approved valuation submitted by the Chief Valuator. He may not fix the FHA Valuation at an amount in excess of the Chief Valuator's approved valuation, except as provided in (c) below.

(b) In any case the Chief Underwriter may return the Report of Valuator to the Chief Valuator for reconsideration.

(c) The Chief Underwriter has the authority to raise the Chief Valuator's approved valuation to the extent of \$125, provided the Chief Valuator concurs without coercion and provided, further, that a counter-proposal as to the principal amount of an insurable loan can thereby be avoided. This can occur only in cases where an increase of \$125 or less in the Chief Valuator's approved valuation will make possible a commitment for the exact amount stated in the application. The Chief Underwriter shall exercise this authority

only for the purpose of obviating counter-proposals involving small amounts. He shall not exercise it more than once in connection with any one property. In such cases the Chief Valuator must signify his concurrence by initialing the FHA Valuation as fixed by the Chief Underwriter on FHA Form No. 2017. Under no other circumstances than those specifically stated in this paragraph and in paragraph 168 (3) (d) is the Chief Underwriter permitted to fix an FHA Valuation in excess of the Chief Valuator's approved valuation.

(d) In a case where the Chief Valuator cannot conscientiously supply an approved valuation that is satisfactory to the Chief Underwriter, the Chief Underwriter may completely relieve the Chief Valuator and the Valuation Section from all responsibility, mark all previous copies of Report of Valuator "Superseded by Chief Underwriter's Report of Valuator", himself make a complete Report of Valuator based on his own personal inspection and examination of the property, and sign the report as "Chief Underwriter." In such a case his valuation is fixed as the FHA Valuation. When a Chief Underwriter thus preempts the prerogatives of the Chief Valuator and the Valuation Section, and where, at the same time, he has recommended the issuance of a commitment, he shall forward the complete Insuring Office Case Binder, FHA Form No. 2020(b) to the Underwriting Section, Washington, D. C., for review. This does not prevent the issuance of a commitment prior to the review of the case by the Underwriting Section.

169. Wherever authority is granted herein to Section Chiefs of the Underwriting Department to modify reports, the Chief Underwriter also has the authority to make such modifications. This authority includes the right to refuse to accept modifications made or recommended by the Section Chiefs except as limited in paragraph 168.

170. The Chief Underwriter completes his report by recording his decisions and certifying that he has no personal interest present or prospective, in the property, applicant, or the proceeds of the mortgage; that to the best of his knowledge and belief, the statements made in his report are correct; and that his findings and conclusions, as set forth in the report, are justified. He indicates that he has carefully examined and considered all the reports relative to the risk ratings and the valuation of the real property described in the application. He fixes the FHA Valuation. If he finds the mortgage eligible for insurance he recommends issuance of commitment for insurance. He also enters his conclusion whether or not the proposed mortgage is economically sound. His recommendations set out necessary conditional requirements, if any. In the event that he concludes that the application should be rejected,

he records upon the report his reasons for recommending rejection. After the Chief Underwriter has signed his report the case is forwarded to the Director of the Insuring Office.

171. Director's Decision. Space is provided on the Report of Chief Underwriter for the recording of the approval of the Director of the Insuring Office. The Director may approve or disapprove the report of the Chief Underwriter. By making appropriate entries upon the form he may thereby authorize issuance of Commitment for Insurance, or Notice of Rejection. If the Director disagrees with the conclusions and decision of the Chief Underwriter, he states the reasons justifying his disapproval upon the reverse side of the Report of Chief Underwriter and forwards to the Underwriting Section, Washington, D. C., the complete Insuring Office Case Binder together with all related data and correspondence. He also acquaints the Chief Underwriter with the reasons for his disapproval. The Chief Underwriter then forwards to the Underwriting Section, Washington, D. C., any supplementary information which he deems helpful in gaining a full understanding of the conditions and matters to which the divergent points of view relate. When the case is received by the Underwriting Section in Washington it will then be reviewed. Then the case is submitted to the Deputy Administrator for Titles II and III for final decision. No commitment for insurance or notice of rejection shall be issued or other action taken in any case referred to the Deputy Administrator for final decision until he has made the decision and transmitted it to the Insuring Office.

172. Modified Procedure. Foregoing paragraphs describe the regular procedure. It is used in connection with all cases of proposed new construction and in connection with certain cases of existing construction. The modified procedure is mandatory for use in connection with all cases except the following:

(1) All cases in which the construction of building improvements is incomplete at the time the application is made and in which the Underwriting Department uses submitted drawings and specifications.

(2) All cases of newly completed properties in which the completion of construction of building improvements occurred less than about one year prior to the date of the application.

(3) All cases involving building improvements constructed more than thirty years prior to the application.

(4) All cases in which the application indicates that the borrower proposes to make immediate improvements that involve major repairs, alterations, or additions.

(5) All cases which, in the opinion of the Chief Valuator, present unusual structural problems as determined after an examination of the premises by a Valuator.

173. The modified procedure differs from the regular procedure in that FHA Form No. 2014, Report of Architectural Inspector, is not used; all portions of FHA Form No. 2015, Report of Valuator, are completed by the Valuator; and the services of the Architectural Section are used only in an advisory capacity.

174. The preliminary examination procedure is described in paragraphs 132 to 137. Upon the completion of preliminary examination the Preliminary Examiner selects the cases which may be handled by the modified procedure. In determining the selection of cases he uses the rules set out in paragraph 172 above, except that he cannot determine which cases come under the fifth rule. He directs that cases selected for modified procedure shall not be routed to the Architectural Section. FHA Form No. 2015, Report of Valuator, is headed and delivered to the Valuation Section.

175. Upon receipt of a case in the Valuation Section the Chief Valuator requests a Valuator to make an investigation and report the results in Report of Valuator. In the modified procedure the Valuator fills out all parts of the report. This requires him to follow the regular procedures outlined for both Architectural Inspectors and Valuers in paragraphs 138 to 155. After completing his report he returns it to the Chief Valuator. Upon approval of the Report of Valuator by the Chief Valuator it is sent to the Mortgage Risk Section. The Report of Valuator is not signed by the Chief Architectural Supervisor.

176. The Chief Valuator, in addition to the responsibilities given him in connection with the regular procedure, has the privilege, in the modified procedure, of revising the ratings ascribed to the Physical Security Features and the estimate of replacement cost, by making red ink entries and dating and signing them.

177. The Architectural Section makes cost data available for the use of Valuers in accordance with the instructions contained in Part I, Section 4.

178. If, after a Valuator submits a Report of Valuator to the Chief Valuator, the Chief Valuator finds that the property presents unusual structural problems he may request the Architectural Section to complete a Report of Architectural Inspector, FHA Form No. 2014. When this is done the subsequent processing of the case follows the regular procedure rather than the modified procedure. In this event those parts of Report of Valuator which cover items appearing on FHA Form No. 2014, Report of Architectural Inspector, shall be stamped "See Form No. 2014." When

Report of Architectural Inspector is submitted the Valuator reviews his report and makes changes in it if his opinions are affected by the information in the Report of Architectural Inspector. The Valuator then shall make a notation on his report as follows: "Report reviewed on _____ (date) John Doe, Valuator." The Chief Valuator enters a like notation.

179. The procedure in the Mortgage Risk Section and Review Section is the same in both the regular and modified procedures.

180. It may be desirable that the Valuator prepare rough sketches of certain properties. The Chief Valuator shall determine the types of properties in connection with which sketches shall be required. He shall also determine the character of sketches to be made. Some Chief Valutors and Valutors will prefer to use quadrupled paper. A property which presents complex problems may require the making of a detailed sketch and plot plan. Such a sketch and plan is shown on the following page and represents the house which is used to illustrate the estimation of replacement cost in new condition in Part I, Section 4.

181 (1). **Special Procedure.—Cases with Unknown Borrowers.** In cases where application is made for a conditional commitment to insure a mortgage to be executed by an unknown borrower either the regular or modified procedure is used except as follows:

(1) The case binder is not routed to the Mortgage Risk Section but is sent directly to the Assistant to the Chief Underwriter.

(2) The Mortgage Risk Section does not render Report of Mortgage Risk Examiner until the Insuring Office receives an application in connection with the same property with a named borrower.

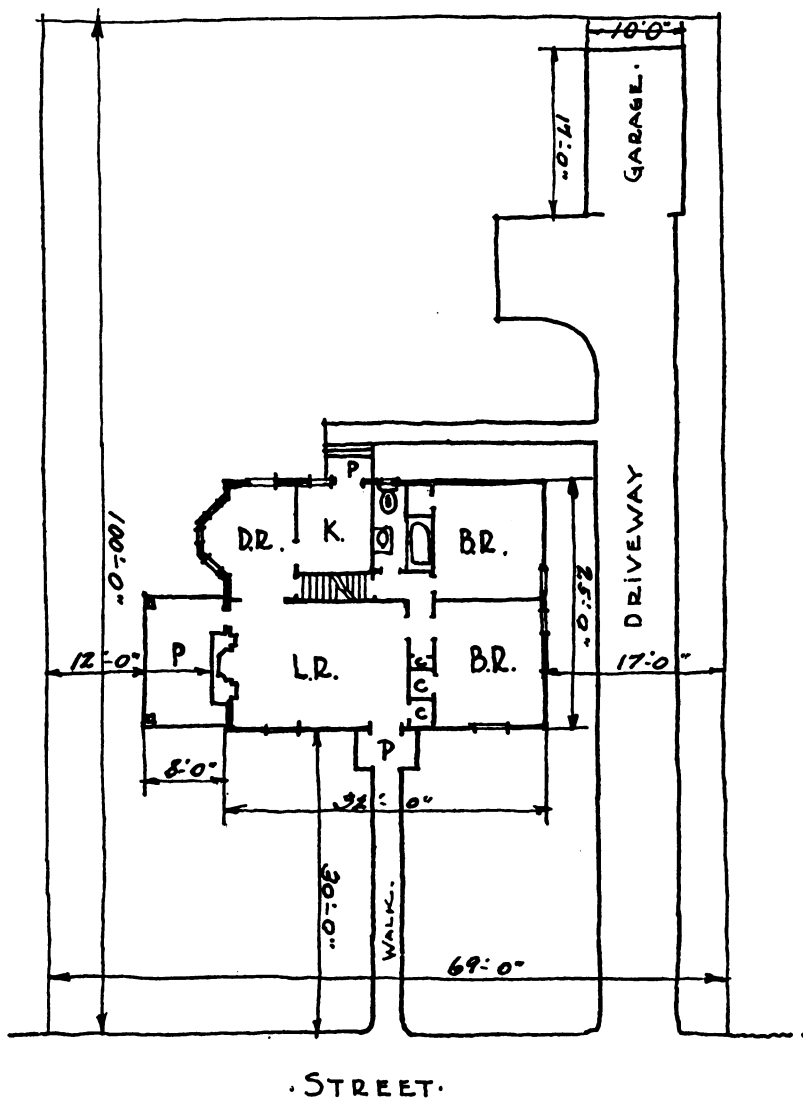
(3) The Assistant to the Chief Underwriter does not prepare FHA Form No. 2017, Report of Chief Underwriter. Instead he prepares an Interim Report of Chief Underwriter, FHA Form No. 2081, or FHA Form No. 2203.

(4) The Chief Underwriter recommends rejection or the issuance of a conditional commitment.

181 (2). If the Chief Underwriter recommends the issuance of a conditional commitment, he shall determine the amount and life of the recommended loan in accordance with the instructions given in Part II, Section 4, paragraphs 425-427, presuming that the Rating of Borrower is approximately 75%. He then indicates the loan amount and period thus determined on the Interim Report of Chief Underwriter.

181 (3). When, subsequently, an application is received in connection with the same property with a named borrower the case is routed directly to the Mortgage Risk Section. This Section

SKETCH AND PLOT PLAN



makes a Report of Mortgage Risk Examiner. Thereafter, the case is handled in accordance with the regular procedure.

182 (1). Special Procedure.—Undeveloped Subdivisions. In pursuance of the objectives of the National Housing Act the Federal Housing Administration desires to insure eligible mortgages on residential properties which are created by the subdividing of parcels of real estate and the erection of new structures thereon, but, at the same time, it does not desire to, and will not, insure mortgages in such cases unless it is convinced that the subdivision projects are justified and economically sound.

182 (2). Areas of this description fall into two classes: Undeveloped Subdivisions and Partially Developed Residential Areas. Special considerations for the rating of these areas are described in paragraphs 280-291, Part II, Section 2. Underwriting Departments shall establish and maintain separate numerical indexes for filing reports in connection with Undeveloped Subdivisions and Partially Developed Residential Areas. The prescribed special procedures are not required in any instance where the area involves less than five acres which are immediately adjacent to or extensions of eligible developed neighborhoods.

182 (3). *Undeveloped Subdivision* is defined as a tract of raw land which it is proposed to subdivide into smaller parcels and to market as an area predominantly for residential purposes, or a subdivision or portion of a subdivision, either old or new, in which a few houses may exist, which is in such a state of development and unified control as to make practicable major changes in layout, restrictions, or other features.

182 (4). Cases involving properties located in undeveloped subdivisions are processed by either the regular or the modified procedure, or the special procedure used in connection with unknown borrowers. In addition, they must be subjected to the special procedure described below in paragraphs 182 (5) to 182 (7).

182 (5). An Undeveloped Subdivision may come to the attention of the Underwriting Department either as the result of a request by the sponsor for an informal opinion of the Federal Housing Administration concerning the qualities of the subdivision as a location for properties on which insured loans are desired, or as the result of a formal application to insure a mortgage on a property situated in the subdivision. In either case the procedure to be followed before the issuance of a commitment is the same.

182 (6). The sponsor is requested to prepare, with the assistance of the Underwriting Department if necessary, the Subdivision Information Form, FHA Form No. 2084, and to supply

certain required exhibits. The Valuation Section prepares for the Chief Underwriter's approval, Chief Underwriter's Subdivision Report and Rulings, FHA Form No. 2084(a). If the Chief Underwriter's opinion of the subdivision is unfavorable he may so notify the sponsor or recommend that a Notice of Rejection be issued in connection with an application received. If the Chief Underwriter's opinion is favorable he shall submit the original copies of the completed reports and exhibits to the Underwriting Section, Washington, D. C., for final ruling. No favorable informal opinion or commitment shall be issued without specific authorization by the Underwriting Section, Washington, D. C.

182 (7). *Informal Opinions* are prepared by the Chief Underwriter and shall be based on the rulings issued by the Underwriting Section, Washington, D. C. If the ruling is based on definite conditional requirements they shall be included verbatim in the informal opinion issued by the Chief Underwriter. It is not recommended that the decision of the Underwriting Section be copied in its entirety and transmitted to the sponsor. Not infrequently matters which should be treated as confidential are included. When issuing an informal opinion the following clause shall be included: "No statement made herein shall be construed as binding the Federal Housing Administration to make a commitment for the insurance of a mortgage covering a property located in the subdivision described herein nor shall it be construed as giving blanket approval to the subdivision." When the conditional requirements of the rulings have been fulfilled to the satisfaction of the Chief Underwriter applications for mortgage insurance may be processed and commitments may be issued in connection with eligible properties located in the subdivision.

183 (1). **Special Procedure.—Partially Developed Residential Areas.** *Partially Developed Residential Area* is defined as an area of land comprising one or more subdivisions or portions thereof, or any partially developed residential district, in which an insufficient number of lots are improved with dwellings to establish the character of the neighborhood (other than an Undeveloped Subdivision, as defined in paragraph 182 (3)).

183 (2). Cases involving properties located in Partially Developed Residential Areas are processed by either the regular or the modified procedure, or the special procedure used in connection with unknown borrowers. In addition, they must be subjected to the special procedure described below in paragraph 183 (3) to 183 (5).

183 (3). A Partially Developed Residential Area may come to the attention of the Underwriting Department only as a result of a formal application to insure a mortgage on a property situated

in the Partially Developed Residential Area. Informal opinions shall not be rendered in connection with Partially Developed Residential Areas.

183 (4). Upon receipt of an application involving a property located in a Partially Developed Residential Area the Valuation Section, in due course, shall prepare for the Chief Underwriter's approval, Chief Underwriter's Subdivision Report and Rulings, FHA Form No. 2084 (a). At the same time the Rating of Location is made in the usual manner. If a commitment is issued the original copy of FHA Form No. 2084 (a) and the triplicate copy of the Report of Valuator, with any pertinent exhibits, shall be forwarded immediately to the Underwriting Section, Washington, D. C. The comments of the Underwriting Section shall be of an advisory and informatory nature. The authority and responsibility for processing cases of this kind are vested in the Underwriting Departments of the Insuring Offices.

183 (5). Underwriting Supervisors, especially designated for this work, will frequently visit the Insuring Offices as representatives of the Underwriting Section, Washington, D. C., with full authority to issue decisions on any and all Undeveloped Subdivisions or Partially Developed Residential Areas in which no commitments have been issued. The Underwriting Departments are urged to consult with and obtain the advice and assistance of the Underwriting Section, Washington, D. C., when assistance and counsel are desired in connection with any difficult decision.

184 (1). **Regular Compliance Inspections.** In cases involving proposed new construction after a commitment to insure a mortgage has been issued the Chief Underwriter shall authorize the Chief Architectural Supervisor to have periodic inspections made during the course of the construction operations.

184 (2). These inspections are necessary in order to determine whether or not the improvements are being erected in compliance with the approved drawings and specifications submitted with the application covering the case. These compliance inspections do not, in any sense, constitute architectural supervision or construction supervision but are made solely for the protection of the Administration in order to determine that the property upon completion will comply with the requirements outlined in the submitted drawings and specifications upon which the commitment to insure was based.

184 (3). The regular compliance inspections shall be made:

(a) When the excavation is completed and ready for the footings and foundations.

(b) When the building is enclosed but the structural members are still exposed and while the roughing-in, i. e., heating, plumbing, and electrical work, is in place and visible.

(c) When the building is completed and ready for occupancy.

184 (4). At the time of the first inspection the Architectural Inspector ascertains that the placing of the building on the lot is in accordance with the drawings. He determines whether or not the size and depth of the excavation conform to the drawings, and he examines those portions of the excavation on which footings and foundations are to rest with reference to bearing capacity, distance below frost line, and any other condition which might affect the structural soundness or durability of the completed building. He reports whether or not the work inspected complies with approved drawings and specifications, and regarding the suitability of excavation to receive the footings and foundations. The results of this inspection are entered in FHA Form No. 2051, First Compliance Inspection Report.

184 (5). The second inspection requires a careful check of all structural details and mechanical equipment to ascertain whether or not they comply with the approved drawings and specifications. The inspection covers materials, workmanship, equipment, size, location, and arrangement. All parts of the heating, plumbing, and electrical systems which have been installed, especially those portions which will be finally concealed, must be examined at this time. The results of this inspection are entered in FHA Form No. 2052, Second Compliance Inspection Report.

184 (6). The third inspection involves an examination of all details of construction and finish to ascertain whether or not the building has been completed according to the approved drawings and specifications and is ready for occupancy. The Architectural Inspector checks all heating, plumbing, and electrical equipment, and compares the structure with the approved drawings and specifications. He also takes two photographs of the completed property. Two prints of each are attached to and made a part of the Third Compliance Inspection Report, FHA Form No. 2053, upon which the result of this inspection is reported.

184 (7). On each of the three regular compliance inspection report forms two questions appear: "Do variations, if any, modify the original Rating of Physical Security?" and "Do variations, if any, modify the original Estimate of Replacement Cost?" It is important that affirmative answers to these be explained clearly and in detail. It is possible to allow changes or deviations from the approved drawings and specifications provided that these changes do not adversely affect the original Rating of Physical Security or

lower the Estimate of Replacement Cost. However, if the changes or deviations from the approved drawings and specifications are of major character and do adversely affect the original Rating of Physical Security or lower the Estimate of Replacement Cost, the Architectural Section must immediately notify the Chief Underwriter of the exact conditions. If in the opinion of the Chief Underwriter the mortgage security has been impaired the applicant must be notified immediately that the terms of the commitment have not been fulfilled. Upon the completion of the final compliance inspection, either regular or additional, in cases where in the opinion of the Chief Underwriter mortgage security is impaired the applicant must be notified that the commitment in the particular case is null and void. In such instances it is possible upon receipt of a new application and an additional fee to re-process the case.

184 (8). Sometimes in cases involving proposed new construction it may be found that at the time a commitment to insure is issued actual construction of the particular property has progressed to such a stage as to render impracticable the making of the first or second compliance inspection. In such cases the number of compliance inspections to be made will depend upon the stage of construction existing at the time the Architectural Inspector first visits the property.

185. **Additional Compliance Inspections.** The Chief Architectural Supervisor may deem it desirable or necessary to have more than three regular compliance inspections made, for example, where special installations are contemplated that will require more frequent checking or where certain work will be concealed earlier in the building operations than is ordinarily the case. Additional inspections are also necessary in cases where noncompliance with approved drawings and specifications is discovered during one of the regular compliance inspections and it is necessary for the contractor to correct certain deficient items. In such instances, the Chief Architectural Supervisor may order such special compliance inspections as are necessary upon obtaining appropriate authorization in writing from the Chief Underwriter. Reports shall indicate whether or not all the deficiencies have been satisfactorily remedied.

186. **Repair Compliance Inspections.** There are two types of cases involving existing construction in connection with which the Chief Underwriter may require repair compliance inspections. First, there are cases where the application states that there are proposed immediate improvements involving major repairs or alterations affecting the design or structure of the property. For such cases suitable drawings and specifications covering the proposed work are submitted with the application. Second, there are cases where it

is found that a "Reject" rating of certain Physical Security Features was avoided by requiring certain major structural repairs or alterations in addition to those contemplated in the application. Where such conditions occur it is the duty of the Chief Architectural Supervisor to have a repair compliance inspection made. FHA Form No. 2053(a), Repair Compliance Inspection Report, is used for this purpose. In all such cases the Chief Architectural Supervisor shall notify the Chief Underwriter when all repairs, alterations, or additions have been completed in a satisfactory manner.

PART I
SECTION 2
METHODS OF MORTGAGE RISK RATING

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PART I
SECTION 2
METHODS OF MORTGAGE RISK RATING

DEFINITION OF RISK RATING

201. Mortgage risk rating is the process of thoroughly analyzing the major factors of risk undertaken in the making of a mortgage loan and the rating of the mortgage in accordance with the risk involved in the loan transaction or in connection with the insurance of the mortgage. Risk rating is made necessary by the terms of the National Housing Act. It provides a uniform method by means of which to determine whether or not a dwelling mortgage is eligible for mutual insurance under Title II of the National Housing Act. In addition, it serves as a basis for the classification of mortgages in accordance with their quality as investments.

MORTGAGE ELIGIBILITY REQUIREMENTS

202. The National Housing Act prescribes certain eligibility requirements relating to mortgages submitted for insurance. Among these requirements are the following:

(a) The principal of the mortgage loan cannot exceed a definitely prescribed percentage of the appraised value of the mortgaged property.

(b) The mortgage loan must be completely amortized during its life by means of periodic payments on the principal.

(c) The mortgage loan may not have a maturity in excess of a definitely prescribed period of time.

(d) The periodic payments in connection with the mortgage loan may not be in excess of the mortgagors' reasonable ability to pay.

(e) The project with respect to which the mortgage is executed must be economically sound.

203. In addition to the specific eligibility provisions of the National Housing Act, the Federal Housing Administration establishes certain administrative rules, regulations, and standards which indicate the other minimum conditions of eligibility. These

embrace such matters as the types of communities in which the properties may be located, standards in connection with subdivisions, property standards affecting construction and layout, requirements with respect to cash equities, and other matters.

204. The National Housing Act also specifies that the mortgages accepted for insurance shall be grouped, for insurance purposes, according to their risk characteristics.

205. In determining both eligibility and risk characteristics two types of analyses are made by the Federal Housing Administration:

(1) Those made for the purpose of determining whether or not the submitted mortgage complies with the specific requirements of the Act, administrative rules and regulations, requirements, and standards;

(2) Those made to determine the quality of the mortgage in terms of risk.

206. The latter operation, which is the determination of economic soundness, requires a measurement of mortgage risk and is accomplished by means of mortgage risk rating. Each mortgage submitted is analyzed and assigned a percentage rating which expresses the relative amount of risk involved in it. To be economically sound, a mortgage must be based on good security and involve a borrower with characteristics and income which indicate a strong probability that the debt will be paid off in accordance with conditions of the transaction. Such a mortgage transaction is mutually advantageous to the borrower, the mortgagee, and the Federal Housing Administration. For practical purposes a mortgage is considered to be economically sound when the risk-rating process results in a final rating of 50% or more. If the percentage is less than 50%, the mortgage is not economically sound, and it is not eligible for insurance. Ineligible mortgages must be rejected, unless modifications are introduced which raise the rating to at least the 50% level.

NATURE OF MORTGAGE RISK

207. Mortgage risk is created whenever a mortgage is made. It lies in the future. The risk continues to exist throughout the entire life of the loan, although the degree of risk may change. It is fallacious to presume that mortgages fall into two classes, viz., those that are safe and those that are unsafe. Each and every mortgage investment is hazardous in some degree. However, different mortgages vary as to degree of risk.

208. Mortgage risk is an entity and can be treated as such. It is essential to so treat it in order to make it possible to express a measurement of risk in simple terms. As an entity, the over-

all degree of risk is composed of all the possibilities of trouble, expense, and loss in connection with the lending of mortgage funds. In other words, risk includes probability of:

- Difficulty in connection with collections
- Unusual expense in connection with collections
- Excessive servicing costs
- Foreclosure trouble
- Cost of foreclosure
- Delay in foreclosure
- Cost of rehabilitation
- Cost of carrying until sold
- Cost of resale
- Loss, if any, on resale

The over-all degree of risk is necessarily associated with the relative degrees to which there is likelihood of trouble and financial losses such as those listed above. The list indicates the elements which contribute to and affect mortgage risk. The factors comprising them are numerous, complex, and subject to an almost infinite number of possible combinations in practical cases.

209. Included among the elements which contribute to risk are the wide variety of neighborhood and location characteristics. Different types of cities create different kinds of residential neighborhoods. An almost infinite number of factors affect the probable future trends of neighborhoods and of the values of the homes in them. Some neighborhoods are more stable than others; some may be expected to have longer attractive lives than others. In listing factors which contribute to risk, it is necessary to take account of the great variety of architectural styles and designs. They have differing probabilities with respect to structural durability. They will be acceptable in future markets in widely differing degrees. Different methods of dwelling construction, different room arrangements, different sizes of houses, and different provisions for mechanical equipment introduce different degrees of mortgage risk.

210. A most important group of factors which affect mortgage risk is the one which embraces the relationship between the physical property and the neighborhood in which it is located. This relationship directly affects marketability of the property. Marketability is a basically important characteristic of good mortgage loan security. Different degrees of marketability represent different degrees of mortgage risk. There are varying degrees of conformity and non-conformity between neighborhoods and individual houses in them and this must be taken into account in listing factors which contribute to mortgage hazard.

211. Also included are all of those elements of risk associated with the earning power of the prospective borrower, his ability to pay, his attitude toward obligations, and his prospects for the future. In the final analysis the probability that a borrower will be able and willing to meet the mortgage obligation represents the first line of defense against trouble with the mortgage investment. Therefore, a poor borrower, when considered in relation to the mortgage transaction, requires a low rating of mortgage risk. At the same time, a good borrower cannot go very far toward replacing the necessity for sound physical security in the real estate itself.

212. All the individual elements which contribute to mortgage risk are presumed, in the final analysis, to combine and constitute the over-all risk involved in the insurance of the lending operation. In this sense, mortgage risk is considered to be an entity capable of measurement and expression as a single percentage.

ESSENTIALS IN THE MEASUREMENT OF RISK

213. The underwriting staff of the Federal Housing Administration utilizes the risk-rating procedure (1) to determine whether or not a mortgage is eligible for insurance, and (2) to rate the risk represented by the mortgage so that it may be grouped correctly for mutual insurance purposes. The risk-rating process accomplishes both objectives simultaneously.

214. These two operations require the use of a prescribed system which secures uniform decisions and conclusions when applied by different competent men. It is necessary to deal with many complex elements of risk. It is apparent that these may combine into an almost unlimited number of patterns. In order to secure uniformity and consistency in decisions, the risk-rating system prescribes that the elements of risk shall be treated by inter-related groups and then integrated into a final result according to a specified procedure. Adherence to the procedure is mandatory.

215. Risk-rating involves forecasting and prediction. It deals with probabilities. Mortgage risk lies in the future. It exists throughout the life of a loan. It relates to the possibility of default and loss. Risk-rating involves the determination of the chances and likelihood of default and loss. It seeks to foresee the probable and possible ways in which failures and trouble may occur. Risk-rating, therefore, is equivalent to predicting chances or likelihoods as seen at the time of analysis.

216. All the factors of risk in mortgage lending are not included in the list of features in the risk-rating forms. Some have been omitted deliberately; others are included under other designations. The ability of the mortgagee to service a loan wisely is an

example of an omission. This factor was omitted but not ignored, for the Federal Housing Administration will insure only those mortgages submitted by approved mortgagees, and to gain approval a mortgagee must establish that it is able to service mortgages properly. Other mortgage-risk factors of prime importance are future changes in conditions affecting world and domestic trade and changes in price levels. These factors are too complex to be measured except in very general terms and do not come within the scope of the risk-rating method except insofar as they are considered in valuations. At the same time, practically all other factors of risk in connection with which members of the underwriting organization can be expected to have significant opinions are embraced in the system.

217. It cannot be presumed that the relative importance given to the various factors has been determined with the ultimate highest degree of accuracy. However, reasonableness has been held as the objective, and it is anticipated that future research and experience will enable a greater degree of accuracy. Certain weights have been ascribed to the elements of risk considered in the risk-rating system. The nature of these weights should be thoroughly understood by the men who use the system. The weights ascribed were fixed in accordance with the opinions with respect to the relative importance of the various features as expressed by a large number of experienced mortgage men. It is to be hoped that they will lend themselves to more refined measurement as experience accumulates. At the present time the introduction of the weights into the system may be compared with the fire insurance rate system adopted many years ago and gradually corrected through the years as the relative importance of the risk factors became known. It is probable, however, that the weights used in the risk-rating system are sufficiently correct so that the results obtained by the use of the system are reasonable and justified.

218. The risk characteristics and economic soundness of a mortgage project cannot be determined on the basis of the loan-value ratio alone. This ratio merely expresses the relationship between the loan and the property value at the time of appraisal. It cannot throw any light on the possibility of default by the borrower nor can it indicate what relationship may exist between the loan and the property value at a future time. If the loan is to run for twenty years but the building which, in part, constitutes the mortgage security cannot be expected to sustain economic usefulness for that period of time, the loan project is not economically sound; and, though the loan-value ratio may be relatively low, a rating of the mortgage risk may indicate that it is ineligible for insurance. Again, the loan might not be economically sound if the probable rate of de-

cline in property value will be greater than the rate of amortization of the loan principal. Therefore, risk rating is significant because it makes possible the examination of mortgages by means other than the traditional one of determining the ratio between the principal amount of the mortgage and the valuation. This ratio is included in risk rating but is only a part of it.

219. Valuation analyses include consideration of a great number of factors. All of them are also mortgage-risk factors since conditions with regard to them affect value which, in turn, affects the index of risk indicated by the loan-value ratio in any case. Valuation requires the analysis of structural, functional, and esthetic qualities of buildings; the making of estimates of the cost of constructing or reproducing structures; the analysis of the quality and stability of environments in which individual properties are located, the extent to which desirable or undesirable relationships exist between individual properties and their surroundings, and numerous other matters. All these analyses are significant in mortgage risk rating as well as in valuation. However, the valuation of property is for the purpose of establishing an estimate of the price which a purchaser is warranted in paying while risk rating determines the quality of a mortgage investment. That is, the two processes have different objectives. For this reason it is important to draw a careful distinction between risk rating and valuation. Valuation is used by the Federal Housing Administration (1) to make certain that loans which exceed the maximum prescribed percentage of value are not accepted for insurance, and (2) to ascertain the loan-value ratio, which is one of the most heavily weighted features in the risk-rating system. In the first instance possible ineligibility is determined by valuation. In the second instance, valuation is used to assist in the determination of eligibility as dependent upon the presence of economic soundness in the mortgage project as revealed by risk rating.

220. The risk-rating system is designed to guide the judgment of underwriting staffs, to attain as great a degree of accuracy as is practicably obtainable, and to secure a maximum degree of controlled uniformity. The system requires the exercise of and dependence upon good judgment at every step in the procedure. It is in no sense of the word a formula which can be applied without the need for exercising intelligence and discrimination.

THE RISK-RATING PROCESS

221. The many individual factors which contribute to risk have been combined and grouped into a few significant relationships which are called "features" in the risk-rating system. These

features are, in turn, combined into larger groups described as "categories." There are twenty-eight features grouped into four categories, as follows:

The Property:

- Structural Soundness
- Resistance to Elements
- Resistance to Use
- Livability and Functional Plan
- Mechanical and Convenience Equipment
- Natural Light and Ventilation
- Architectural Attractiveness
- Adjustment for Nonconformity

The Location:

- Relative Economic Stability
- Protection from Adverse Influences
- Adequacy of Transportation
- Need for Housing
- Appeal
- Sufficiency of Utilities and Conveniences
- Adequacy of Civic, Social, and Commercial Centers
- Level of Taxes and Special Assessments
- Topography and Special Hazards

The Borrower:

- Reputation
- Attitude Toward Obligations
- Ability to Pay
- Prospects for Future
- Past Record

The Mortgage Pattern:

- Ratio of Loan to Value
- Ratio of Debt Service to Rental Value
- Ratio of Life of Mortgage to Economic Life of Building
- Lowest Category Rating
- Intermediate Category Rating
- Highest Category Rating

222. Certain individual elements of risk are incapable of intelligent rating. For example, if an attempt is made to rate a property according to the number of baths, no satisfactory clue to rating is possible unless the Valuator relates the number of baths to the requirements of the local market and the size of the house. However, when he is asked to rate a factor such as "Livability and Functional Plan", he is able to form a very definite conclusion. Such a relationship is ratable. The system does not rate the income of the borrower. Instead, it rates the ability of the borrower to pay the debt service.

That is, the judgment of the Mortgage Risk Examiner is applied to the relationship existing between the borrower's income and the debt service of the contemplated mortgage. The selected twenty-eight features or relationships are sufficiently different from each other so that an intelligent independent judgment in connection with any one of them can be formed. In the aggregate, the twenty-eight features embrace all the most important ratable elements of risk in the making of a mortgage loan on a dwelling property.

223. In the processing of an application for insurance, each feature is given a rating which varies according to the extent to which conditions regarding it contribute to the risk involved in the mortgage project. Each risk feature is either an individual risk factor or comprised of a number of correlated factors which can be analyzed separately but treated as a unit. For example, the feature "Sufficiency of Utilities and Conveniences" requires consideration of the extent and adequacy of the pattern of street improvements, public utilities, and municipal services. The resulting risk contributed by the presence, absence, or grades of quality of any of these things is reflected in the rating of the entire feature.

224. In each of the four categories of risk, the individual feature ratings when combined comprise the rating of the category. The Rating of Property is assigned by Architectural Inspectors and Valuers. The Rating of Location is assigned by Valuers. The Rating of Borrower is assigned by Mortgage Risk Examiners. The Rating of Mortgage Pattern is assigned by Chief Underwriters. All ratings are reviewed and finally established by Section Chiefs or Chief Underwriters in accordance with jurisdictions and responsibilities outlined elsewhere in this Manual.

225. The ratings ascribed to the first three categories are treated as three features in the Mortgage Pattern category and when combined with three other features in the Mortgage Pattern category result in the final risk-rating index of the mortgage. The final result is referred to as the Rating of Mortgage Pattern.

226. The forms used by the underwriting staff contain four rating grids, one for each of the four categories of risk. Each grid lists the several features in a column at the left-hand side. Opposite, on the right-hand side, are seven columns headed, respectively, "Reject", "1", "2", "3", "4", "5", and "Rating." The accompanying illustration of a grid indicates the typical arrangement.

227. In rating the individual risk features, the risk-rating system requires differentiation between six degrees of excellence or poorness of conditions. First, differentiation must be made between a condition that is so poor as to result in risk so great as to warrant rejection of the insurance application. Above this margin

below which a "Reject" rating of a feature is necessitated, differentiation must be made between conditions ranging from "poor but acceptable" on up the scale of excellence through "fair" and "good" to "excellent." These designations are presented here simply to indicate that the system recognizes that risk measurements are relative. The terms themselves are not used on the forms because they would convey implications beyond the simple idea of rating as suggested by the use of the figures "1", "2", "3", "4", and "5". Each feature is rated by placing an X mark opposite it in the grid. Every feature must be rated but not more than one such mark is made for any one feature. A feature rating in the "Reject" column indicates that conditions relating to it are such that insurance of the mortgage should be refused. A "1" column rating would indicate a very poor condition just above the reject margin. A "5" column rating would indicate that unusually excellent conditions pertain to the feature. Intermediate ratings would cover the range in between.

228. A small numeral or "weight" appears in each rating column after each feature. These are the weights assigned for differ-

Rating of Borrower

Feature		REJECT	1	2	3	4	5	RATING
Creditworthiness	Reputation		5	15	15	25	25	
	Attitude Toward Obligations		4	8	12	16	20	
	Ability to pay		6	12	18	24	30	
	Future Prospects		3	6	9	12	15	
	Past Record		2	4	6	8	10	
TOTAL RATING OF BORROWER								%

ent degrees of risk. When all X marks have been entered on the grid, the indicated weights are copied in the right-hand column, headed "Rating." The sum of the weights carried over and placed in the last column is entered at the lower right-hand corner of the grid and becomes the total rating ascribed to the entire category. The only exception is found in the Property grid. In it one feature weight is deducted instead of added in securing the final Rating of Property.

229. The final rating for the mortgage is obtained by recording ratings upon a grid known as "Rating of Mortgage Pattern." On this grid there are several features involving the relationships between certain features of the mortgage instrument, such as the amount of the loan and the mortgage term in years, and matters pertaining to the property, such as its estimated value and the estimated remaining economic life of the building. Also listed as features on this grid are the ratings of the several other risk categories. Ratings on this grid are made for these last named features according to the amount of the category ratings which have been previously

determined. The sum of the ratings made on the Rating of Mortgage Pattern grid is the final index of the relative risk involved in the mortgage project under analysis.

230. If the sum of the individual feature ratings in any category is less than 50%, this indicates a degree of risk too great to permit insurance of the mortgage. A large number of low feature ratings will result in rejection of the application for insurance because the resulting category rating will fall below the 50% margin of acceptability. The use of the percentages to describe degrees of risk is apt to be misleading unless it is recognized that there is no implication that the 50% rating which constitutes the lower limit of eligibility in a category represents "one-half" of the amount of risk indicated when a category is rated at 100%. The range from 50% to 100% is intended to represent different degrees of risk above the lower limit of acceptability.

231. The risk-rating system is so devised that after the quality of the real estate security and the characteristics of the borrower have been determined and found to be such that no undue mortgage risk is created on their account, then by means of the system it can be determined what is the maximum loan principal and maximum loan term in years which would represent the margin beyond which economic soundness and, therefore, insurability would cease to exist. Thus, after the ratings of Property, Location, and Borrower have been made in a case, the Chief Underwriter in rating the Mortgage Pattern can determine whether or not the loan described in the application is insurable, and if not insurable because the loan is too large, or the term too long, or both, he can determine how large a loan would be insurable and for what maximum term the loan could be made.

232. Under the risk-rating system the determination of economic soundness and eligibility of mortgages proceeds in four steps as follows:

(1) Determination as to whether mortgages submitted for insurance are eligible or ineligible for further consideration, as indicated by the application of eligibility tests based on certain provisions in the National Housing Act, in the official administrative rules, and in property standards.

(2) Determination as to whether mortgages accepted for further consideration are insurable or non-insurable, by rating individual risk features and ascertaining if any individual feature receives a "Reject" rating.

(3) Determination as to whether mortgages receiving no individual feature reject ratings are insurable or non-insurable, by rating

risk categories and ascertaining if any category receives a rating of less than 50%.

(4) Final determination of the degree of economic soundness of mortgages receiving no individual feature reject ratings and no category ratings under 50%, by means of a rating based on all feature and category ratings.

233. It may be pointed out that the relative importance of the several categories of risk differs from case to case. For example, in a case in which either the Property, the Location, or the Borrower Category receives a very low rating and the other two categories receive relatively high ratings, the relative importance of the one low-rated category in the over-all degree of risk is substantially greater than in a case in which all three categories are rated alike. For this reason the fourth category, namely, the Mortgage Pattern, includes a device by means of which to take account of this relationship. The category having the lowest rating is more heavily weighted than the other two on the grid of the Mortgage Pattern.

234. The Mortgage Pattern is also so arranged that it is possible to determine counter-proposals on a uniformly fair basis. For illustration, consider a case in which the loan is too hazardous to be acceptable for insurance because the amount of the loan is too great. Analysis of the Mortgage Pattern, after the three other categories have been rated, makes it possible to determine how much of a reduction in the amount of the loan is necessary to make it eligible for insurance.

235. Detailed instructions in connection with the rating of the twenty-eight features and four categories are presented in Part II of this Manual.

CONTROL OF RISK MEASUREMENT

236. In the use of the risk-rating system, underwriting staffs are instructed to consider the features as a check-list. As such it will have the effect of preventing them from omitting from consideration matters of vital importance in the determination of risk. Furthermore, they are expected to rely heavily upon their personal judgment in establishing the ratings. It is specifically suggested that there is no reason why they cannot form an over-all opinion with respect to the proper rating of an entire category and check the rating by a detailed analysis of the features. This device will serve to correct any tendency to treat the features and the system as a fetish, and will tend to orient and control judgment in connection with ratings. The minutiae in the system cannot be significant in the absence of the application of broad judgments. On the other hand, broad gen-

eral judgments are dangerous in that they may fail to give sufficient consideration to important details. Both approaches are necessary to a correct rating.

237. The Underwriting Section of the Mortgage Insurance Division, Washington, D. C., prepares and distributes illustrations of correctly rated cases for the guidance of the Underwriting Staffs in the Insuring Offices. These illustrations include descriptions of actual cases and outline the specific considerations which resulted in the risk ratings ascribed. It is expected that members of the Underwriting Staffs will consult the illustrations and make comparisons between them and current cases to seek analogies and cognate situations. Such practice serves to bring a high degree of consistency into the ratings ascribed throughout the entire country and leads to a more correct segregation of mortgages according to risk characteristics in the mutual mortgage insurance groups.

238. Risk-rating illustrations are not regulatory. They represent aids to judgment only. Underwriting staff members are instructed to follow the illustrations insofar as feasible, but they are not accountable for discrepancies between the illustrations and the ratings which they ascribe in particular cases. Where the discrepancies are unwarrantedly great, Underwriting staff members may be held accountable on the basis of incompetence or lack of integrity, but in such instances the variations between illustrations and actual cases may not be presented as the sole evidence.

239. Risk-rating illustrations are sent to Insuring Offices by Washington headquarters and remain the property of the Federal Housing Administration. Chief Underwriters are responsible for their proper use and members of Underwriting Staffs are cautioned to use risk-rating illustrations in a discreet manner.

240. Risk measurements are also controlled through the provisions for review, described in Part I, Section 1. Every effort shall be made by Section Chiefs and Chief Underwriters to bring consistency into the ratings ascribed to mortgages.

PART I

SECTION 3

METHODS OF DWELLING VALUATION

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PART I
SECTION 3
METHODS OF DWELLING VALUATION

VALUATION PRINCIPLES

301. Purpose of Valuation. Because the National Housing Act does not permit the insuring of any mortgage which involves a principal obligation exceeding a definitely prescribed percentage of the value of the mortgaged property, it is necessary that the Federal Housing Administration secure appraisals of such properties by its own Valuers so as to determine that the mortgage to be insured meets this eligibility requirement. Furthermore, the value must be ascertained because the ratio of the loan to the value is one of the considerations in the risk-rating process.

302 (1). The Character of Value. The word "value" refers to the ability of useful things to produce benefits for or to meet the needs or satisfy the desires of human beings. The meeting of such needs or the satisfying of such desires requires the occurrence of events which always lie in the future, never in the past; for when a need is met or a desire is satisfied, it ceases to exist. Value does not exist unless future benefits are in prospect. Its measure is the present worth of benefits which will be realized only upon the occurrence of future events.

302 (2). Value, as applied to real estate, may be interpreted as meaning the price which a well-informed buyer, acting intelligently, voluntarily, and without necessity, would be justified or warranted in paying for the property appraised, and a well-informed seller of the property acting intelligently, voluntarily, and without necessity, would be warranted in accepting.

302 (3). The buyer in any case is not warranted in paying more than it would cost him to reproduce the property just as it stands and environed as it is, nor is he warranted in paying any more than it would cost him to purchase other properties affording equal advantages and subject to equal disadvantages. Another statement of this same principle is this: the buyer is not warranted in paying

any more, and seller is not warranted in accepting any less, than the price at which other properties having equal facilities, equal desirability, and equal utility, and subject to the same risk of loss or possibility of enhancement of desirability or value in the future, can be purchased from well-informed intelligently acting owners who are free to act of their own volition and desire.

302 (4). A careful distinction must be made between cost and value. The two result from different economic phenomena. Value depends on the production of future benefits, while cost is not necessarily, and frequently is not, a measure of such benefits.

303 (1). Axioms of Valuation. There are certain basic valuation principles which are axiomatic, that is, self-evident, and fundamentally true. For example, it is evident that:

- (1) Valuation presupposes the existence of a buyer.
- (2) Valuation presupposes the existence of a seller.
- (3) Valuation presupposes a sale in which the buyer is well-informed, and acts intelligently, voluntarily, and without necessity.
- (4) Valuation presupposes a sale in which the seller is well-informed, and acts intelligently, voluntarily, and without necessity.
- (5) Valuation endeavors to estimate prices which are fair and warranted, that is, prices which represent the worth at the time of appraisal of the future benefits which will arise from ownership, rather than prices which can be obtained in the market.
- (6) Valuation recognizes the importance and usefulness of sales prices provided it is determined whether or not such sales prices were fair and warranted; and provided the motives, intelligence, and wisdom of the parties to the sales, as well as other conditions surrounding them and influencing the determination of the sales prices, are ascertained and weighed.
- (7) Valuation presupposes and recognizes that intelligent buyers and sellers consider the utility of real property.
- (8) Valuation recognizes that replacement cost at the time of appraisal sets one approximate upper limit of possible value.
- (9) Valuation recognizes that value may be much less than replacement cost.
- (10) Valuation recognizes that the prices at which competing properties are available for purchase set or tend to set the approximate upper limit of possible value.
- (11) Valuation presupposes and recognizes that well-informed buyers and sellers are commonly aware of the existence of competing properties and compare their respective asking prices, desirability, advantages, and disadvantages, and future prospects.
- (12) Valuation presupposes and recognizes that well-informed buyers and sellers compare and contrast the advantages and disadvantages of renting with those involved in ownership.

303 (2). There is no virtue in under-valuation of properties, and great risk of loss is introduced by over-valuation. Federal Housing Administration Valuers must avoid both under-valuation and over-valuation. Their attention is directed to the fact that speculative elements of value cannot be considered as enhancing the security of residential loans; rather do such elements enhance the risk of loss to mortgagees who permit them to creep into the valuations of properties upon which they make loans. Valuers shall not report valuations that cannot be justified by existing conditions which they find and of which they are aware, and by reasonable and plausible estimates with regard to the effects of conditions which may reasonably be expected to prevail in the near future subsequent to the date of valuation.

303 (3). The axioms of valuation indicate that correct residential valuation procedure must include consideration of the following matters:

- (1) Physical characteristics of the property.
- (2) Existing and prospective enviroing influences—adjacent, nearby, city-wide, regional, and national—which affect, or may or will affect, the utility or desirability of the property.
- (3) Replacement cost in new condition of the improvements, their physical condition when appraised, and their probable remaining economic life.
- (4) Sales and listing prices, and equally as important, the conditions surrounding them.
- (5) Motives, viewpoints, and reactions of buyers and sellers.
- (6) Rental values.
- (7) Tax, assessment, and maintenance burdens incident to ownership or avoided by “tenantship.”
- (8) Comparisons of competing residential properties and their sales or asking prices to establish relative desirability and utility, and the consistency of the valuation reported.

USE OF DATA IN DWELLING VALUATION

304 (1). Valuation involves the gathering and analysis of data which are great both in quantity and variety. Valuations will be more or less accurate according to the adequacy and reliability of the data, and the care exercised in the use of the data.

304 (2). The investigations which the Valuator is required to make, and the data he must gather and consider for valuation purposes, are identical in many respects with those which must be made or used in determining mortgage risk. Special attention must be given to all data relating to matters which will affect the value of the property and the security of the mortgage loan during

the mortgage period. The value reported by the Valuator is as of a certain designated date and may not prevail at later times because values are not permanently fixed but are subject to fluctuation in response to changing economic, social, and governmental conditions, and also to neighborhood changes, city growth, and many other influences. The mortgage on the appraised property will exist, barring foreclosure, for a number of years, possibly twenty. Therefore, the matter of the degree of stability or permanence of the existing desirability or utility of the appraised property, and the possibility or probability of the enhancing or lessening of that desirability or utility, is of primary and fundamental importance.

304 (3). The reasons for this are obvious but worthy of statement. The mortgage loan is repayable in monthly installments over a period of years. The mortgage debt, therefore, continues for a period of years, and the need for security for the debt likewise continues. The security for a mortgage loan is the ability and willingness of the borrower to repay the loan, and the right of the lender to attempt recovery of the amount of the debt by foreclosure and sale of the mortgaged property. An additional element of security is provided in the case of a mortgage insured by the Federal Housing Administration. This insurance safeguards the mortgagee against loss in the event the borrower defaults in his mortgage contract and the lender is forced to foreclose and take possession of the property. If such foreclosure takes place, the mortgagee, upon conveying title to the property to the Federal Housing Administrator, becomes entitled to receive the benefits of the insurance provided under the National Housing Act. The Administrator thereby becomes placed in the position of the mortgagee, and one step which he may take in order to avoid loss is to sell the property which has been conveyed to him. If such sale can be made at a price equal to the amount which represents the liability of the Federal Housing Administration which was created when the insurance contract was entered into, plus any expenses incurred by the Administrator in handling, dealing with, and disposing of the property involved, then no loss will be experienced. Therefore, anything which lessens the salability or value of the mortgaged property or the property owner's desire and ability to retain title to his home, lessens the security behind the mortgage and increases the risk of loss of capital by the lender. It follows that mortgage security is great or small according to the degree of stability or permanence of the desirable and favorable influences which result in and sustain value and the borrower's ability and willingness to pay. Mortgage security is also affected by the degree to which unfavorable influences, which act in the opposite direction, are effectively minimized or excluded. These factors apply to the entire period during which the mortgage is in existence.

305 (1). Residential District Changes. A superficial examination of residential areas in any American city reveals the fact that, with practically no exception, such districts decline in desirability with the passage of substantial periods of time. It is possible that the rate of such declines will generally be slower in the future than it has been in the past because the rate of population growth in the United States is, and has been, on the decline. This factor (population growth) has been one of the main causes of the loss of desirability which residential districts have experienced. It is obvious that as new population comes into a given region, new residential areas spring up within communities that have already been established. These newer districts present a strong appeal as places of residence, and people living in the older districts experience the urge to sell or rent their old homes and acquire new ones in the newly developing residential areas. In this manner the older districts gradually lose the aspects of owner-occupied communities and take on the aspects of tenant-occupied districts.

305 (2). The older district still remains desirable, but only to families whose social status or standards of living are lower than those of the families which have vacated the district. This process of change in occupancy by families of successively lower standards of living is accompanied by declines in desirability and value. The value decline may be arrested in some cases where the utility of the sites in a particular district undergoes a transition to more productive uses. However, the district almost inevitably declines in desirability, and usually in value as well, after it is once established and before any such transition to higher uses takes place. The rate of decline varies in different districts according to the rapidity with which new forces destructive of residential values operate within each district and according to the intensity with which these forces act. Many districts enjoy sustained value levels for long periods of time. In fact, most of them decline very slowly and the lapse of a number of years is necessary before the fact that a decline is taking place becomes obvious.

305 (3). The phenomenon to which attention is here directed also results from other causes than population growth. The development of modern transportation systems, extensions of and changes in the routes of transportation lines within individual communities, and the making available of automobiles to families of comparatively low purchasing power have promoted the development of new residential districts and greatly speeded the rate of declines in the desirability and value of the established ones. The encroachment of nonconforming uses in residential sections (such as the introduction of commercial, manufacturing, and industrial enter-

prises), and the physical deterioration of the buildings in these sections are other obvious and common causes.

305 (4). It is very important that the Federal Housing Administration Valuator make a study of the causes of declines in the desirability and utility of residential districts. Otherwise he will not develop the greatest accuracy in his valuation opinions and in the ratings which he must make so that mortgage risk may be estimated.

306 (1). It is not possible to totally exclude or prevent the growth or operation of value-destroying influences, for it is practically inevitable that all residential property will decline in desirability or utility, and therefore in value, with the passage of substantial periods of time. This risk is known and acknowledged. If the decline is slow, the resulting risk can be offset in mortgage transactions by requiring periodic amortization payments on the loan. The important thing, however, is to discover if, during the mortgage loan period, the property involved will be subject to unusual, extraordinary, and excessive loss of desirability, such as would occur if the district experienced a transition from fine residential use to industrial use, or from occupancy by people with annual family incomes of between \$2,400 and \$3,000 to people with family incomes not exceeding \$1,200 per year.

306 (2). It is, therefore, especially important to search diligently for the presence of any adverse influences which lessen or destroy desirability or utility, and to discover the absence of safeguards which are intended to protect against declines in value or desirability. In such categories are included the following:

(a) A declining population in the neighborhood or community or region;

(b) A decline, or danger of decline, of the desirability of the neighborhood through the influx of people of lower living standards;

(c) A decline, or danger of decline, of the desirability of the neighborhood as a place of residence through the introduction into it of commercial, industrial, or manufacturing enterprises, or nuisances or inharmonious uses of any kind;

(d) Lack of appropriate and adequate deed restrictions and effective provisions for the enforcement thereof;

(e) Lack of appropriate and adequate zoning regulations.

307 (1). Use of Sales Prices. Included in data the Valuator must obtain is information regarding sales transactions involving residences similar to those which he must appraise. In the past, and to a large extent still, great importance has been attached to sales prices. They are frequently not as important as has been believed. This is because the price in a given real estate sale results

from the points of view and the necessities of the particular parties to the transaction, either or both of whom may have been poorly informed, or motivated by unusual or compelling circumstances. Before the sales price in any case can be of any substantial use, the Valuator must obtain certain information regarding the conditions and circumstances which existed when the sale was made. Such information includes:

- (a) The actuating motives of buyer and seller;
- (b) The relative intelligence of buyer and seller in negotiating the sale;
- (c) The relative skill in bargaining of the buyer and seller;
- (d) The fairness of the price paid in view of prices asked for available properties affording equal advantages and subject to equal possibilities of enhancement or loss of value;
- (e) The date of the sale and the general and specific environing and economic conditions which then existed and whether or not such conditions have changed since that date.

307 (2). It must be noted, too, that sales prices are of varying usefulness and importance according to the rapidity with which price levels of real property may be changing. In an unusually active sales market, such as exists in "boom" times, accompanied by rapidly rising prices, the stimulus given to prices by strongly competing buyers becomes such that fairness, as regards the prices paid, disappears. Stability and permanence are nonexistent at such times, as well as in times of rapidly declining prices, and the prices then obtained in sales are almost worthless as useful information in estimating value, though their frequency, coupled with pyramiding prices, constitutes a warning of the imminence of a reversal of the price trend. Only in times of comparative stability of the price structure are sales prices of substantial worth in valuation work. Thus after a price decline has set in, developed, and finally spent its force, as at the end of a period of economic distress, and voluntary sales transactions begin to occur, it is probable that the sales prices in such transactions will be equal to or closely approximate warranted prices, i. e., value, provided the parties are well-informed and act intelligently. A Valuator will generally over-value property unless he recognizes the changing relationships between sales prices and value. He should understand that in certain periods sales prices may generally exceed value, while during other periods the prices may be below value. Only in times of comparative stability of the general economic structure, and during periods when there is a fairly well-balanced relation between the factors of supply and demand, will sales prices approximate or actually equal value. If a Valuator does not understand these considerations he will appraise incorrectly. As sales prices increase

in a rising market, his value estimates will accompany the prices in their climb to a peak. Before they reach their peak, however, they may have outstripped value. Later when a break occurs and prices start down, his point of view will cause him to maintain his value estimates at higher levels, although the value levels are below the sales prices at the peak and stay below them in the early stages of the decline. In the later stages they will become equal to the prices and then, for a time, exceed them. It is apparent that Valuers must understand sales-price and value-relationships under varying general economic conditions and under varying directions or trends of price changes.

307 (3). As a general observation, it may be said that the rate of change of real estate prices will indicate the relative usefulness and importance of sales prices; the greater the rate of price change, the lesser the significance of sales prices, and vice versa.

308. Often it is said that prices at foreclosure or forced sales are not fair and therefore of no use. This may or may not be true. In times of declining price levels, a forced sale might be made quickly for an amount which would be higher than that obtainable if a reasonable time elapsed during which efforts to obtain a higher price were made. Such a forced sales price could easily be as much as (or even more than) was warranted at the time. In periods of comparative stability, or of advancing price levels, it is probable that forced sales prices are unfair and of little worth as useful data in valuation work.

309 (1). Sales prices are of importance when they can be analyzed and made to reveal points of view regarding value held by substantial numbers of persons. In so far as they represent the value estimates of isolated individuals they are of little worth as part of the data needed in solving appraisal problems. This places emphasis where it belongs, namely, on the "why" and "wherefore" of the particular prices paid in specific transactions, rather than upon the prices themselves.

309 (2). Unless the sales transactions regarding which information is gathered occurred close to the time at which the Valuator makes his appraisal, correction because of changed environment and economic conditions may be necessitated.

310 (1). When sales prices are found to be fair and are used by the Valuator, it is of extreme importance that careful comparison of the physical characteristics of the property being appraised and the one that was sold be made; and that a similar comparison of environmental influences and their probable future effects on the desirability and value of each property also be made. The one property must then be intelligently and correctly rated in

terms of its relative desirability as compared to the other. Then the sales price of the one can be modified accordingly and regarded as a tentative index of the value of the other property. For example, a single family residence was sold for \$10,000. Investigation convinces the appraiser that the sale price was fair and reasonable. A rating of 100% is assigned this property for the purpose of comparing it with a property being appraised. The two properties are compared. The Valuator notes similarities and differences with respect to the sizes of the houses, excellence of construction and design, floor plan, facilities, equipment, interior finish, probable remaining economic lives, relative stability and permanence of the desirability of their respective environments, respective fair monthly rental values, tax burdens, cost of maintenance, and other factors. The property being appraised is finally rated 80% and the sales price (\$10,000) is modified by multiplying it by 80%. The resulting figure of \$8,000 is tentatively assigned as the value of the second property.

310 (2). It is important to note that only properties of substantially similar and equal desirability and general characteristics can properly be compared where the purpose is to resolve the fair value of one property into a figure indicative of the fair value of another. Thus it would be wrong practice to compare a property which sold for and was fairly worth \$15,000 with a property having a residential structure with one half the number of rooms of the first one and considered desirable only by people of substantially lower purchasing power than that of those who could afford to buy and own a \$15,000 home.

311. Many of the statements made herein with regard to sales prices also apply to consideration of asking or listing prices for sales purposes. The latter are useful when comparisons are made between listed properties and a property being appraised. Ratings of the listed properties are made in terms of the desirability and utility of the property to be appraised, and the listing prices are modified accordingly so as to determine a fair listing price for the property involved. This is done as in the case of the use of sales prices. Listing prices generally may be regarded as fixing the maximum value for properties of equal desirability. They do not, however, of themselves, indicate fair values, and they must not be regarded or used as if they did do so.

312 (1). **Use of Rental Data.** Asking prices for rental purposes are somewhat different from such prices for purposes of sale. Rental prices asked usually conform very closely (frequently they conform completely) to fair rental prices, and to rental prices actually paid or readily obtainable. Monthly rental values bear a relationship to capital or sales values—a very close relationship,

except, perhaps, in the case of high-priced homes. Because of this fact they are useful and important in appraisal work. It is apparent that rental value will vary somewhat according to the value variations of property. Properties of greater value will have higher rental values than those of lesser worth, other things being equal. As a property ages and declines in value, its rental value will decline also. It is important to note, however, that while several properties may have the same monthly rental value, their capital values may be different, because of such conditions as differences in the remaining economic lives of the structures, and differences in tax burdens, maintenance costs, and in the stability of the neighborhoods. It is essential, therefore, that rental data be used only in conjunction with other important data, for the relationship between capital value and monthly rental value is a varying one and can be determined in any case only by ascertaining other matters affecting utility and desirability.

312 (2). Inasmuch as a vast number of residential properties now in existence are of a type which are commonly rented out to tenants and, to a large extent, purchased or owned for such rental purposes, the determination of the fair monthly rental value of the property being appraised affords a very important approach to the solution of the appraisal problem. If the appraiser fully understands that there is usually a very close relationship between monthly rental value and capital value, and ascertains this relationship in individual cases, he will find that the monthly rental value provides a very reliable index to aid in guiding his judgment to his final conclusion.

312 (3). In determining fair monthly rental value, rentals paid or asked for like accommodations equally well located must be ascertained. Rentals for inferior or superior accommodations are also useful, for, by comparing and rating the various rental units, actual rentals paid can be modified and used in estimating fair rental value of vacant or owner-occupied premises.

313 (1). There is always a rental market. Sales prices of real estate have been subject to violent changes as have all other prices in times past. When merchandise prices decline, merchants clear their shelves by taking the best prices they can get. They then buy new goods at lower prices and are able to continue in business. However, when realty prices fall, owners withdraw property from sale or else continue to ask prices that will enable them to recover their costs. The result is that real estate sales (except under compelling circumstances) cease to occur and a "frozen" market comes into being. In a reasonably active real estate market, the public's estimate as to value is ascertainable and is useful in valuation work. When the market freezes and

property sales disappear due to declines in all prices, then it becomes more difficult to estimate fair value, because people then are not expressing their value estimates in purchases of properties. However, there is always a residential rental market; and since rent-paying ability determines rental levels, and since this ability usually changes shortly after or almost simultaneously with declines or rises in value levels, but is little influenced by speculation which creates artificially high and unsustainable price levels, therefore, residential rental levels are nearly always excellent approaches to the determination of residential property values and the determination of the extent of changes in such values.

313 (2). Again, in practically all residential neighborhoods when the "newness" of the district has disappeared, it is common to find many homes vacated by their owners and rented to tenants. Homes in such neighborhoods gradually acquire the characteristics of investments, that is, they are no longer bought or sold primarily as "homes" but as investments, and the net rental returns they will produce become of primary importance in estimating their values. It is apparent that the "value-rent" relationship becomes more and more significant as the life of a residential structure progresses. It is of the utmost importance that Valuers in making value estimates relating to dwellings which are not new or in an early life stage, base these in large part upon the net income, not the gross income, reasonably to be expected from these properties. Estimates which rely heavily or solely upon estimates of cost of replacement in new condition less arbitrarily determined deductions for accrued depreciation (such as by use of the so-called "straight-line" method) are likely to be very inaccurate, for they ignore the value-rent relationship as well as other important data.

314 (1). Use of Replacement Costs. Valuation procedure consists of first estimating how high the value in a given case could possibly be under ideal conditions if the building improvements involved were new—that is, fixing a valuation "ceiling"—and then narrowing the zone between zero and this ultimate upper maximum as much as possible by analyzing and interpreting pertinent data. In other words, the appraisal process involves confining the judgment as to value within brackets and then narrowing the brackets as much as is possible. The topmost upper bracket or limit of possible value is the cost of replacement of the property in a given case, assuming the building improvements to be in new condition. The first step of the Valuator in analyzing and interpreting data is to fix this uppermost bracket of possible value. Under the direction of the Chief Architectural Supervisor estimates of the cost of replacement of building improvements in new condition are made by the Valuator or are

furnished to him by an Architectural Inspector. These estimates relating to building improvements are then utilized by the Valuator to make an estimate of the cost of replacement of the entire property—land and buildings and all rights arising from ownership—in new condition. This latter estimate becomes the topmost upper bracket of possible value. The word “possible” is chosen deliberately. It signifies that while value may possibly be equal to this uppermost limit, it is also possible that it may be any amount below this limit. This distinction is of the utmost importance and Federal Housing Administration Valuers must understand the reasons for the distinction. Comparatively few people realize that cost may substantially exceed value. Value depends entirely upon usefulness—utility—not upon the costs of construction or replacement. It is true that value tends to conform to cost but this is not to imply that it is always equivalent to cost. No value would result if an ocean liner were to be constructed at an inland point from which it could not be moved because no navigable stream would accommodate its draft. Similarly, the expenditure of money for a dwelling structure does not necessarily create value equal to the cost. The purpose of the cost estimates made or used by Valuers must be fully comprehended. These estimates are not intended as measures of value, and are not to be so regarded. They merely indicate the possibility that value to an equivalent amount may exist. It is the Valuator's task to decide whether or not the possibility is an actuality in any case. His reports must show that he is distinguishing between cost and value.

314 (2). Another reason why cost of construction may be in excess of value at a given time is that under some circumstances a reduction in cost may be in prospect, and if construction costs decline, value will also decline if it was equal to cost in the first place. Thus, assume that a new method of constructing buildings is invented. At first the costs of using it are great due, in part, to high production costs attendant upon the construction of newly devised machinery required to manufacture special materials or fabricate special units used in the new construction method; due, also, to high promotional costs attendant upon the introductions of a new method to the public and the creating of a public demand for its use; and due to high labor costs when the method is being introduced because of lack of skill of building craftsmen in dealing with unorthodox materials or utilizing construction devices or methods not familiar to them. Obviously when the pioneering stage has been passed, production costs will be decreased through mass production, and labor costs will decline through increased skill of the laborers. It is plain that the costs involved in the beginning must exceed value

because of the prospect of declines in costs if for no other reason. This, perhaps, would not be true if a dwelling were a short-lived commodity like certain articles of wearing apparel which may be much more valuable than their cost when they are new and represent the first-appearing of a new style. The satisfaction of having been first to introduce the style compensates the wearer for the initial excessive cost, and though he quickly discards the article he feels he has received value for his money. But dwellings involve substantially large expenditures and they must last for a long time. Therefore if a decline in construction cost is in prospect, the intelligent buyer will consider the value to be, at most, no higher than the point to which construction costs will decline, unless he may believe that some benefit will accrue to him by being first to own a house of a new style. It is more than likely, however, that he would not believe that any such benefit would accrue from style alone; it would have to come from superior living qualities and lesser operating and maintenance costs, combined with lower construction costs than for houses of usual type. It follows that, in cases involving new construction methods or materials, replacement costs may be of relatively little significance in valuation analyses, while the costs of replacement of building improvements of the same design, size, and layout, but built with orthodox materials and by traditional methods, are likely to be of greater significance. In such cases, the latter costs rather than the former, will tend to fix the upper limit of possible value insofar as the building improvements are concerned.

314 (3). In the previous paragraph reference was made to the "cost of replacement of a property." Such an estimate should properly include all items of expense to which an individual would be subjected if he were to undertake to replace or reproduce the improvements involved in any case upon a site of equal desirability or value. These items would include not only cost of land and buildings but additional items as indicated in the following list:

- (1) Price at which an equally desirable site can be purchased.
- (2) Expenses incidental to the acquisition of the site.
- (3) Cost of preparing the site for improvement, including costs of grading, terracing, retaining walls, and landscaping.
- (4) The cost (to the owner) of construction of the improvements.
- (5) Other items of expense during the construction period, such as:
 - (a) Loss of interest upon invested capital.

- (b) Pro rata cost of taxes on land during construction period.
- (c) Pro rata cost of taxes on improvements.
- (d) Pro rata cost of hazard insurance.
- (6) Allowances for:
 - (a) Cost of financing (if any).
 - (b) Cost of mortgage insurance (if any).

From the foregoing, it is apparent that the Valuator's estimate of the replacement cost of a given "property" in new condition would exceed the sum of the replacement cost of the building improvements and the land, as such. This, at the same time, emphasizes the distinction between "land and buildings", and "property", for the land and buildings are simply material things while the "property" which an individual purchaser seeks and buys is, in reality, the rights and benefits arising from ownership. These rights and benefits sometimes are equivalent in value to the costs to which a purchaser would be subjected and the allowances which it would be proper to make if he were to attempt to reproduce or replace the physical property which he contemplates buying or which is the subject of appraisal. It is the replacement cost of the "property" rather than merely of land and buildings which sets the approximate upper limit of possible value.

314 (4). An illustration of an estimate of the cost of replacement of a property in new condition is given below.

*Estimated Cost of Replacement of Building
Improvements in New Condition*

Main Building.....	\$6, 447
Garage.....	412
Other Improvements.....	205
Total.....	\$7, 064

Cost of Replacement of Property in New Condition

Building improvements (as above).....	\$7, 064	\$7, 064
Price at which an equally desirable site can be purchased.....	1, 350	1, 350
Cost of grading, terracing, retaining walls, and landscaping.....	320	320
Miscellaneous:		
Expenses incidental to acquisition of site, such as cost of drawing conveyancing instruments, monetary fees, recording fees.....	15	\$15

*(Cost of Replacement of Property in New Condition—Continued)**(Miscellaneous—Continued)*

Survey of site.....	\$25	\$25
Fire, wind-storm, and other hazard insurance during 4 mos. construction period...	10	10
Cost of financing and mortgage insurance...	100	100
Pro rata portion of tax on land during construction period of 4 mos. ($\$30 \times 4/12$)...	10	10
Pro rata portion of tax on improvements during construction period. (No tax)...	0	0
Subtotal (Total cash investment).....	\$8,894	
Interest on invested capital at rate of 6% per annum for construction period of 4 mos. ($\$8,894 \times 6\% \times 4/12$).....		178
Subtotal (Miscellaneous items).....	\$338	338
<i>Total Estimated Cost of Replacement of Property in New Condition</i>		\$9,072

314 (5). Some of the items or allowances in the cost estimate may not create equivalent value in a particular case but may, on the other hand, lessen the possible value. For example, the financing in a given case may be unwise, and not only would the act of incurring the cost of financing fail to create equivalent value, but the completed property would be found less valuable than would be the case if it were not encumbered with the mortgage financing which the owner had negotiated. Again, the structure erected might be inappropriate to the neighborhood and the completed property would be less valuable than its cost. This again calls attention to the fact that estimates of replacement cost are of little significance in valuation work except as maxima. An owner might erect a house which would cost him 50 percent more than the houses which generally characterize the neighborhood; but the value might be less than that of other houses nearby providing the same facilities. In such a case a condition of "over-improvement" would exist, that is, the cost of the improvement would be substantially over and above that which the neighborhood standards would warrant. If the house was not up to neighborhood standards and cost substantially less than typical residences nearby, "under-improvement" would exist; or if the house were erected on a business site it would be a "misplaced" improvement. In all such cases, the value created by the erection of the structures would be less than their costs of reproduction, and the cost estimates would not be measures of the values that could properly

be attributed to the improvements as fractions of the "land-and-improvements" unit. The expenditure of money for retaining walls and terracing and landscaping may also prove wasteful since excessive expenditures on account of such items may create value to the extent of but a fraction of their cost. This is a matter which the Valuator must clearly understand.

314 (6). Notwithstanding the fact that there are three types of items in the estimate of replacement cost of property, namely, (1) cost of building improvements, (2) land price, and (3) miscellaneous costs, when it comes to the distribution of a total value estimate between the elements of which the property is comprised, the entire amount can be divided between only two items—(1) land and (2) buildings. For example, assume that in the illustration above the value of the property equals the cost estimate of approximately \$9,000. The cost estimate shows building cost \$7,064, lot price \$1,350, and all other items \$658. Since it is assumed that the value equals the cost, these three amounts must become reflected in land value or building value or both. A proper distribution in this case might be \$1,600 land value and \$7,400 building value. In the great majority of cases where cost and value are equal—and, obviously, this can only occur in the case of new buildings, and not even then in some cases—the miscellaneous items become elements of building value rather than of land value. This will be true unless the erection of the building raises the level of land value of the entire neighborhood, an event which rarely happens. Of course, if a large number of buildings are quickly erected in a new tract and the development is a successful one, the level of land value can be raised by the entire building operation. In this case, part or all of the miscellaneous items in the cost estimate may be reflected in the land value. This is the unusual case, however. The ordinary case is the one in which the miscellaneous items are reflected in the building value, provided, of course, that value and cost are equal. The truth of this becomes apparent when the reverse of the building process is assumed. Assume the building to be removed: there remains a lot such as there was before and of the same value as before. Whatever of value disappeared with the removal of the building, went along with the building and must therefore have been an element of building value. But if forty residences were erected and lot values rose from \$800 to \$1,000, the removal of one house would not result in reducing the value of the lot on which it stood from \$1,000 to \$800; the lot would still be worth \$1,000. These same results would not follow if old instead of new buildings and old instead of new neighborhoods were involved, as is pointed out elsewhere in this Section.

314 (7). The building cost estimates which are used by the Valuator give the cost of duplicating the structures involved in new condition. The significance of such estimates is greatest in the case of new, or nearly new, structures. They become of less and less significance as older and older buildings are the subjects of valuation. In a great many cases the buildings to be appraised will not be new ones. The cost estimates therefore will be of hardly any significance at all, and the Valuator's attention and consideration will have to be centered almost entirely upon:

(a) The actual physical condition of the structure upon the property which he is appraising;

(b) The relative substantiality of construction;

(c) The presence of obsolescence;

(d) The manner and speed with which future deterioration will limit the production of future benefits and limit remaining physical and economic life;

(e) The manner and speed with future obsolescence will limit the production of future benefits and limit remaining economic life;

(f) The probable remaining economic life;

(g) The extent and degree of future utility;

(h) The degree of conformity or nonconformity to typical neighborhood standards;

(i) The quality and stability of the neighborhood and the social and financial characteristics of its inhabitants;

(j) Rental values, tax burdens, and other costs of ownership, and the many other matters to which attention is drawn in this Manual.

314 (8). Determination of the replacement costs of the sites involved in specific cases, and discussion of essential data with regard to this subject, will be found in this Section under the title "Comparative Method of Estimation."

VALUATION CONCEPTS

315 (1). Averages and Normal Value. It is appropriate to give a word of warning regarding the use of averages in appraisal work. It is quite common to hear appraisers speak of some "average" condition, "average" price, "average" value, "average" house, or "average" lot. When they mean "typical" it is possible that their concepts may be correct. However, there is a distinction to be made between that which is "average" and that which is "typical."

315 (2). Assume that the average value of the residential properties in a given block is \$3,500. The values of the individual properties range from \$2,000 to \$6,000 and none of them has

a value of \$3,500. However, there are more houses in the block that are worth \$4,000 than there are properties worth any other figure, and \$4,000 is, therefore, the typical value of houses in this particular area. In the illustration it is readily seen that the average value is of no significance in appraising any residence in the block. However, the typical value would be very important in appraising both typical houses and those which are not typical.

315 (3). An average figure or condition can only be of substantial use in appraisal procedure if it is composed of quantities that do not vary considerably from the average itself. Generally, in real estate valuation work, it is much more helpful to ascertain that which is most common or typical, rather than to seek out averages. There are exceptions, however, as, for example, when the data refer to district vacancies.

316. The best type of residential district is one in which the values of the individual properties vary within comparatively narrow limits. In such a district one is likely to find people whose living standards likewise are substantially the same, although their individual tastes in some respects may be widely different. Such a district is characterized by uniformity and is much more likely to enjoy relatively great stability and permanence of desirability, utility, and value than a district in which the residential values are found to vary within wider limits. In both cases one of the first steps the Valuator must take is to determine the characteristics of that which he would consider the typical (not the average) residential property in the district. In so far as properties in an area depart from that which is typical, it will be found that fair values will be less than replacement costs.

317. Sometimes statistics are published which report various averages applying to entire municipalities or states, or the nation as a whole. Some appraisers have used such averages by applying them directly in cases involving particular properties. Such practices are dangerous unless it is first ascertained that the average figure can be properly utilized in the specific case which engages the appraiser's attention. Thus, if it be reported that there has been a 30% decline in rental values in a particular city during the previous four years, this figure should not be utilized in individual cases where an estimate of current rental value is being made. The past rental value should not be reduced 30% and the resultant figure used as the current rental value unless it be known that the immediate district in which the property under consideration is located has experienced a decline in that amount. It is entirely possible that the district has experienced a decline of 10% or of 50% in spite of the fact that the drop in the entire community has averaged 30%.

318 (1). Normal value is a term which is very frequently used by real estate appraisers and others. While the term is so commonly heard, it is very rarely that one can satisfactorily define the concept so designated. Usually normal value is made to refer to some price or value of the past which was higher than that which exists at the time the statement is made. Such a concept is very apt to result in unsound valuations because it is nearly always accompanied by the belief that in a short time prices and values will return to "normal", and, therefore, that it is not proper to recognize existing conditions and facts which have created present values at points which the appraiser considers are not "normal."

318 (2). The instability of the general price structure in times past has caused great fluctuation in real estate price levels, so that there is no single level that can be pointed out as a "normal" one. It is possible that if a certain general price level can be maintained indefinitely, then a "normal" value for various types of real property may become a reality. In the meantime, normal real estate value can exist only in the sense of that which is typical under conditions current at the time of appraisal, not past or future ones.

318 (3). The foregoing statements are not to be interpreted as meaning that the past or the future cannot be considered when determining real estate values. The past is often very useful in forecasting the future, and the manner in which events have occurred in the past may in some cases be a very reliable indication of what will happen in the future. However, new influences and relationships continually come into being which affect real estate prices and value. Therefore, it is essential to consider to what extent the possible repetition of past events will be modified by the effects of such new influences in the future. Furthermore, all values, of whatever kind, lie in the future, and the process of estimating values necessitates the making of assumptions with regard to the future. The warning which is sounded herein is against assuming that some certain level of real estate prices that existed at one time or another is "normal", and that therefore prices will inevitably gravitate to that level in the future.

319 (1). **Remaining Economic Life and Physical Life of Buildings.** Because buildings are subject to physical deterioration and obsolescence, their periods of usefulness are definitely limited. As they deteriorate or obsolesce, their ability to serve useful purposes decreases, and eventually disappears. This decline and ultimate disappearance of utility may occur gradually or rapidly. The period of time between the completion of a building and the disappearance of its ability to produce services or net income over and above a fair return on the land value is the total "economic life" of the structure.

At the end of its economic life, it may still be structurally sound and in good physical condition, so that it can still be useful though not profitably useful. The period of time between the completion of the building and the time when it is no longer fit or safe for use, or no longer practicable to attempt to maintain it in safe, usable condition, is its total "physical life."

319 (2). Valuators are required to give estimates of the remaining economic lives and physical lives of buildings. Architectural Inspectors also make estimates of the remaining physical lives of buildings. In either case, the estimates should be for the period from the time of examination until the predicted end of life, rather than estimates of the total lives described in the foregoing paragraph.

319 (3). The value of any property arises from its ability to produce returns for its owner. He receives these returns either by occupying the property and receiving services from it, sometimes called "amenities", or by renting the property to a tenant who receives the services and pays the owner its equivalent monetary worth in the form of rent. The difference between the total services or total rent and the expenses is the net returns or net income. The value of property arises from its capacity to produce net returns. Therefore, the characteristics of the future net income-stream must be forecast in valuation work. The future net income-stream has three characteristics, namely, (1) quantity—the size of the income-stream at the time of appraisal and thereafter; (2) quality—the changeability of the size in the future; and (3) durability—the period of time during which the stream, in any size, will endure. Deterioration and obsolescence will decrease the amount of net returns from time to time in the future, thereby decreasing the margin between the amounts of net returns and the periodic amounts which represent a fair return on the value of the land. The services of the land as a building site are not limited as to duration, but continue indefinitely into the future, for the land does not deteriorate and disintegrate. Its earning capacity is continuous and is usually considered to be interminable, that is, a perpetuity. However, the services of the buildings are definitely limited in duration owing to the fact that the buildings will eventually become useless, due to the operation of forces which cause deterioration, disintegration and obsolescence. Therefore, that portion of the income, whether measured in services or dollars, which is attributable to the buildings, is of definitely limited duration and subject to decline during the period of its continuance. Eventually, the value of the property declines until land value only remains. At such a time, the building has reached the end of its economic life.

319 (4). It is to be noted that economic life can never be greater than physical life. An estimate of the probable remaining physical life of a structure is useful in fixing its maximum possible remaining economic life, as well as in determining the qualities of the building from an engineering standpoint. Of course, the estimated remaining economic life may be, and usually is, less than the maximum possible economic life indicated by the estimate of remaining physical life as is made clear below.

319 (5). In valuation work estimates of both physical life and of economic life are made. Both types of lives are dealt with and they are jointly treated, for the factors which limit them both operate to lessen property values and often cannot be differentiated one from the other. Both of these types of forces must be considered by the Valuator. However, in a great majority of cases those factors which result in obsolescence seem to operate with greater rapidity than the ones which result directly in physical deterioration. In most instances this results in the termination of economic life before physical life becomes exhausted. This fact causes the distinction which is made between the probable physical lives of residential buildings and their probable economic lives. It is the probable future economic life of a residence being appraised, rather than its probable future physical life, which is of importance in valuation work, for the greater the remaining economic life, the greater will be the value in a specific case.

319 (6). It is apparent from the foregoing that Valuers must clearly understand the significance of the terms "economic life" and "physical life" and the distinction between them. Otherwise their valuation estimates will not be reliable. For example, consider two properties the value of whose services at the time of appraisal is the same, this being indicated by identical rental values of \$50 per month for each property. Both houses involved are equally well-built and each can be assigned a remaining physical life of 50 years. However, the locations are different in character, and plausible estimates of probable remaining economic lives are 25 years for one and 40 years for the other. Obviously the property having the house with the longer probable economic life is more valuable than the other one, assuming the same expenses of operation in each case. However, if the valuator did not understand the significance and distinction between economic life and physical life, he would be tempted to appraise both properties at the same amount.

319 (7). The economic lives of residential structures are limited. They are of shorter or longer duration according to:

(a) The excellence of the workmanship and the durability of the materials entering into construction;

(b) The policy of the owners or occupants with regard to maintenance and repair;

(c) The use or abuse to which the structures are subjected;

(d) The rapidity with which natural forces such as wind, rain, heat, cold, and fog, cause physical deterioration;

(e) The permanence or mutability of favorable or unfavorable environmental influences;

(f) The fortunes or misfortunes (from the economic standpoint) of the community or region in which the properties are located;

(g) The trend of changes in value of the sites upon which they stand;

(h) Their degree of conformity or nonconformity with their surroundings;

(i) The creation of new inventions, or the making of new discoveries, which result in changes in the tastes and preferences of human beings and their modes of living, such as discoveries which have resulted in the creation of new and more desirable building materials, and inventions which have provided new conveniences in homes, such as electric lighting, electric refrigeration, and air conditioning.

320. Some of the factors which shorten the useful lives of dwellings can be controlled or partially offset but others are beyond the control of any single property owner or group of owners. In cases where control is possible, it frequently is not practically feasible because of the costs entailed in exercising the control.

321 (1). The economic life of a residence will terminate at such time as its presence upon its site ceases to enhance the value of the site. This may be illustrated as follows: It is found that an old residence is capable of producing an annual income which is insufficient to pay the taxes upon the property to say nothing of the costs of repairs, insurance, and maintenance, or the production of any returns upon the value of the lot on which it stands. Since its facilities are inadequate to produce any net returns, its useful life has come to an end. The improvements upon the lot in such a case possess no more value than the amount which can be obtained from a purchaser who will buy them and remove them from the site.

321 (2). In another case an old residential property is found to produce annual revenue sufficient only to pay for taxes, insurance, and maintenance, and an additional amount which is found to be a proper and sufficient return upon the value of the site only. Note that there is no return which might properly be attributed to the improvements upon the land. In this case the improvements are producing only enough revenue to take care of the necessary expenditures and a return upon the land value. The economic life of the

improvements has, therefore, come to an end because of the inability of the structure to justify its existence by producing a net return in excess of the necessary returns to management and land, and it is found that the value of the property is approximately the same as that of the land alone.

322 (1). The future economic lives of buildings cannot be precisely determined, due to the impossibility of foreseeing the occurrence of events or new discoveries which affect the values of existing structures by making them obsolete or by hastening and intensifying the operation of those forces which produce obsolescence. All that can be expected is that estimates of future economic life will be of such character as will cause them to be accepted as plausible by well-informed and reasonably-minded people.

322 (2). No very definite instructions can be given with regard to the estimating of the probable future economic lives of residential buildings. Very careful consideration must be given to those matters to which attention has been directed herein. Of course, influences will come into existence in the future which will affect the economic lives of residential structures in general. Other influences will come into existence in particular cities, or neighborhoods, or blocks or squares, within these communities. The most that can be hoped for is that the Valuator will identify and give effect to such influences as are known to exist or can be foreseen.

322 (3). One thing that can be appropriately stated is this: the probable future economic life of any residence is not dependent upon its present age, except insofar as great age may result in a comparatively limited future physical life and thereby become the most important factor in limiting remaining economic life. Economic life, however, is solely dependent upon continuing ability to produce returns, in dollars or in services, in excess of the necessary expenses and a fair return on the land value.

322 (4). While it is impossible to gauge the accuracy of economic life estimates except in a very general way, it is possible and necessary for Valuers to be consistent in making such estimates. In cases of properties of very similar character and situation, the estimates will also be similar. Poorly built or envired structures will be ascribed shorter lives. Better built or envired structures will be ascribed longer lives.

323 (1). It is believed that insofar as properties of the type with which Federal Housing Administration Valuers must deal that estimates of remaining economic life in excess of fifty years will in no case be warranted, and that an estimate for this period will apply only to new buildings receiving high Ratings of Property

and in locations receiving favorable feature ratings in the Location category. In making these estimates Valuers should receive material assistance from analyses of the conditions and relationships reflected in individual feature ratings in the Property and Location categories. The feature ratings in these categories are indexes of the relative stability of the income-stream, either in the nature of dollars or services, which may be expected from the properties to which they apply. High feature ratings in the Property and Location categories will indicate that estimates of remaining economic life should be high when compared to the possible maximum which the Valuator considers might apply under the most favorable conditions, and the higher the ratings the more nearly should the estimate approach the possible maximum.

323 (2). Low ratings of the features in the Property category will indicate that the estimate of remaining economic life should likewise be relatively low, and the lower the ratings the further should the estimate depart from the possible maximum applicable under the most favorable conditions.

323 (3). Low ratings of the features in the Location category will not necessarily indicate that the estimate of remaining economic life should also be relatively low. The economic life estimate may be relatively high if the Rating of Property is high, although the Rating of Location may simultaneously be low. This is true because of the opposite effects produced on the economic life estimate and on the Location rating by threatening or possible encroachments of nonconforming land uses and by threatening or possible infiltration of inharmonious racial groups. The possibility or imminence of such encroachments or infiltrations will always result in low ratings of some of the features in the Location category. However, these same forces may operate to either extend or shorten the remaining economic lives of structures in the areas involved. For example, if there is any possibility of encroachment by a nonconforming use which will tend to raise the level of land values in the neighborhood under consideration, this will have the effect of shortening the remaining economic lives of residential structures in the district. On the other hand, if the threatened encroachment involves the introduction of land uses which will result in lowering the levels of land value in the neighborhood, the effect will be to lengthen the remaining economic lives of the residential structures therein. In the first instance the introduction of the more profitable uses will result in higher tax burdens, decreased percentage of owner-occupancy, and a decline in the gross rental value of properties in the neighborhood. These forces will operate to hasten the time when the residential structures cannot produce income in excess of a fair return on the value of land and,

therefore, will shorten the span of remaining economic life. In the second case the introduction of less profitable uses will tend to lower tax burdens, and, while it will also decrease the percentage of owner-occupancy and the gross rental value and probably will lessen the amount of net returns that can be produced, it will, at the same time, tend to maintain net returns at a point sufficient to assign a portion of it as a return on the buildings. The infiltration of inharmonious racial groups will produce the same effects as those which follow the introduction of nonconforming land uses which tend to lower the levels of land values and to lessen the desirability of residential areas. In other words the probable future economic lives of the residential structures will be lengthened.

323 (4). The Property and Location category and feature ratings become especially significant and useful in the making of estimates of remaining economic life when they are interpreted in connection with the amounts of net income in dollars which may reasonably be expected from the properties under appraisal. For example, assume that in a given case it is found that of the gross rental value of \$240 there will remain but \$82 after deduction for vacancy, taxes, insurance, repairs, maintenance, replacements, management, and other items of cost which must be met by the property owner. Assume further, that a fair return on the land value is \$60. This leaves a net return to the buildings of but \$22 which is only about one-third of the land returns. The relation between the amount of the land returns and the building returns indicates that the land value is several times that of the improvements and suggests that possibly the improvements do not represent the highest and best use for the site, or it may indicate that the physical condition, structural quality, or design of the improvements is bad. Assume that the Rating of Property is 52% and the Rating of Location 85%. These category ratings confirm the conclusions indicated by the income relationships as stated above, for the low Property rating indicates bad physical conditions possibly coupled with poor design and nonconformity, while the relatively high Location rating indicates a relatively high degree of stability and excellence of the location and neighborhood. Analysis of individual feature ratings will throw further light on these matters. All these deductions combine to force the conclusion that the improvements will have a relatively short remaining economic life. The amount of the estimate would be largely influenced by the Valuator's conclusions as to whether or not the site could be immediately and profitably improved with structures of a different type. If he considers this not feasible at the time, his next conclusion must relate to when it may become profitable to replace

the existing improvements with others of a more suitable type, and his estimate of remaining economic life will be determined in accordance with his conclusion.

DEPRECIATION, DETERIORATION, AND OBSOLESCE

324 (1). Depreciation is defined as loss in value from any cause whatever. Frequently the term is used in the narrow sense of loss in value caused by physical deterioration and sometimes it is used to signify deterioration itself. Accrued depreciation at any time is the difference between value at the time of appraisal and the replacement cost of the structure in new condition.

324 (2). The word "deterioration" refers to the decay and disintegration which takes place in structures with the passage of time. It is caused by natural forces, by the elements, and by use. It operates to terminate the physical lives of buildings.

324 (3). The term "obsolescence" refers to those changes in the usefulness of structures which causes them to become less desirable and less useful. It operates to terminate the economic lives of buildings. It does not affect physical life as it does not cause deterioration.

325 (1). Deterioration and obsolescence cause a lessening of utility and thereby result in depreciation, that is, loss in value. Therefore, it is essential to understand the nature of the causes of depreciation, not because of any necessity of measuring the amount of depreciation which has occurred since the completion of a building, but because of the necessity of estimating how these forces will probably affect utility in the future. The forces which cause deterioration and obsolescence operate continuously. They may operate in the future in the same manner or in a different manner as in the past. By studying the manner in which they have operated in the past, greater accuracy in the estimates as to how they may operate in the future is attained.

325 (2). It is well here to stress the point that accrued depreciation is not of primary importance in valuation but is of subordinate importance. Accrued depreciation is something which lies in the past. It is the amount by which value has declined since erection of a building. To measure it, it is necessary to make two estimates, (1) value as of date of appraisal and (2) cost of replacement in new condition. The difference between the two estimates is the amount of accrued depreciation which occurred during the period of time between these dates. The determination of accrued depreciation is a by-product of the valuation process rather than an essential step in it, because value always depends on the amount of future benefits, not upon the deduction of expired benefits from cost of replacement. Therefore the valuation process properly concerns

itself with the estimation or forecasting of the probable extent and nature of future benefits.

326 (1). It may also be pointed out that attempts to estimate accrued depreciation directly rather than to measure it after the value estimate has been made are likely to produce grossly inaccurate results in many cases. Such attempts usually start by estimating the replacement cost in new condition of the building involved. It is then assumed that this cost represents the value of the building new, an assumption which frequently is incorrect. Next it is assumed that the amount of accrued depreciation caused by deterioration and obsolescence can be determined as follows: by ascertaining the time which has elapsed since the building was completed; considering the physical condition of the structure as revealed by examination so as to discover how deterioration has occurred; and by observing the extent to which the structure is obsolete in architecture, design, equipment, and so forth. Then accrued depreciation is presumably determined by assuming some annual percentage rate of depreciation due to deterioration, multiplying it by the replacement cost and the age of the building, adding an amount equal to the cost of needed repairs and of modernizing the structure so as to offset unusual deterioration and obsolescence. But the resulting total may be, and frequently is, very inaccurate, more inaccurate than a conclusion arrived at by first estimating the value as of the date of appraisal and then taking the difference between this estimate and the value in new condition. An illustration of a direct estimate of accrued depreciation by the incorrect process outlined above and one showing a correct method follow:

Illustration of incorrect method of estimating accrued depreciation:

Cost of replacement of improvements in new condition.	\$6,000
Age of building, 10 years.	
Assumed rate of annual depreciation caused by deterioration, 2%.	
Accrued depreciation due to deterioration at the chosen rate ($\$6,000 \times 10 \text{ yrs.} \times 2\%$)----	\$1,200
Unusual deterioration due to improper maintenance (cost of needed repair and maintenance work)-----	300
Accrued depreciation due to obsolescence (arbitrary estimate but including cost of replacing obsolete equipment and modernization).....	500
Total accrued depreciation from all causes-----	\$2,000
Estimated value of improvements at time of appraisal.	\$4,000

Illustration of correct method of estimating accrued depreciation:

Cost of replacement of property (land, buildings, and miscellaneous costs) in new condition.....	\$9, 000
Value of property at time of appraisal (building 10 yrs. old).....	5, 500

Accrued depreciation in value of improvements from all causes.....	\$3, 500
Value of property at time of appraisal.....	\$5, 500
Value of land at time of appraisal.....	3, 000

Estimated value of improvements at time of appraisal	\$2, 500
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326 (2). It is to be noted that in the incorrect method illustrated above the chances of error are great, particularly if the buildings are in early or mid-life. Valuation requires the assigning of dollar values to degrees and extents of future utility. To attempt in the valuation of residential properties to estimate the value of future utility by directly estimating accrued depreciation, thereby placing reliance on cost and age data to the exclusion of data pertaining to sales and listing prices, rental values, social and financial characteristics of probable users or owners of properties, and other data not relating to cost or age, is a procedure which should not be countenanced. Valuers are instructed not to use it.

326 (3). Obviously in the late life of a residential building, when its value is small, the probable error in a direct estimate of accrued depreciation is likely to also be small. The reason for this is that in late life the age of the building usually is rather great so that when this is multiplied by the assumed annual rate of depreciation, the product is correspondingly great and the difference between it and replacement cost in new condition is correspondingly small. This explains why in some instances the procedure under consideration happens to produce a result which is approximately correct. However, the procedure is defective in principle and is, therefore, not to be relied upon in view of the fact that procedures which are correct in principle and possible of practical application and use are available. Further discussion of the merits and demerits of various estimating methods relating to depreciation occurs in subsequent paragraphs.

326 (4). Because deterioration affects remaining physical life while obsolescence either causes remaining economic life to be less than possible remaining physical life, or causes a greater decline in future benefits than is caused by deterioration alone, therefore, it becomes of greater importance than deterioration in the calculations and considerations of the Valuator.

326 (5). Obsolescence results from such occurrences as these:

- (a) New inventions and discoveries;
- (b) Changes in the preferences and tastes of the public, as, for example, with regard to styles of architecture, geographical locations as places of residence, the extent of plumbing facilities provided in residences, sizes of rooms, and heights of ceilings;
- (c) The encroachment of nonconforming uses, as when commercial and industrial enterprises are introduced into residential neighborhoods;
- (d) The infiltration into residential districts of people whose living standards are lower than those of the people who already inhabit these districts;
- (e) The failure of substantial numbers of property owners in the district to maintain their properties in good condition;
- (f) To increases in land values which result in changes in the highest and best uses for which land is suited.

326 (6). The problems raised by deterioration and obsolescence are not solved by attempting to rate physical conditions and functional efficiency and then attempting to translate the rating into a dollar amount to be deducted from replacement cost in order to determine present value. They are properly solved by estimating the extent of future benefits which will be produced during the economic lives of buildings and reflecting the effects of deterioration and obsolescence by forecasting a decline in the extent of these benefits. For example, in dealing with a residential income property, the results of deterioration and obsolescence which will accrue in the future—what has occurred in the past is not of direct importance—are properly given effect by forecasting a decline in future net income and by assigning to the building involved a remaining economic life which appears reasonable in view of the intensity with which these causes of depreciation will probably operate in the future upon the property under appraisal. It is not essential to make separate estimates regarding the extent to which deterioration on the one hand and obsolescence on the other will cause depreciation. Both causes operate to produce one effect. The advantage of understanding their different character is that thereby more accurate estimates of their over-all effect will result.

326 (7). There is a tendency, but no certainty, that value in new condition will be equivalent to replacement cost in new condition. It cannot be too strongly emphasized that this is merely a tendency. However, since value and replacement cost can be equal, estimates of replacement cost in new condition can be used as "ceiling" estimates of possible value, thereby acting as controls on the judg-

ment of the appraiser. When these estimates relate to the replacement costs of buildings that are not new, they are of comparatively limited importance in correct valuation procedure; because, while new buildings may be as valuable as their costs of reproduction, old ones cannot be. As buildings progress in age they become less valuable. Due to the fact that the passage of time and the loss in value of improvements upon land occur simultaneously, procedures have been devised to ascertain the value of buildings which are not new by estimating accrued depreciation on an age basis and deducting the amount so determined from replacement cost. These procedures place major emphasis upon the ages and replacement costs of structures which are being valued. In real estate valuation work the emphasis properly belongs upon the length of the probable remaining economic life, rather than upon the length of the past physical life, and upon probable future benefits rather than replacement costs. The reason for this is that all value derives from the future, none of it from the past. Past events are useful in forecasting future probabilities but the past services of real properties cannot be relied upon as bases for the valuation of their probable future services.

326 (8). In the valuation of residential property great reliance, unfortunately, is commonly placed upon a valuation procedure which starts with replacement cost in new condition, then estimates accrued depreciation of building value by a direct method—usually the so-called straight-line method or some variation of it—next deducts this item from cost, then adds present land value, and calls the result the value of the property under appraisal. Sometimes, by coincidence, use of this procedure gives a correct conclusion, but it is erroneous in principle since it places major emphasis upon the past and does not estimate the extent of future utility.

326 (9). The straight-line method of estimating accrued depreciation (or of any method which depends on cost and age data) is defective in a number of important particulars. First, its use requires acceptance of the premise that replacement cost in new condition is equivalent to value in new condition and therefore that so-called “depreciated replacement cost” is equivalent to value, that is, replacement cost less accrued depreciation calculated by some arbitrary method of direct estimation based on cost and age data is equivalent to value at the time of appraisal. This is a very serious defect because some properties when new are less valuable than the sums which represent their cost.

326 (10). The straight-line method is also defective in that it is based upon the premise that buildings decline in value in equal yearly amounts. All appraisers know that this premise is not correct. While the average depreciation per year may be 2%, it

does not follow that in 10 years the building value will have declined 20%, in 30 years 60%, 45 years 90%, and so on. Therefore, such a procedure is of questionable merit.

327 (1). Mechanical Equipment and Accessories.

Many new electrical and mechanical devices are being installed in new homes. In many instances the installations are such that some or all of this equipment loses its character as personal property and becomes an integral part of the real property. Equipment which is part of the real estate is part of the security for the mortgage on the property, and therefore affects the value estimate. If the equipment is wisely chosen and installed it may enhance the value of the property to the full extent of its cost in the case of a new dwelling. If, however, the cost of the equipment is too great an outlay in relation to the cost of the structure, or if the typical buyer cannot afford the cost of operating the equipment, it will not enhance the value of the property to the full extent of its cost. Thus, when dealing with new properties, the Valuator must, first, be able to know just what equipment in the building is part of the real property and what is personal property so that he may know exactly what he is to appraise; and, second, he must determine to what extent the value of the property is enhanced by the equipment which is part of the realty. Insofar as any of the equipment is in the nature of chattels, he must omit it from the value estimate.

327 (2). If the case is one involving an old structure in which it is intended to install new mechanical equipment and accessories in such a way that they will become part of the realty the Valuator's problem is the same as in the case of new structures. The Valuator must determine to what extent the installation will enhance the property value. Many of these mechanical devices are subject to rapid deterioration due to the wearing out of moving parts and to speedy obsolescence due to continual change and improvement in design. For these reasons it may not be wise to install them where the costs of installation, maintenance, and operation will be too great in relation to the value of the property.

327 (3). In cases involving residential income properties or old rented single dwellings the value added by special mechanical equipment will be reflected in the amount of rent these properties can command. In estimating the value of such a property the Valuator must ascertain what the equipment consists of, what its replacement cost is, what it will cost to operate and maintain it, and how long a remaining useful life it will probably have. Then he must calculate what amount per annum will have to be taken from the gross income the property will produce in order (1) to operate and maintain this equipment and (2) to recover the value he assigns to

it during its remaining useful life. This amount he uses as a deduction in his income analysis in ascertaining the net income which may be expected from the property. In this way he can justify the value assigned to the property including its short-lived equipment.

327 (4). The Valuator is given assistance, where new buildings are involved, by the Architectural Inspector, who is instructed to include in his report a separate item representing the replacement cost of any equipment which is part of the real property and which will suffer rapid deterioration or obsolescence.

328. Conformity. The extent to which the property being appraised conforms to its environment must be determined by the Valuator. This matter is dealt with in some detail in Part II, Sections 1 and 2. Data relating to conformity are of very great importance because nonconformity produces adverse effects, such as the shortening of economic life, hastening of obsolescence, and limiting of marketability, thereby affecting value. Regardless of the replacement cost of any residential property, its value can be utterly destroyed by influences external to itself.

329 (1). Rental Value. In the risk rating system, use is made of rental data in rating the feature Ratio of Debt Service to Rental Value, in the Mortgage Pattern grid. The Valuator is required to report the fair monthly rental value, unfurnished, of the property. There should be no difficulty in ordinary cases in determining the proper figure inasmuch as there is practically always an active rental market, so that by making intelligent comparisons, and using verified data, a fair and accurate estimate can be made. Rentals which are out of line with others involving like properties and facilities are readily discarded. Competition between landlords and the discriminating judgment usually exercised by prospective tenants are such that most actual rentals for residential properties are likely to be fair, and acceptable as a basis of comparison.

329 (2). The estimates of monthly rental value reported by the Valuator must be estimates which relate to the properties on an unfurnished basis. They are not to relate to properties on a furnished basis, either wholly furnished or only partially furnished. The estimates are not to be offhand opinions. The Valuator may make inquiries of people actually renting dwellings in the neighborhood and to obtain information from real estate rental agents and from newspaper advertisements. If these sources of information are used the estimates will usually be correct. In comparing rentals for different properties the same conditions of tenancy must apply. That is, the agreement between landlord and tenant as to who is to pay for light, gas, and water must be the same in each case or else necessary adjustments must be made before comparing the rentals.

329 (3). Care should be exercised in cases where properties are located in areas in which there are wide seasonal fluctuations in rental values, summer or winter resort areas, for example. Rental values at the height of the rental season should not be reported as the fair monthly rental value. Likewise, rental information at the ebb of the rental season will lead to an erroneous conclusion.

330. In every case the reported rental value must be the price which a prospective tenant would be warranted in paying for the right to occupy the premises for a full year on an unfurnished basis, the tenant being required to pay all expenses in connection with the use of the property except those costs of repairs and maintenance for which owners usually are responsible. Usually when dwellings are rented on an unfurnished basis, the landlord agrees to pay only for the maintenance of the structure and for major repairs made necessary by defects in the structure or its equipment or because of deterioration which has been allowed to accrue through no fault of the tenant. Thus the basis of the rental value estimate assumes that the tenant is required to pay all charges for gas, light, water, fuel, power, gardener, maintenance of lawns and shrubs, and for minor replacements such as for washers in plumbing fixtures. To secure necessary uniformity the basis of the estimate must be as defined above.

VALUATION PROCEDURE

331 (1). Desirability of Methodical Procedure. The advantages of methodical procedure in valuation are these:

(a) The discovery, isolation, identification, and rating of individual influences which combine to create, sustain, or destroy value is accomplished;

(b) Appraisal procedure is standardized to a reasonable and desirable degree;

(c) The extent of the zones within which acceptable valuation estimates must fall is limited, bringing under some control the estimates of individual appraisers.

331 (2). In valuation it is preferable to resort to analytical methods rather than to depend on unaided judgment. The methods used in valuation have definite limitations and are useful aids only when the appraiser knows their limitations and uses the methods intelligently. No method of calculating realty values can be relied on implicitly to the exclusion of what the experienced appraiser knows to be in accord with common sense and good judgment. A perfect valuation method would, of course, be absolutely reliable, but no valuation method can be perfect due to the character of the data which must be used. These data deal with many matters

that are incapable of exact measurement. Furthermore, valuation requires forecasting of matters that cannot be definitely ascertained. Estimates are used in place of measurable quantities. If the estimates are based on such knowledge as is available with regard to the matters considered, and are in accord with sound, common-sense principles, then the conclusions produced will be sound and will be acceptable as reasonable and accurate estimates by reasonably minded and well-informed individuals. Absolute necessity for good judgment characterizes every step in valuation procedure.

332 (1). Summation Method of Estimation. A summation estimate is one in which the fractions of a property, i. e., land and improvements, are treated separately and without regard to their relationships to each other or to their surroundings. For example, a lot in a given case is determined to have a value, as a vacant site, of \$1,200. It is proposed to erect a new residence upon this lot at an estimated cost of \$6,000. A summation estimate, if used for valuation purposes, would suggest a value of \$1,200 plus \$6,000 plus miscellaneous costs totalling about \$200, or \$7,400. Such a method is not truly a valuation method; it is really a cost estimating process. Sometimes it produces an estimate which is equal to warranted value but being wrong in principle from a valuation standpoint it cannot be depended upon for valuation purposes. If the structure in a given case is not suitable to the site or the neighborhood, the summation estimate will exceed the value of the property. If the Valuator ignores the comparative method of estimation and relies solely upon the summation method, his conclusions will very often be erroneous.

332 (2). This does not mean that consideration cannot properly be given to land and buildings separately, for this procedure, in one form or another, is followed in practically all methods of valuation. However, when a fractional part of a property is being valued, the Valuator must remember that the fraction is but a part of a unit comprised of land and improvements; that the value of the fractions can only be fixed intelligently by endeavoring to ascertain to what extent they individually contribute to the value of the entire unit. The sum of the values ascribed to the fractional parts cannot, in any event, exceed the value of the entire property, nor can the entire property be more valuable than the sum of the values of its fractional parts. Therefore, if a value be assigned to a fraction of a property, then the value assigned to the remaining fraction can only be the difference between the value of the entire property and that which has been ascribed to the first fraction. For example, if, in a hypothetical case, a value of \$1,200 is imputed to the site, the value contributed to the whole by the building improvements which it is proposed to erect could only be the difference between the total value

of the completed property, say \$5,250, and \$1,200, which difference would be \$4,050, although it might cost \$6,000 to build the contemplated improvements.

332 (3). Summation estimates ignore considerations as to whether the improvements existing upon individual sites represent the best utilization of those sites. If such improvements are more costly than the site and neighborhood justify, then a condition known as over-improvement exists. If the improvements are less costly than is warranted by the circumstances and conditions environing the lot in a given case, then a condition of under-improvement exists. If a certain lot is best suited as a site for a single-family residence but is improved with a cheap store building, the structure upon the lot becomes properly classified as a misplaced-improvement. In any case where over-improvement, under-improvement, or a misplaced-improvement exists, a summation estimate will always exceed warranted value.

333. There is one set of conditions under which a summation estimate will be equivalent to value. These conditions are as follows: (a) the structure must represent the highest and best use for the site; (b) the structure must be entirely suited to the site and neighborhood in all respects; (c) construction costs must be in proper and fair relationship to other costs in general; and (d) there must be a proper relationship between supply and demand factors in the market. Very frequently different conditions than those named exist. Therefore, the usefulness of the summation method of estimation is almost entirely limited to providing a replacement cost estimate, which merely serves as the upper limit of possible value. Valuers are forbidden to use the summation method in valuation procedure except for the purpose of fixing an uppermost limit of possible value of properties in new condition. Used in conjunction with comparative estimates and capitalization estimates, summation estimates serve in a helpful role but they must not under any circumstances be relied upon by Valuers as determinants of value unless the other estimating methods are used and produce the same results.

334 (1). Capitalization Method of Estimation. A dwelling property is valuable solely because of its ability to produce a stream of returns in the future for the benefit of its owner. The size of this stream, the possibility of future increase or decrease in its size, and the constancy and permanency of the stream will determine the value of the property. In the case of rental property, the returns are in the form of streams of dollar incomes. In the case of new single-family residential properties, the returns are usually in the form of amenity income-streams, that is, in the form of direct satisfactions. Residential properties are of both types. Both types of

streams produce income, the one measurable in dollars, and the other not concretely measurable but, nevertheless, ratable comparatively in terms of assumed standards with regard to quantity, quality, and duration. The Valuator must make forecasts of the sizes of these incomes, their probable future sizes, and their probable future duration. He cannot avoid such forecasting in his work for he is dealing constantly with future contingencies, which being unknowable, can only be estimated, and which very largely determine present value.

334 (2). Most new residences are bought or owned primarily because of their ability to produce amenity income-streams, while old residences are, perhaps, nearly always purchased or owned because of their ability to produce rentals. During the life of ordinary residences the markets in which the properties will be sold will include some purchasers having the one motive and some having the other. It is probable that the first type of purchaser predominates in the market in which newer houses are sold and that the second type predominates in the market in which older houses are sold. The method of valuation must reflect the dominant market.

334 (3). Real property which produces streams of dollar incomes may be appraised by placing values on these income streams. This is done by resolving them into capital sums the interest upon which, at proper rates of return, would be equivalent to the periodical amounts of income produced by the various properties, having in mind and making due allowance in the process of capitalization for the fact that these dollar streams will not last indefinitely. Such resolution of income streams into equivalent capital sums is known as "capitalization of income." Thus an income stream of \$800 per year in perpetuity has a capitalized value of \$10,000, using an 8% rate of capitalization, for \$10,000 invested at 8% per year will produce an income of \$800 yearly. An income stream of the same amount (\$800 per year) for only 25 years would have a capitalized value of \$8,540, using an 8% rate, since the deposit of \$8,540 in an account bearing 8% interest per annum would permit payment of an income of \$800 per year for 25 years, at the end of which time all of the original \$8,540 would have been paid out.

334 (4). The capitalization process of realty valuation is fully understood by comparatively few appraisers; and since an unusual degree of knowledge and good judgment are necessary to use it effectively, its usefulness is subjected to considerable limitations. Its most intelligent and effective use requires the availability of certain data not now in existence, but which the Federal Housing Administration will gather in its research work and statistical studies. As the results of these studies become available, a proper capitaliza-

tion procedure suitable for the purposes and requirements of appraisal by Valuers will be developed and utilized.

335. Income-producing realty produces both gross and net income. In the capitalization method of value estimation the latter is the important item, not the former, for only the net income comprises the measure of benefit received by the property owner. Estimating net income necessitates the estimating or forecasting of gross rental value and gross income, and the forecasting of those items which must be paid out of the predicted gross income after allowance for vacancy and rent losses. In residential properties these items usually are taxes, insurance, water, power for electric refrigeration, rubbish disposal, janitor, management, gardener, repairs, decorating and maintenance, and other expenses. When the net earnings have been thus estimated on the basis of currently existing conditions, the probable stability and permanence of these earnings, the extent to which they may decline in the future, the probable manner of such decline, and the length of the probable remaining economic life of the structure involved must then be considered. This will permit the selection of a stream of net earnings which coincides in its characteristics with that which appears to be the one which will most likely be produced by the subject property. Selection may then be made of a proper capitalization rate, or rate of return which correctly reflects the hazard or risk involved in the case and which is sufficient to attract a well-informed buyer. The net income stream selected as the most plausible one may then be resolved into its equivalent capitalized value. The process of capitalization, when properly understood and applied, makes full allowance for the return (out of income) of the value of wasting assets, that is, of that portion of the total property value which is assigned to the structure on the site.

336. Comparative Method of Estimation. The Federal Housing Administration Valuator will find greatest use for the Comparative Method of estimation in appraising single-family residences. In this method residential properties that are substantially similar in their physical characteristics and environments are subjected to careful analysis so that comparisons of their relative desirability and utility, and the permanence of these elements, may be made. The method requires the use of data relating to replacement cost of both land and buildings; sales prices and conditions under which such prices are obtained; monthly rental values; and other matters. In fact, almost the entire range of data which are useful in solving valuation problems involving any type of property will be useful in the comparative method of estimation when it is intelligently and properly applied in the case of residential properties.

337 (1). In using this method of estimation, comparisons between residential sites, irrespective of the existence or absence of residences upon them, are made; and the comparisons also extend to the relative desirability and utility of individual and substantially similar residential properties as single units comprised of two elements, namely, land and improvements.

337 (2). It is common to find residential communities of considerable area in which the characteristics of the individual properties are substantially alike, and in which influences originating in neighboring districts, or in the city as a whole, or in larger regions, operate substantially alike upon each of the properties in the districts under consideration. From this fact arises the principle of uniformity upon which the comparative method of land valuation is based. It is usually true that in specific residential localities, lots are found to be approximately uniform in size, shape, and other physical characteristics, as well as uniformity affected by factors which determine or influence their utility and stability of value. Therefore, when a value has been determined for a typical vacant lot in such a district, this value constitutes a very reliable index of the value of other vacant lots which are also typical, as well as of lots which may vary, in some respects, but not substantially, from such typical vacant lots.

337 (3). In making comparison between residential lots, it is essential that the Valuator realize that the factor of primary importance is utility. Comparisons almost entirely lose their significance where the utility of the properties compared is substantially different. Thus, a comparison between a lot restricted to use as a site for one single-family residence only and another one upon which a four-family apartment building might be erected, would be much less significant, and any conclusions drawn would be much less reliable, than in a case where each of the lots compared is available and suited for use for one single-family residence only.

337 (4). The comparative method as applied to land valuation starts with consideration of the physical characteristics and potential uses of the lot to be appraised and of the environing influences which affect it. Such consideration is also given to other lots of known value. The values of properly comparable sites may then be resolved into units such as \$0.80 per square foot, \$25.00 per front foot, etc. These unit values may then be applied directly to the site which the Valuator is appraising and a tentative index of the value of that site obtained. The Valuator's maximum estimate of value of the site will be controlled by the prices at which sites of equal desirability may be obtained from well-informed sellers who are under no compulsion to sell. His land-value estimate may be less than these prices but it cannot properly exceed them unless the neighborhood is

a very old one in which nobody would desire to erect a new residential structure because its value would be less than its cost immediately upon completion. In this one instance, the value of a lot which is already improved may be in excess of the prices at which equally desirable lots can be purchased. At any time when a reasonable demand exists for residential lots of equal desirability to the one being appraised, sales prices actually established in transactions between intelligently acting, well-informed sellers and buyers practically fix the value of the lot.

337 (5). Instead of utilizing unit values per square foot or per front foot, in many cases the comparisons may be made directly between the lots considered. In comparing one lot with another, the physical characteristics of the two sites must, of course, be given attention; however, the main consideration with regard to such characteristics is the relative desirability of the two sites as suitable areas upon which to erect residences appropriate to the district. This can frequently be accomplished by direct comparison without utilizing unit values.

337 (6). The use of front-foot and square-foot unit values is subject to certain limitations. For example, the front-foot unit gives no indication of depth involved; the square-foot unit gives no indication of frontage or depth; and both units fail to give any indication of lot shapes or topography. Therefore, when any of these units are utilized, it is essential that variations in width, depth, shape, and topography be given consideration. A lot 86 feet deep and 40 feet wide may have a front-foot value of \$20, but this unit probably would not apply to an adjoining lot which was 130 feet in depth, although it is possible that it might apply in the case of a lot 95 feet deep or 80 feet deep. A residential lot of extremely great depth might be no more valuable than one of much lesser depth provided the latter was sufficient to meet the minimum requirements for desirable residential sites in the district. This would be the case if the additional depth were of no practical use but resulted in a larger tax levy or heavier cost of maintenance than in the case of the shallower lots.

337 (7). If, in making comparisons, the appraiser does use a front-foot unit value, he must determine what amount of frontage constitutes a typical width for lots in the district. This is necessary because residential lots that are considerably wider or narrower than typical lots in a given locality will generally be found to be worth less per front foot than are lots having typical widths. For example, the typical size of single-family residential lots of rectangular shape in a particular district is 50 feet by 150 feet. Such lots are fairly worth \$25.00 per front foot, or \$1,250 in this area. The residence being appraised is situated upon a lot which is

100 feet by 150 feet in size, and the deed restrictions permit but one residence upon this site. On a basis of \$25.00 per front foot, the 100-foot lot would be worth \$2,500. However, its fair value is found to be only \$1,875, or \$18.75 per front foot. If the restrictions permitted the use of this site for two single-family residences, instead of one, and if the existing residence were located upon the ground so as to leave one-half of the width of the lot vacant, then the value of the site might readily be \$25 per front foot, or \$2,500. This would not necessarily follow, however. If the vacant half of the lot could not be immediately improved to advantage, and it is more likely that it will remain vacant for a number of years in the future, due to the absence of any present or prospective demand for its utilization, its value would be less.

337 (8). Sometimes, so-called "depth tables" and "corner-influence tables" are utilized for valuation purposes by real estate appraisers. While it is recognized that such tables are useful in the solution of some problems, such, for example, as those which confront tax assessors, where mass appraisals are necessary, and while such tables do, to a limited extent, express correct general relationships, still their use in valuation work involving individual parcels of land is always subject to serious objection. Such tables are composed of a large number of averages and cannot give effect to variations in the utility of individual sites, except in a very general way.

338 (1). A site which has been improved by the erection of a residence may under certain very limited conditions be more valuable than a vacant lot of the same physical characteristics which adjoins it. This condition can prevail in a district of homes which have suffered great obsolescence. In such a district it might not be at all feasible to erect a new residence upon a vacant site, and therefore unused land in the district might be of very nominal value, especially if no transition to more profitable uses were taking place in the same block. At the same time, the sites upon which residences already exist in the district are serving useful purposes and may possess considerable value, because they are profitably utilized. This condition should serve as a further warning to the Valuator when he uses asking prices or sales prices in making comparisons, for the price of a vacant site may differ from the value of the improved sites adjoining or nearby if the neighborhood is of the type described above.

338 (2). The conditions described in the preceding paragraph do not exist in new or nearly new residential districts. The belief that in sparsely built-up, but developing, neighborhoods the lots upon which dwellings have been erected are more valuable

than the vacant lots is incorrect. The mere erection of one dwelling in such a district will not increase the value of the site unless it simultaneously raises the land value level in the entire neighborhood, which is not likely to be the case. Of course, as the district as a whole is built-up, land values in it may rise for a while but all lots in the area, whether improved or unimproved with buildings, will be equally valuable provided they are of the same physical characteristics and equally desirable. The value of the lot is more dependent on matters external to the lot itself than on the building upon it. The building does not raise or lower the lot value, for the potential usefulness of the site determines its value. Values of improved sites in such areas are no different from those of neighboring vacant sites and the prices of the latter control value estimates relating to the former.

339 (1). It is contemplated that the Chief Valuers in the several Insuring Offices will pick out houses in various neighborhoods in the territory within which they operate, which will be representative of the houses which may be considered typical in these various neighborhoods. Values will be established for these "representative type houses" taking into account complete data covering style, size, design, construction, setting, neighborhood, and the general economic background. From time to time these values should be revised. Valuers will be furnished with the valuations of the representative type houses. These valuations will serve as bases for valuing other nearby properties. This procedure will enable greater accuracy of valuations and result in attainment of a certain degree of controlled uniformity.

339 (2). In comparing the desirability of several residential properties as complete units, the Valuator must rate the desirability of the accommodations provided in the homes, as well as the relative desirability of their environments. The Valuator gathers information on properties which he intends to compare with the property under appraisal. Properties which have recently been sold or which the Valuator has appraised are chosen for this purpose. He ascertains the conditions entering into the sales transactions so that he can conclude whether or not the sales prices were fair and warranted. He studies the various properties and is then in a position to ascribe ratings to them in terms of their relative desirability. These ratings are relative, the property under appraisal being assigned a rating of 100% regardless of its physical condition or characteristics, remaining economic life, and desirable or undesirable features. The ratings ascribed to the other properties will be over or under 100% according to the extent to which their desirability and utility are greater or lesser than those of the subject property. The ratings are used for two purposes: (1) to indicate, by comparison, the market

price probably obtainable for a particular property; or (2) to indicate, by comparison, the probable value of the property. The Valuator has two invaluable aids in determining proper factors: first, he has the Property and Location category ratings; second, he can make use of rental data.

340 (1). Residences on Apartment or Business Sites. There will be frequent cases in which the property to be appraised will consist of a single-family residence upon a lot that is suitable for multiple-family residential use or commercial use. In such cases a valuation arrived at by adding the value of the land as determined by comparative analysis to the so-called "depreciated replacement cost" of the residence will be incorrect. Such a valuation would be based upon the premise that the value attributed to the land alone was enhanced by the residence by an amount equal to the so-called depreciated replacement cost of the structure. The fact that the residential use does not represent the highest and best use for the site would be ignored. The premise would therefore be incorrect, and any conclusion based upon it would likewise be erroneous.

340 (2). The value of a residential property is equivalent to the sum of the value of the site and the replacement cost of the structure upon it only if the case is one in which the structure is new and represents the highest and best use for the land, and conforms to those standards which determine the characteristics of that which is typical in the particular district where the property is situated. Furthermore, there must be a demand for dwellings of the same type in the neighborhood, at prices equivalent to this sum. Obviously, the conditions described cannot apply in the case of old residences on apartment or business sites, and therefore a summation estimate cannot be used for valuation purposes in such cases, for such an estimate will always exceed the value of such properties.

340 (3). In dealing with properties which are not improved to their highest and best use, it is essential to determine with as much accuracy as possible the probable remaining economic life of the improvements. If the residence has reached the end of its economic life, then the value will not be in excess of the worth of the land plus the salvage value of the improvements. If, however, the improvements are capable of producing a net return in excess of the sum of that which is rightly imputable to the land and the costs of taxes, operation, and maintenance, then their economic life has not yet terminated and their value upon the site may be determined by the use of the capitalization method of estimation, having in mind that the earnings of the improvements cannot be treated as though they were to continue indefinitely, when, as a matter of fact, they will continue but for a relatively short time.

340 (4). Where the residential site is found to be zoned for business use, or where it fronts upon a street portions of which are being devoted to commercial purposes, the Valuator must not assign a value to the lot equal to the value of another nearby site which is actually being profitably used for commercial purposes. This is a very common error. For the residential site to have a value equivalent to that of the lot which is actually improved and being profitably utilized for business purposes, there must be an immediate need for the residential site for business purposes equally as profitable. Generally speaking, in American cities most lots which are being used for residential purposes but which front upon commercially zoned streets will probably not be utilized for business purposes until the lapse of long periods of time, during which their owners will receive little or no net income from them but will have to carry excessive burdens of taxation and sacrifice the interest earnings which they might enjoy if the sums which they paid for the properties were invested in some productive form of property. The tendency generally is to overestimate the value of such properties.

341 (1). **Taxes and Special Assessments.** The level of general property taxes and the character and amounts of special assessments affect the values of properties. The greater the amounts of such burdens, the less valuable are the properties subjected to them even though they may offer identical services to their owners.

341 (2). General property taxes are levied yearly and must be paid yearly or more frequently. Within any given community the level of taxes is reflected in the market prices which properties command, and except in cases where the assessed valuations are not properly equalized, appraisal procedure is not affected, inasmuch as the market price data and rental data used by the valuers already contain the necessary adjustments. Differences in tax levels do, however, affect the comparisons which appraisers make and should be taken into account.

341 (3). The effects upon value of special assessment liens are different from those produced by general property tax liens. Whereas all properties in a community may be subject to general property taxation, levies in the nature of special assessments are made only upon the properties within the boundaries of the special assessment district. Such special assessments differ from general property taxes not only in the respect just mentioned but also in this respect: they continue only for a definite period of years, whereas the general property taxes continue indefinitely. Therefore, in cases where special assessment liens exist, due allowance for this condition must be made in the valuation process. Properties against which special assessment liens exist are less valuable than would be

the case if these liens did not exist. This is made apparent by considering the conditions reflected in the several cases outlined below.

Case #1. A property free of special assessment liens but subject to general property taxes: Value, \$6,000.

Case #2. The same physical property subject not only to general property taxes but also special assessment liens totaling \$200 now due and payable. A purchaser of this property must pay the amount due and the value of the property is therefore less: Value, \$5,800.

Case #3. The same physical property subject not only to general property taxes but also to special assessment liens totaling \$500 payable in ten yearly installments of principal plus interest at 6 percent per annum on the deferred amounts. Because of the risk created by the possibility of default in paying the installments of interest and consequent foreclosure and loss of title, or because of the interest rate charged which may be excessive in the light of current financial conditions, this property may be \$500, or more, less valuable than a similar property free from assessment liens: Value \$5,500 or less.

Case #4. The same physical property subject not only to general property taxes but also to a special assessment lien which is a lien upon all of the properties within the special assessment district and which continues a lien upon all of these properties until it is entirely extinguished. Special assessment bonds outstanding, \$500,000. Assessed value of the special assessment district, \$3,000,000. Assessed value of the property being appraised, \$3,000, or 1/1000th of the district assessed value. The effect of the assessment lien on the value of the property is much more pronounced than in Case #3. The following paragraph discusses the reasons for this. Value less than \$5,500, probably considerably less.

Case #5. The same physical property and condition as in Case #4 except that the assessment district is broken down into zones, each of which bears a different percentage of the total levy against the entire district. Assume that the assessed value of the property is still \$3,000 and of the entire district \$3,000,000. However, the property is in an area which is designated "Zone A" of the assessment district, which zone is required to pay 20 percent of the total district lien (\$500,000), or \$100,000. It is seen now that the assessed value of the property is 1/100th of that of the zone in which it is located, so that if all owners of properties in the zone and assessment district pay their yearly assessment levies, the property appraised will be charged (1/100th of \$100,000) \$1,000 plus yearly interest charges. The value will therefore be less than \$5,000, and probably considerably less.

341 (4). In Case #4 above, it will be noted that if all of the property owners in the special assessment district pay installments of principal and interest each time they become due, the owner of the specific property considered will have to pay 1/1000th of \$500,000 or \$500, in yearly installments, plus interest. Therefore, the minimum reduction in value as compared with Case #1 would be \$500. However, if any of the other property owners in the district become delinquent in their assessment payments, the delinquency may cause an increase in the amounts which will be levied against the properties in the district during the following year. This may result in an increase in the amount of delinquency and necessitate a still greater levy for the next year. In this way the special assessment burden may mount up year by year, falling more and more heavily upon the shoulders of those owners able to pay or unwilling to abandon their properties. It is possible for such burdens to reach the point where owners in the district voluntarily surrender their properties. This possibility is mainly responsible for the statement above that the value probably would be considerably less than \$5,500. In cases where special assessment liens of the type mentioned in Cases #4 and #5 exist, it is essential that information be gathered with regard to the amount of delinquency, if any, the likelihood of foreclosure by the owners of the lien, and the likelihood of a pyramiding of the assessment levies.

341 (5). In cases where special assessment liens exist, the Valuator must appraise the properties as they stand subject to the assessment liens. In no such case is it permissible for him to assume the hypothetical condition in which his appraisal is based upon exemption from the assessments. In each such case the estimate will be decreased by at least the amount of the liens against the property or that proportion of the lien upon the entire district which would represent the minimum that would probably be equal to the total sum (excluding interest) to be assessed in all the future yearly levies against the specific property under appraisal. In determining this minimum he would be influenced by:

(a) The assessment levy made during the current year against the property appraised;

(b) Whether or not the levies had been increasing during the prior years during which the assessment lien had existed;

(c) The probable trend of the amounts of the levies in the future;

(d) The total amount of the lien outstanding against the district;

(e) The ratio of the assessed value of the property appraised to the assessed value of the assessment district, or of the zone in which the property lies.

341 (6). When properties lying within the boundaries of special assessment districts are sold, the buyer may either assume the burden of paying the assessments as they come due, or he may insist upon the immediate payment by the seller of existing special assessment liens. Obviously, the purchase price will be different in the two cases. For this reason, it is essential that when sales price data are obtained by Valuers, they ascertain the conditions of the sale with regard to special assessment liens as well as other conditions already mentioned under the title "Use of Sales Prices."

342 (1). Leasehold Estates. Section 201 of the National Housing Act permits the insurance of mortgages eligible in other particulars which are first liens on real estate the titles to which are held by mortgagors either in fee simple or:

(1) Under a lease for not less than ninety-nine years, which is renewable;

(2) Under a lease having a period of not less than fifty years to run from the date the mortgage was executed.

In certain localities in the United States considerable numbers of residential properties are leasehold estates. The valuation procedure in such cases is somewhat different from that which applies in cases where title is held in fee simple.

342 (2). When a long-term lease upon real property is made, the effect is to create two distinct properties. The lessor still holds his title in fee simple, but since it is encumbered by the lease which he has given, his interest is designated the "leased fee." The lessee acquires the rights to the benefits which the property will produce during the term of the lease, provided he does not default in the performance of those acts required of him under the terms of the lease. His interest is designated the "leasehold estate." In exchange for the rights, he is obligated to pay a rental to the owner of the fee and to discharge the other obligations placed upon him by the lease. Inasmuch as this Manual concerns dwelling properties only, it is not deemed essential to prescribe the more complex methods of leasehold estate appraisal. The procedure set forth herein provides good approximations of the values of leasehold estates and is presented with the aim of giving sufficient direction to Valuers, so that they will be able to properly perform their functions in cases submitted for insurance where this type of ownership exists. The prescribed procedure follows.

342 (3). The Valuer determines the total value of the property as though owned in fee simple and unencumbered by a lease. He then determines the value of the leased fee. Finally, he deducts the value ascribed to the leased fee from the estimated value of the unencumbered property and accepts the difference as a reason-

able approximation of the value of the leasehold estate. He then enters the results on the Report of Valuator in the following manner:

ESTIMATE OF VALUE LEASEHOLD ESTATE ——— \$4,800

In my opinion the value of the property described above, assuming the contemplated improvements or new construction described in exhibits, if any, accompanying Mortgagors' Statement, or assuming the repairs or alterations or additions, if any, listed under item "(4)" of this report have been completed, is unencumbered by lease ——— \$6,000

Distribution of total valuation:

Land	\$ 1,500	@ \$ 30	per ☐ lot, ☒ front foot, ☐ square foot.
Main building	\$ 4,000		Remaining term of lease, 30 yrs. renewable
Garage	\$ 400		Annual ground rent — \$60
Other improvements	\$ 100		Capitalization rate — 5%
			Value of leased fee — \$1,200

These steps are described in greater detail in the following paragraphs.

342 (4). The first step to be taken is to estimate the value of the property as though owned in fee simple. This is done in the same manner as in any case where a leasehold estate is not involved, and all the instructions and suggestions contained in the Underwriting Manual are to be followed in this step.

342 (5). The next step is to estimate the value of the leased fee, that is, of the lessor's estate. In order to do this, it is necessary to be familiar with the terms of the lease. This necessitates a reading of that document. A decision must be made as to whether or not the lease terms are fair and equitable. If they are not so, it is possible that the lessee will default. Of course, if he has erected a building at a substantial cost to him, and the building is suited to the site, the default of the lessee may not result in any loss to the lessor, but on the other hand, may result in substantial monetary gain to him. Such would be the case if the lease provided that upon default of the lessee and consequent forfeiture of his rights, all improvements upon the land would revert to the lessor without cost to the latter. Such a condition is usual where long-term leases are made. The elements of value in the lessor's rights, i. e., the leased fee, are:

(1) The present value of the net rentals which the lessee is to pay under the lease;

(2) The value of the "reversion", that is, the value of the right to regain possession of the property and the benefits it will produce after expiration of the lease.

342 (6). While the valuation procedure in the case of a lease for a definite period of years and not renewable differs in some respects from that which is followed in the case of a lease renewable forever, it will not be necessary in the operations of the Federal Housing Administration Valuers to make any distinction in the two cases. The reason for this is that, under the provisions of the National Housing Act, a lease in an eligible case must run for at least fifty years. Furthermore, in view of the fact that the values of the sites in all cases will not be large, the possible error that may

result from failure to follow a different procedure will be so minute that it will always be inconsequential.

343. Valuation of the Leased Fee.—The ground rents reserved under a lease renewable forever may be treated as “perpetuities”, that is, as payments which will continue periodically forever. The valuation of such rentals is by direct capitalization after a proper rate of capitalization has been chosen. The rate of capitalization varies in different cases depending upon the reasonableness of the amounts reserved as rent; the certainty that the lessee will be able and willing to pay the rents when due; the amount of the “stake” of the lessee in the property; the future prospects of the property with regard to maintaining or enhancing its desirability, utility, and value; and the rate of return obtainable from other types of investments. Where conditions are on the whole favorable, it will not be unusual for capitalization rates applicable to the valuation of leased fees to range upwards from about 4%. The process of capitalization of a net rental receivable in perpetuity is simple, merely involving division of the yearly rental by the capitalization rate. For example, if the ground rent, in a given case, is \$90 per year net to the lessor, and it is assumed that the proper capitalization rate is 4%, the capitalized value of the ground rent payable in perpetuity is (\$90 divided by 4%) \$2,250. If, instead of 4%, it were determined that the capitalization rate should properly be 6%, the value would be (\$90 divided by 6%) \$1,500. Under the conditions of this case, there will be no “reversion” to the lessor, that is, the property will presumably never revert to the lessor inasmuch as the lessee has the right to renew his lease forever. Therefore the total value of the leased fee in the example quoted would be \$2,250 or \$1,500, depending upon the rate of capitalization.

344 (1). Valuation of the Leasehold Estate.—Having taken the steps outlined above, the Valuator will have come to a conclusion with regard to:

(a) The total value of the property in fee simple unencumbered by the lease;

(b) The value of the leased fee (lessor's interest).

The valuation of the leasehold estate (the lessee's interest in the property) is then determined by deducting the value of the leased fee from the total value of the property in fee simple unencumbered by the lease. The result so obtained is used by the Administration as an acceptable approximation of the value of the leasehold estate.

Example #1. A ground lease upon a single-family residence site having more than fifty years to run calls for a rental of \$60 per year, representing 6% upon a ground value of \$1,000 at the time the lease was made. The lessee erected a residence upon the

site at a cost of \$5,000 several years prior to the date of appraisal. What is the value of the leasehold estate?

(a) Estimated value of the property in fee simple unencumbered..... \$6,000

Distribution of total valuation:

Land..... \$1,500
Buildings..... 4,500

Total..... 6,000

(b) Estimated value of the leased fee: The lease is well secured; land value has increased since the lease was made; the district is well protected with appropriate restrictions and zoning and has developed into a uniformly desirable residential area. It is determined that a fair capitalization rate of lessor's ground rent is 5%; therefore, the value of the leased fee is (\$60 Divided by 5%)..... 1,200

(c) Value of leasehold estate..... 4,800

In the foregoing example, it will be noted that the value of the leasehold estate exceeds the value of the improvements. This is because the land has enhanced in value and the ground rent is therefore lower than it would probably be if a new lease were to be made at the time of appraisal.

Example #2. In this case, the conditions are the same as in the foregoing example, except that the district has depreciated in value, and it is found that the owner's expenditure of money for his home has proven unwise. The lessor's ground rent is still well secured, but because of the unfavorable factors affecting the neighborhood, the proper capitalization rate is 6%.

(a) Estimated value of the property in fee simple unencumbered..... \$4,000

Distribution of total valuation:

Land..... \$ 500
Buildings..... 3,500

Total..... \$4,000

(b) Value of the leased fee (\$60 divided by 6%)..... 1,000

(c) Value of the leasehold estate..... 3,000

In the above example the value of the leased fee exceeds the value of the land. Likewise the leasehold estate is less valuable than the portion of the total valuation ascribed to the improvements. In

such cases, the results are entered on the Report of Valuator in the following manner:

ESTIMATE OF VALUE		LEASEHOLD ESTATE ----- \$3,000
In my opinion the value of the property described above, assuming the contemplated improvements or new construction described in exhibits, if any, accompanying Mortgageors' Statement, or assuming the repairs or alterations or additions, if any, listed under item "(k)" of this report have been completed, is -----		
		unencumbered by lease ----- \$4,000
Distribution of total valuation:		
Land	\$..... 500	@ \$..... 500..... per ☒ lot, ☐ front foot, ☐ square foot.
Main building	\$..... 3,500	Remaining term of lease, 55 years
Garage	\$.....	Reserved annual rent ----- \$60
Other improvements	\$.....	Capitalization rate ----- 6%
		Value of leased fee ----- \$1,000

344 (2). The laws of some states fix the methods whereby lessees of residential properties under long-term ground leases may "redeem" (that is, purchase the fee simple title from the lessor, thereby destroying the lessor-lessee relationship) the ground rentals reserved under their leases. In such instances the appraisal procedure must be consistent with the legal requirements. For example, assume that under a state law a lessee has the right to redeem the ground rent by paying the lessor a sum equal to the capitalized value of the ground rent on a 6% basis. Thus, in example #1 above if such state law existed, the value of the leased fee would be (\$60 divided by 6%) \$1,000 instead of \$1,200, and the value of the lessee's estate would be \$5,000 instead of \$4,800. Legal enactments of the type mentioned have the effect of giving lessees options to buy at definite prices; and whenever an option to purchase exists in a lease, the value of the lessor's interest, or leased fee, cannot exceed the option price, although it may be less than that figure.

345 (1). *Subleasehold Estates.* Sometimes lessees under long-term leases create subleasehold estates by subleasing their rights to others. Such subleasing is not unusual in cases where one individual leases several parcels of ground and then subleases each parcel separately to different persons. The procedure to be followed in valuing subleasehold, or sub-subleasehold estates is the same in principle as that outlined herein for the valuation of ordinary leaseholds. The Valuator simply capitalizes the total rental reserved in the sublease and deducts the resultant sum from the total valuation ascribed to the property as if unencumbered.

345 (2). Valuers must realize that the ownership of a property which is a leasehold estate involves more risk than the ownership of either a leased fee or an unencumbered property. Furthermore, mortgage investment in leasehold estates is generally more hazardous than in unencumbered properties. Consequently, valuation procedure in such cases requires the exercise of discriminating judgment.

346. In any case in which a mortgage upon a leasehold estate is submitted for insurance, the value of the lessee's interest, that is, of the leasehold estate—not the value of the property in fee simple unencumbered by the lease—is the basis upon which to determine the maximum amount of an insurable loan. Thus, in the first example above, a mortgage loan exceeding the prescribed maximum percentage of \$4,800 (the value of the leasehold) would be ineligible for insurance. In the second example, the maximum insurable loan would be based on the prescribed maximum percentage of \$3,000.

347 (1). The Valuator's Final Judgment. The Valuator must never lose sight of the fact that the value which he must estimate is the price which a well-informed buyer would pay, and be warranted in paying, for the property appraised, rather than the maximum price which could be obtained if the property were offered for sale. In determining such a warranted price such a buyer will not only give consideration to both the cost and the value which may be assigned separately to the land and to the improvements upon it but he will also consider the prices at which he can obtain other properties of like characteristics and equally desirable from well-informed sellers who when selling would be acting intelligently, voluntarily, and without necessity. He will contrast the advantages of renting with the advantages of buying, as indicated by comparison of the cost of renting and cost of buying, and he will consider the many other matters to which attention is drawn in this Section of the Underwriting Manual. He will not be especially interested in or greatly influenced by what the property has cost someone else in times past or what it would cost to build it today, though he will desire information regarding these matters; but he will be vitally interested in the ability of the property to produce a stream of future benefits for him if he were to purchase it. The characteristics of this stream of benefits—its present size, the extent of any probable diminution in its size in the future, the certainty of the continuation of the flowing stream, and the length of the period during which the flow may be expected to continue—will determine the price which he is warranted in paying, and, hence, the value of the property.

347 (2). The valuation process requires the Valuator to gather, analyze, and interpret a great volume and variety of data. Because the necessary data are gathered piecemeal, as it were, there is danger that he will assign greater importance to some of the data than they are rightly entitled to receive, and reach a conclusion which is premature and unsound. Before reaching his final conclusion, it is essential that he place himself at a distance, figuratively speaking, from the problem with which he is dealing in order that he may get a broad, comprehensive view of the whole group of data and of

the aspects of the problem in its entirety. He must not remain so close to the great volume and variety of data which he must consider that he will fail to properly appraise the relative importance of the various matters which comprise the data and lose sight of the general characteristics of the entire problem. Let him stand off at a distance after analyzing the data, and consider the resultant effect produced by the multiplicity of influences which operate in every case. Then it is more likely that the conclusions which he reaches as a result of any valuation method or procedure which he may follow, or comparisons which he may make, will accord with that which will be required of all Federal Housing Administration Valuers, namely, that their conclusions in every case shall be fully supported, reasonable, sound, and sensible.

PART I .
SECTION 4
METHODS OF DWELLING COST ESTIMATION

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PART I
SECTION 4
METHODS OF DWELLING COST ESTIMATION

BASIS OF THE COST ESTIMATE

401. Basis of Estimation. Estimates of the cost required to replace building improvements in new condition shall be made by either Architectural Inspectors or Valuers for use in connection with the valuation of the real estate pledged as security for mortgages submitted for insurance. Estimates of replacement cost in new condition shall be made on the basis of fair costs which would have to be met by an individual lot owner who would secure suitable drawings and specifications, obtain competitive bids, and contract with a responsible contractor for the construction of one dwelling only.

402. The estimate shall be based upon replacement of the improvements in new condition. In any case where alterations or additions to the improvements are contemplated by the mortgagor, or where none are contemplated but the inspector finds that a "Reject" rating of one or more of the Physical Security Features will be necessary unless alterations or additions are made, the cost estimate shall be based on replacement of the improvements in new condition as they would exist with the proposed alterations or additions incorporated. However, in the event the buildings include excessive or wasteful use of materials or details, excessive ceiling heights or room sizes, attention shall be called to this fact under Estimate of Cost Required to Replace Building Improvements in New Condition in the blank space beneath "____ sq. ft. @ ____ ¢ per sq. ft." on FHA Form No. 2014 or 2015.

403. The estimate shall include the cost of all labor, materials, sub-contracts, inspection fees, permits, builder's overhead and profit, and architectural fee entering into the cost of construction of the following:

- (1) Main building including porches and attached masonry terraces when supported on foundation walls.
- (2) Garage and other accessory buildings.
- (3) Walks, drives, and terraces laid on the ground.

(4) Private septic tank, well, and electric generating plant. The builder's overhead and profit may be based on, but shall not exceed, the customary local and current charges for the type and class of building under consideration. The architectural fee shall be calculated on the basis of the percentage customarily charged in the locality for this type of work at the time of the estimate. If the building is of the type for which plans are ordinarily purchased outright, no more than the purchase price ordinarily charged for such plans shall be included.

404. The estimate shall not include the following:

(1) Savings due to quantity production of buildings or unusual efficiency of builder or workmen.

(2) Deterioration and obsolescence and resulting depreciation.

(3) Carrying charges during construction and cost of financing.

(4) Structures of temporary character or structures not permanently affixed to the ground.

(5) Landscaping including shrubs, trees, grass, retaining walls, and grading of site.

(6) Chattels, that is, equipment and accessories which are not in a legal sense part of the realty.

405. Equipment and Accessories. Many newer dwellings contain increasingly greater amounts of mechanical equipment and accessories which are now coming to be regarded as standard equipment and are provided by the builder to create sales appeal. Determination as to whether certain equipment or accessories are chattels or parts of the realty depends on local custom and State laws, and to assist the Chief Architectural Supervisor, who must make this decision, the Underwriting Section, Washington, D. C., has supplied the Insuring Offices with opinions from the Legal Division as to the items to be construed as parts of the realty or as chattels in the different States.

406. Because certain items of equipment and accessories may be subject to rapid depreciation and obsolescence as a result of the wearing out of moving parts, continual improvements in design, and anticipated reductions in initial and operating costs, the estimator shall indicate under Estimate of Cost Required to Replace Building Improvements in New Condition in the blank space beneath "____ sq. ft. @ ____ ¢ per sq. ft." on FHA Form No. 2014 or 2015, the estimated cost of all the equipment in the subject property which will, in his opinion, materially depreciate or suffer rapid obsolescence in the early life of the mortgage.

407. New Materials and Methods of Construction. New materials and methods of construction which have not been generally used in dwellings may be subject to wide fluctuations in cost

over comparatively short periods of time. To meet this condition the estimator shall estimate the cost of the subject building according to the drawings and specifications, except that conventional materials and methods of construction shall be substituted for the new materials and methods of construction. The substituted conventional materials and methods of construction shall offer the same structural soundness, relative resistance to fire, to use, and to the elements, the same insulation value, and maintenance costs as the units they replace. In the event this transposition increases the thickness of the floors, walls or roof, the size of the building shall be increased by this amount so that the property will contain the same living space. This cost establishes the Maximum Allowable Estimate of Cost Required to Replace Building Improvements in New Condition, and is not the cost of the improvements as they actually exist. The actual cost of the improvements as they exist may or may not be known and it is not necessary to figure such cost. Insert the words "Maximum Allowable" before "Estimate of Cost Required . . ." etc., on FHA Form No. 2014 or 2015.

PREScribed COST ESTIMATING PROCEDURES

408. *Selection of Method to Use.* In general underwriting practice cost estimates shall be made by the Cubic and Square Foot Method, as described in paragraphs 416 to 421. All typical buildings and all buildings on which the Valuator completes the dual inspection provided for in the Modified Procedure (Part I, Section 1) shall be estimated by this method except in the event that there are no Cubic and Square Foot cost data available for the particular type of building. In such cases the Architectural Section shall estimate the replacement cost by either the Inplace Unit Price Method described in paragraphs 422 to 430, or other approved methods as described in paragraph 409. It is the responsibility of the Chief Architectural Supervisor to select the method which is to be used.

409. *Exceptions and Adaptations.* The existence of a number of different cost estimating methods and of a number of adaptations of the Cubic and Square Foot Method and the Inplace Unit Price Method are recognized and are permitted where, in the opinion of the Chief Architectural Supervisor, they accelerate the processing of cases or the assembling of Cubic and Square Foot cost data without sacrificing accuracy. However, in order to secure uniformity it is necessary to forward data and explanations of these methods or adaptations to the Underwriting Section, Washington, D. C., for approval.

410. Preparation and Distribution of Cost Data. The Chief Architectural Supervisor is responsible for the preparation and distribution of necessary cost data as follows:

(1) Cubic and Square Foot cost data shall be prepared in a uniform manner as outlined in paragraphs 419 and 420 and shall be furnished each Architectural Inspector and Valuator.

(2) Cost data pertaining to the Inplace Unit Price Method or other approved methods shall be prepared in a manner similar to that outlined in paragraph 429 and furnished each Architectural Inspector.

CALCULATION OF CUBIC VOLUME AND SQUARE FOOT AREA

411. Calculations of the cubic volume and square foot area of building improvements shall be made according to the uniform method prescribed in the following paragraphs. Because it is essential to secure uniformity no alternative methods are to be used.

412. Calculation of Cubic Volume. Cubic volume of the building improvements shall be computed as follows:

(1) To be included and calculated in full:

The actual space enclosed within the outer surfaces of the outside walls and between the bottom of the basement floor slab, or, in unexcavated areas, between the ground and the outside of the roof, including bays, oriels, light shafts, dormers, and exterior chimneys up to the average height of the roof, enclosed porches and built-in garages.

(2) To be included and calculated in part:

(a) Non-enclosed porches

1. Within house proper----- $\frac{1}{2}$ volume

2. As an extension to house----- $\frac{1}{2}$ volume

(b) Masonry terraces supported on foundation walls. $\frac{1}{2}$ volume

(3) Not to be included:

Outside steps, cornices, parapets, and footings.

413. Calculation of Square Foot Area. The square foot area of building improvements shall be computed as follows:

(1) To be included and calculated in full:

The finished and livable floor area above the basement, including bays, oriels, dormers, light shafts, exterior chimneys, enclosed porches, and built-in garages. In computing these areas, measurements shall be taken to the outside surfaces of the exterior walls or partitions enclosing the areas.

(2) To be included and calculated in part:

(a) Finished livable area of basement, such as a recreation room, or servants' quarters, measured to the

outside of exterior walls or partitions----- $\frac{1}{2}$ area

- (b) Semi-finished area of attic, not used as a livable area measured to the outside of exterior walls or partitions..... $\frac{1}{2}$ area
- (c) Non-enclosed porches:
1. Within house proper..... $\frac{1}{2}$ area
 2. As an extension to house..... $\frac{1}{2}$ area
- (d) Masonry terraces supported on foundation walls.. $\frac{1}{4}$ area
- (3) Not to be included:

Outside steps, cornices, parapets, and footings.

414. The following example shows the uniform method of calculating cubic volume and square foot area of the building shown in the accompanying isometric, plan, and section sketches. For convenience, the dimensions are identified in both the sketches and computations by capital letters just above the dimensions. Dimensions are given by feet and inches on the sketches and are converted into decimals to the nearest half foot in the computations. This practice is considered sufficiently accurate.

Identification	Dimensions	Area	Sq. Ft. Factor	Height	Sq. Ft.	Cu. Ft.
House.....	A B 25 x 21	525	N 2.0	R 32.0	1,050	16,800
House.....	C D 17 x 7	119	N 2.0	S 31.0	238	3,689
Bay.....	E F 5 x 2	10	O 1.0	T 12.0	10	120
Porch.....	G H 13 x 8	104	P .5	U 5.5	52	572
Terrace.....	I J 6 x 5	30	Q .25	V 1.0	7	30
Chimney.....	K L 5 x 1	5	N 2.0	R 32.0	10	160
Totals.....					1,367	21,371

415 (1). The following instructions serve as explanations of entries made in the above computations.

Identification: Insert identifying word, such as house or bay.

Dimensions: Insert the horizontal dimensions for measured area.

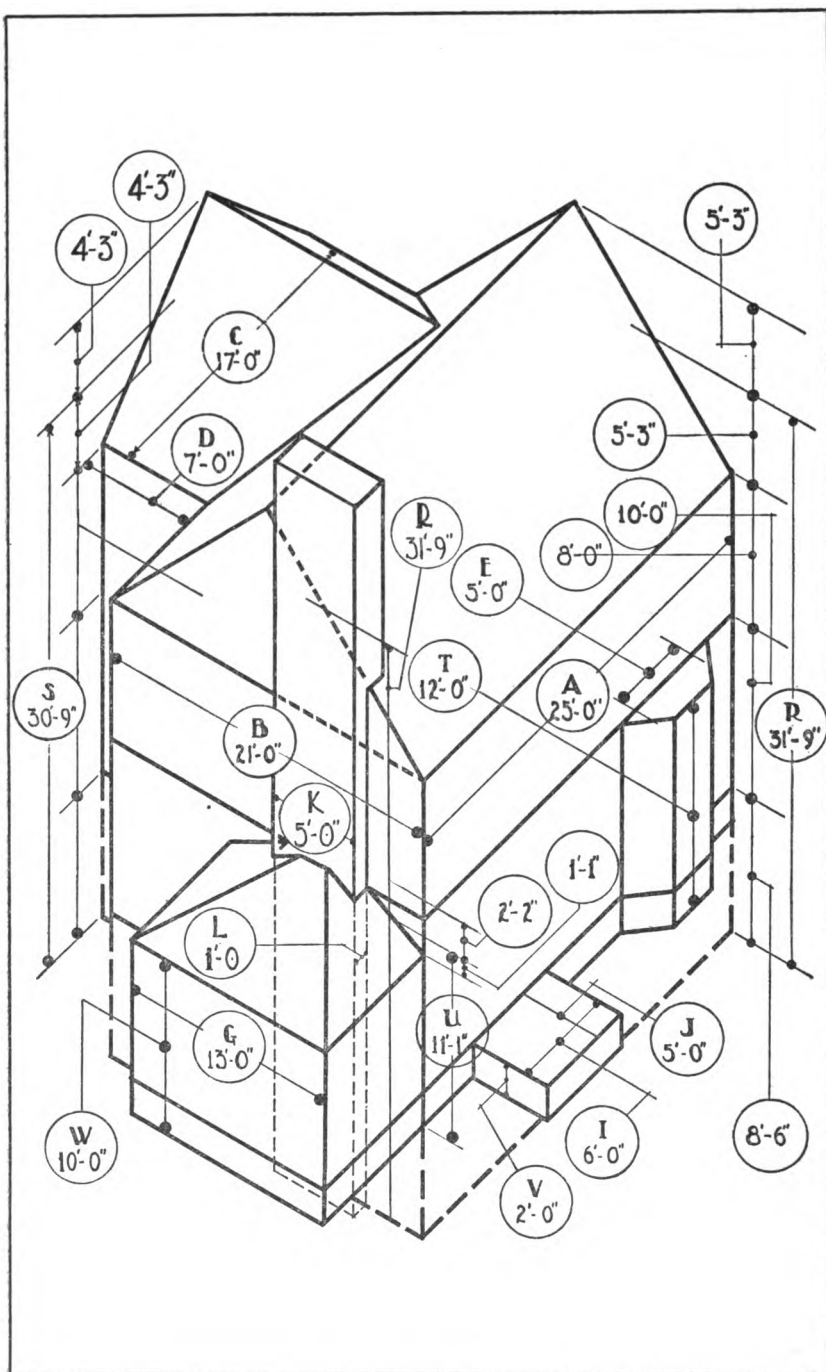
Area: Insert the product of the horizontal dimensions.

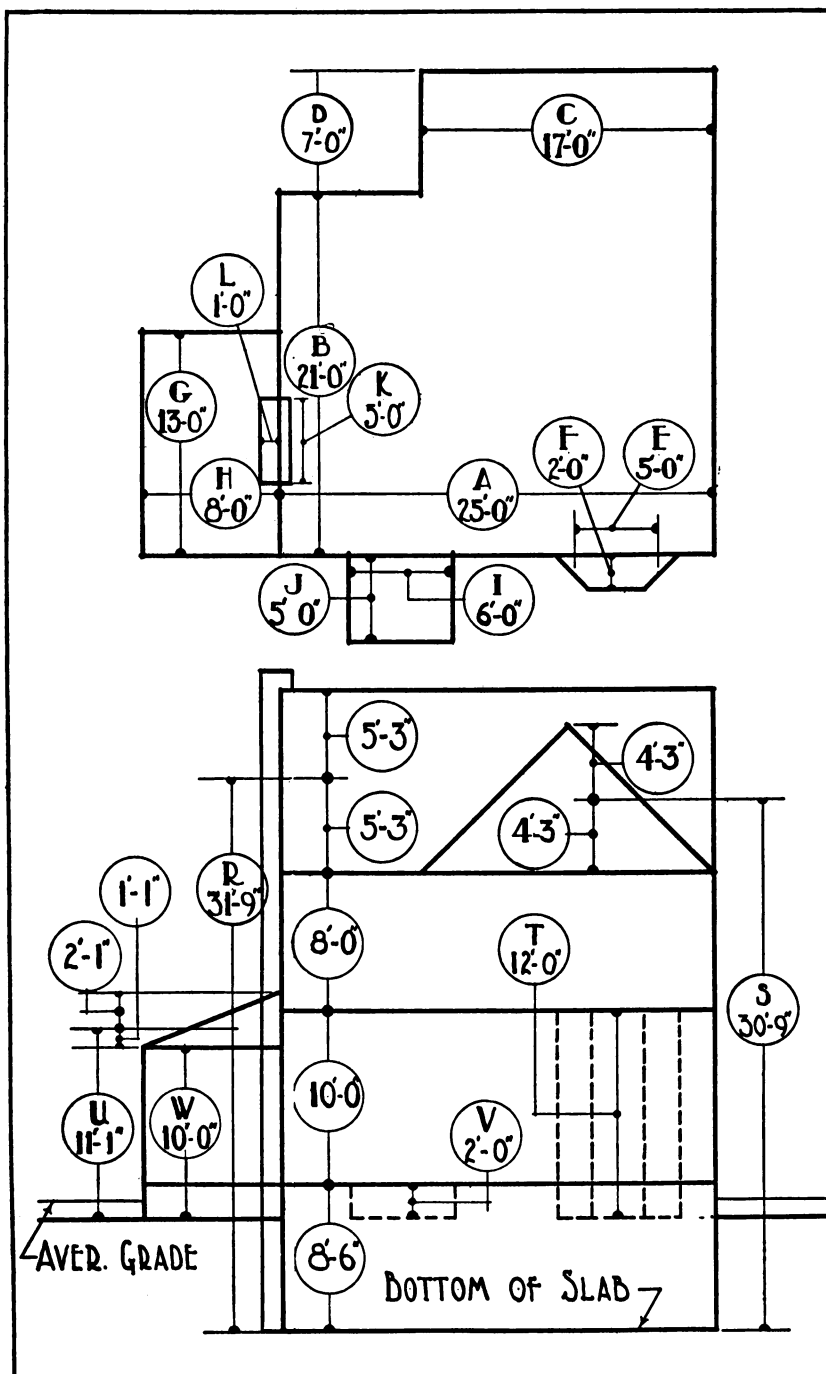
Sq. Ft. Factor: Insert the number by which the area is multiplied to determine the number of square feet.

Height: Insert dimension indicating the height by which the area is multiplied to determine the number of cubic feet.

Square Feet: Insert the product of the area times the sq. ft. factor.

Cubic Feet: Insert the product of the area times the height.





415 (2). Following are explanations of square foot factors and heights used in the above computations.

Square foot factor "N" is made up as follows:

Finished area of first floor.....	1.0
Finished area of second floor.....	1.0

Total or square foot factor "N"..... 2.0

Square foot factor "O" is 1.0 as the bay is only one story high.

Square foot factor "P" is 0.5 as the porch is an extension to the house and is calculated at $\frac{1}{2}$ area.

Square foot factor "Q" is 0.25 as the terrace is calculated at $\frac{1}{4}$ area.

Height "R" is made up as follows:

Bottom of basement floor to first floor.....	8' 6"
First floor to second floor.....	10' 0"
Second floor to ceiling.....	8' 0"
One-half the distance between the ceiling and ridge.....	5' 3"

Total or Height "R" (use 32.0 feet)..... 31' 9"

Height "S" is made up in the same general manner.

Height "T" is made up as follows:

Grade to first floor.....	2' 0"
First floor to top of roof.....	10' 0"

Total or Height "T"..... 12' 0"

Height "U" is made up as follows:

Grade to first floor.....	2' 0"
Floor to ceiling.....	8' 0"
One-third the distance from ceiling to roof peak.....	1' 1"

Total height (use 11.0 feet)..... 11' 1"

As the cubic volume of the porch is calculated at $\frac{1}{2}$, the height of 11 feet is divided by 2.

Height "U"..... 5:5

Height "V" is made up in the same general manner.

CUBIC AND SQUARE FOOT METHOD OF COST ESTIMATION

416. The Cubic and Square Foot Method is a single process. Realizing the limitations of the accuracy of either the cubic foot or the square foot method of cost estimation when used alone, the Federal Housing Administration does not depend on either method by itself but combines them in the Cubic and Square Foot Method, using one as a check against the other. This check performs

two functions. (1) It reduces the chances of error in the area and volume take-off. Any great variation between the estimated cost arrived at by these two methods serves as a flag and should cause the estimator to recheck his take-off. (2) It brackets the estimated cost after the take-off has been rechecked and found correct by indicating the upper and lower limits of the cost. After the cost has thus been bracketed it then becomes a matter of judgment for the estimator to fix the estimated replacement cost at some point within the limits of the bracket. The result is known as the "fixed cost."

417. The Cubic and Square Foot Method of cost estimation is sufficiently accurate only when its cost units have been secured in the proper manner. It shall be used only when the units have been determined as follows:

(1) The houses shall have been classified by a method similar to that described in paragraph 418.

(2) At least five houses of each classification shall have been estimated by either (a) the Inplace Unit Price Method, described in paragraphs 422 to 430, (b) some other approved method or adaptation as permitted in paragraph 409, or (c) a method in which the costs have been secured from some outside source such as the published bids received on a building and for which the plans are available for the calculation of cubic volume and square foot area.

(3) The houses shall have had the cubic volume and square foot area calculated as described in paragraphs 412 and 413.

(4) The cost per cubic foot shall be the result of dividing the total estimated cost by the number of cubic feet of volume, and the cost per square foot shall be the result of dividing the total estimated cost by the number of square feet of area.

418. **Classification of Houses.** The Cubic and Square Foot Method is sufficiently accurate only when the cost units are derived from houses of the same classification as those to which the units are finally applied. Therefore, it is necessary to use a uniform method of classifying houses. The first step in establishing the Cubic and Square Foot cost units is to classify the houses. For the purpose of accumulating cost estimating data all houses shall be classified in the following general manner. However, as classification is purely local certain Insuring Offices may find it necessary to increase, decrease, or change the number of classifications in each group or the number of square feet in each bracket in order to cover all types of houses. Houses are classified according to five criteria: (1) *Type of Plan*, (2) *Number of Rooms*, (3) *Number of Stories*, (4) *Number of Square Feet*, and (5) *Class of Construction*. Multi-family dwellings shall be classified separately to meet local condi-

tions. The following gives a possible grouping under each of these five classification criteria: 2

(1) *Type of Plan*

(a) Regular, square, or rectangular.....	{ full basement ½ basement no basement
(b) Irregular, L, or T shaped.....	{ full basement ½ basement no basement
(c) Rambling, U shaped.....	{ full basement ½ basement no basement

(2) *No. of Rooms* (3) *No. of Stories* (4) *No. of Square Feet*

4 room	1	{ 650 to 750	{ 750 to 850	{ 850 to 1000
5 and 6 room.....	{ 1 1½ 2	{ 1200 to 1400	{ 1400 to 1600	{ 1600 to 1800
7 and 8 room.....	{ 1 1½ 2	{ 1400 to 1600	{ 1600 to 1800	{ 1800 to 2000
		{ 1600 to 1800	{ 1800 to 2000	{ 2000 to 2200
			{ 2000 to 2200	{ 2200 to 2400

(5) *Class of Construction*

A—Good	{ different types of exterior walls alternates for different features
B—Average.....	{ different types of exterior walls alternates for different features
C—Poor.....	{ different types of exterior walls alternates for different features

Class of Construction shall be based on different types of construction and features generally accepted as determining class "A", "B", or "C" houses in each state or district.

419. *Compiling Cubic and Square Foot Cost Units.*

Inasmuch as cost estimates of building improvements in new condition made in the past by either the Inplace Unit Price Method or other equally accurate method have been translated into cost per cubic foot and cost per square foot, and as volume and areas have been calculated in a uniform method, it is only necessary to classify these houses as outlined in paragraph 418 and tabulate the cost per cubic foot and the cost per square foot in order to compile the Cubic and Square Foot cost units. The prices used in the above estimates of replacement cost shall have been the average prices prevailing in the

locality at the time the estimate was made, except that seasonal fluctuations shall have been ignored. Cubic and Square Foot cost units become increasingly accurate as additional estimates are made by the Inplace Unit Price Method or other equally accurate approved method. Should there be any material change in the cost of construction it will be necessary to re-estimate a number of houses of each classification, tabulate the results, and revise the Cubic and Square Foot cost units accordingly. As the construction cost levels of towns and cities differ within a state or district, this variation can be adjusted by location differentials using the costs in the city in which the Insuring Office is located as 100 and adding or deducting a percentage for the other locations.

420. Following is an example of a Cubic and Square Foot Cost Data Sheet. The use of this form or an adaptation is suggested. The following instructions apply to the form: Fill in blanks under location differentials with the name of the city or town to which the differentials apply and add additional differentials as they are needed. Under "General Description of Houses" fill in the blanks with a brief description of the construction and features which determine Class "A", "B", and "C" houses, adding any additional features that are necessary. Add any additional features under "Types of Exterior Walls," and "Alternates" that will increase the scope of the data. In the alternates certain items which are included in the Class "A" house are additions to the Class "B" house and also to the Class "C" house, and certain items that are included in Class "B" house are a deduction from the Class "A" house and an addition to the Class "C" house.

Cubic and Square Foot Cost Data Sheet

_____ Insuring Office

_____ Plan _____ Basement

Location Differentials (Cities)

_____ Room _____ Story

_____ to _____ Square feet

Date Compiled _____

Date Revised _____

_____%_____
_____%_____
_____%_____
_____%_____
_____%_____
_____%_____

General Description of Houses:

Class "A". Foundations _____ Floor Construction _____
Finished Floors _____ Wall Finish _____ Bath and Kitchen
Finish _____ Doors, Windows and Trim _____
Roof and Sheet Metal _____ Plumbing _____
Heating _____ Electrical Work _____

Class "B". Foundations _____ Floor Construction _____
Finished Floors _____ Wall Finish _____ Bath and Kitchen
Finish _____ Doors, Windows and Trim _____
Roof and Sheet Metal _____ Plumbing _____
Heating _____ Electrical Work _____

Class "C". Foundations _____ Floor Construction _____
Finished Floors _____ Wall Finish _____ Bath and Kitchen
Finish _____ Doors, Windows and Trim _____
Roof and Sheet Metal _____ Plumbing _____
Heating _____ Electrical Work _____

Base Cost for Types of Exterior Walls	Cost per Sq. Ft.			Cost per cu. Ft.		
	A	B	C	A	B	C
2 x 4s, sheathing & face brick veneer.....						
4" masonry and 4" face brick.....						
8" masonry and stucco.....						
2 x 4s, sheathing, metal lath, and stucco.....						
2 x 4s, sheathing and siding.....						
Alternates—add or deduct						
Recreation room in basement.....						
250# Compo. shingle roof.....						
Slate roof.....						
Additional Lavatory.....						
Additional Bath.....						

421. Example of Estimating Replacement Cost by the Cubic and Square Foot Method. The building improvements used as a basis for the following example are shown by drawings preceding paragraph 430. Paragraph 430 is an example of estimating replacement cost of the same improvements by the Inplace Unit Price Method. The use of the form or an adaptation is suggested. Cost units are assumed for illustration only.

Work Sheet—Cubic and Square Foot Method

—Insuring Office

Property Address _____ City _____ State _____
Serial Number _____ Made by _____ Date _____

Regular Full 8 1½ 1,200 to 1,400 B Brick Veneer
Plan Basement Rooms Stories Sq. Ft. Class Exterior Walls
Cubic Foot Cost: 19,800 Cu. Ft. @ \$1½¢ = _____ \$8,240.00
Square Foot Cost: 1,250 Sq. Ft. @ \$4.70 = _____ \$5,875.00
Fixed Cost (Average Cost used) _____ \$6,058.00

(Explanation)

Resultant Unit Costs 30½¢ per cu. ft., \$4.36 per sq. ft.

Garage 12 x 20 = 240 Sq. Ft. @ \$1.20 = _____ \$ 288.00

Outbuildings _____ = _____ Sq. Ft. @ _____ = _____ \$ _____

Driveway 12 x 62 = 744 Sq. Ft. @ 16¢ = \$119.00

Walks $\left\{ \begin{array}{l} 4 \times 30 = 120 \\ 3 \times 23 = 69 \end{array} \right\} 189$ Sq. Ft. @ 14¢ = 27.00 } _____ \$ 146.00

Other Improvements: _____ \$ _____

Estimated Replacement Cost of Building Improvements in New
Condition = _____ \$6,492.00

Calculation Of Cubic Foot Volume And Square Foot Area

Identification	Dimension	Area	Sq. Ft. Factor	Height	Sq. Ft.	Cubic Foot
House.....	32 x 25	800	1.0	23.3	800	18,640
Chimney.....	1.5 x 5.0	7	1.0	23.3	7	166
Bay.....	6.5 x 3	20	1.0	17.8	20	356
2nd floor.....	15 x 14	210	1.0	-----	210	-----
2nd ".....	17 x 14	238	.5	-----	119	-----
Dormers, 3 @....	3 x 3.5	32	1.0	2.5	32	80
Porch.....	13 x 8	104	.5	5.	52	520
Stoops, 2 @....	4 x 6	48	.25	.5	12	24
		-----	-----	-----	1,252	19,786

INPLACE UNIT PRICE METHOD OF COST ESTIMATION

422. The Inplace Unit Price Method of cost estimation is an adaptation of the quantity survey method, designed to reduce to a minimum the number of arithmetical operations. This is accomplished by applying to the total number of surface square feet of a particular part of the building, such as exterior walls or floors, a square-foot unit cost which is compiled by adding together the square-foot cost of all items entering into the construction of that particular part. There are certain parts of a building which cannot be reduced to surface square feet and these parts are estimated by applying a price per unit to the total number of units involved. This method is more exact than the Cubic and Square Foot Method and if the cost data are properly assembled and kept current, the resulting estimates will fall within a reasonable range of those which could be secured by competitive bids and this degree of exactness is sufficient for the purpose. Material and labor prices and prices per unit including sub-contractor's profit shall be obtained from at least three local material dealers, contractors and sub-contractors and the average price used. Unit prices shall be checked from time to time to insure their being kept current. All unit costs used should be compiled according to the various types of construction, as outlined in paragraph 429. Garages, other out-buildings, drives, walks, and terraces should be estimated in the same general manner as the main buildings.

423 (1). *Quality Variation.*—Because quality of workmanship varies an adjustment may be necessary in some cases. This adjustment, if necessary, is made by the addition or deduction of a percentage of the total estimated cost of labor and materials.

423 (2). Builder's overhead and profit and the architectural fee, on the basis prescribed in paragraph 403, are added as separate items after the cost of labor and materials has been estimated and the adjustment for quality variation, if any, has been made.

424. It is not necessary to set up a complete set of Inplace unit costs for each section of the state or district which has a distinct cost level. By checking several estimates it will be possible to estimate the cost of all buildings in these sections by using the cost data compiled for the city in which the Insuring Office is located as 100, and adding or deducting a percentage of the total cost to compensate for the differences in cost levels.

425. The cost estimate of the main building is divided into the following parts: (1) excavation, (2) foundations, exterior steps and chimneys, (3) floors and ceilings, (4) roof and sheet metal, (5) exterior walls, (6) interior partitions, (7) millwork, (8) plumbing, (9) heating, and (10) electric light and power. The following items

are estimated separately from the main building: (11) garage and other out-buildings, (12) walks and drives, (13) private septic tank, well, and electric generating plant.

426. Measurements. Over-all outside measurements are used to determine areas. Openings such as doors, cased openings, arches, windows, stair wells, etc., are not deducted as experience shows that the cost of excess quantities so obtained is balanced by the cost of forming the openings. The work of measurement and calculation is kept down by grouping together all parts which have the same surface area such as basement floor, first floor, second floor, and ceiling. Measurements are taken either from the building itself or its plans or sketches and should be to the nearest half foot. Further instructions for taking off measurements for each general item are as follows:

(1) *Excavation.* Estimate the number of cubic yards in the excavation in two classes (a) bulk, and (b) trench, since trench excavation is the more expensive. In bulk excavation assume horizontal dimensions one foot greater on all sides than shown on plan to take care of width of the footing over width of wall and back filling. In trench excavation assume length of trench one half foot greater on all sides than shown on plans and increase width of trench to nearest half or whole foot to take care of back filling.

(2) *Foundations, Exterior Steps, and Chimneys.* All foundation and area walls and piers are figured from bottom of footings to the bottom of the wall sills or floor slabs. Outside dimensions are used, deducting for chimney when it is part of an outside wall but not deducting for corners or openings. Walls of the same thickness are lumped together. Where there is less than 6" difference in the height of walls they are figured the same. Interior brick piers are estimated by the cubic foot and the quantity included as 12" brick walls. Chimneys are estimated solid, which takes care of hearth slab, flue lining, and firebrick back, and the quantity included as 12" walls. Exterior steps of masonry, stone, or concrete are measured by the lineal foot of treads. Paving of adjacent small area is included as an extra tread. When only one or two treads occur in conjunction with a stoop, terrace, or porch it should be included as part of the floor of those items.

(3) *Floors and Ceilings.* Where floors and ceilings cover identical areas they are grouped under that one area as shown in example. Other floors and ceilings are taken off separately. When a change in finish, such as tile floor in a bath, occurs such area must be taken off additionally for separate treatment. The measurements are taken through to the outside of all exterior walls or interior partitions.

(4) *Roofs and Sheet Metal.* Take off all measurements along the rake and include overhang. As dormer roofs and the triangular part of connecting roofs will approximately balance the openings which are occasioned by them, these areas need not be calculated nor the openings deducted. Take off as separate items the number of lineal feet of gutters, downspouts, valleys, and flashing and counter-flashing.

(5) *Exterior Walls.* Measure walls starting at the top of foundation and extending through to the outside of roof as this takes care of the cornice. In taking off gables and dormer side walls, multiply the width by the average height. Do not deduct door and window openings. Do not take off stone, cast stone, or terra cotta sills, lintels, or other ornamental trim as separate items since they are compensated for by adding the difference over masonry in a lump sum.

(6) *Interior Partitions.* Measure the interior partitions from finish floor to finish ceiling and through all crossing walls to the outside of exterior walls or cross partitions. Do not deduct door or cased openings.

(7) *Millwork.* List all doors and windows (wood or metal), louvers, porch columns, ornamental entrances, mantels, and facings, and hearths. List the number of treads of interior stairs, the number of surface feet of cabinets and bookcases, and the lineal feet of porch rail. Do not list running trim as it is a part of exterior wall and interior partition. Do not list standing trim as it is a part of doors and windows.

(8) *Plumbing.* List all plumbing fixtures, gas connections, connections to public water supply and public sewer, and built-in tile fixtures such as medicine cabinets, towel bars, soap dishes, etc., under this item.

(9) *Heating.* List heating plant, special fuel burners, mechanical stokers, and thermostatic controls under this item. When radiation is indicated list total number of square feet. When radiation is not indicated, estimate the number of square feet required. Indicate radiators thus: 3/26/11. "3" indicates the number of tubes, "26" indicates height in inches, and "11" indicates number of sections.

(10) *Electric Light and Power.* List as a total all electric outlets for light fixtures, switches, and convenience outlets. List separately power outlets for kitchen range, oil burner, or ventilating fans.

(11) *Garage and Outbuildings.* Measure and list items in the same general manner described for main building.

(12) *Drives, Walks, and Landscape Terraces.* Measure within property lines.

(13) *Private Septic Tank, Well, and Electric Generating Plant.* List as separate items.

427. Factors. A factor is a number which indicates the quantity of a particular material including waste and incidental items required in one square foot of construction. The following factors have been rounded off to one decimal place which is sufficiently accurate for the purpose:

(1) *Excavation:* No factors are used for excavation.

(2) *Foundations, Exterior Steps, and Chimneys.*

(a) Foundation walls:

Walls	Factors		
	Brick	Concrete	Stone
4"	7 brk.	.33 cu. ft.	.33 cu. ft.
6"	—	.5 cu. ft.	.5 cu. ft.
8"	13 brk.	.67 cu. ft.	.67 cu. ft.
12"	19.5 brk.	1.0 cu. ft.	1.0 cu. ft.

(b) Exterior Steps:

	Factors (including 4" slab)		
	Brick	Concrete	Stone
Per lineal foot of tread	20 brk.	.8 cu. ft.	1.0 cu. ft.

(c) Chimneys:

	Factors		
	Brick	Concrete	Stone
Per cubic foot	19.5 brk.	1.0 cu. ft.	1.0 cu. ft.

(3) *Floors and Ceilings.*

(a) Floor factors. The factors for joists in frame floor construction include the joists, wall sills, girders, 2 x 4 bond timbers, and one row of 1 x 4 bridging, and are based on a bay 12 feet square, with wall sills and girders on two sides figured twice the thickness of the joists and on the other two sides of same thickness as the joists. The factors for subfloor and finished floor include material lost in dressing and matching, and waste in cutting on the job.

	Factors	
	16" on center	20" on center
Joists		
2" x 12"	2.6	2.2
2" x 10"	2.2	1.9
2" x 8"	1.8	1.6
Subfloor	Right angles	Diagonal
1 x 6s & 8s-S2S	1.2	1.3
1 x 6s & 8s T&G	1.3	1.4
Finished Floor	2 1/4" Face	3 1/4" Face
Pine or Oak	1.4	1.3

(b) Ceiling Factors. The factors for joists in frame ceiling construction include joists and one row of 1 x 4 bridging and

are based on a bay 12 feet square, starting and ending with a joist. The factors for ceiling and insulating boards include material lost in dressing and waste in cutting on the job.

Joists	Factors	
	16" on center	20" on center
2" x 10"	1.5	1.2
2" x 8"	1.2	1.0
2" x 6"	1.0	.8
Ceiling 3¼" Face		1.3
Insulating Boards		1.1

(4) *Roofs.* The factors for rafters in frame roof construction include rafters, ridge of same size, and wind braces 8 feet long on alternate rafters of same width and one-half the thickness of rafters. They are based on a bay 12 feet square (measured on the roof surface), starting with rafter on one side and ending with half rafter on other side.

Rafters	Factors	
	16" on center	20" on center
2" x 10"	1.7	1.4
2" x 8"	1.4	1.1
2" x 6"	1.0	.9

(5) *Exterior Walls.* The factors for studs in exterior frame wall construction include studs, shoe, double top plate, doubled headers, sills, jambs, and trussing for one window opening, and are based on a bay 9 feet high and 12 feet wide, starting on one side with corner post and ending on the other side with half corner post. The factors for siding include the actual loss in dressing, lapping, and waste in cutting on the job.

	Factors
Studs 2" x 4"-16" on centers.....	1.4
Studs 2" x 6"-16" on centers.....	2.0
4" brick veneer.....	7 brick
Siding 1" x 6", 4½" to weather.....	1.4
Siding 1" x 8", 6" to weather.....	1.4
Siding 1" x 10", 8" to weather.....	1.3
Base and picture mould.....	.11

(6) *Interior Partitions.* The factors for studs in frame interior partition construction include studs, shoe, double top plate; double headers, jambs, and trussing for one door opening; and one row of bridging. They are based on a bay 9 feet high and 12 feet wide, starting on one side with a corner post and ending on the other side with half corner post. Factors for wall finish and running trim provide for the occurrence of these items on both sides of the partition.

	Factors
Studs 2" x 4"-16" on centers.....	1.4
Studs 2" x 6"-16" on centers.....	2.0
Plaster.....	2.0
Base and picture mould.....	.22
Insulating boards.....	2.2
Paint or other finish.....	2.0

(7) *Millwork*. No factors are used for this item.

(8) *Plumbing*. No factors are used for this item.

(9) *Heating*. No factors are used for this item.

(10) *Electric Light and Power*. No factors are used for this item.

(11) *Garage and Outbuildings*. Proper factors should be selected from items (2) to (6), inclusive, above for each part of the garage or outbuildings.

(12) *Drives and walks*. No factors are used for this item.

(13) *Private Septic Tank, Well, and Electric Generating Plant*. No factors are used for this item.

428. Examples of the Compilation of Inplace Unit Costs. The following examples show how the total Inplace unit costs are developed for each of the various parts of a building. The items used are derived from the drawings preceding paragraph 430. The unit costs of the items here developed are used in the example of estimating replacement cost by the Inplace Unit Price Method in paragraph 430. The material and labor prices are assumed for the purposes of illustration only.

(1) *Excavation*. Secure unit prices from subcontractors.

(2) *Foundations, Exterior Steps, and Chimneys*.

(a) Foundations:		Material	Labor	Total	Factor	Unit Cost
12" brick walls	common brick	.015	.010	.030	19.5	.585
	mortar	.005				
8" brick walls	common brick	.015	.011	.031	13.0	.403
	mortar	.005				
(b) Exterior steps:						
Cement steps	concrete	.600	.300	.900	.8	.720
(c) Chimneys:						
Brick chimney	brick	.015	.010	.030	19.5	.585
	mortar	.005				

(3) *Floors and Ceilings*.

(a) Main area of house:

Basement

Floor	4" concrete	.100	.040	.140	1.0	104
-------	-------------	------	------	------	-----	-----

First floor		Material	Labor	Total	Factor	Unit Cost
Joists	2 x 8, 16'' on centers	.022	.012	.034	1.8	.061
Subfloor	diagonal S2S	.020	.008	.028	1.3	.036
Finish floor	select oak, 2¼'' face	.070	.030	.100	1.4	.140
Paint	fill and 2 cts. shellac			.030	1.0	.030
Unit Cost for Floor						<u>.267</u>

Ceiling						
Paint	size and 2 cts.			.035	1.0	.035
Finish	wood lath and plaster	.055	.020	.075	1.0	.075
Joists	2 x 8, 16'' on centers					.061
Unit Cost for Ceiling						<u>.171</u>
Combined Unit Cost for Main Area of House						<u>.578</u>

(b) Second floor finished area:

Floor						
Subfloor	right angle T. and G.	.020	.010	.030	1.3	.039
Finish floor	#1 com. oak, 2¼'' face	.060	.030	.090	1.4	.126
Paint	fill and 2 cts. shellac					.030
Unit Cost for Floor						<u>.195</u>

Ceiling						
Paint	size and 2 cts. cal.			.020	1.0	.020
Finish	insulating board	.045	.010	.055	1.1	.061
Joists	2 x 6, 16'' on centers	.022	.012	.034	1.0	.034
Unit Cost for Ceiling						<u>.115</u>
Combined Unit Cost for Second Floor Finished Area						<u>.310</u>

(c) Second floor unfinished area:

Subfloor	right angle T. and G.					.039
Ceiling	compo. boards	.025	.005	.030	1.1	.033
Combined Unit Cost for Second Floor Unfinished Area						<u>.072</u>

(d) Addition for bathroom floors:

Floor	¾'' ceramic tile			.800	1.0	.800
Base	3'' concrete	.085	.030	.115	1.0	.115
						<u>.915</u>
As tile replaces finished floor (.140) and paint (.030), deduct						<u>.170</u>
Net Additional Unit Cost for Bathroom Floor						<u>.745</u>

(e) Porch and stoop:

Floor		Material	Labor	Total	Factor	Unit Cost
Floor base	4" reinforced concrete	.190	.060	.250	1.0	.250
Finish floor	red quarry tile			.350	1.0	.350

Unit Cost for Porch or Stoop Floor..... .600

Ceiling

Paint	2 cts. lead & oil			.030	1.0	.030
Ceiling	"B" grade, 3¼" face	.050	.010	.060	1.3	.078
Joists	2x6, 16" on centers	.022	.012	.034	1.0	.034

Unit Cost for Porch Ceiling only..... .142

Combined Unit Cost for Porch..... .742

(4) Roofs and Sheet Metal.

(a) Main Roof:

Rafters	2x6, 16" on centers	.022	.013	.035	1.0	.035
Sheathing	S2S	.020	.008	.028	1.2	.034
Felt	30#	.020	.005	.025	1.0	.025
Roofing	250# asphalt shingles	.095	.015	.110	1.0	.110

Unit Cost for Main Roof..... .204

(b) Bay and Porch Roofs:

Rafters	2x6, 16" on centers					.035
Sheathing	S2S					.034
Felt	15#	.010	.004	.014	1.0	.014
Roofing	40# tin	.130	.020	.150	1.0	.150

Unit Cost for Bay and Porch Roofs..... .233

(5) Exterior Walls.

(a) Main walls:

Paint	2 cts. masonry			.035	1.0	.035
Exterior	com. brick	.015	.015	.035	7.0	.245
	mortar	.005				
Sheathing	diagonal S2S	.020	.010	.030	1.3	.039
Structural	2 x 4, 16" on centers	.022	.015	.037	1.4	.052
Finish	wood lath and plaster					.075
Base and picture mould	{ 3 member 6" }	.080	.020	.100	.11	.011
	{ 1 member 2" }					
Paint	size and 2 cts.			.035	1.0	.035

Unit Cost for Main Walls..... .492

		Material	Labor	Total	Factor	Unit Cost
(b) Gable and dormer walls:						
Paint	3 cts.			.040	1.0	.040
Exterior	1 x 8 siding, "B" grade	.045	.015	.060	1.4	.084
Sheathing	right angle S2S	.020	.008	.028	1.2	.034
Structural	2 x 4, 16" on centers					.052
Unit Cost for Gable and Dormer Walls.....						.210
(c) Second floor finished area:						
Paint	2 cts. cal.					.020
Finish	insulating board					.061
Base and picture mould						.011
Unit Cost for Second Floor Finished Area.....						.092
(d) Second floor unfinished area:						
Finish	compo. board					.033
Base and picture mould						.011
Unit Cost for Second Floor Unfinished Area.....						.044
(e) Addition for bathroom wall:						
Walls	tile		1.00	1.0	1.000	
As tile replaces lath and plaster (0.75), base and picture mould (.011), and finish (.035), deduct.....						.121
Net Additional Unit Cost for Bathroom Wall.....						.879
(6) Interior Partitions.						
(a) First floor:						
Paint	size and 2 cts.			.035	2.0	.070
Finish	wood lath and plaster			.075	2.0	.150
Base and picture mould				.100	.22	.022
Structural	2 x 4, 16" on centers	.022	.015	.037	1.4	.052
Unit Cost for First Floor.....						.294
(b) Addition for tile bathroom:						
Same as under Exterior Wall.....						.879
(c) Basement partition:						
Paint	2 cts. lead and oil			.030	2.0	.060
Finish	1 x 6 T. and G.			.030	2.6	.078
Structural	2 x 4, 16" on centers					.052
Unit Cost for Basement.....						.190
(d) Second Floor finished area:						
Paint	2 cts. cal.					.020
Finish	insulating board					.061
Base and picture mould						.011
Structural	2 x 4, 16" on centers					.052
Unit Cost for Second Floor Finished Area.....						.144

		Unit Cost
(e) Second floor unfinished area:		
Finish	composition boards	. 033
Base and picture mould		. 011
Structural	2 x 4, 16" on centers	. 052

Unit Cost for Second Floor Unfinished Area..... . 096

(7) *Millwork*. The following examples show how the unit prices of typical exterior doors, interior doors, cased openings, attic and basement stairs, bookcases, and kitchen cabinets are compiled. The labor includes all labor necessary to set, apply hardware, and finish the item. The paint covers painting the complete item three coats or fill, two coats, shellac and varnish. Standing trim is two member black band. When part of an item is better than usual, such as 1½" interior door, or better grade of hardware or trim, increase the unit cost accordingly.

(a) Exterior Doors:

	Front 3 x 7 1½"	Side 2' 6" x 7' 1½"	Rear 2' 6" x 7' 1½"	Basement 2' 6" x 7' 1½"
	6 pan. col.	15 lts.	1 pan. lt.	5 x pan.
Door	\$6. 50	\$5. 50	\$4. 50	\$3. 50
Frame	3. 50	3. 00	3. 00	3. 00
Trim, one side	1. 00	1. 00	1. 00	1. 00
Hardware	2. 50	1. 75	1. 50	1. 25
Labor	4. 20	3. 60	3. 00	3. 00
Paint	2. 50	2. 00	2. 00	1. 75
Base Costs.....	\$20. 20	\$16. 85	\$15. 00	\$13. 50
Screen dr. G. I. wire	8. 50	6. 50	6. 50	
Weatherstrip	8. 50	6. 50	6. 50	
Caulking around frame	1. 50	1. 50	1. 50	1. 50
Total Unit Costs.....	\$38. 70	\$31. 35	\$29. 50	\$15. 00

(b) Interior Doors and Cased Openings:

	2'6" x 7' x 1½" Two Panel	2'6" x 7' x 1½" Five Cross Pan.	Cased Opening 5'6" x 7'
Door	\$3. 25	\$2. 75	\$—
Jambs	1. 40	1. 40	1. 50
Trim—two sides	2. 00	1. 50	2. 50
		plain	
Hardware	1. 25	1. 00	
Labor	3. 60	3. 00	2. 00
Paint	2. 00	1. 25	1. 00
Total Unit Costs.....	\$13. 50	\$10. 90	\$7. 00

(c) Windows, Steel Sash and Louvers:

	12 lts. 9" x 12" Dble. hung, 1- $\frac{3}{4}$ "	Stl. Sash, 3'-1 $\frac{1}{4}$ " x 4'- $\frac{3}{4}$ " full vent	Stl. Base- ment Sash 2'-9 $\frac{1}{4}$ " x 1'	1'6" x 3'6" Louver
Window, sash or louver	\$2. 15	\$12. 25	\$2. 25	\$3. 10
Frame	2. 75	2. 65	1. 50	_____
Trim—back band	1. 30	1. 10	_____	_____
Wts. & cords	. 75	_____	_____	_____
Glass	_____	3. 35	. 80	_____
Hardware	. 35	_____	_____	_____
Screens	_____	4. 14	_____	_____
Labor	3. 00	2. 70	1. 00	. 60
Paint	2. 00	2. 00	. 50	. 50
Base Costs	\$12. 30	\$28. 19	\$6. 05	\$4. 20
Screens, wood frame, half length, GI wire	1. 50	_____	_____	_____
Weatherstrip	2. 25	_____	_____	_____
Caulk around frame	1. 25	_____	_____	_____
Total Unit Costs...	\$17. 30	\$28. 19	\$6. 05	\$4. 20

(d) Stairs:

	Material	Labor	Paint	Cost per Tread
Basement stairs, open, pine treads and risers, 2" x 4" hand rails	. 80	. 70	. 50	\$2. 00
Attic stairs, closed, pine treads and risers, pine hand rail	1. 25	1. 00	. 75	3. 00

(e) Cabinets and Bookcases:

				Cost per Surface Ft.
Kitchen cabinets, stock, wood doors below, glass above	. 75	. 60	. 25	1. 60
Bookcases, stock, glass doors, movable shelves	. 60	. 50	. 20	1. 30

(8) *Plumbing*. Secure unit prices from subcontractors.

(9) *Heating*. Secure unit prices from subcontractors.

(10) *Electric Light and Power*. Secure unit prices from sub-
contractors.

(11) *Garage and Out Buildings*.

Unit cost

(a) Foundation same as 8" wall of house..... . 403

(b) Floor same as basement floor of house..... . 140

(c) Exterior walls same as gable of house..... . 210

(d) Roof same as roof of house..... . 204

(12) *Drives and Walks*. Secure unit prices from subcon-
tractors.

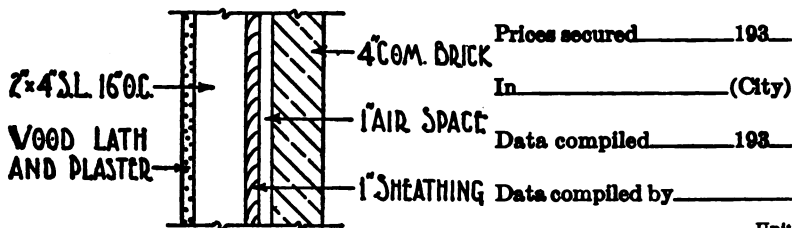
(13) *Private Septic Tank, Well, and Electric Generating Plant*.
Secure lump sum or unit price from subcontractors.

429. Following is a suggested data sheet for developing and recording Inplace Unit Price data for typical exterior walls and for changes in materials that are usually encountered. Similar data sheets should be compiled for all main items of construction. Data sheets should always include a sketch of the basic wall section as indicated.

Inplace Unit Price Cost Date Sheet

____ Insuring Office

Exterior Walls



Prices secured _____ 193__

In _____ (City)

Data compiled _____ 193__

Data compiled by _____

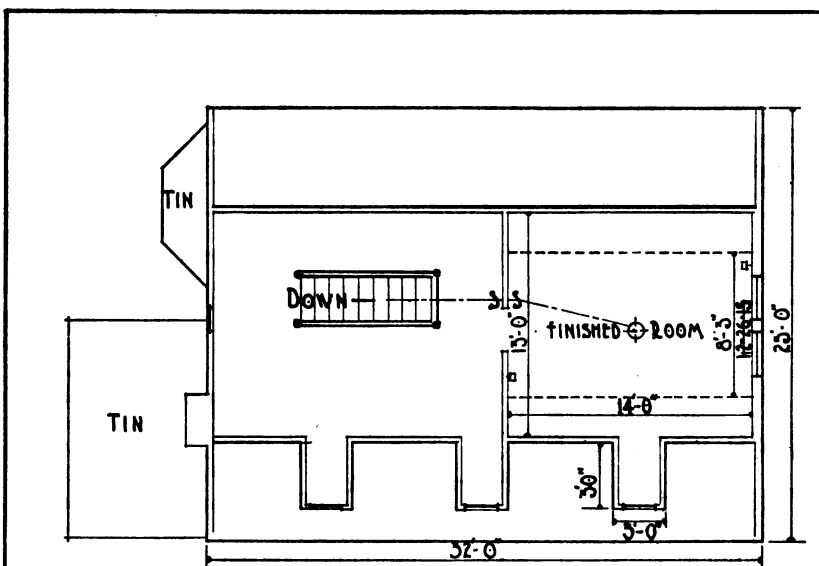
		Material	Labor	Total	Factor	Unit Cost
Exterior	common brick	.015	.015	.035	7.0	.245
	mortar	.005				
Sheathing	diagonal S2S	.020	.010	.030	1.3	.039
Structural	2" x 4"-16" on center	.022	.015	.037	1.4	.052
Finish	Wood Lath and Plaster	.055	.020	.075	1.0	.075
Base & picture	3 member 6"					
mld.	1 member 2"	.080	.020	.100	.11	.011
Paint	size & 2cts.			.035	1.0	.035

Total Unit Cost per Square Foot

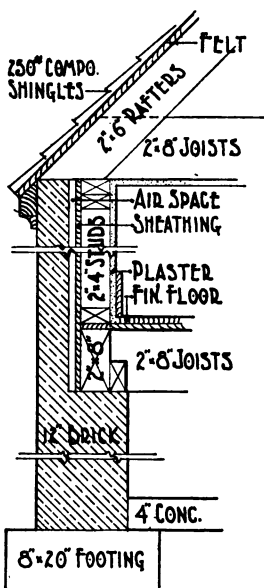
.457

For changes in materials from the above wall as shown substitute following costs:

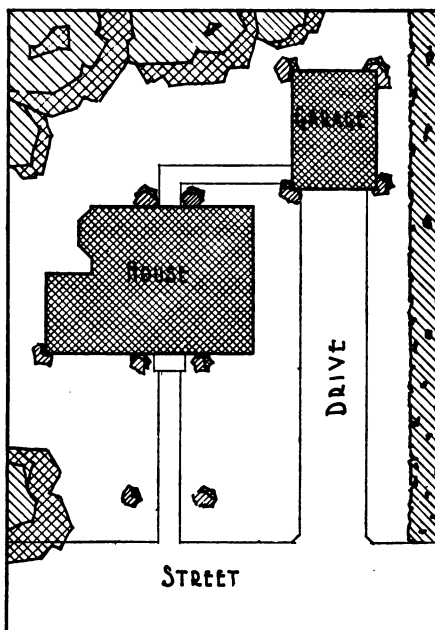
Paint	2cts. lead & oil			.030	1.0	.030
Paint	3cts. lead & oil			.040	1.0	.040
Paint	2cts. masonry pnt.			.035	1.0	.035
Exterior	face brick	.020	.018	.043	7.0	.301
	mortar	.005				
Exterior	1"x6" siding, "B" grade	.042	.015	.057	1.4	.080
Exterior	1"x8" siding, "B" grade	.045	.015	.060	1.4	.084
Exterior	shingles, #1 cypress	.080	.015	.095	1.0	.095
Exterior	metal lath and stucco	.085	.085	.120	1.0	.120
Sheathing	right angle S2S	.020	.008	.028	1.2	.034
Structural	2"x6"-16" on center	.022	.014	.036	2.0	.072
Structural	4"x8"x12" cinder block	.065	.020	.100	2.6	.260
	mortar	.015				
Finish	gypsum lath & plaster	.065	.025	.090	1.0	.090
Finish	metal lath & plaster	.075	.030	.105	1.0	.105
Paint	size & 2cts. calomine			.020	1.0	.020
Paint	size & paper, 25¢ roll			.040	1.0	.040



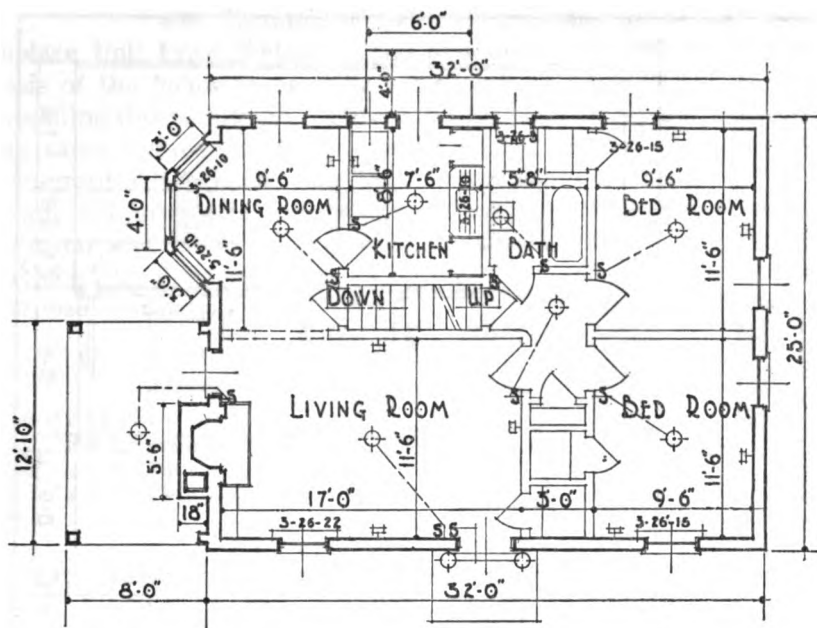
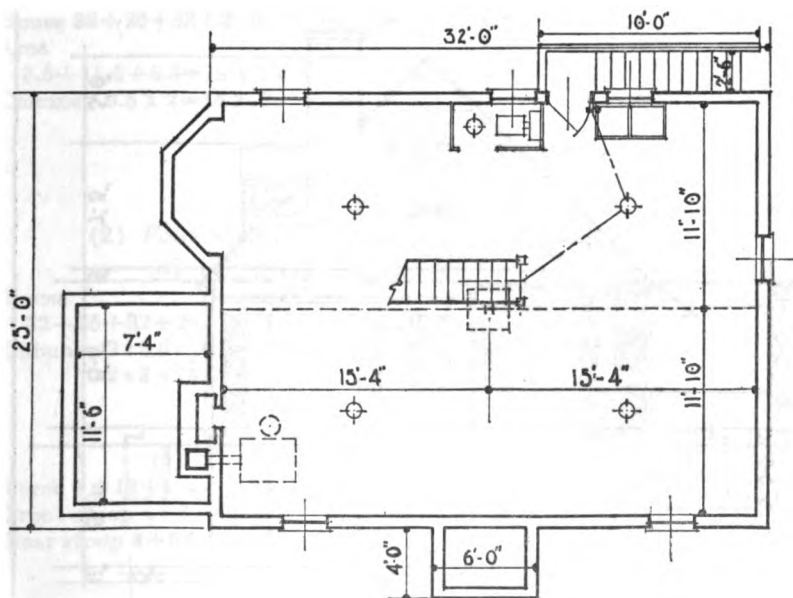
SECOND FLOOR PLAN



SECTION



PLOT PLAN

FIRST - FLOOR - PLANBASEMENT - FLOOR - PLAN



FRONT ~ ELEVATION



SIDE ~ ELEVATION

430. Example of Estimating Replacement Cost by the Inplace Unit Price Method. The building improvements used as a basis of the following example are shown by drawings immediately preceding this paragraph. Paragraph 421 is an example of estimating the same improvements by the Cubic and Square Foot Method. Paragraph 426 explains how the measurements are made and paragraph 427 gives the factors used. Paragraph 428 shows how the material and labor prices are combined with factors to form the Inplace Unit Price unit costs. Considerable detail is developed for the purpose of instruction.

(1) *Excavation.*

(a) Bulk excavation:

House $34 \times 27 \times 7.3 = 6,700$
 Bay $4 \times 8.5 \times 7.3 = 248$
 Area $4 \times 4 \times 7.3 = 117$
 $4 \times 8.5 \times 3.6 = 122$

7, 187+27

266 cu. yds.

. 50

\$133. 00

(b) Trench excavation:

Porch $8.5+13.8+8.5 = 31$
 Frnt. stoop $4.5+7+4.5 = 16$
 Rear stoop $4.5+7+4.5 = 16$

 $63 \times 1.5 \times 3.5 = 331$ House $33+26+33+21.5 = 114 \times 2 \times .7 = 160$

Area

 $3.5+11.5+3.5 = 19 \times 1.5 \times .5 = 14$ Chimney $6.5 \times 2 = 13 \times .7 = 9$

514+27=19 cu. yds.

1. 00

19. 00

Total Cost of Excavation..... \$152. 00(2) *Foundations, Exterior Steps, and Chimneys.*

(a) 12'' walls and chimney:

House

 $32+25+32+20.5 = 109.5 \times 8.3 = 909$ Chimney $2 \times 5.5 \times 16.5 = 182$ $2 \times 3 \times 15.5 = 93$

1, 184=1,184 cu. ft.

. 585

693. 00

(b) 8'' walls:

Porch $8+13+8 = 29$ Front stoop $4+6+4 = 14$ Rear stoop $4+6+4 = 14$

 $57 \times 4 = 228$ Area $3+3 = 6 \times 8 = 48$ Area $7.5+3 = 10 \times 6 = 60$

336

336 sq. ft.

. 403

135. 00

	Quantity	Unit Price	Cost
(c) Interior piers:			
4" pipe	1		\$8. 00
(d) Exterior steps:			
10 treads @ 2' 4" =	23 lin. ft.	. 72	17. 00

Total Cost of Foundations, Exterior Steps and Chimney----- \$853. 00

(3) *Floors and Ceilings.*

(a) Basement, first floor, and ceiling:

32 x 25 = 800

6.5 x 3 = 19. 5

819. 5

820 sq. ft.

. 578

473. 00

(b) Finished second floor:

14 x 15 = 210

4 x 3 = 12

222

222 sq. ft.

. 310

69. 00

(c) Unfinished second floor:

14 x 17 = 238

2 @ 4 x 3 = 24

262

262 sq. ft.

. 072

19. 00

(d) Bath floor:

3 x 8 =

24 sq. ft.

. 745

18. 00

(e) Porch:

12.8 x 8 =

102 sq. ft.

. 742

76. 00

(f) Stoops:

2 @ 4 x 6 =

48 sq. ft.

. 600

29. 00

Total Cost of Floors and Ceilings----- \$684. 00

(4) *Roofs and Sheet Metal:*

(a) Main roof:

House 18.5 x 33 x 2 = 1222

Stoop 3 x 6 = 18

1240

1,240 sq. ft.

. 204

253. 00

(b) Porch and bay roofs:

Porch 8.5 x 14 = 119

Bay 7 x 3.5 = 25

144

144 sq. ft.

. 233

34. 00

(c) Sheet metal:

Gutters 33 + 33 + 14 + 10 = 90

90 lin. ft.

. 180

16. 00

Downspouts 6 @ 8 feet = 48

48 lin. ft.

. 180

9. 00

Flashing 11 + 14 + 10 + 10 + 6 = 61

61 lin. ft.

. 150

9. 00

Total Cost of Roofs and Sheet Metal----- \$321. 00

	Quantity	Unit Price	Cost
(5) <i>Exterior Walls.</i>			
(a) Main walls:			
House $32+25+32+26=115 \times 9.3=$	1,074 sq. ft.	. 492	\$528. 00
(b) Gables, dormers, and porch ends:			
Gables $25 \times 6 \times 2=300$			
Dormers $3 @ 3.5 \times 2 \times 2= 42$			
$3 @ 4 \times 3= 36$			
Porch $8 \times 1 \times 2= 16$			
394	394 sq. ft.	. 210	83. 00
(c) Second floor finished area:			
$14 \times 7.3= 102$			
$4+3+4=11 \times 4.8= 53$			
155	155 sq. ft.	. 092	14. 00
(d) Second floor unfinished area:			
$14 \times 7.3= 102$			
$2 @ 4+3+4=11 \times 4.8=106$			
208	208 sq. ft.	. 044	9. 00
(e) Addition for bath walls:			
$3 \times 4=$	12 sq. ft.	. 879	11. 00
Total Cost of Exterior Walls.....			\$645. 00
(6) <i>Interior Partitions.</i>			
(a) Basement:			
$3+5+3=11 \times 7.3=$	80 sq. ft.	. 190	15. 00
(b) First floor:			
$3+3+3+32+15+3=59$			
$12+12+13+3+25 =65$			
124 x 8.5	1,054 sq. ft.	. 294	311. 00
(c) Second floor finished area:			
$15+6+6+14=41 \times 7.3=$	300 sq. ft.	. 144	43. 00
(d) Second floor unfinished area:			
$17+6+6+14=43 \times 7.3$	314 sq. ft.	. 096	30. 00
(e) Addition for bath wall:			
$8.5+6+8.5+3=26 \times 4$	104 sq. ft.	. 879	91. 00
Total Cost of Interior Partitions.....			\$490. 00
(7) <i>Millwork.</i>			
Front door, $1\frac{1}{4}"$ 6 pan. colonial, screen door, weatherstripped and caulked	1		\$39. 00
Side door, $1\frac{1}{4}"$, 15 lts., screen door, weather- stripped and caulked	1		31. 00
Rear door, $1\frac{1}{4}"$, 1 lt. and 1 pan., screen door, weatherstripped and caulked	1		30. 00
51246—36—10			

	Quantity	Unit Price	Cost
Basement door, 1½", 5 cross pan., caulked	1		\$15. 00
Windows, 1½", D. H., ½ screens, weather-stripped and caulked	16	17. 30	277. 00
Steel basement sash	6	6. 05	36. 00
Louver	1		4. 00
Blinds, pair	2	4. 00	8. 00
Columns	4	4. 00	16. 00
Front Entrance	1		25. 00
Inside doors, 1½", 2 panel	11	13. 50	148. 00
Inside doors, 1½", 5 cross panel	2	10. 90	22. 00
Cased opening	1		7. 00
Kitchen cabinet, stock, wood door below, glass above, 2 @ 2' x 7' = 23 sq. ft.	23 surf. ft.	1. 60	45. 00
Bookcase, stock, glass doors, 3' x 7' = 21 sq. ft.	21 surf. ft.	1. 30	27. 00
Attic stairs, closed, pine treads and risers, pine rail	13 treads	3. 00	39. 00
Basement stairs, open, pine treads and risers, 2" x 4" rail	12 treads	2. 00	24. 00
Mantel, tile facing and hearth			50. 00

Total Cost of Millwork..... \$843. 00

(8) Plumbing.

¾" water meter and line	1		50. 00
Sewer connection and line	1		20. 00
5' double shell recess tub	1		85. 00
Lavatory, apron front, wall type	1		30. 00
Syphon action closet, combination	1		45. 00
Apron front kitchen sink, 5' double drain board	1		65. 00
Double concrete laundry trays	1		30. 00
20 gallon automatic gas heater and storage tank	1		60. 00
Wash down closet combination			30. 00
Medicine cabinet	1		10. 00
Built-in tile fixtures	6	2. 50	15. 00

Total Cost of Plumbing..... \$440. 00

(9) Heating.

Living room	3/26/22, 51 sq. ft.
Kitchen	3/26/10, 23 sq. ft.
Dining room, 2 @	3/26/10, 46 sq. ft.
Bedroom #1	3/26/15, 35 sq. ft.
Bedroom #2	3/26/15, 35 sq. ft.
Bedroom #3	3/26/15, 35 sq. ft.
Bathroom	3/26/6, 15 sq. ft.

Feet of Radiation	240 sq. ft.		
2 pipe steam heat	240 sq. ft.	1. 60	384. 00
Addition for oil burner and thermostatic control			175. 00

Total Cost of Heating..... \$559. 00

	Quantity	Unit Price	Cost
(10) <i>Electric Light and Power.</i>			
Outlets	44	2. 00	\$88. 00
Range outlet	1		50. 00
Electric refrigerator outlet	1		5. 00
Kitchen ventilating fan and outlet	1		25. 00
Fixture allowance			50. 00
Total Cost of Electric Light and Power-----			\$218. 00
Subtotal, labor and materials			5, 202. 00
Quality variation, good, add 2%			104. 00
			5, 309. 00
Builder's overhead and profit, 10%			531. 00
			5, 840. 00
Architectural fee, no supervision, 4%			234. 00
Total Cost of Main Building-----			6, 074. 00
(11) <i>Garage.</i>			
(a) Foundation:			
20 + 12 + 20 + 4 = 56 x 1.5 =	84 sq. ft.	. 403	34. 00
(b) Floor:			
12 x 20 =	240 sq. ft.	. 140	34. 00
(c) Exterior walls:			
56' x 8' = 448			
2 Gables @ 12' x 3' = 72			
520	520 sq. ft.	. 210	110. 00
(d) Roof:			
21' x 9' x 2 =	378 sq. ft.	. 204	77. 00
(e) Overhead doors:			30. 00
Subtotal labor and materials			217. 00
Builder's overhead and profit—10%			22. 00
			\$239. 00
Architectural fee, no supervision—4%			10. 00
Total Cost of Garage-----			\$249. 00
(12) <i>Drives and Walks.</i>			
Drive, 12' x 62' = 744	744 sq. ft.	. 160	119. 00
Walks 4' x 30' = 120			
3' x 23' = 69			
189	189 sq. ft.	. 140	27. 00
Total Cost of Drives and Walks-----			\$146. 00
Total Cost of Main Building, Garage, Drives, and Walks-----			\$6, 469. 00

PART II
SECTION 1
RATING OF PROPERTY

INDEX

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PART II
SECTION 1
RATING OF PROPERTY

GENERAL RATING INSTRUCTIONS

Physical Security Features		REJECT	1	2	3	4	5	RATING
Durability	Structural Soundness		5	10	15	20	25	
	Resistance to Elements		2	4	6	8	10	
	Resistance to Use		1	2	3	4	5	
Function	Livability and Functional Plan		5	10	15	20	25	
	Mechanical and Convenience Equipment		2	4	6	8	10	
	Natural Light and Ventilation.		1	2	3	4	5	
Architectural Attractiveness			4	8	12	16	20	
Total Rating of Physical Security								%
Adjustment for Nonconformity			12	9	6	3	0	%
TOTAL RATING OF PROPERTY								%

101. Rating of Property is determined by rating eight features of risk according to the principles outlined in this Section and in Part I, Section 2. The first seven are described as the Physical Security Features and are so weighted that the Total Rating of Physical Security may be as high as 100%. The eighth feature, Adjustment for Nonconformity, is separately rated and the result deducted from—not added to—the Total Rating of Physical Security to determine the final Rating of Property.

102. The Total Rating of Physical Security, which is obtained by rating the first seven features, presumes that the subject property is free from any detrimental influence resulting from non-conformity with typical properties in the immediate neighborhood. Because nonconformity definitely affects the marketability of properties, it is important to compare the subject property with surrounding properties and make any necessary adjustment in order to convert the Total Rating of Physical Security into the Rating of Property. The Total Rating of Physical Security presumes a hypothetical condition. The Rating of Property represents a measurement of the mortgage risk introduced by the characteristics of the physical property and by its relation to its actual environment.

103. The Rating of Property does not include consideration of those risk factors introduced by the characteristics of the neighborhood and location. These are included in the Rating of Location (Part II, Section 2).

104. In rating Adjustment for Nonconformity no consideration is given to factors of nonconformity unless they are of such a character that they increase mortgage risk. Nonconformity which does not impair the quality of the real estate security is not permitted to reduce the final Rating of Property.

105. Total Rating of Physical Security shall be accomplished by rating separately each of seven features. The features have been weighted on a scale of 100% in order to obtain the relative importance of each when all are combined to obtain the Total Rating of Physical Security. Each feature is marked on a scale of from "1" to "5", "5" being the highest rating. The rating grid reproduced at the head of this Section enables this rating to be made easily and quickly. For example, assume that the Architectural Inspector or Valuator is ready to rate the various physical security features. The first is Structural Soundness. Suppose that the structure is well constructed and in very sound condition. The inspector puts an X mark in the "5" column and immediately carries over to the extreme right-hand column of the grid the figures appearing in the marked square, in this case 25. If the mark were to be placed in the "2" column, the number in that square would be carried over, 10 in this case. If the structure is deemed to be sub-standard, the X mark would be made in the Reject column and the word "Reject" written in the extreme right-hand column. One such rating anywhere in any category will necessitate a recommendation for the rejection of the application for insurance. In the event an X mark appears in the Reject column, the word "Reject" must be written in the Rating column on the Total Rating of Physical Security line and on the Rating of Property line. If no such mark appears after any of the seven features, the Total Rating of

Physical Security is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an expression of the Rating of Physical Security on a percentage basis.

106. The seven features which are rated to determine the Total Rating of Physical Security are listed below with the weights which have been ascribed to them:

(1) Structural Soundness.....	25
(2) Resistance to Elements.....	10
(3) Resistance to Use.....	5
(4) Livability and Functional Plan.....	25
(5) Mechanical and Convenience Equipment.....	10
(6) Natural Light and Ventilation.....	5
(7) Architectural Attractiveness.....	20

An eighth feature appears on the grid but it is not a Physical Security Feature. It is designated "Adjustment for Nonconformity." Instructions for rating this eighth feature are given below in paragraphs 156 to 169.

107. The seven features are analyzed from several different points of view. The first three features, namely, Structural Soundness, Resistance to Elements, and Resistance to Use are studied in terms of durability. The next three features, namely, Livability and Functional Plan, Mechanical and Convenience Equipment, and Natural Light and Ventilation, are studied in terms of function. The words "Durability" and "Function" have been placed at the left edge of the grid to remind the inspector to assume the proper points of view. The last feature, Architectural Attractiveness, is studied in terms of lasting appeal.

108. In rating the Physical Security Features, the inspector must be aware of the fact that he is rating mortgage risk. In connection with existing construction he must rate either that which he finds on the site or the same property assuming completion of alterations, additions, and repairs in contemplation by the borrower or required by the Federal Housing Administration. No hypothetical conditions may be assumed by him, however, unless they are specifically defined in his report. In the case of new construction, he is to analyze the submitted drawings and specifications in detail and reflect in the rating the relative degree of excellence or poorness which the property will exhibit upon completion according to these drawings and specifications. In either existing or new construction he must base his rating on possibilities and probabilities with respect to what may happen to the structures in the future. The past experience and present condition with respect to the first seven features in this category are significant only to the degree to which they indicate the likelihood of future difficulty. Surface indications are invaluable clues to hidden defects or deficiencies.

109. To obtain consistency from case to case it is necessary for inspectors to utilize the "3" column (in the ratings of the Physical Security Features only) as an average basis from which relative poorness and excellence descend and ascend. In rating the features, personal preferences and prejudices must be subordinated except in so far as they are commonly shared by informed persons. It is not intended to nullify the judgment of the inspector but to obtain disinterested, uniform analyses of the mortgage security. The tendency to alter design or to change drawings on the basis of the inspector's personal tastes should be avoided and not allowed to influence his considerations.

110. The physical conditions prevailing in the structure directly affect the ratings of a number of the Physical Security Features and the Total Rating of Physical Security. This is especially true with regard to the three features relating to structural durability and to the features Livability and Functional Plan and Mechanical and Convenience Equipment. Poor physical condition will tend to result in low ratings of these five features. The ratings bear a direct relationship to the estimate of remaining physical life of the building. Inspectors are required to give estimates of remaining physical lives of buildings and it is important to relate these estimates to the ratings ascribed to these five features. Thus, if Structural Soundness is given a low rating because of physical deficiencies of the building, the estimate of the remaining physical life should be shorter than if high ratings have resulted from the analysis. Inasmuch as the actual remaining physical life of a building is a matter of considerable conjecture, it is evident that estimates of lives are largely significant only in relation to one another. That is, an inspector cannot be expected to have any very definite opinion with respect to the actual remaining physical life of a building, but he can have a very significant opinion with respect to which of several structures may be expected to have longer or shorter lives. It is suggested, therefore that well-built houses, newly completed, be ascribed remaining physical lives of from 50 to 60 years and that other houses be ascribed lives in relation to these arbitrarily established lives.

111. The inspector must take into account the provisions in established property standards by considering them to be the minimum requirements necessary to avoid reject ratings of features. Those properties which barely meet the eligibility requirements will warrant a low rating and the degree to which they surpass the minimum requirements should be favorably reflected in the feature ratings. In cases where repairs, alterations, or additions are contemplated by the mortgagor, or where such work is found to be necessary if reject ratings are to be avoided, the instructions stated in

Part I, Section 1, must be followed in making the Physical Security Feature ratings in the Rating of Property category.

STRUCTURAL SOUNDNESS

112. The rating of Structural Soundness is an index of the ability of all structural members, materials, and methods of assembly incorporated in a structure to withstand the imposed loads with the minimum acceptable amount of settlement and deflection. In rating this feature the inspector shall consider and weigh carefully the adequacy of the design of the structural fabric, the size, quality, and durability of the materials comprising the structural members, the quality and methods of workmanship incorporated in the assemblage, and finally the extent to which physical deterioration has created unsoundness or weakness.

113. The list of questions in subsequent paragraphs serves to indicate the principal considerations which enter into the formation of judgment with regard to a proper rating of this feature.

114. Foundation.

(a) Soil: Is the nature of the soil such as to withstand imposed loads?

(b) Footings: Do footings possess adequate width and thickness to distribute properly the weight on the soil? Sufficient depth to resist upheaval by frost? Has adequate reinforcing been provided where necessary?

(c) Foundation Walls: Are foundation walls adequately designed and do they possess sufficient strength to carry the imposed loads and resist outside earth pressure and hydrostatic pressure?

(d) Columns and Piers: Are columns and piers of sufficient size and strength to carry beam loads?

115. Floors.

(a) Basement Slab: Is basement slab designed and reinforced so as to resist hydrostatic pressure, if any?

(b) Porch and Terrace Slabs: Has adequate reinforcing been provided to carry the load?

(c) Beams and Sills: Are beams, wall sills, and plates of adequate size and construction, and do they possess sufficient bearing surface?

(d) Joists: Are floor joists of sufficient size and properly spaced so that there will be no undue deflection in their span? Adequately bridged and unimpaired by the installation of the mechanical equipment? Is there sufficient bearing area on supports? Is there adequate support for joists abutting headers?

(e) Openings: Are openings properly framed, trussed, and headed?

(f) Sub Floors: Is sub-flooring so employed as to add additional bracing to the structure?

116. Exterior Walls.

(a) Are structural members of sufficient size to carry the imposed load and properly braced or sheathed to resist wind pressure?

(b) Are frame walls well tied to masonry?

(c) Have all openings been properly framed and linteled?

117. Interior Walls and Partitions.

(a) Are structural members of adequate size, properly spaced and braced?

(b) Have all load-bearing openings been properly framed or trussed and double studded at jambs?

118. Ceilings.

(a) Are ceiling joists of adequate size, properly spaced and bridged?

(b) Is there sufficient bearing area on supports and is the tie continuous between outside walls?

119. Roofs.

(a) Are rafters of adequate size, properly tied, and seated so as to carry the roofing material and resist wind and snow loads?

(b) Is roof properly braced with supports and collar or wind beams?

120. Accessory Buildings. Are foundations, floors, side walls, and roof of such materials and construction as to assure a physical life for the accessory buildings equal to that of the main building?

121. Although a fire-proof building, properly designed and constructed, deserves the highest rating under Structural Soundness, this does not imply that a building of frame or masonry veneer construction, when properly designed and constructed, could not possess sufficient quality to warrant the highest rating. The determination is dependent upon whether or not the methods of assembly, materials used, and workmanship are such as to assure a long life for the structure.

122. A low feature rating will be warranted if defects such as sagged beams, floor joists, or rafters, excessive settlement, or cracked basement walls are present in a serious degree. The fact that it has been necessary for the present or previous owners to install additional piers and beams in the basement, or to patch cracked basement walls, or to install additional roof bracing should serve as a warning to the inspector and as an indication that a close analysis should be made of the structure to discover other hidden faults which

may be expected in construction, the low quality of which is thus reflected.

123. Certain regions of the United States are subject to tornadoes, earthquakes, and other natural hazards, and in these areas structural soundness must be rated according to the degree with which the building was designed and erected in order to minimize the danger from these special natural hazards.

124. In the final analysis it is necessary to consider the loads which will be imposed upon the structural fabric by the use for which it was designed and to estimate the degree with which it will be able to withstand these requirements. The cost range of the structure under analysis should not enter into the consideration of its structural soundness.

RESISTANCE TO ELEMENTS

125. The rating of this feature reflects the degree of resistance exhibited by the structure to the deteriorating and damaging effects produced by the elements. These effects may in themselves lessen the durability and may render the entire building or certain portions of it uninhabitable. The inspector shall bear in mind that the excellence of resistive ability in one material may be off-set by poroness in adjacent materials and in such cases the rating will be adversely affected. Conditions entering into the rating of this feature are discussed below under three headings, "Resistance to Weather", "Resistance to Fire", and "Resistance to Decay, Corrosion, and Insect Hazards." Resistance to special natural hazards such as earthquakes and tornadoes is primarily a structural resistance and was discussed above under the feature "Structural Soundness." The following list of questions serves to indicate the principal considerations which enter into the formation of judgments with regard to the proper rating of this feature.

126. Resistance to Weather.

(1) Roof:

(a) Is the roof correctly pitched and are the slope and angles of the roof of such a nature as to afford proper drainage and to avoid "snow pockets"? Have crickets or saddles and snow guards been provided where necessary?

(b) Is roofing material of such quality and condition as to effectively resist rain, snow, and ice, and to withstand high winds in areas where these climatic conditions occur, and to withstand exposure and rapid temperature changes without resulting damage?

(c) Are ridges properly protected?

(d) Are the materials and construction of roof decks of such nature as to withstand the elements?

(2) Sheet Metal:

(a) Have ferrous and non-ferrous metals been used in combination so that erosion will result?

(b) Valleys: Is the material of all valleys of such quality as to have a life equal to that of the roofing materials?

(c) Flashing and Counter-Flashing: Are flashing and counter-flashing of proper quality and workmanship installed where necessary?

(d) Guttering and Downspouting: Have gutters and downspouts been provided where necessary and are they so designed as to adequately dispose of the water and so constructed as to resist snow loads?

(3) Walls:

(a) Basement or Foundation Walls: Are these walls adequately designed and constructed to resist penetration of moisture?

(b) Principal Walls: Are the principal walls so constructed and in such condition as to effectively withstand the elements of the section of the country in which they are erected and to resist driving rains and rapid freezing and thawing?

(c) Where more than one type of material is used in principal walls, are the different materials properly tied together and has provision been made for the absorption of their different coefficients of expansion?

(4) Insulation:

(a) Have the methods of insulation and insulation materials been incorporated in such a way as to effectively retard transmission of heat and cold?

(b) Has weatherstripping and caulking been provided?

(c) Have storm doors, storm windows, and vestibules been provided in regions where climatic conditions warrant?

127. Resistance to Fire.

(a) Do the materials and structural methods used offer a high or low degree of fire retardance to both the exterior and interior construction?

(b) Has fire resistivity been aided by proper framing around chimney, by the use of flue tiles, and by adequate fire-stopping?

128. Resistance to Decay, Corrosion, and Insect Hazards.

(1) Decay and Corrosion:

(a) In unexcavated portions is there ample circulation of air around wood or metal members?

(b) Is there adequate provision to exclude surface water?

(c) Are materials subject to decay or corrosion adequately protected?

(2) Insect Hazards:

(a) In regions where termites or borers are prevalent, have suitable protective measures been provided, such as metal shields under all frame bearings, and have timbers been impregnated?

RESISTANCE TO USE

129. In rating this feature the inspector must reflect the degree to which the quality of the materials and workmanship will withstand the wear and tear to which they are subjected through continued use. Further, the inspector must bear in mind that the cost of maintenance of a dwelling is directly correlated to the factors considered in rating this feature. As the interior of the structure contains the major portion of the wearing surfaces, the considerations entering into the rating of this feature must, therefore, be concerned primarily with the interior of the main structure and of accessory buildings, and must also include the surfaces of walks, drives, porches, and terraces. The heaviest wear resulting from use is experienced by flooring, wall finish, doors, sash, trim, and hardware. The inspector must consider whether or not the material and workmanship incorporated in both the finish and base of the following items are of such quality as to be highly resistant to the wear to which they will be subjected:

(a) Floors, Utility Areas:

- (1) Basement floor.
- (2) Kitchen, pantry and service porch floors.

(b) Floors, Living Areas:

- (1) First, second, and third floors.
- (2) Baths and lavatory floors.
- (3) Porch and terrace floors.

(c) Walls:

- (1) Exterior walls.
- (2) Interior walls.
- (3) Bathroom, lavatory walls and wainscote.
- (4) Kitchen walls and wainscote.

(d) Ceilings.

(e) Interior:

- (1) Doors, jambs, and trim.
- (2) Windows, frame, and trim.
- (3) Finish hardware.

(f) Accessory Buildings:

- (1) Floors, walls, and ceilings.
- (2) Doors, windows, frames, trim, and hardware.

(g) Walks and Drives:

- (1) Include base and surface.

130. The materials and workmanship of both plaster base and plaster must be noted inasmuch as the best wall finish is no stronger than its base and the best painting or wall papering applied to poor plaster may result in an unsatisfactory wearing surface. The quality of interior painting, tinting, or wall papering must be carefully considered. Doors and sash, either of wood or metal, that are of light, flimsy construction will not withstand constant use and for this reason will affect the feature rating unfavorably. The wearing qualities possessed by all these items, assuming ordinary maintenance, shall be weighed against the severity of wear and tear to which they will be subjected.

LIVABILITY AND FUNCTIONAL PLAN

131. In rating this feature it is imperative that the inspector determine the degree of practical usefulness for residential purposes to the typical family likely to occupy the subject property. If the property has been planned and constructed so that a high degree of livability and functional efficiency exists, then a high rating for this feature will be warranted.

132. The inspector must determine whether or not the layout of the structure is economical, practical, and efficient. An economical layout is one which presents the greatest proportion of usable floor area in relation to the gross floor area. An excess of unusable space makes a house less desirable. For example, if the hall area is larger than is necessary in view of the uses to which it will be put, and perhaps because of this the sizes of other rooms in the house where increased area is desirable have had to be restricted, then the layout would to some degree be uneconomical. Again, if space is provided which is not readily and conveniently usable, economy is sacrificed because of unwarranted additional cost of construction and maintenance together with the attendant increased labor involved in the occupancy and use of such a structure. The inspector must recognize that large entrance halls, galleries, and similar spaces are considered desirable and necessary in dwellings in the higher cost range. Where such spaces properly serve a functional purpose they do not indicate inefficiency of plan.

133. The rating of this feature must reflect the functional qualities, adequacy of sizes, and efficiency of the individual rooms. Lower ratings will be warranted if any of the following objectionable conditions are present:

- (a) Sleeping quarters with insufficient privacy.
- (b) Dark or poorly ventilated rooms.
- (c) Bathrooms not readily accessible, or accessible only through a major room.

(d) Kitchen inadequate for or ill-arranged for food storage, food preparation, and dish washing.

(e) Insufficient provision for hanging clothes, or for storage of linens, blankets, and brooms.

The relation of the location of the service or utility portion of the house to the living quarters also definitely affects the rating of this feature.

134. If the probable occupant is likely to have laundry work done in the home, the rating will be affected by the relative adequacy of the provision for laundry work. This is to be judged, not merely on the presence or absence of laundry trays and convenience outlets but also upon such items as the light and ventilation of the laundry space, space available for drying, and access to outdoor drying.

135. The rating must also be influenced by the ease of circulation throughout the house afforded to the occupants. The most desirable conditions will occur where access from room to room is according to logical sequence, where there are no long, dark, or winding corridors, where movements into and out of the various rooms or units cause the least disturbance, where staircases are sufficiently wide, not too steep, and in such locations as to permit moving of furniture readily. Ratings of this feature will be favorably affected in the case of houses having rooms of such sizes and shapes as to accommodate furniture readily in proper grouping for convenient living. Shape is very important as well as size. Broken or short wall areas do not permit flexibility in furniture arrangement. Protruding radiators that are in the way are objectionable. Windows should be spaced in relation to internal function as well as to exterior appearance. The rating of this feature must reflect the practical quality of the interior layout. This factor will contribute to the rating favorably or unfavorably, depending on the existence or absence of agreeable proportions of the rooms. For example, a room 5 feet by 15 feet is poorly proportioned for conventional use.

136. Another important factor which affects the livability and functional quality of a residential property and one which the inspector must consider in making this feature rating is the plan of improvement of the site. Consideration should be given to the suitability of the size, shape, and topography of the lot in relation to the type and size of the dwelling and accessory buildings. Buildings, walks, plantings, and terracing (in the case of a sloping lot) may be so laid out or arranged on the plot as to result in a high degree of excellence or an opposite condition may result. The rating of this feature will be favorably affected in cases in which the general plan of improvement, because of the functional aspect, is excellent, so that the result-

ant effect is one that, because of excellent livability characteristics, endows the property with strong appeal to those who would be commonly attracted as purchasers of such property. In any such case the buildings will be found located upon the site in the most advantageous and desirable positions. Structures will be found placed on the lot so that the fullest advantage has been taken of the possibilities for sunshine, ventilation, scenic outlook, privacy, and safety. Where high ratings of this feature are warranted, it would also be found that the grounds have been laid out so that opportunity is afforded for effective landscaping and gardening. Furthermore, in such cases there would exist a high degree of easy accessibility to garage buildings and other accessory structures, and the placing of buildings, walks, and drives would not result in cutting of the grounds into small and unusable areas. A condition tending toward high ratings of this feature will also result in cases where accessory buildings are so located upon the site as not to create hazardous conditions affecting the safety of the occupants of the property, and where they are so placed that the convenience of the occupants is served in the most advantageous manner. In cases where no accessory buildings have been provided, the rating of this feature will be influenced by the size and location of the available area of the site upon which accessory buildings might be erected. As the actual conditions which are found in any case depart from the conditions which have just been described, ratings of this feature will become progressively lower. Although natural light and ventilation are covered under a separate rating feature, consideration must be given to the requirements of natural light and ventilation as affecting livability and functional efficiency. For example, if a kitchen is so poorly lighted and ventilated as to impair its usefulness, convenience, and comfort, this condition should be reflected in the rating of livability. Proper orientation of rooms to obtain maximum benefit from sunlight and exposure is definitely a factor affecting livability. If the sun porch is placed on the northern side of the building or if a living portion is not shielded from the sun during the hotter part of the day in a region subject to extreme heat, the rating will be adversely affected.

137. The following list of questions will assist the inspector in the proper rating of this feature:

- (1) Does the arrangement of the plan present an economical layout in relation to the ratio of usable floor area to gross area?
- (2) Is the separation and relation of living units arranged so as to provide ease of circulation and privacy?
- (3) Has the separation and relation of service units been considered from a circulation and utility standpoint?

(4) Are rooms of adequate size for their intended purposes? Are wall spaces of such size and location, and are openings and radiators so arranged as to provide for convenient and suitable furniture placing?

(5) Do the ingress and egress both from living and service units contribute to livability?

(6) Has interior planning been accomplished so that the fullest possible advantage has been taken of orientation and the facilities offered by the plot, and are provisions for natural light and ventilation adequate for the functional necessities of the dwelling?

(7) Is the plot of suitable size, shape, and topography, and is the utilization of the plot of such character as to afford a high degree of livability to the occupants of the property from the standpoint of service, convenience, and safety?

138. If the property under consideration is occupied by more than one family, in rating this feature the inspector must consider certain matters that do not pertain to single-family dwellings. To be warranted in giving such a building a high rating as to livability and functional plan he must satisfy himself as to the following: that there is separate access to each family unit without undue annoyance to other families; that the plan is so arranged that families do not look into each other's windows across narrow intervening space; that adequate venting has been provided so that objectionable odors are properly and effectively carried off; that provision has been made to retard sound transmission from one unit to another. If the heating of such a building is accomplished by means of separate installations rather than a common plant the rating of this feature is favorably influenced when there is proper provision for access by each family to the heating rooms, separate fuel storage facilities for each family unit, and adequate, efficient facilities for fuel delivery.

MECHANICAL AND CONVENIENCE EQUIPMENT

139. The rating of this feature reflects the degree of adequacy and durability of the mechanical and convenience equipment in the subject property to perform the functions for which this equipment is designed, considering the number and type of people likely to occupy the particular property, and the class of property. Analysis of this feature proceeds under three phases: "Plumbing and Sewerage", "Heating", and "Electric Light and Power."

140. Only such items of mechanical and convenience equipment as are definitely identified as a part of the real property, either by custom or State law, can be included for consideration. (See Part I, Section 4.) From a functional standpoint, public water supply, public sewerage, and public utility electric supply systems

are preferable to private systems on the property itself. Consideration must be given to the dependability of all supplies and services.

141. Items of mechanical equipment that are of recognized and reputable manufacture and for which replacement parts are readily obtainable possess better quality and superior durability. In new construction particular attention should be given to any evidence of the use of ante-dated, second-hand, or rebuilt equipment. Such equipment will necessitate a low feature rating.

142. Systems in which equipment and fixtures are of poor quality and design, and improperly installed will show more rapid deterioration and obsolescence and give rise to frequent damage and heavy repair costs. It is axiomatic that the rating will be affected by the age and condition of the equipment; that is, the older the equipment, the less chance there is for this feature to receive a high rating. The economical operation and maintenance of mechanical and convenience equipment has a direct bearing upon its functional qualities.

143. The following list of questions serves to indicate the principal considerations which enter into formation of judgments by the inspector with regard to a proper rating of this feature.

144. Plumbing.

(1) Baths and Lavatories:

(a) Are there sufficient baths and lavatories for the number of persons likely to occupy the property including servants, if any?

(b) Are fixtures of proper design, material, and workmanship for this class of structure? Are trimmings suitable for this class of structure? Are trimmings readily accessible and adjustable?

(2) Service Facilities:

(a) Are the plumbing facilities in kitchen, pantry, and laundry adequate to perform the service required?

(b) Are fixtures of proper design, material, and workmanship for this class of structure with trimmings readily accessible and adjustable?

(3) Supply, Waste, Drains, and Accessories:

(a) Are supply pipes properly graded as to size, of durable material, good workmanship, and provided with sufficient conveniently placed stop and drain valves?

(b) Are soil, waste, and vent pipes of adequate size, of durable material, and good workmanship? Are soil and waste lines properly trapped and vented?

(c) Is the domestic hot water supply system of proper size, kind, design, and workmanship to combine adequate service with economy, and is the storage tank properly installed and insulated?

(d) Are the cellar, area, and roof water drains of sufficient size, and properly designed and installed so as to function properly and without excessive maintenance?

(e) Is there an ample supply of pure water, preferably from public, or municipal utility source?

(f) Has adequate provision been made for the disposal of sewage, preferably by public or municipal systems?

145. Heating.

(1) Heating plant:

(a) Is the heating plant of ample size, design, and construction to operate conveniently, economically, and efficiently under all conditions, and is the furnace insulated?

(b) Are the pipes or ducts properly graded, sized, of good material, workmanship, and insulated against heat losses?

(c) Is the type of heating plant and is the fuel used suitable to the class of dwelling?

(2) Radiators and Registers:

(a) Are the radiators or registers of sufficient size and properly placed so that they most effectively distribute the heat throughout the various rooms?

(b) Are radiators or registers effectively designed, of good material and workmanship, properly valved and controlled?

146. Electric Light and Power.

(1) Supply and Accessories:

(a) Are the feeders, switches, and panels of sufficient size to fulfill the requirements to which they are put, without the overloading of circuit or switch capacities, and do they conform to the Underwriters' Code and local ordinances?

(b) Is the system divided into light and power circuits?

(c) Is there an adequate and dependable supply of electric energy available, preferably from public utilities?

(2) Fixtures and Outlets:

Is there a sufficient number of fixtures and outlets to properly distribute illumination and are fixtures of suitable design and construction to harmonize with the subject property?

NATURAL LIGHT AND VENTILATION

147. The rating of this feature is an index of the adequacy of the extent to which the various rooms of the dwelling are served by natural light and ventilation under ordinary circumstances. In making the rating the inspector must be mindful of the provisions in property standards relating to conditions which have a bearing upon this feature. Accessory and adjoining buildings, if

in too close proximity to the main structure, will adversely affect this rating. The measure in which the plan provides cross ventilation and more than one exposure for the various rooms will also affect this feature rating.

148. The orientation of the building will affect the rating. If the plan is such that the principal rooms have the most desirable exposure with respect to sunlight and prevailing winds, a favorable influence upon the rating results. Furthermore, natural air circulation throughout the interior is highly desirable. Unsatisfactory orientation in the case of proposed new structures can be frequently corrected by the reversal or rearrangement of the plan.

149. In order to rate this feature properly, it will be necessary for the inspector to consider the following items as they affect natural light and ventilation:

- (1) The ratio of glass area to floor area.
- (2) Orientation of the building upon the site.
- (3) Cross ventilation in the individual rooms, particularly bedrooms.
- (4) Double exposure in principal rooms.
- (5) Mechanical ventilating equipment to remove odors from service area.
- (6) Proximity to adjoining buildings.
- (7) Relation of accessory buildings to principal structure.

ARCHITECTURAL ATTRACTIVENESS

150. In rating this feature, the inspector must be guided by "taste." However, he must disregard, in so far as is humanly possible, his prejudices and preferences where they are not in substantial agreement with likes and dislikes held by others who may be competent to judge these matters. The inspector shall consider architectural attractiveness in relation to the property as a whole and to the exterior and interior characteristics of the buildings. Mortgage risk is presumed to be lessened in those instances in which architectural treatment may be expected to remain attractive for long periods of time.

151. Of primary importance is the general impression created by the entire property. The degree to which there is unity is a first consideration. The highest rating is warranted when the architectural treatment of site, planting, and buildings is such that they comprise a harmonious entity. Such combinations of improvements and land attain the maximum degree of desirability possible from the standpoint of design. In such cases the structures are most effectively and pleasingly accommodated by the width, depth, or area possessed by the sites upon which they are erected, and topog-

raphy has been permitted to contribute to the agreeable impression which is created when the property is viewed in its entirety.

152. Accessory buildings impair or contribute to the degree of unity attained. Unless they are so designed as to become integral parts of the design and ensemble of the house and grounds a condition will result which will tend to cause some penalty in the rating of this feature. Garages and other accessory buildings are too often conceived as afterthoughts without the proper regard for the resulting effect. The planting upon the site may either be carefully laid out in an attractive arrangement, or it may be placed upon the site without proper consideration for usefulness of the entire plot of ground. Planting should also be considered with reference to the measure in which it serves the purpose of forming a desirable and harmonious setting for the buildings; to the measure in which it permits the occupants of the building to secure the maximum enjoyment possible from the use of the lot; and the measure in which it succeeds in screening out and protecting the property from unsightly objects and surroundings.

153. It is necessary in making a rating of Architectural Attractiveness to give consideration to architectural style. Attention must be given to the relative excellence or poorness of the particular design and to the refinements (or lack of them) incorporated in the subject property. The architectural attractiveness of the interior should be viewed with consideration of pleasing proportions of rooms, materials and textures of walls and floors, and the design of important details such as mantels, staircases, and woodwork. No consideration should be given to the degree to which the style is in conformity with the architectural styles prevailing in the neighborhood. If nonconformity with styles in the surrounding environment is of such a character that it increases mortgage risk, it is taken into account in the feature Adjustment for Nonconformity.

154. A structure of the so-called "shirt-front", or one-sided treatment design, in which the exterior appearance of the remaining side walls of the building has not been considered, would merit a low rating of this feature. Architectural designs that are considered freakish or those characterized as hybrids should be penalized in this feature rating. To receive the better ratings, all design motifs should be in good taste and have a utility basis, should furnish a convenience, and add structural value and attractiveness to the general scheme. The elaborate use of motif and detail, the inclusion of an unnecessary variety of materials, and the straining for the picturesque cannot increase the rating. Use of false effects of roofing, false half-timber work, or the unusual handling or combination of materials, or materials inappropriately used in the particular case involved, will also adversely affect the rating of this feature.

155. The inspector in assigning a final rating to this feature shall consider the subject property on its merits and in the same manner as individuals of reasonable tastes likely to become interested in the property as tenants or owners will view it. By answering the following questions the inspector will be aided in determining the proper rating of this feature:

(1) Do the elevations express frankly the plan contained therein or is the design of a freakish nature straining for the picturesque?

(2) In whatever style the building has been designed, does it express to a reasonable degree refinement and proper interpretation of that style, or does the design indulge in an over-use of superfluous ornament or an improper use of materials as they relate to each other?

(3) Is the fenestration arranged so as to result in a pleasing effect?

(4) Are room proportions pleasing? Are interior details so designed as to be appropriate and attractive?

(5) Has the entire ensemble effect been considered in the arrangement of buildings to the plot plan?

(6) Do the accessory buildings tie in to the composition of the entire project?

(7) Has the entire project a pleasing appeal to the typical potential purchaser?

ADJUSTMENT FOR NONCONFORMITY

156 (1). The last feature of the Rating of Property category is designated "Adjustment for Nonconformity." It is rated in the same manner as are the other features in the risk-rating system. However, it will be noted that the weights in the columns in the rating grid for this feature are in a reverse order to that of other feature weights. Thus, in the "1" column the weight is "12" while in the "5" column it is "0". A column "5" rating indicates either that nonconformity is not present at all or that if it is present it does not adversely affect the desirability or marketability of the property. The feature rating is always deducted from Total Rating of Physical Security, thereby accomplishing whatever adjustment is necessary because of adverse effects attributable to conditions of nonconformity.

156 (2). It is a demonstrated axiomatic principle of mortgage lending that a harmonious relationship between properties within an immediate neighborhood area tends to lessen the risk involved in mortgage investments. Many forms of nonconformity adversely affect the marketability of properties. One of the most pronounced is that of over-improvement or under-improvement. The rating of the feature, Adjustment for Nonconformity, is for the purpose of measuring the degree of mortgage risk introduced because

of an unsatisfactory relationship between the subject property and typical properties in the immediate neighborhood. The word typical refers to the properties which are the most characteristic of the immediate neighborhood. The nonconformity of a particular property is its degree of variation from the typical. The feature rating, however, is not a rating of nonconformity but an adjustment to compensate for risk resulting from decreased desirability and marketability because of nonconformity.

157. Nonconformity does not necessarily result in in-harmony. A pleasing variety that results in harmoniously blended properties is greatly to be desired and should result in a high rating of this feature. Variety does not mean an incongruous mixture resulting in unpleasing contrasts. It has been demonstrated that pleasing variety for neighborhoods and entire developments can be successfully accomplished even in areas designed for modest homes. It must be determined in each case whether or not the property involved conforms in various respects with properties that are typical to the immediate neighborhood and whether or not marketability and desirability are adversely affected by nonconformity if it exists. In this connection the relationship between the subject property and those adjacent to and near it is most important. As comparisons are made of dwellings more and more distant from it, the comparisons become less and less significant. It is to be noted also that in a given neighborhood there can be several types of dwellings which can be typical. Therefore, when comparing a property with others nearby to determine what rating to give to the feature Adjustment for Nonconformity, the comparison must relate not to one property, either actual or hypothetical, which is considered typical, but rather to all properties which are typical in the district.

158. The rating ascribed to Adjustment for Nonconformity is deducted from the Total Rating of Physical Security in order to determine the Total Rating of Property. The significance of Adjustment for Nonconformity may be indicated by an example. For illustration, two properties may be identical in every respect except location. One is situated in an area in which there are a large number of homes of similar characteristics, such as size and quality. The other is located in a neighborhood where all the other houses are markedly smaller and of lower quality. In both instances the Total Rating of Physical Security will be identical, say 86%. In the first instance the rating of Adjustment for Nonconformity will be high and the "X" mark will be placed in the "5" column. The weight in the "5" column is 0%. Hence, there will be no deduction and the Rating of Property will be 86%, the same as the Total Rating of Physical Security. In the second case the rating of

Adjustment for Nonconformity will be low and the "X" mark might be placed in the "2" column. The weight in the "2" column is 9%. Hence, 9% will be deducted from Total Rating of Physical Security and the final Rating of Property will be 77%. In other words, the Total Rating of Physical Security will be the same regardless of the location of the two properties. The Rating of Property, however, differs in the two cases, because of differences in the degree to which nonconformity affecting the desirability and marketability of the properties is present.

159. The feature Adjustment for Nonconformity has been so weighted as to result in a maximum penalty (12%) in the "1" column, and a minimum penalty (0%) in the "5" column. The Reject column is used only in cases involving extreme nonconformity resulting in the practical destruction of marketability. In the event the "X" mark appears in the Reject column, the word "Reject" must be written in the Rating column on the Rating of Property line. The principal factors entering into the rating of Adjustment for Nonconformity are discussed under the following four headings:

- (a) Nonconformity as to Purpose and Exterior Design.
- (b) Nonconformity as to Size.
- (c) Nonconformity as to Usefulness and Function.
- (d) Nonconformity as to Lot Characteristics.

160. Nonconformity as to Purpose and Exterior Design.—The word "purpose" as used here refers to the use for which the property is designed, whether single-family, multiple-family, commercial, or other use. In some neighborhoods, structures designed for one purpose only may be found. This is generally true in the case of comparatively recent subdivisions where appropriate deed restrictions and zoning regulations have governed the development. It is more usual, however, to find structures of different characteristics or purposes in residential neighborhoods. This mixture creates nonconformity and introduces varying degrees of risk in mortgage transactions which involve properties in such neighborhoods. It is well recognized that marketability and rentability are adversely affected by the introduction into a residential neighborhood of a structure which does not conform with those already existing in the area. For example, the erection of a multiple-family dwelling in a single-family residential area will usually adversely affect the marketability of single-family residences in that area. The purpose of a structure will largely control its design.

161. In considering exterior design it is essential to determine the extent of nonconformity which the subject property exhibits in comparison with the exterior treatment of the typical

properties in the immediate neighborhood. The degree of nonconformity as to exterior design of a structure with the exterior design of other structures in the immediate neighborhood is not important except insofar as it results in a failure to harmoniously blend with them. It is to be noted that the rating does not exclusively involve the making of a judgment as to the degree of homogeneity which exists with regard to the structures in the neighborhood, inasmuch as a property may differ in several respects from others but still be characteristic of the immediate neighborhood area. It is universally recognized that a structure, though conforming in every respect except exterior design, may clash so violently with that which is typical that the marketability of the property is largely destroyed. In such cases a low or possibly a reject rating of the Adjustment for Nonconformity feature would be necessary. However, reject ratings are rarely justified.

162. In an immediate neighborhood where a considerable mixture of purposes of structures and exterior designs exists it may not be possible to characterize the district as other than heterogeneous. While this characteristic would be reflected in the Rating of Location it must also be considered in the rating of Adjustment for Nonconformity. Under such conditions the rating of this feature reflects the degree of marketability of the subject property in comparison with the marketability of other properties situated nearby in its immediate neighborhood.

163. In some instances it will be found that residential properties are located in areas which have been zoned for commercial use by local zoning ordinances but that no commercial use has yet been made of sites in the immediate neighborhood, which is still a residential district. An adverse effect will be created by such situations and will find expression in this feature rating if the use of sites for non-residential purposes is a prospect in the near future.

164. In order to reflect the degree of mortgage risk involved, the Valuator must determine nonconformity as relating to both the original purpose of the structure and the use to which it is actually put. If the property is used for a purpose other than that for which it was originally constructed, but there has been no important change of exterior or interior design, rating of this feature will not be adversely affected insofar as purpose and design are concerned.

165. **Nonconformity as to Size.**—The word "size" as here used refers not only to the number of rooms but also to the mass of a building. A modern eight room house of compact design beside an old-fashioned eight room house with twelve foot ceilings and large room areas is an example of difference in size. Again, size is reflected in the number of rooms, as in the case of a twelve room house in an

area comprised largely of five room houses. In rating this feature, it is necessary to determine whether or not the marketability of the subject property is adversely affected because of variation from the sizes of typical properties in the neighborhood. The rating will be favorably affected when the subject property is approximately the same size as the typical properties in the district. The feature rating will be adversely affected if the property under consideration is much larger or much smaller than the surrounding dwellings. This does not imply that because a twelve room house is located in a neighborhood of ten room houses, the feature rating will be penalized, as it may still be typical of the properties in the immediate neighborhood. However, it is possible that a property might exhibit a high degree of conformity as to purpose and exterior design, usefulness and function, and lot characteristics, but from the standpoint of size in comparison with the typical properties it might be so completely out of conformity that a low rating of Adjustment for Nonconformity might be warranted.

166. Nonconformity as to Usefulness and Function.—Rating of Adjustment for Nonconformity requires a contrasting of the efficiency of planning and design, quality of workmanship and materials, and the conveniences embodied in the improvements in a given case with the same attributes and elements of the structures which are typical in the immediate neighborhood. The subject property may be a six room house having four bedrooms, living room, kitchen, and bath, but no dining room. The typical property also may have six rooms but there are three bedrooms, living room, kitchen, bath, and dining room. Therefore, the usefulness and function of the subject property by virtue of the lack of a dining room is in nonconformity with the typical property in the immediate neighborhood. It will be found that the requirements of inhabitants of properties will vary according to the income level of the inhabitants. For example, homes in a neighborhood of \$15,000 properties should provide more in the way of efficient planning and conveniences, including mechanical and other equipment, than those in a neighborhood of \$5,000 properties. It is necessary that the comparison in a given locality be with properties of typical value in that particular area. Continuing the example above, if a home valued at \$5,000 is in a location where typical homes are of \$15,000 value, judgments as to usefulness and function should be based on the requirements of the \$15,000 homes. If, through poor planning, deficient interior design, inadequate mechanical equipment, poor workmanship, or inferior quality of materials, the usefulness and function of a property is lower than the usefulness and function of typical properties, the rating of Adjustment for Nonconformity will be affected unfavorably. Should

conditions be such that any or all of the deficiencies very seriously affect the marketability or rentability of the property, a reject rating will be warranted.

167. The highest rating will occur where the interior design, layout, equipment, workmanship, and materials are such that the property will function with a degree of efficiency and livability equal to that which characterizes typical properties in the same area. It is most important that the Valuator assume the attitude of weighing the usefulness and function of the property he has under investigation, regardless of its value, against that which characterizes structures of typical value in the neighborhood.

168. **Nonconformity as to Lot Characteristics.**—It is generally true that the residential sites in any neighborhood are more or less uniform in their physical characteristics, such as width, depth, shape, topography, soil, and adequacy as areas of land sufficient to properly accommodate a dwelling and necessary accessory buildings. The rating will be favorably affected where the site under consideration conforms in its physical characteristics with those that characterize sites in the neighborhood generally. This does not mean that it is essential that the lots under analysis be identical in size, shape, and so on, with other lots in the district. It is possible for nonconformity as to lot characteristics in some respects to exist without adversely affecting the rating of Adjustment for Nonconformity. This will be true in cases where the desirability of the lot is not affected by such nonconformity. Thus a lot may be very different in its shape from other lots nearby but if its area is sufficient to accommodate an appropriate dwelling just as efficiently and in as desirable a manner as other nearby sites, and if the lot loses none of its desirability by virtue of its lack of conformity as to shape and size, the feature rating will not be adversely affected. However, nonconformity may exist in such a degree or in such a manner as to make a site decidedly less marketable and less desirable. In such a case a lower rating will result.

169. The degree to which the marketability of the subject property is affected because of variations from typical properties from the standpoint of purpose and exterior design, size, usefulness and function, and lot characteristics determines the rating of Adjustment for Nonconformity.

PART II
SECTION 2
RATING OF LOCATION

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PART II
SECTION 2
RATING OF LOCATION

GENERAL RATING INSTRUCTIONS

Feature	REJECT	1	2	3	4	5	RATING
Relative Economic Stability							
Protection from Adverse Influences		4	8	12	16	20	
Adequacy of Transportation		2	4	6	8	10	
Need for Housing		1	2	3	4	5	
Appeal		1	2	3	4	5	
Sufficiency of Utilities and Conveniences		1	2	3	4	5	
Adequacy of Civic, Social, and Commercial Centers		1	2	3	4	5	
Level of Taxes and Special Assessments		1	2	3	4	5	
Topography and Special Hazards		1	2	3	4	5	
TOTAL RATING OF LOCATION							%

201. The following definitions are used:

(1) *Location* is defined as the actual site of a property viewed in terms of its relationship with its immediate surroundings and general economic background.

(2) *Rating of Location* is defined as the process of determining the degree of mortgage risk attributable to location. "Rating of Location" also refers to the percentage expression which results from the process.

(3) *Established Rating of Location* is defined as rating of a selected location which is used as a basis of comparison in connection with the rating of other locations in the same neighborhood.

(4) *Neighborhood* is defined as a single area composed of locations separated only by publicly-used land, the residential portions of which exhibit a degree of homogeneity. In general, a neighborhood is available for or improved with dwellings of more or less similar character, age, and quality.

(5) *Outlined Neighborhood* is defined as a neighborhood in which the approximate borders have been established and in which Established Ratings of Location have been completed and made available to Valuers.

202. Rating of Location shall be accomplished by rating separately each of nine features. The features have been weighted on a scale of 100% in order to retain the relative importance of each when all are combined to obtain the rating of location. Each feature is rated on a scale from "1" to "5", "5" being the highest rating. The rating grid which appears on the Report of Valuator is so designed that conclusions reached by the Valuator or Chief Valuator after a thorough inspection and study of conditions as they exist may be readily recorded and the total rating quickly ascertained. The Valuator makes ratings of all features in accordance with the general principles outlined in this Section and Part I, Section 2. For example, when rating the feature "Sufficiency of Utilities and Conveniences" if the Valuator has ascertained that all utilities and conveniences are present, with excellent service furnished at moderate cost, an X mark would be placed in the "5" column. If conditions were such that a complete lack of utilities and conveniences existed the Valuator would consider the location substandard and the X mark would be placed in the Reject column and the word "Reject" written in the extreme right-hand column. One such rating anywhere in the category necessitates a recommendation for the rejection of the application for insurance. In such an event, while the remaining features of the grid are rated, in lieu of a numerical total percentage expression the word "Reject" is written on the Total Rating line. If no reject ratings are ascribed, after all nine features of the grid have been rated the Valuator will review the individual feature ratings which have been set down and will consider the Rating of Location completed for this particular application.

203. The Valuator does not carry over to the extreme right-hand column the ratings for the individual features. This task is performed by the Chief Valuator who also assigns to the first feature, "Relative Economic Stability", the weight which is warranted for the area under consideration. The Chief Valuator carries

over to the extreme right-hand column the respective feature ratings and adds the nine ratings to obtain the Total Rating of Location.

204. The nine features, together with the weights assigned to them, are listed below:

(1) Relative Economic Stability.....	(40)
(2) Protection from Adverse Influences.....	20
(3) Adequacy of Transportation.....	10
(4) Need for Housing.....	5
(5) Appeal.....	5
(6) Sufficiency of Utilities and Conveniences.....	5
(7) Adequacy of Civic, Social, and Commercial Centers.....	5
(8) Level of Taxes and Special Assessments.....	5
(9) Topography and Special Hazards.....	5

205. The primary purpose of the Rating of Location is to determine the degree of mortgage risk involved because of a property's location at a specific site. The rating is a prediction of the degree of mortgage risk likely to be experienced at such location during a period of about the next twenty years. This point of view makes necessary the study and consideration of not only what is present at the time of inspection but also a determination of the future trend in the neighborhood area and economic background for at least the coming twenty years. There are many areas which have great charm, where planning has been well executed, and the surroundings present to a marked degree a harmonious picture of beauty and comfortable living. If properties in such areas possess ready marketability, that is, if there is a sufficiently large number of financially capable prospective buyers for the properties, and if it is expected that this market will continue, and that the financial capacity of buyers will remain the same or increase, a high Rating of Location is justified. If, however, there is a limited market, that is, few financially capable prospective purchasers of homes in the price range at which properties in the area are offered, and if it is anticipated that the number of prospective buyers will decrease, and if the stability of buyers' incomes is questioned, high ratings are not justified. Beauty and charm alone do not suffice to make a satisfactory area. When, on the other hand, these attributes are combined with a high degree of marketability, a high Rating of Location is entirely justified.

206. A rating below 50% requires the application to be rejected. A rating above 50% is considered better than merely acceptable. In making a Rating of Location the Valuator must realize that the 50% minimum rating does not represent one-half of perfection. It is a barely-passing acceptable rating. In general, the Valuator should consider the "5" column to represent excellence of the highest order and rate other conditions down from this point.

As varying degrees of acceptability occur for the various features, the true relative condition should be reflected in the rating assigned. It will be noted that in establishing a 50% minimum rating as the basis of acceptability some features may be rated in the "1" and "2" columns without making it impossible to have a total category rating which will qualify. In rating any one feature, if the degree of risk caused by the factors comprising this feature is such as to render the insuring of mortgages at this location too hazardous, the rating should be in the Reject column.

ANALYSIS OF NEIGHBORHOODS

207. It is highly desirable for the Valuation Section in Underwriting Departments in Insuring Offices to make Established Ratings of Locations based upon Outlined Neighborhoods. Preparation of this character contributes to speed in the processing of cases and ultimately leads to economy and consistency. Furthermore, the practice of making Established Ratings of Locations improves the effectiveness of preliminary examination. For the purpose of making Established Ratings of Locations it is not always necessary or desirable to establish Outlined Neighborhoods by indicating the specific borders of the areas. The practice of fixing borders has certain obvious advantages but need not be applied in all cases.

208. In fixing Outlined Neighborhoods and Established Ratings of Locations, the first step is to make an analysis of the economic background in accordance with the procedures outlined below in paragraphs 211-217. This permits a weight to be assigned the first feature. The second step is the determination of the central downtown core of the city which can usually be outlined and considered as an ineligible area. Downtown reject areas must be outlined with the greatest of care in order to save embarrassment to the Insuring Office in connection with applications on mortgages which lie within such borders. Central downtown core areas include the business and commercial sections of the cities as well as the slum and blighted areas which almost invariably surround downtown sections of major cities. The next step requires the Valuator to proceed through the town, observing as much of the entire city as possible until he reaches the outskirts where development ends. Study should reveal the directions of city growth. Competing areas should be studied to determine which areas justify the highest ratings. In general, the process of outlining neighborhoods should start on the outer fringe of development and work inward toward the downtown district. Neighborhoods should be outlined so that adjoining areas having properties of similar age and quality will be included in one neighborhood. This treatment permits the inclusion of a considerable

expanse of territory in one neighborhood. It is not necessary that all locations within the neighborhood boundary be of almost similar mortgage-risk quality. Wide variations in total ratings will appear when individual cases are handled. Once the Established Ratings of Location in Outlined Neighborhoods have been completed, the Valuator handles the rating of all other locations by comparing the subject location with the Established Rating of Location, feature by feature. This procedure may be applied to all locations, whether situated in large cities or country hamlets.

209. Each Insuring Office should maintain suitable records of Established Ratings of Location. A combination of cards and maps proves desirable in most cases. First the neighborhoods are outlined on maps. The better locations are rated by the use of the Rating of Location grid. The ratings are ascribed on the basis of a local comparison of competing neighborhoods except that in small communities where there are but few neighborhoods the entire city is usually considered as a unit. Descriptive material should be placed upon a card so that the basis of the rating may be recorded. This can be accomplished by recording in separate lists the favorable and unfavorable features present at the location for each feature, together with a summary of the line of reasoning which caused the particular feature rating to be assigned. The Chief Valuator will keep these location rating cards readily available for the use of Valuers so that when an application is received for the insurance of a mortgage on a property situated within the neighborhood boundary, the Valuator to whom the application is assigned will have available for his use the Established Rating of Location of what is considered the best location in the area. He can proceed to this location, familiarize himself with conditions existing at that point, and then proceed to the location of the property described in the application. By ascertaining the conditions present at the subject location and comparing them feature by feature with those determining the Established Rating of Location, a quick, accurate determination of the risk of the subject location can be ascertained. It is quite improbable that any one location in a neighborhood area will rate higher than all other locations for all features in the grid. When the Valuator encounters a condition where the subject location exceeds in quality the rating ascribed to the Established Rating of Location, he should not hesitate to make the rating of the subject location higher for that particular feature. If it is found that some location other than the original Established Rating of Location possesses a higher total rating, it may be selected as a new or additional Established Rating of Location and a card made as described above. By inserting on the map a number for each neighborhood with the Established Rating of Location properly designated, the processing of applications will be expedited.

210. Certain generally accepted principles should govern a Valuator's judgment when he is engaged in analyses of neighborhoods or locations. Among the principles are the following:

(a) Homogeneous development of properties in any neighborhood tends to reduce mortgage risk. Areas which contain structures of about the same age are usually better mortgage-lending areas than those in which a variety of age groups is present.

(b) Areas in which development has been accomplished in accordance with accepted principles of good housing are quite apt to prove much more stable than those areas where little thought or attention has been paid to the various requirements for light and air, lot coverage, and controlled similarity of types of structures.

(c) The Valuator is confronted with quite different problems when rating new and old locations. Where development has been completed and there are few vacant lots, a satisfactory measurement of mortgage risk is usually more easily made than when a sparsely-developed location is being rated. The latter usually requires a more thorough study of the future before a significant rating can be made. There is in progress a definite decentralization of housing which will probably continue the building up of suburban neighborhoods. If the location under consideration does not lie in a path of city growth and there is apt to be a lapse of a number of years before the neighborhood is well built-up, a much lower rating will be ascribed than where the location lies in the path of city growth with every prospect that the neighborhood will be built up in a comparatively short time.

(d) Neighborhoods containing old structures mixed with new, where little has been done in the way of planning to present an attractive appealing appearance, are in many instances inhabited at the present time by established financially-capable owners. It may be that the same types of persons now provide a strong market for properties in such areas. Such conditions may be deceptive and the Valuator must determine whether or not the coming generation will regard locations in such neighborhoods as desirable. It is possible that such areas will, within the next twenty years, suffer greatly. The mixed neighborhood in competition with a modern, homogeneous area will invariably suffer, since the chances are that within a comparatively short period of time a lower grade of social occupancy will exist. The past has demonstrated that where entire neighborhoods or subdivisions were laid out forty years ago with a well-executed, conscious effort to develop beauty and charm in an economical manner, the areas have tended to continue in high favor, although other neighborhoods just as favorably situated, but where no effort was made for planning or homogeneous development, have suffered and

are now occupied by owners or tenants of a markedly lower social and financial class. Coming years will bring this condition more pointedly to the attention of prospective buyers. It has been demonstrated that well planned and homogeneous development amid attractive surroundings can be secured at no great increase in cost of properties. Further progress in this regard is confidently anticipated. The mixed neighborhoods with heterogeneous types of properties and methods of construction with varying sizes of homes and age groups of structures, when placed in competition with the better areas, will retrograde at a much faster rate in the future than they have in the past, regardless of the probability that population increase may be at a much slower rate in future years.

(e) Neighborhoods tend to decline in investment quality. The exception to this rule usually lies in undeveloped or partially developed new neighborhoods. Such areas, when favorably situated, when attractive to new purchasers constituting the market, when adequately protected against adverse influences, and definitely planned in accordance with accepted good housing practice will probably improve for a period. However, unless they fill the requirements listed above and unless the development is completed within the period of a very few years, the chances that they will achieve reasonably permanent stability are limited.

(f) The stage of development of a neighborhood is an important factor to consider. It cannot be presumed that neighborhoods 50%, 75%, or 15% developed represent any specified degrees of mortgage risk when generalization is attempted. However, the stage of development of favorably located new neighborhoods in which a strong appeal exists may be a significant element in the ratings. The stability of such an area may be limited at the start. Later it may progress to a point where definite evidence is available to indicate the probable future character of the neighborhood. In other words, the character of the neighborhood will then have been established. At this point a higher Rating of Location may be justified as a result of certainty which was lacking in the less-advanced stage of development. In most cases, the prospect of further improvement in the location is remote.

ECONOMIC BACKGROUND RATING

211. The unit area considered in connection with Economic Background Ratings is the metropolitan district. In most instances the same rating should be ascribed to all portions of a metropolitan district. The Bureau of the Census lists in 1930 one hundred metropolitan districts, each with a population in excess of 100,000 persons. The Chief Valuator should determine metropolitan

districts of all smaller centers of population for the purpose of establishing Economic Background Ratings. In most cases "twin cities" should be treated jointly and but one rating ascribed. In virtually all cases, suburban communities should be included in the same economic background area and accorded the same rating as the entire metropolitan district. On the other hand many satellite cities may be ascribed ratings independent of the one given to the major city near which it is located. Chief Valuers must establish the limits of the unit areas and are required to make certain that all Valuers know the established limits of the areas in which they work.

212. In rating the first feature, "Relative Economic Stability", two sets of elements are reflected:

(1) The general economic background including opportunities for employment and trends of industrial, commercial, and other activities which affect the risk in all dwelling mortgages located in the metropolitan area.

(2) The relationship between the general economic background and the location under consideration. This relationship involves the extent to which owners and occupants of properties in the neighborhood may be expected to share in and enjoy the advantages attributable to residence in the economic background area.

213. These two sets of elements cannot be treated jointly. The first is the concern of the Chief Valuer. It is necessary for him to establish for each economic background area or metropolitan district the maximum possible rating which may be ascribed to the first feature, namely, "Relative Economic Stability." This rating may not exceed 40% in any case and is scaled downward for different areas in accordance with the Chief Valuer's Economic Background Rating. When the Chief Valuer makes an Economic Background Rating, his conclusion includes the weights applicable to each of the five rating columns. For example, if he finds it necessary to rate an economic background area with a maximum possible weight of 30%, then he has established the following table of weights for the first feature:

In the "1" Column.....	6%
In the "2" Column.....	12%
In the "3" Column.....	18%
In the "4" Column.....	24%
In the "5" Column.....	30%

If he finds it necessary to establish the maximum possible weight at 15%, then the following table of weights applies to the first feature:

In the "1" Column.....	3%
In the "2" Column.....	6%
In the "3" Column.....	9%
In the "4" Column.....	12%
In the "5" Column.....	15%

The other set of elements, the general relationship between the economic background and the location under consideration, is the concern of the Valuator who renders the Report of Valuator on the case. It is necessary for him to form a judgment with respect to the degree to which the particular neighborhood and location receive the benefits of the economic background. This judgment is formed in accordance with the instructions below in Paragraphs 218-225 and is recorded by an X mark in one of the spaces opposite the first feature on the rating grid.

214. Chief Valuers are required to keep a confidential record of their ratings of the economic backgrounds of the various communities in their states or districts. It is advisable to express the Economic Background Rating in terms of the weight ascribed for the "5" column, 40% being the rating ascribed to the areas in the United States in which conditions permit the highest rating. In no instance, however, is an Economic Background Rating of less than 10% in the "5" column permitted. To assist in establishing these ratings an Economic Background Rating Form is provided and recommended for the use of Chief Valuers. Its use will insure uniform treatment of all areas. Full instructions covering its use are furnished. This form is not inserted in the case binders. It is used solely as an aid to the Chief Valuator in arriving at a suitable Economic Background Rating for use in connection with all cases in the area to which the rating applies. Chief Valuers are not permitted to allow their conclusions to become known to borrowers, mortgagees, the public, or others than the Chief Underwriter and Director.

215. In making an Economic Background Rating the Chief Valuator forms an opinion of the probable future stability and sufficiency of the industrial, commercial, and other economic activities in the town, city, and economic background area. In arriving at his opinion he shall consider the factors involved in terms of sources and amounts of family incomes which support investment in residential real estate. These elements are viewed in terms of their sufficiency, diversity, and probable future stability.

216. The effect of the economic background upon the risk involved in mortgages has been recognized by mortgage lenders. Some companies have excluded entire cities from their lists of acceptable areas. Others have limited their activities to cities beyond definite population sizes and have favored selected locations within the accepted larger metropolitan areas. It is not the policy of the

Federal Housing Administration to exclude entire cities and towns from the benefits of mutual mortgage insurance. It may well be, however, that within certain communities whose present-day and expected future stability is exceedingly low, only certain favored locations which surpass the general average of the town or community may prove acceptable for insurance. The rating ascribed shall apply to all locations situated in the area rated. From time to time Chief Valuers will find it proper to revise their Economic Background Ratings to keep abreast of new conditions and to improve work done previously. Such revision does not, of course, affect cases already processed.

217. The Economic Background Rating gives consideration only to the underlying factors that affect the population of the entire city or area. It does not show how the various income groups are distributed throughout the city or what neighborhoods are good or bad from the standpoint of mortgage risk. It cannot be taken as a substitute for the analysis of specific locations. It must be recognized that even in cities having the most stable economic backgrounds there are slums that do not derive any great benefit from their locations in such cities.

RELATIVE ECONOMIC STABILITY

218. In rating this feature the Valuator expresses the extent to which owners and occupants of properties in the neighborhood may be expected to share in and enjoy those employment and income advantages attributable to the metropolitan area as a whole. Within such an area neighborhoods will reflect these benefits in varying degrees. This feature is rated on the basis of local comparison, the highest ratings being accorded the locations where the most favorable conditions exist. In this respect it is treated in exactly the same manner as the other features in the Rating of Location category. The feature is an expression of the relative security of the position of the families as a whole in the neighborhood in which the location under analysis is situated.

219. The Valuator, in order to rate intelligently Relative Economic Stability must ascertain the extent or limits of the area included in the Economic Background Rating. These limits are established by the Chief Valuator according to the principles described in Paragraph 211.

220. When rating this feature the attention of the Valuator is centered on a consideration of the sufficiency and stability of sources and amounts of family incomes available to the owners and occupants of properties at the location under consideration. This requires a consideration of the adequacy and permanency of

incomes received to maintain present levels of living including purchase of homes, together with the adequacy and permanency of the number and character of sources from which these incomes are derived. It is desirable to consider whether or not families in occupancy will find ready employment at the same wage or salary if their present sources are cut off for any reason. The adaptability of the individuals together with availability of other means from which they may secure an income should be considered jointly. The individuals themselves may be sufficiently versatile to perform other duties or tasks and still receive no or relatively little benefit from such capacity because of a dearth of other sources of employment. Or it may be that many and varied sources are available but the adaptability of the individuals themselves is such that they cannot take advantage of opportunities offered. In either case a low rating of this feature is indicated.

221. When the owners or occupants of properties near a location are generally living beyond their incomes or where the percentage of incomes devoted to the purchase of homes is excessive for their income levels, a low rating is warranted. If, on the other hand, the owners are living well within their means and the burden of home purchase is light, a high rating of this feature is indicated, provided the owners or occupants are versatile and sufficiently diverse sources of incomes are available. There is no scale which the Valuator may use in determining at what point the proportion of income devoted to the purchase of homes becomes excessive. For the lower income levels a higher proportion of income is usually devoted to this purpose than in the higher income brackets. In general, owners whose incomes approximate \$2,000 a year are not paying too much for housing when they devote \$500 to this purpose. Owners at the \$6,000 income level ordinarily do not expend the same percentage, 25%, or \$1,500 per year.

222. Rental areas require special treatment. The characteristics of tenants rather than the qualities of owners will determine the rating. Unless income-producing properties are self-supporting and provide some income to the owners, there is grave danger that the desire to retain title to the property will recede to the point of indifference. This attitude will be created by the income characteristics of the present occupants and those comprising the prospective rental market in so far as income is dependent upon these factors. Of course, operating and maintenance expenses including taxes also affect incomes. In the case of an isolated rental property situated in the midst of owner-occupied properties the income characteristics of the owners are considered. If a few rental properties are occupied by tenants of radically lower income-level

than that of the typical property owners, and if it is determined that the presence of the lower income-level occupants is indicative of the characteristics of future typical occupants in the area, the income characteristics of the tenants should control judgment. This applies to neighborhoods in transition where the first indication of blight is usually the introduction of lower income-level tenants.

223. Where incomes received from rentals of duplex apartments represent an appreciable part of total income received, it is necessary to determine the permanence of the rental market for such living units before rating this feature. If it is ascertained that there is great likelihood of a reduction in rental, or if it may be assumed that a depression will cause a sharp decline in the amount of rentals received, a low rating of this feature is warranted.

224. The Valuator should determine the character of work performed by owners and occupants and reach a conclusion regarding the stability of incomes in the neighborhood. Incomes of certain types of individuals are apt to be far more stable than those of other types. Earners in the higher income brackets and in the laboring class are first to feel the effect of depressions, whereas the medium class income producers, especially in industry and trade, continue unaffected until a somewhat later period. Earners in established professions, such as doctors, dentists, and lawyers, when they have stable practices, usually suffer losses in cash incomes in event of a depression but their primary incomes continue. Less fortunately placed professional men may expect an almost complete loss of income. This feature will receive a high rating when the owners and occupants of properties in a neighborhood are living well within their means and are able to set up reserves for future emergencies. The plan for retirement of mortgages sponsored by the Federal Housing Administration requires a continued regular income. It may be considered that the sufficiency of incomes is at a high level when these reserves can be established. The Valuator is cautioned against assuming that the incomes of owners of high-priced properties will be more stable than the incomes of owners of moderately-priced properties. Experience demonstrates that an assumption of this kind is entirely unwarranted.

225. The foreclosure experience in a neighborhood is of limited significance as an index of the sufficiency and stability of incomes of residents. New residential areas where mortgages represent a high ratio of loan to value may show a high foreclosure rate. Older residential areas where mortgages have been reduced to a low percentage of value may show a more favorable foreclosure experience. The added burden of interest and amortization payments on the larger loans may have been such that during trying times foreclosures became almost inevitable.

PROTECTION FROM ADVERSE INFLUENCES

226. This feature has a total weight of 20, making it one of the most important features in the Rating of Location. Protection from adverse influences is not concerned merely with zoning and deed restrictions. These are of great importance, but they do not represent all of the protection which is or may be afforded a location. Where little or no protection is provided against adverse influences the Valuator must not hesitate to make a reject rating of this feature.

227. Protection in the form of zoning restrictions is becoming almost universal. The best artificial means of providing protection from adverse influences is through the medium of appropriate and well drawn zoning ordinances. If the framers of the zoning ordinance have used excellent judgment in establishing areas, and if the provisions of the ordinance itself have been well worded and drawn from a thorough knowledge of conditions existing in the city and those which will most probably exist in the future, and if the zoning ordinance receives the backing of public approval, an excellent basis for protection against adverse influences exists. If the ordinance has been drawn with little or no real understanding of its purpose or a genuine desire to promote an orderly city growth, or if it lacks public approval, the chances are that it will offer little protection against adverse influences to residential properties. Even when ably executed, investigation must be made to determine whether or not infractions of the zoning law are permitted. If the law may be changed readily or if the provisions themselves are not strictly enforced, it should be given little consideration by the Valuator in determining a location's protection from adverse influences. Greater importance is attached by the Federal Housing Administration to zoning protection in and near large metropolitan centers than in places having smaller populations and less rapid rates of growth. Absence of zoning may be a proper basis for rejection in the former case, but would not cause rejection in the latter type of case.

228. Deed restrictions are apt to prove more effective than a zoning ordinance in providing protection from adverse influences. Where the same deed restrictions apply over a broad area and where these restrictions relate to types of structures, use to which improvements may be put, and racial occupancy, a favorable condition is apt to exist. Where adjacent lots or blocks possess altogether different restrictions, especially for type and use of structures and racial occupancy, the effect of such restrictions is minimized and adequate protection cannot be considered to be present. A location lying in the path of business expansion is often unprotected from the business encroachment even though deed restrictions for residential use may be present. It must be realized that deed restrictions, to be effective,

must be enforced. In this respect they are like zoning ordinances. Where there is the possibility of voiding the deed restrictions through inadequate enforcement of their provisions, the restrictions themselves offer little or no protection against adverse influences. In other words the property so situated that its logical use is other than for residential purposes, even though it is restricted to such residential use, will inevitably be put to its highest and best use in the course of time.

229. The geographical position of a location may afford in certain instances reliable protection against adverse influences. If the location lies in the middle of an area well developed with a uniform type of residential properties, and if the location is away from main arteries which would logically be used for business purposes, probability of a change in type, use, or occupancy of properties at this location is remote. The Valuator should consider carefully the immunity or lack of immunity offered to the location because of its geographical position within the city. Natural or artificially established barriers will prove effective in protecting a neighborhood and the locations within it from adverse influences. Usually the protection against adverse influences afforded by these means include prevention of the infiltration of business and industrial uses, lower-class occupancy, and inharmonious racial groups. A location close to a public park or area of similar nature is usually well protected from infiltration of business and lower social occupancy coming from that direction. Hills and ravines and other peculiarities of topography many times make encroachment of inharmonious uses so difficult that protection is afforded. A college campus often protects locations in its vicinity. A high-speed traffic artery or a wide street parkway may prevent the expansion of inharmonious uses to a location on the opposite side of the street. These natural and artificial barriers are of such importance that the Valuator should make a thorough study to determine their presence and reflect such conditions in the rating of this feature. On the other hand, when a high-speed traffic artery passes directly through a desirable neighborhood area with similar development on each side of the artery, instead of offering a protection the noise and danger attendant upon its presence constitutes in itself an adverse influence. The same holds good for the presence of railroads, elevated or surface lines, and other transportation.

230. When a neighborhood with its locations has been solidly developed in accordance with accepted good housing practices such development alone usually constitutes, in the absence of extreme adverse conditions, good protection against adverse influences. But many solidly developed neighborhood areas present conditions which are far different from what is at present regarded as good housing

practice. In these little protection is offered to the neighborhood since there is little doubt that new competing neighborhoods will be developed which will provide more comfortable and enjoyable surroundings. The solidly built-up neighborhood where good housing has not been provided will easily lend itself to a change in occupancy. The Valuator must realize that when making a prediction for a period of twenty years this condition shall be reflected in his rating. It is difficult to over-emphasize the importance of the presence or absence of well-executed neighborhood planning in rating locations. Narrow streets, excessive lot coverage, inadequate light and air, and poor circulation within the neighborhood area, as well as the inter-mixture of types, price levels, and a general absence of architectural attractiveness in dwellings represent adverse influences in themselves.

231. The quality of dwelling construction is of some importance, inasmuch as unsubstantial, flimsy construction is subject to rapid deterioration which hastens the lowering of class of occupancy. The same condition holds for locations whose properties present freakish architectural designs. The presence of over-improvement or under-improvement in the neighborhood constitutes a condition which may adversely affect location ratings. Maintenance and repair of neighborhood houses is a clue to the future physical condition.

232. Where nuisances are present in a neighborhood little protection is offered to locations close to such undesirable elements. A nuisance may be defined as anything, whether temporary or permanent, which is considered objectionable to any or all of the occupants of residential structures in the neighborhood. In estimating the full import of nuisances which may be present the Valuator must consider whether or not it is probable that the nuisance will be changed or removed. In all instances the rating must reflect the presence of the nuisance to some degree, a heavy penalty being assigned in instances where it is felt that the removal of the nuisance is improbable. Thus the dwelling situated adjacent to a filling station is subjected to the adverse influence of such a nuisance. The rating in this instance should severely penalize the location, perhaps to the point of rejection. A few nuisances may be listed: Presence of billboards, undesirable domestic animals, stables, chicken coops and runs, liquor dispensing establishments, rooming houses, zoos, public playgrounds, schools, churches, mercantile and industrial establishments, cemeteries, homes of an institutional character, offensive noises and odors, and poorly-kept, unsightly properties.

233. The Valuator should investigate areas surrounding the location to determine whether or not incompatible racial and

social groups are present, to the end that an intelligent prediction may be made regarding the possibility or probability of the location being invaded by such groups. If a neighborhood is to retain stability it is necessary that properties shall continue to be occupied by the same social and racial classes. A change in social or racial occupancy generally leads to instability and a reduction in values. The protection offered against adverse changes should be found adequate before a high rating is given to this feature. Once the character of a neighborhood has been established it is usually impossible to induce a higher social class than those already in the neighborhood to purchase and occupy properties in its various locations.

ADEQUACY OF TRANSPORTATION

234. Ready access to places of employment, main shopping districts, and other neighborhoods within the city is a requisite for neighborhood stability. The Valuator does not rate transportation itself but rather the adequacy of transportation for the type of residents occupying the location. Areas developed with low-cost homes where the income level of inhabitants is also low need better and cheaper transportation facilities than an area developed with higher-priced homes where the incomes of inhabitants are much higher. The former will need public transportation facilities. The latter may rely to a considerable degree upon the use of automobiles. The price range of properties near a specific location will have a direct bearing upon the quality of the transportation facilities that will be adequate for the use of the inhabitants. Neighborhoods or subdivisions located on the edge of a city where typical values are about \$4,000 need much more in the form of public transportation than other neighborhoods or subdivisions similarly located but built up with homes of higher value. The occupants of the first area will possess automobiles but it is highly probable that the cost of operation will prove so high that an undue proportion of income must be devoted to transportation.

235. In rating "Adequacy of Transportation" it is necessary to consider the quality and frequency of the service offered by the carrier, as well as the cost to passengers and the length of time required to reach places of employment, shopping centers, and other neighborhoods. Comparisons should be made between similar and competing neighborhoods with different transportation facilities. The highest rating is given to those areas where services and schedules are the best and where costs are the lowest. If comparison is confined to neighborhoods of the same value range, a logical and correct rating of this feature will result.

236. In many instances the areas with the finest transportation facilities are those situated close in to the center of the city where street-car lines, bus lines, or other means of transportation are available. These are frequently the most undesirable areas in the city. Proximity to the center of any major city, especially where the location is within easy walking distance of the downtown area, has a tendency to produce rooming houses, boarding houses, or crowded tenements. Nevertheless, when rating this feature such areas shall be rated high for "Adequacy of Transportation."

237. Many expensive neighborhoods and some moderately-priced areas are quite inaccessible to the downtown area and other neighborhoods within the city except by automobile. The Valuator when encountering such a condition should determine how servants are transported from their homes to their places of employment. If considerable inconvenience is caused the owners and occupants of such properties in getting their servants to and from their homes a lower rating of this feature is in order.

238. Due to climatic conditions, the locations within a neighborhood may prove inaccessible during certain portions of the year. When such conditions prevail, a low rating of this feature, perhaps to the point of rejection, is required.

239. The permanence and performance of the common carrier providing the transportation is of vital interest to the Valuator whether such carrier be a bus line, street-car line, subway, railroad, or ferry. Where there is high probability of a discontinuance of service, a low rating will be indicated. Those areas which are within easy walking distance of the center of the city or where the bus line or other carrier represents only an accessory convenience to the general use of automobiles are exceptions. The quality of transportation service extended by two different types of transportation within a city, for example, a bus line in competition with a street-car line, may show considerable variance. Where this occurs, those locations served by the more efficient and desirable carrier will be rated higher than those locations compelled to rely on the inferior facilities. Transportation lines usually follow city growth. It is difficult to expand and develop a city in a direction where adequate transportation facilities are not present. In some instances transportation services will anticipate development but in most cases they will be provided after development commences. When rating a new neighborhood, especially one on the outskirts of the city, those areas where the transportation already exists will invariably be rated higher than those where the service is merely contemplated, since it is impossible to anticipate in all instances the successful completion of plans or hopes for the establishment of these transportation facilities.

240. Where travel is by automobile the condition of the roads and streets is considered. A proper penalty must be made in rating those locations where access is hampered by streets which are inadequately surfaced for the traffic they carry. A location which is dependent upon street-car or bus transportation facilities shall be rated according to the quality, schedule, and length of time taken by the utility to reach the downtown area, and by the length of time and the effort required in walking or riding from the location to the point of boarding the transportation. Where it is necessary to traverse steep hills or cross dangerous intersections a lower rating is necessary.

241. The automobile has accelerated the decentralization of cities. Inhabitants of all income levels usually desire to live away from the crowded, older sections of the town. There is a strong urge to move out where there is sufficient light, air, and ground space for play and gardening. For the medium and upper income levels this desire to move to suburban locations is easily possible of fulfillment. For many in the lower income groups in large cities it has been quite impossible except in those instances where adequate and cheap transportation facilities exist. When rating this feature the Valuator is urged at all times to confine his consideration to the needs of present and prospective future inhabitants near the location under consideration and not to assume that transportation needs apply evenly to all income levels of inhabitants. His rating will be the result of comparing the adequacy of transportation afforded competing locations within the city, that is, locations where similar price-level properties are occupied by inhabitants of similar income level.

NEED FOR HOUSING

242. "Need for Housing" is rated from either of two points of view depending on whether or not the Valuator is confronted with a new and partially-developed neighborhood or an old and fully-developed residential district. In the first instance greater emphasis is placed on the need for additional housing facilities. In the other case consideration centers around the likelihood of a continued demand for the housing now in the neighborhood. Each situation is separately discussed below.

243. Newer Neighborhoods.—For a high rating of this feature, new building capable of absorption by prospective, financially capable purchasers must exist with values and sales prices of homes approximating reproduction costs. This implies a physical need for the new construction, as well as a financially satisfactory group of purchasers who will buy homes in this particular neighborhood area. It is highly necessary that a new neighborhood possess a

qualified and reasonably broad market; a physical need for homes of the type and price range which will most likely be erected; and an appeal sufficient to attract these new purchasers. Only under these conditions is a high rating for this feature justified.

244. For a high rating of this feature it is necessary that the development of a sparsely developed new neighborhood be completed over the span of a very few years. Unless this happens an undesirable age mixture of structures will result. The new and modern will be intermixed with the old and obsolescent, which condition may adversely affect both classes. In other words, a neighborhood whose structures are of a similar age is usually the better mortgage-lending area and where this condition is assured a higher rating of this feature is warranted.

245. Higher rating of this feature requires that new construction be placed on the market at a selling price conforming to the value range of properties which have already been built. There must be demonstrated a ready demand and market. The new \$5,000 homes in a \$10,000 neighborhood may be readily salable but they have an adverse effect on existing properties. New \$10,000 homes in the same neighborhood may not be absorbed inasmuch as there may be no need for housing at such a price. Neither condition is desirable. The highest rating would be given, for example, to the \$5,000 neighborhood in which \$5,000 houses were being built, provided the new prospective purchasers were financially capable and preferred this neighborhood or location to competing areas.

246. **Older Neighborhoods.**—It is usually doubtful that any new building will be undertaken in older neighborhoods. The highest rating of this feature will be given to those locations where a ready financially capable market for homes exists at their current value levels. The market must be both qualified and ready to buy at the present level of values if a good rating is to be given.

247. The examination of market demand must include consideration of competing areas. For a high rating it is necessary that these old areas or neighborhoods possess a high degree of desirability when compared with competing areas, that is, when compared with neighborhoods and locations developed with the same type and price range of homes. For such a condition to exist there must be a lack of new dwellings at the same price range at other locations which might be considered to be superior in quality and livability and which would require the expenditure of less money to maintain.

APPEAL

248. In rating this feature the Valuator shall take into consideration all elements which may be considered to draw prospec-

tive purchasers to this location. Appeal relates to a great deal more than mere physical charm, beauty of layout, and other esthetic qualities. If the appeal of a location is not sufficient to preserve present values, that is, to keep up the present level of rentability and marketability of properties, it is rated low by the Valuator.

249. Appeal is purely relative and is to be measured by the attitude of the income group or the social class which will constitute the market for properties near the location under consideration. Thus it will be possible for a neighborhood in the \$4,000 price range to possess as high an appeal for its prospective market as a neighborhood in the \$12,000 class. Appeal must be measured by a comparison between competing areas of the same level of property values where the market is made up of the same income groups. The Valuator is cautioned against comparing the appeal of a low-priced area with that of a high-priced neighborhood since these areas are in no sense competitive and appeal to completely different groups of prospective purchasers.

250. Physical charm in many instances will present a vital element of appeal. A beautifully laid-out area with adequate street improvements, good plot layouts, and well-planted shrubs and trees will tend to create strong appeal. If this beauty has been created at moderate expense where properties will not be heavily assessed for the resulting effect, a much greater appeal will exist than where the effect has been created through extravagance and high assessments against the properties.

251. Where properties of one definite type are present and where the architectural designs blend harmoniously, a physical condition exists which attracts prospective purchasers to the location. If, in addition to physical attraction of the neighborhood, the present class of occupants is of such quality as to make the area desirable to the social group which will form the prospective market, additional appeal is created. If proximity to cultural centers or recreational activities is combined with both of these favorable elements, this feature may be rated even higher.

252. Of prime consideration to the Valuator is the presence or lack of homogeneity regarding types of dwellings and classes of people living in the neighborhood. An area that is being developed along the lines of accepted good housing practice where adequate light and ventilation are assured, play space available, easy circulation to other parts of the neighborhood present, with attractively styled, harmoniously blending residences, will ordinarily possess a more lasting appeal than an area lacking some or all of these features. The Valuator is interested in what will occur during the next twenty years. The grading of this feature should reflect whether or not the attitude of the present-day market toward the location will continue.

253. Some areas which may lack in accommodations or conveniences usually regarded as requisites for stability will possess an appeal created by the social class of occupants, or prestige created by associations, which will make properties at the locations as marketable as any similar value range location within the city. The Valuator must determine whether or not the younger generation which will represent the market for these properties at a future date will regard the area as equally desirable. In many instances this prediction will be difficult to make. In others it can be easily ascertained. The Valuator must, in any event, study possible changes in the attitude of the future market before rating this feature.

254. The geographical position of the location in relation to the city considered with the effects of favorable or unfavorable topography will have a distinct bearing upon the rating of this feature. Those areas which lie in a path of city growth where the topography of the ground lends itself to economical development, in the absence of other conditions which may exert an adverse effect, will be found to possess a strong appeal.

255. The utilities and conveniences available to a location will have a pronounced effect upon the appeal. A lack of desirable conveniences exerts a negative effect which must be reflected in the rating. Presence of noisy and high-speed traffic arteries, railroads, commercial or industrial properties, or the presence of incompatible racial elements results in a lowering of the rating, often to the point of rejection. The approach to the neighborhood is of importance. Where it is necessary to pass through a slum or an otherwise undesirable area in order to arrive at the location less appeal will be present than where such a condition does not prevail.

256. While the husband and wife who own a home or are prospective purchasers of a dwelling might be willing to tolerate certain adverse conditions affecting themselves, an altogether different attitude will be taken when the welfare of their children is endangered. Parents wish their children to have all available advantages for physical and cultural development and those areas offering the most will be the places in which they will prefer to live. The Valuator will reflect true conditions in his rating of this feature only when he includes in his consideration the effect upon appeal of the presence or lack of advantages for rearing children.

SUFFICIENCY OF UTILITIES AND CONVENIENCES

257. In rating this feature the Valuator will take into consideration the presence and quality of such items as police and fire protection, telephone service, gas, electricity, water supply, sewerage (both sanitary and storm), garbage disposal, street lighting,

street paving or surfacing, sidewalks, and curbs. The presence or absence of any or all of these features will be considered in relation to the requirements of the inhabitants of homes in the area and what would be desired by prospective purchasers of homes at this location. These requirements will vary with differences in the social and financial class of people occupying the area. It may generally be assumed that the prospective market will be composed of the same class but where a neighborhood is changing in occupancy the needs and desires of the lower class which will eventually prove to be the occupants of the neighborhood shall be taken into consideration.

258. In different communities the presence or absence of certain utilities or conveniences will show a varying effect. In his rating the Valuator reflects the degree to which the present utilities and conveniences fill the needs and desires of both the present occupants and prospective purchasers of homes at the location. In most instances pure community water under sufficient pressure is considered a definite requirement. In other communities individual water supplies will prove adequate for some of the locations. Thus it is necessary to interpret the present and expected future desires of the market when rating this feature. The highest rating will be given not only to those areas where all the utilities and conveniences are present but also to those which in all particulars meet the requirements of the occupants, both present and prospective.

259. It is necessary for the Valuator to consider not only the presence or absence of these utilities and conveniences, but also the quality of the service which is rendered together with the cost of such services. Where part of the cost is reflected in taxes or special assessments, such as those levied for street improvements, that part should not be considered in rating this feature, since it will be taken into account in the feature, "Level of Taxes and Special Assessments."

260. The rating of this feature can easily be made once the total list of utilities and conveniences in the city is determined together with the cost and quality of the services extended. Where certain vital utilities or conveniences are absent at a specific location the Valuator should not hesitate to give low ratings or even reject ratings when required. Although the Valuator shall take into consideration the probability of additional utilities and conveniences being installed, the rating under such circumstances can not be as high as it would be if the additional utilities and conveniences were already present at the location. Until the service is in actual existence and available, there is always some doubt regarding its ultimate installation. Where those utilities and conveniences which represent minimum requirements for comfortable living are absent at a location

rating of this feature by the Valuator should be made in the Reject column.

ADEQUACY OF CIVIC, SOCIAL, AND COMMERCIAL CENTERS

261. For a neighborhood to remain stable and retain desirability for the same class of occupancy now living in its various locations it is necessary for it to have adequate shopping centers and facilities for recreation and cultural improvement. In some instances these are available to the residents at points within a neighborhood, although in other instances they may be situated beyond the boundaries of the neighborhood. The question for the Valuator to determine is their sufficiency in amount and availability for use to the occupants of the location under consideration.

262. The presence and quality of grade and high schools, neighborhood shopping centers, churches, theaters, other means of recreation or amusement, parks, playgrounds, community halls, libraries, and colleges tends to determine the desirability of the neighborhood. Only in a few instances will all the kinds of facilities entering into the consideration of this feature be present. A favorable rating is made when it is considered that those present provide adequate means for convenient and pleasant living with suitable provision for cultural development.

263. The older residential areas within a city will usually have available more of these facilities than the newer neighborhoods. The centers making for convenience in living and cultural benefit usually follow rather than precede the building up of any residential area. However, those new neighborhoods which are better served by conveniences will usually develop and maintain a character more favorable to stability than those in which they are lacking.

264. The Valuator should relate the presence or absence of these facilities to the requirements of the social class of occupancy at the location. Areas occupied by low income groups will ordinarily require easier access to commercial and business centers, schools, churches, and the other desirable elements listed above, than the area occupied by residents of a higher income level. While the presence of neighborhood stores may be essential to the well-being of occupants of a low income area, the mere existence of such elements near a location occupied by people of high incomes would be a destroying influence rather than a favorable asset. However, it is desirable for the higher income level area to have these shopping centers and other facilities easily available, although it is undesirable for the dwelling locations to be situated adjacent to such centers.

265. When considering the question of schools, the Valuator should take into consideration the desirability of the school

accommodations offered. Distances to the schools should be related to the public or private means of transportation available from the location to the school.

266. The social class of the parents of children at the school will in many instances have a vital bearing. Thus, although physical surroundings of a neighborhood area may be favorable and conducive to enjoyable, pleasant living in its locations, if the children of people living in such an area are compelled to attend school where the majority or a goodly number of the pupils represent a far lower level of society or an incompatible racial element, the neighborhood under consideration will prove far less stable and desirable than if this condition did not exist. In such an instance it might well be that for the payment of a fee children of this area could attend another school with pupils of their same social class. The question for the Valuator to determine is the effect created by the necessity for making this payment upon the occupants of the location. Under any conditions the rating could not be as favorable as if the desirable school were available without additional cost. In many instances where a school has earned a prestige through the class of pupils attending, it will be found that such prestige will be a vital element in maintaining the desirability of the entire area comprising the school district.

267. Where the Valuator encounters an area built up with high-priced properties occupied by people of high-level incomes and adequate school facilities are not immediately present, he should investigate to determine whether or not children of the area are attending private schools and whether or not such private schools are served by a bus line for the children. It may be that the area is occupied by people of sufficient financial strength to provide transportation to and from the school by private automobile with chauffeur. Such a condition is rarely as favorable as when the school is served by public transportation. Where it is necessary for members of the pupils' families to drive the children in the family automobile to and from school, rating for this feature will be adversely affected since the inconvenience will reflect unfavorably on the desirability of the location.

268. For certain types of neighborhoods means of recreation are essential whereas in others they represent merely a passive contribution to general welfare. For locations in cities which are devoted in part or as a whole to the tourist or resort business almost the entire basis for stability is represented by the means provided for recreation and amusement. Ready access to neighborhood and downtown theaters, public and private golf courses, and park and playground areas is always desirable. It is required that the Valuator

determine what is needed by the present and prospective occupants of the location and make his rating from what is present in comparison with what is needed or desirable. Where facilities are insufficient and such absence has a detrimental effect upon the marketability and rentability of properties situated near the location a low rating will probably result.

LEVEL OF TAXES AND SPECIAL ASSESSMENTS

269. In the rating of this feature the Valuator is concerned with the effect which taxes and special assessments may have on the desirability of the location for home ownership. It is therefore necessary to determine the total amount required for taxes and special assessments and to express that amount as a percentage of the Federal Housing Administration valuation. The tax rate itself is of little importance unless the actual basis of assessment is known. Thus a tax rate of \$5 per \$100 of assessed value is meaningless, whereas a tax rate of \$5 per \$100 of Federal Housing Administration valuation, or a 5% tax, is an exact indication of the seriousness of the tax burden.

270. The effect of the tax burden in the city as a whole has been considered and is reflected in the Economic Background Rating of the area. The Valuator's only concern in rating this feature is to determine the relative advantages or disadvantages of the tax level at the subject location in comparison with other locations within the area. It is well known that the basis for assessment, and often the tax rate itself, varies for different areas within a city. Where specific locations are receiving preferential treatment in this regard, and where it is estimated that such condition will continue, a high rating of this feature is in order regardless of the reasons for the condition.

271. The Valuator is interested in measuring the effect of the taxes upon home ownership. When it is found that the total tax and assessment rate is such as to have little or no effect upon the desirability for home ownership a high rating is given to this feature. On the other hand, if the total tax bill has a detrimental effect on home ownership the condition must be reflected by lowering the rating. Only when the tax is at such a high point as to be almost confiscatory in its requirements is a reject rating required.

272. Inasmuch as the extent of the general tax burden in the city as a whole is not considered in the rating of this feature it should be observed that it is proper to give certain locations a high rating even though the city has a relatively high tax level. Thus it is possible to have locations which warrant a "5" column rating in a city with a 3% tax level as well as in the city with only a 1% tax level. For residential properties the point at which the level of taxes and special assessments will have a detrimental effect on home

ownership will vary in different parts of the country according to what the local residents have learned to expect. The rating of this feature depends a great deal upon determining these effects.

273. Where special assessments exist the Valuator should consider the length of time such assessments run as well as the total payment required. But even though special assessment payments may be required for only a few years, they should be given consideration in the rating. From the point of view of mortgage risk the first few years of the loan are apt to be a critical period and a few years of high special assessments may seriously affect marketability and desirability for home ownership. Only when the special assessments are about to expire may they be left out of consideration.

274. Special care must be taken in cases where special assessments are in the nature of ad valorem taxes. Each individual property is security for an entire bond issue and cannot be freed from the special assessment lien until the bond issue has been entirely retired. Low ratings of this feature must be given in all such cases, and where the special assessment burdens are excessive Reject ratings may be warranted.

TOPOGRAPHY AND SPECIAL HAZARDS

275. The Valuator must consider the suitability of the topography of the land at the location as it affects marketability and rentability of residential improvements which are present or contemplated, together with the presence of any special hazards to which the occupants of the location may be subjected. Special hazards refer directly to conditions which have an influence on the personal safety of the occupants.

276. Where the contour of the land is such that public opinion regards it with favor and where there are no conditions present which will affect the safety of people a high rating of this feature is in order. Where the contour of the land is such that marketability or rentability is materially restricted, or where conditions are present which may adversely affect the safety of people, a low rating of this feature is required. The test to be applied in determining the proper rating is the effect that the conditions existing will have upon the present and future marketability and rentability of properties at the location.

277. Where generally hilly land prevails within a city only those locations where the steepness of the hills and grade of the streets is such as to exceed the general average, and by such conditions present less desirability to the prospective market will a low rating be required. In another city where land is generally flat or gently rolling, and even a moderate hillside is encountered, a low rating for

the hillside location may be in order, provided those people representing the market for properties near the location regard such conditions as undesirable.

278. Among special hazards may be listed streets with a heavy grade, ravines, abrupt changes in contour of land, high-speed traffic arteries, heavy traffic over streets, fogs, presence of commercial or industrial activity dealing with the storage or manufacture of volatile or explosive mixtures, possibility of flood, landslides, soil erosion, conflagration, or danger from tidal waves, cave-ins, or subsidence due to underground tunnels or excavations as in mining operations. The Valuator should remember that in rating this feature he is expressing the comparative advantages or disadvantages of the location under consideration with all other locations having a similar range of value within the city. Wherever a condition such as the recurrence of tornados or earthquakes, excessive heat or cold, high wind velocity, or generally unfavorable climate applies to the entire city, it is advisable to set a "ceiling" or maximum rating for this feature. Where such conditions are found the Chief Valuator will establish this rating. No location's rating of this feature may exceed the ceiling rating established. Locations will grade down from this ceiling rating when additional hazards or detrimental variations in topography appear. In any event, the rating of this feature should reflect the desirability of the location in the opinion of the present and future market. Where conditions are such that the marketability and rentability of the properties are seriously affected a low rating is required; in some instances a rejection will be necessary.

279. The topography of some cities is such that low land will be developed for residential purposes largely because such ground is located close to centers of employment or the downtown area of the city. These areas may be subjected to intense summer heat, poor circulation of air, periodic fogs, and, in some instances, floods. Where the Valuator encounters such locations low, or possibly reject, ratings may be warranted.

SPECIAL CONSIDERATIONS IN RATING UNDEVELOPED SUBDIVISIONS AND PARTIALLY DEVELOPED RESIDENTIAL AREAS

280. The instructions and principles for developed neighborhoods set forth in the foregoing paragraphs of this Section apply with equal force to undeveloped or partially developed areas. When judging the latter the Valuator must, to a considerable degree, look into the future and forecast the environment that will be created because of the existence of certain conditions in combination with certain assumptions. Special consideration must be given various

features when rating such locations. These special considerations will be outlined in succeeding paragraphs.

281. Successful new areas are recognized as the best mortgage-lending areas. To be successful a new or partially developed area must reach a stage of being substantially built up within a period of a very few years. Due to the fact most outlying residential areas will be developed as a result of the decentralization movement rather than as a result of population increases, the economic background of the community assumes great importance, since those communities which will experience a prosperous future will decentralize much faster than those for which a less advantageous future is forecast.

282. With assumptions in combination with certain known conditions as the basis for rating, new and partially developed locations require low ratings, that is, satisfactory areas receive a passing percentage but no high total rating. As the character of these areas is established, ratings can be raised or lowered to reflect the existing conditions. The character of the area becomes evident when a considerable percentage of lots have been improved or when a satisfactory concentration of dwellings is present. The wave system of development, that is, concentration of improvement and building activity in a definite portion of the subdivision until it is established before starting activity in an adjoining section, is an orderly procedure which may greatly reduce mortgage risk. Such a program assures structures of the same age, and if development is halted for any reason the close grouping of homes will increase neighborhood and location stability.

283. **Relative Economic Stability.**—In rating this feature the Valuator considers the combined income characteristics of both occupants and persons constituting the market for the type and price class of improvements contemplated. Since an assumption is the basis for rating high ratings are seldom justified.

284 (1). **Protection from Adverse Influences.**—The Valuator should realize that the need of protection from adverse influences is greater in an undeveloped or partially developed area than in any other type of neighborhood and, in general, a high rating should be given only where adequate zoning regulations or effective deed restrictions exist inasmuch as these provide the surest protection against undesirable encroachment and inharmonious use.

284 (2). Carefully compiled zoning regulations are the most effective because they not only exercise control over the subject property but also over the surrounding area. However, they are seldom complete enough to assure a homogeneous and harmonious neighborhood.

284 (3). Recorded deed restrictions should strengthen and supplement zoning ordinances and to be really effective should include the provisions listed below. The restrictions should be recorded with the deed and should run for a period of at least twenty years. Recommended restrictions include the following:

(a) Allocation of definite areas for specific uses such as single or double-family houses, apartments, and business structures.

(b) The placement of buildings so they will have adequate light and air with assurance of a space of at least ten feet between buildings.

(c) Prohibition of the resubdivision of lots.

(d) Prohibition of the erection of more than one dwelling per lot.

(e) Control of the design of all buildings through requiring their approval by a qualified committee and by appropriate cost limitations.

(f) Prohibition of nuisances or undesirable buildings such as stables, pig pens, temporary dwellings, and high fences.

(g) Prohibition of the occupancy of properties except by the race for which they are intended.

(h) Appropriate provisions for enforcement.

284 (4). The fact that zoning regulations and deed restrictions exist does not necessarily mean that a high rating is warranted. The type of use permitted by such regulations should be carefully analyzed, for frequently areas are zoned and restricted in a manner that would encourage land use which would greatly decrease its desirability for residential purposes. The Valuator should make sure that the protection provided is appropriate to the best use of the land.

284 (5). Some areas in which there are no zoning regulations or restrictions may be considered properly protected because of the favorable situation of the development or the topography of the land. The natural protection afforded in such instances might be sufficient to warrant a good rating.

284 (6). Additional protection and stability is afforded by city plans and subdivision regulations that are officially recognized and enforced. Such plans will avoid making noisy, high-speed traffic arteries out of residential streets; will establish barriers between residential and industrial or railroad properties; and assure that the forward growth of the city will be orderly and harmonious. Any undeveloped subdivision falling within the jurisdiction of a city, county, or regional plan shall conform to such plan and regulations. These regulations may be evaded in many States through the sale of property by metes and bounds, for when a subdivision is sold in this

way the plot plan can be changed at the whim of the developer. For this reason it is highly preferable that a subdivision be sold from a recorded plat.

284 (7). A partially developed area that remains long in that condition represents in itself an adverse influence that will make the area undesirable for mortgage lending. The Valuator is cautioned against placing too much reliance on deed restrictions and zoning in such areas. He should look for other factors which will insure early development of the area and thus offer protection against stagnation or slow, unhealthy growth. Among the factors which will offer such protection are the following:

(a) Situation of development in a path of city growth.

(b) Contemplated use of land for best purposes, considering such conditions as topography, character of land, and situation of area.

(c) A physical need for properties of the price class contemplated.

(d) Combined cost of lot and improvements approximating selling prices and values of completed properties.

(e) Development planned in accordance with accepted standards of good housing.

(f) A strong financially capable developer who enjoys the confidence of the market.

285 (1). **Adequacy of Transportation.**—It is necessary to determine the requirements and desires of the prospective purchasers of homes in the new area and to reflect the standing in this regard of the area under consideration in relation to competing areas within the city. In a development for the low income group an increase of a few cents in the cost of transportation may ruin the marketability of otherwise desirable properties. Reliance upon private automobiles alone cannot be considered adequate transportation for any except the higher income groups and even in these groups suitable public transportation facilities greatly increase the desirability of the area.

285 (2). At times transportation facilities to outlying new areas will be planned though not installed. In such instances a low rating is required until the transportation is physically present. A rejection is indicated unless adequate facilities are definitely assured even though planned and anticipated.

286 (1). **Need for Housing.**—There should be convincing evidence of a healthy and active demand for homes of the type contemplated in the particular locality and at the prices asked before a good rating is warranted. For an undeveloped or partially developed area to qualify under this feature it must be found that:

(a) There is a physical need or shortage of homes of the type and in the price class contemplated.

(b) This need originates with a financially capable group of purchasers.

(c) The area is ripe for development and is in a path of city growth.

(d) Sales prices and values approximate reproduction costs of completed properties.

(e) Sales price of the lots and properties in combination with other attractions are such that the development compares favorably with competing areas.

286 (2). If the area under consideration fails to qualify satisfactorily in any of the particulars listed above the Valuator should reject when rating this feature. The best way to demonstrate a need for housing is through the actual construction and bona fide sale of houses to financially-capable purchasers.

287 (1). **Appeal.**—In rating the appeal of an undeveloped or partially developed area the Valuator must not only take into account existing conditions and surroundings but must also consider the effect which the contemplated program of development will have on the attractiveness of the area.

287 (2). In addition to the regular considerations under "Appeal" special attention should be given to the following factors:

(a) Have care and intelligence been used in planning the street and lot layout?

(b) Are the street lines pleasing?

(c) Has consideration been given to the topography and to natural features?

(d) Have efforts been made to save the trees and to beautify the landscape?

(e) Does sponsorship contribute to appeal?

288 (1). **Sufficiency of Utilities and Conveniences.**—In all cases there must be appropriate and necessary utilities and street improvements installed or definite assurance given that such facilities will be furnished. Due to climate and local custom and conditions street improvements and utilities that might be considered satisfactory in one section of the country may be undesirable in another. No hard and fast rules can be drawn covering the type of improvements. However, the streets should be graded and properly surfaced. There must always be definite assurance of an adequate supply of pure water at reasonable rates.

288 (2). If the water is furnished by a private organization rather than from public mains the financial standing of the water company should be carefully investigated. It has been a

practice in some localities for developers to increase the water rates after all the lots have been sold, thereby forcing the lot owners to purchase the system at an exorbitant price.

288 (3). Water supply from wells is seldom satisfactory. The danger of pollution is always great. Little or no fire protection is provided and the cost of the construction of the well and of installing the necessary pumping system is usually as great or greater than the per lot cost of water mains. With very few exceptions and only when the lots are generous in size and when the supply and purity of the water has been certified as satisfactory by the local or state health authorities should water supply from individual wells be considered satisfactory, and under exceptional circumstances only should a high rating be given. In judging the adequacy of a water system the size of the mains and the pressure must be considered.

288 (4). There must be means of disposing of domestic sewage in a manner which meets the approval of the local and state health authorities. Where public sewer mains are not installed or readily available approved individual septic tanks may be used. If the soil is heavy and the drainage is poor septic tanks or cesspools may become a real hazard. Where the cost of extending the city sewers is no greater per lot than the cost of a properly designed septic tank and tile disposal field the extension of the sewer line is to be preferred.

288 (5). An excellent gauge of the appropriateness and the quality of utilities and street improvements is the standards established for dedication and acceptance by the municipality. If the utilities and street improvements are dedicated to and accepted by the city, township, or county, the responsibility for maintenance is transferred from the property owners and there is assurance that the construction is appropriate to the climate and needs.

289 (1). **Adequacy of Civic, Social, and Commercial Centers.**—These elements of comfortable living usually follow rather than precede development. Those centers serving the city or section in which the development is situated should be readily available to its occupants. Schools should be appropriate to the needs of the new community and they should not be attended in large numbers by inharmonious racial groups. Employment centers, preferably diversified in nature, should be at a convenient distance.

289 (2). The development which bases its sales program almost solely upon lower-cost land in order to compensate for its inaccessibility to community and cultural centers, especially when the sales appeal is to the low-income group, will seldom prove successful.

290 (1). Level of Taxes and Special Assessments.—

The tax and assessment burden to which properties in an area are liable exerts a tremendous influence on the future of any residential area. In the case of an undeveloped area it will be necessary for the Valuator to determine what the approximate burden will be. He should ascertain whether the improvements are to be put in by the developer and included in the lot price or whether their cost will be paid by yearly assessments. In either case he should reduce this expense to a front-foot cost basis for purposes of comparison. In most communities complete street improvements and utilities range in cost from \$7 to \$15 per front foot. When the improvement costs are greatly in excess of these figures heavy delinquencies in purchase contracts or in assessments may usually be expected. The cost of these improvements will not always decrease with the cost of the contemplated dwelling since with small lots and increased density of population better traffic facilities are needed and larger sewer and water mains must be installed. Consequently, cases will frequently be found where the front-foot improvement costs for high-priced homes is considerably less than the cost of such improvements for a low-income group with small lots.

290 (2). In the case of a partially developed area the Valuator should investigate the number of delinquencies in purchase contracts and in assessments and when a disproportionate number of owners are found to be in arrears, it should be considered a danger sign and he should govern the rating accordingly.

290 (3). Some State tax moratorium plans provide an excellent medium for recasting accumulative burdens from overdue tax and assessment payments. The security offered by such plans as well as the lowering of the taxes payable should be considered when encountered.

290 (4). If too expensive improvements are installed in an area, or an uneconomical layout has been designed, the tax and assessment burden will prove heavy. The Valuator will compute the entire tax and assessment payment required for the typical property in any new area and will make his rating by comparing this payment with that required for typical properties in competing areas.

291. Topography and Special Hazards.—Considerations under this feature include the effectiveness of the planning to take advantage of natural topographic conditions, as well as the degree to which dangers to personal safety are nullified. In those instances where contemplated improvements can be completed only at excessive costs due to topographic conditions or quality of the soil, a low rating is required, at times to the point of rejection.

PART II
SECTION 3
RATING OF BORROWER

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PART II

SECTION 3

RATING OF BORROWER

GENERAL RATING INSTRUCTIONS

Rating of Borrower

Feature		REJECT	1	2	3	4	5	RATING
Character Capacity	Reputation		5	10	15	20	25	
	Attitude Toward Obligations		4	8	12	16	20	
	Ability to pay		6	12	18	24	30	
	Future Prospects		3	6	9	12	15	
	Past Record		3	4	6	8	10	
TOTAL RATING OF BORROWER								%

301. The rating grid for the Rating of Borrower appears on the Report of Mortgage Risk Examiner. When the borrower is a corporation, a special form is used and the rating grid contains four features. Paragraphs 333 to 339 give instructions covering the handling of such cases. When the borrower is an individual, the form used contains a rating grid of five features. It is illustrated above. The instructions contained in paragraphs 302 to 332 apply to individual borrowers.

302. Rating of Borrower shall be accomplished by rating separately each of five features. The five features have been weighted on a scale of 100% in order to retain the relative importance of each when all are combined to obtain the rating of the borrower. Each feature is marked on a scale from "1" to "5", "5" being the highest rating. For example, the first feature is "Reputation." If the facts indicate that the borrower is a person of excellent reputation, an X mark is placed in the "5" column. The figure appearing in the marked square, which in this case is "25", is immediately carried over to the extreme right-hand column of the grid. If the mark were to be placed in the "4" column the number in that square would be carried over, "20" in this case. If the borrower's reputation is, in the opinion of the Mortgage Risk Examiner, so questionable that an undue risk would be involved in insuring a mortgage loan made to

him, the X mark is placed in the "Reject" column and the word "Reject" written in the extreme right-hand column. Each of the other features is similarly rated. One such rating anywhere in any category will necessitate a recommendation for the rejection of the application for insurance. When the word "Reject" appears in the Rating column, it must also be written in that column on the Total Rating line. If no such rating appears after any of the five features the final rating of the borrower is obtained by adding the figures in the Rating column. The system is so designed that this figure will be an indication of the rating on a percentage basis.

303. The borrower has a very important place in the rating of mortgage risk. His conduct and performance will determine whether the mortgage insurance transaction with the Federal Housing Administration will merely create a contingent liability or result in the actual issuance of the debentures and certificate of claim of the Federal Housing Administration to the mortgagee in accordance with the terms and conditions of the mortgage-insurance contract. Because of this it is obvious that the risk involved in mortgage insurance transactions will vary according to the character, actions, financial status, and prospects of the borrower who is responsible for the repayment of the loan. The National Housing Act requires that a mortgage, in order to be eligible for insurance, must "contain complete amortization provisions * * * requiring periodic payments by the mortgagor not in excess of his reasonable ability to pay as determined by the Administrator." This provision, of itself, necessitates analyses with regard to mortgagors by Mortgage Risk Examiners.

304. It is highly important that complete information regarding the borrower be assembled. The information will not eliminate the risk introduced by the characteristics, personal traits, financial status, and prospects of the borrower but it will reveal the degree in which it exists. This will enable the proper rating of borrowers and the avoidance of cases where the hazard is too great for prudent business practice. In making the rating of the borrower, the Mortgage Risk Examiner may have available and before him:

(a) The information given in the Mortgagors' Statement accompanying the Mortgagees' Application for Insurance;

(b) Experience of mortgage lending institutions that have held or are holding mortgages on properties owned by the borrower, including the property described in the application if the borrower has been the mortgagor prior to filing the application;

(c) Remarks, if any, in the Report of Valuator;

(d) Results of inquiry directed to references furnished in the Mortgagors' Statement;

(e) **Factual Data Report on the borrower from a character and credit reporting agency;**

(f) **Commercial Report from a mercantile agency on employers, corporations, partnerships, or individual enterprises from which the borrower derives a substantial portion of his income;**

(g) **Information from other sources.**

305. Should the Mortgage Risk Examiner deem it advisable to direct inquiry to the references furnished in the Mortgagors' Statement very definite information should be requested with the understanding that any information supplied will be held as strictly confidential. If he is trying to clear up an apparent discrepancy that may have appeared in analyzing information already obtained definite questions should be asked which will accomplish this purpose. It is entirely within the discretion of the Examiner whether he makes inquiry by letter or otherwise.

306. The procedures used to secure Factual Data Reports from credit reporting agencies are described in Part I, Section 1. The Chief Mortgage Risk Examiner has authority, in all cases in which he considers it necessary or advisable, to obtain a Factual Data Report on the borrower from any credit reporting agency approved by the Underwriting Section, Washington, D. C., and assigned to service his Insuring Office. Forms for this purpose are approved by the Federal Housing Administration. Commercial credit reports from an agency approved for this kind of service are also available to all Insuring Offices. When a Mortgage Risk Examiner considers it desirable or advisable to obtain a credit agency report, he should make an appropriate recommendation to the Chief Mortgage Risk Examiner.

307. In all cases the information given in the Mortgagors' Statement should be compared with similar information obtained from all other sources. Particular attention should be given to checking the reported family income and attendant responsibilities, rental income, if any, from the property covered by the mortgage, and the outstanding obligations of the borrower. Should any serious or outstanding discrepancy appear in the information derived from the various sources, it must be reconciled before the rating of the borrower and the certification by the Mortgage Risk Examiner are made.

308. The rating of the borrower is not a mechanical compilation of facts and figures, a perfunctory analysis of such matters, nor an expression of a casual conclusion or judgment. It involves careful study, with understanding, of all pertinent data including the traits, characteristics, and prospects of the borrower. A very definite responsibility rests on the Mortgage Risk Examiner to draw no hasty or poorly supported conclusions. His information

must come from reliable sources and it must be complete. He must always be careful to see that his decisions are well-founded and do justice to borrowers as well as the Federal Housing Administration. Cases in which the borrowers' characteristics, circumstances, and prospects are such that insurance of their mortgages should be declined shall be handled with certainty and dispatch.

309. The five features and their weights are as follows:

(1) Reputation.....	25
(2) Attitude Toward Obligations.....	20
(3) Ability to Pay.....	30
(4) Future Prospects.....	15
(5) Past Record.....	10

310. The five features which are considered in Rating of Borrower may be regarded from several points of view. The first two features, "Reputation" and "Attitude Toward Obligations", reflect the moral and ethical codes to which the borrower adheres. They are, therefore, considered from the viewpoint of character and the word "Character" is placed in the extreme left margin space on the grid to remind the Mortgage Risk Examiner to consider these features in terms of character. The other three features, "Ability to Pay", "Future Prospects", and "Past Record", relate to the borrowers' probable capacity. They are, therefore, considered from the point of view of capacity and the word "Capacity" is placed opposite to them at the extreme left margin.

REPUTATION

311. A borrower's reputation over a reasonable period of time usually reflects his thoughts, actions, and choice of associates. The reputation of the borrower indicates reasonably well the degree of his moral stability. A borrower of excellent reputation is entitled to the highest rating of this feature. However, the Mortgage Risk Examiner must give careful consideration to the fundamental factors supporting the borrower's reputation, for these factors will affect the risk involved in a mortgage loan to him.

312. The borrower's habits and conduct will generally be a good indicator of the moral standards underlying his reputation, desires, judgment, and moral and ethical principles—all of which taken together reasonably determine whether his character is excellent or otherwise. It is possible, however, to attach a too restricted meaning to the words "habits" and "conduct". If the Mortgage Risk Examiner makes the mistake of rating a borrower's reputation on the basis of the very few actions of the borrower which may be only publicly observed, and fails to secure or disregards information revealing his apparent trend of thought, the rating of the feature "Reputation" will not be correct.

313. The reputation of the borrower is also indicated by the type of persons with whom he associates. Individuals who have interests, ideals, habits, and moral and ethical codes in common usually associate with each other. This fact makes it possible to draw certain conclusions regarding an individual by obtaining information regarding the people with whom he constantly and voluntarily associates. It is probable in most cases that more important information may be obtained in considering the character and type of people with whom the borrower associates socially, rather than those with whom he is associated in business activities, although the latter group must not be ignored. The important consideration is the type of people who are voluntarily picked as associates, rather than those with whom the borrower is thrown into association under conditions whereby he is not permitted to exercise free choice. A high rating, of course, could hardly be ascribed in cases where the borrower's chosen associates are other than substantial, law-abiding, sober-acting, sane-thinking people of approved ideals and acceptable ethical and moral standards. Few reject ratings of this feature will be warranted on the basis of associates unless such ratings also occur in other features in the Rating of Borrower category. In some cases the borrower's record will be good but his associates questionable. While this may jeopardize his reputation and indicate a threat to his future socially, morally, and financially, it will be exceptional, in view of the good past record, for these conditions to necessitate a reject rating of this feature.

314. Although character in its fullest significance is a too deep-rooted virtue to estimate, it is reasonable to presume that in most cases a borrower of excellent reputation will have a good character. However, it is entirely possible that a reject rating of the feature "Reputation" might be warranted in a case where the borrower's attitude toward his obligations, his ability to pay, his history, and his wisdom in the conservation and use of his income, are favorable. It is obvious that reliance cannot be placed on reputation until complete, reliable, and definite information required in rating of the other four features of the Rating of the Borrower category has been gathered and studied.

ATTITUDE TOWARD OBLIGATIONS

315. This feature deals with the borrower's principles, or the ethical side of his character. A borrower may be of excellent character morally, his reputation may be good and his associates above reproach, but his attitude toward his obligations may be so irresponsible that he will constitute an unacceptable risk in the matter of a mortgage loan. His financial obligations may rest so

lightly upon his shoulders that although he will pay his bills for living expenses, he will make no special effort to pay for other services rendered to him. If such conditions exist, the Mortgage Risk Examiner is warranted in recording a low rating for this feature, or in entering a reject rating if the borrower's attitude seems to be sufficiently careless or irresponsible as to make it imprudent to insure a mortgage involving a loan to him.

316. In rating this feature, it is also necessary to take into account the presence and amount of cash equity. It may be necessary to give this feature a reject rating in certain cases where it is apparent that the resulting project with respect to which the mortgage is being executed is economically unsound.

317. Highest ratings of this feature will occur in those cases where the borrower's attitude toward obligations which he has incurred is one not only of willingness but of eagerness to comply with both the spirit and the letter of any agreement or contract to which he is a party. Such a borrower will be the type of person of whom it is said, "His word is as good as his bond." The meeting of his obligations will be a serious matter with him, and he will save, plan and budget his income in order to meet his mortgage payments fully and promptly. He will be found to regard his home ties and relationships as imposing upon him responsibilities in the prompt discharge of which he must be scrupulously faithful. With regard to mortgage loans, it is usually found that borrowers with domestic responsibilities are more dependable than those without such responsibilities. This is especially true in cases where the wife is efficient in household economy and motivates and inspires the husband to apply himself closely to his work and urges him to regard the payment of his just debts as a requirement somewhat of the nature of a sacred obligation.

ABILITY TO PAY

318. Ability to Pay is the most heavily weighted feature in the Rating of Borrower category because, in the final analysis, the satisfactory payment of the mortgage loan is largely dependent on the borrower's financial ability to meet the prescribed monthly installments. Regardless of excellent reputation and commendable attitude toward his obligations, unless the borrower also possesses the ability to meet his obligations, the Mortgage Risk Examiner will be obliged to make a reject rating of the feature Ability to Pay. It is obvious that default is inevitable if the borrower's resources will not enable him to comply with all the contractual obligations created by the mortgage and mortgage notes which he signs. Such obligations include principal and interest payments on the mortgage debt, the payment of taxes, special assessments, fire and other insurance premiums, and expenditures for the proper maintenance of the home.

319. In rating this feature a Mortgage Risk Examiner shall ascertain the sources as well as the amount of income of the borrower. He shall ascertain the nature and amounts of the financial obligations which the borrower must meet. He will also draw some conclusion as to the probable permanence of the borrower's income both as to amount and continuity. For a high rating of this feature to be warranted, the borrower's yearly income should substantially exceed his yearly obligations, and his position with regard to the permanence of his income should be substantially secure. The rating will range downwards to the extent to which the borrower's ability to pay all obligations which he has incurred appears to be questionable. Reject ratings will be warranted in cases where the borrower's yearly obligations exceed or are too large for his yearly income or where it is obvious that some obligations which he has incurred, but which do not mature until a future time, will probably necessitate a default in his mortgage payments.

320. In order to properly rate this feature the Mortgage Risk Examiner must determine the maximum value of residential property which the individual can reasonably afford to purchase with the annual income which he may be expected to receive during the period within which he must complete payment of the purchase price. Unless the purchaser acts with wisdom and good judgment he will incur an obligation that he cannot meet or one which will involve him and his family in unavoidable hardships and sacrifices. If the value of the purchased residence does not bear the proper relation to the buyer's income, a substantial risk is involved in the making of a mortgage loan to him. In such a case a Mortgage Risk Examiner will be warranted in entering a reject rating of this feature. As the best ratio of property value to annual income in one case may be substantially different from the best one in another case, the significance of its influence on the rating of this feature cannot be ascertained mechanically. Rules, such as the one that a man should not undertake to purchase a property when the price exceeds 2 or $2\frac{1}{2}$ times his yearly income, cannot be applied blindly. Consideration must be given to the number of children or other dependents, if any, in the borrower's family, to the nature and extent of his financial obligations other than the mortgage upon his home, and to the cost of ownership of his home. By "cost of ownership" is meant the amount he would have to obtain as rent for his home that would represent a fair return on the purchase price after providing for all costs incident to ownership, such as loss by vacancy and tenants' failure to pay, taxes, special assessments, maintenance and repairs, and other items. The borrower's position in this respect should be carefully analyzed in order to determine from his annual

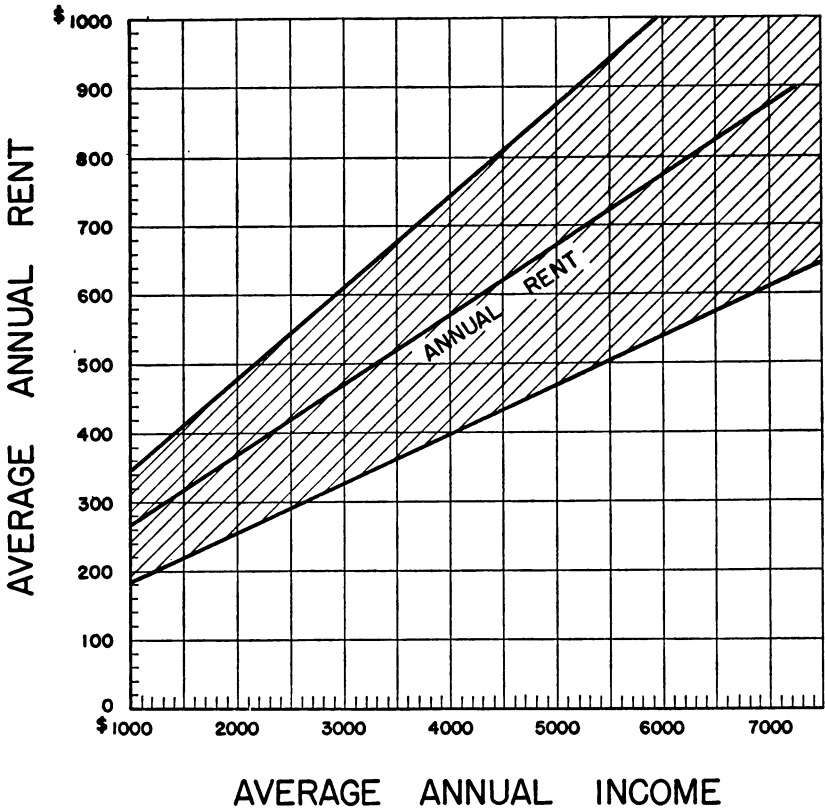
income whether or not he can afford to own the home to which he has title, or is purchasing, or intends to build, and whether the contemplated mortgage obligation will absorb his income to an extent that will adversely affect his ability to pay.

321. Careful consideration must also be given to the ratio of the monthly obligation to monthly income because it reveals whether or not the borrower's monthly mortgage obligation will absorb so much of his monthly income that an insufficient amount will remain with which to provide for living expenses, costs of education, life insurance, recreation, and other necessary items. If his monthly mortgage obligation is too great, then the risk involved will be correspondingly too great and this will warrant a reject rating.

322. As in the factor ratio of value of property to annual income no definite zone limits can be prescribed within which the ratio of monthly mortgage obligation to income must fall and the degree of influence it will have on determining the rating of this feature cannot be ascertained mechanically. Statements in this paragraph containing ratio percentages must not be interpreted as laying down positive rules for the making of ratings, for they are intended merely to serve as guides to Mortgage Risk Examiners in rating this feature. It is obvious that what is a good ratio between monthly mortgage obligation and income in the case of one borrower may be a bad ratio in the case of another one. Although the two borrowers have the same monthly income, a lower feature rating may have to be made in the case of the one borrower than in the case of the other, even if their respective monthly mortgage obligations are in the same amount, because of a wide variance of their family responsibilities and other obligations. Generally speaking, as family incomes are found to be in lower and lower brackets, progressively higher percentages of the family income will be devoted to paying for the cost of shelter, but the actual amounts in dollars and cents should be correspondingly lower. This is a fact which Mortgage Risk Examiners must carefully analyze in each individual case in order to determine accurately how much the borrower can afford to pay monthly on the mortgage obligation in his circumstances and with his financial resources. If in the judgment of the Mortgage Risk Examiner the monthly payment will not allow a sufficient balance of income for other necessities and responsibilities, it will be obvious that the borrower is attempting to maintain or purchase a property that is too valuable for him and not within his ability to pay, and a reject rating of this feature will be warranted.

323. The chart showing the annual rent paid at a given annual income has been computed from data obtained throughout the United States by the Division of Economics and Statistics of the

Federal Housing Administration. The shaded space between the upper and lower lines drawn across the face of the chart shows the range of annual rent paid at a given income. The center line drawn across the face of the chart shows the mean, or average, annual rent paid at a given income. Thus, borrowers earning \$2,500 a year pay an annual rent in an amount somewhere between \$285 and \$540. The average rent paid by borrowers of the same earning capacity was found to be about \$412 a year, as shown by the center line.



324. This chart is not intended to indicate the ratio between rent and income for any definite area. Its tabulation shows only the range on a national basis and is to be used as a guide by the Mortgage Risk Examiner whose further duty is to determine the difference of rental range existing between definite local areas and the nation as a whole. In order to derive the greatest benefit from this chart the Mortgage Risk Examiner should use it as a starting point to help him establish with reasonable assurance the prevailing ratios between annual rent and annual income in communities within the jurisdiction of his Insuring Office.

325. Cases will be found which fall outside the range of ratios prevailing in the local community. Such cases require close scrutiny in order to ascertain whether or not the ratio between annual income and annual rent is sufficiently hazardous to make the borrower an unacceptable risk for insurance.

326. While it is the responsibility of the Mortgage Risk Examiner to avoid the acceptance of borrowers who might default, it is likewise his duty to exercise good judgment in behalf of the borrower so that he will not unduly or unfairly penalize him on account of fears concerning remote possibilities or unpredictable occurrences.

FUTURE PROSPECTS

327. In drawing a conclusion as to whether the future prospects of the borrower will be favorable or otherwise, his past record will be useful to a certain extent. If he has profited by past mistakes and improved his situation in the face of adversity, these evidences of progress and persistence will result in a favorable rating. His present position and his attitude toward it will give some indication as to the likelihood of his progressing in a business way in the future. Effort should be made to ascertain the extent of his natural ability. Inquiry should also be made to determine the extent and nature of his ambitions; whether or not he is interested in educating himself more thoroughly in his business or field of commercial endeavor; whether or not he is resourceful, mentally alert, or lazy and apathetic. Many other lines of inquiry will commend themselves to the Mortgage Risk Examiner in rating the borrower's future prospects. The conclusion which is sought and which sums up the whole matter may be found in the answer to the questions: "Is the borrower self-satisfied or ambitious? Is his mental capacity such as to permit or assure business and other progress?"

328. Two borrowers of similar ages and incomes may be totally unlike in temperament and pursuit, thereby constituting entirely different mortgage risks. The one may seek and know how to grasp opportunities and advantages while the other is content with his situation. Furthermore, the one may be following a vocation for which there can be anticipated a reasonable future need while the other is trained in highly specialized duties for which there will be a limited field, thereby making it difficult for him to obtain reemployment if, for any reason, his present position should terminate.

329. Due regard must be given to the borrower's age so far as it affects his net worth and the possibilities of its retention, increase, or reduction. The degree of stability as well as the amount of his personal assets is highly important, for in the event of any

unforeseen misfortune necessitating a reduction or probable elimination of occupational income, returns from his investments would most likely be the main source of the supply of funds to meet his obligations. In this connection any contingent liabilities should be carefully scrutinized to determine their probable effect on the risk during the existence of the mortgage loan. Age, alone, does not determine the degree of risk involved. It is very possible that a borrower in the prime of life could be a "reject", while another borrower well up in years could properly be regarded as acceptable. From a superficial point of view, it would appear that the borrower, who has reached an age partially or entirely beyond his productive period would be too old to be considered a good risk. It is quite possible that he might die before the maturity of the insured loan. While this fact is true, the possibility of his demise or incapacitation is not in itself a sufficient reason to warrant rejection. In analyzing such cases, the Mortgage Risk Examiner shall determine the source and stability of the borrower's net worth and the amount of his net worth that will probably contribute to his estate. When it appears that the estate of an aged or incapacitated borrower will be adequate to assure a satisfactory continuance of the mortgage payments, his physical disability or possible decease will not constitute sufficient reason to justify a reject rating in this feature. On the other hand, an aged borrower who is entirely dependent upon income derived from his own activities or enterprise that will cease with his death or incapacitation without an accompanying net worth sufficient to assure a continuance of the payments, will in all probability warrant a reject rating in this feature unless acceptable co-parties to the mortgage loan showing reasonable financial ability and intention to carry the mortgage obligation are introduced.

330. Experience shows that men will fight to preserve an asset for which they have made a cash advance while the same men will place much less importance on an asset acquired without great sacrifice. For this reason a cash equity or its equivalent is necessary properly to motivate the borrower and to encourage an attitude toward the mortgage obligation which will justify the presumption that he will make every effort to discharge the debt.

331. Because there is a degree of uncertainty in venturing opinions of the borrower's future, it is probable that a reject rating of this feature will be warranted only in rare instances and in cases where such a rating occurs in some other feature of the Rating of Borrower category. If no reject ratings appear after any of the other four features in this category, a reject rating should not be made for the feature "Future Prospects" unless exceptional circumstances justify such an action.

PAST RECORD

332. A record of the past experience, enterprise, application, and accomplishment of the borrower is useful in determining the degree of risk involved in the loan transaction and in the insurance of the mortgage securing the loan. Human beings are very largely creatures of habit. For the purpose of rating the feature "Past Record" information should be gathered which will disclose the nature and extent of financial obligations which the borrower has incurred in times past, and the excellence or poorness of his record in meeting them. If at some time in the past he became insolvent or was adjudged bankrupt, the causes of such conditions should be ascertained and his record in discharging his obligations to his creditors examined. If past failures have been occasioned by shortcomings on his part, and he has not become aware of his deficiencies nor attempted to correct them, it is likely that his future experience will be similar to the past. In such a case a reject rating of this feature would be warranted. If, however, he has profited by his past mistakes, his experience need not constitute a cause for a reject rating. Inquiries which will be helpful in determining the proper rating in a given case include the following: What is the borrower's history as to real-estate transactions and his mortgage-loan record? Is he a "promoter" type of a questionable character? Has he met satisfactorily all his obligations in times past, or is his record satisfactory only as to certain classes of obligations such as mortgage loans or secured loans? Is he a chronic litigant? What inclinations have been reflected in his business and personal pursuits in times past?

RATING OF CORPORATE BORROWER

Rating of Corporate Borrower

Feature	REJECT	1	2	3	4	5	RATING
History and Reputation		5	10	15	20	25	
Ownership and Management		5	10	15	20	25	
Financial Condition		5	10	15	20	25	
Future Prospects		5	10	15	20	25	
TOTAL RATING OF CORPORATE BORROWER							%

333. The Rating of Corporate Borrower shall be accomplished by rating separately each of four features. The four features have been weighted on a scale of 100% in order to retain the relative importance of each when all are combined to obtain the rating of the corporate borrower. Each feature is marked on a scale from "1" to "5", "5" being the highest rating. The rating grid for the rating of the corporate borrower appears on Report of Mortgage Risk Examiner—Corporate Borrower. In all such cases the Mortgage

Risk Examiner shall be guided by the same basic principles as those involved in rating the individual borrower.

334. If a Mortgage Risk Examiner considers it desirable to obtain a report on the corporate borrower from a commercial credit reporting agency, he may make a request for either or both of the following:

- (a) Mercantile Commercial Report on the corporate borrower;
- (b) Factual Data Report on the corporation officers.

335. The Mortgage Risk Examiner has authority also to require the corporate-borrower applicant or the approved mortgagee to furnish documents, statements, reports, or other detailed information that will enable him to complete the rating accurately. He is permitted and instructed to secure additional information from all available sources. The information secured may include financial and operating statements of recent date, an explanation or elaboration of given items appearing in the financial statement, operating statement, statement of business experience, record and history of the corporation, list of officers and directors, and, particularly if the borrower is an operative builder, information relative to the technical knowledge and actual experience, executive ability, and general training of the individuals comprising the management.

336. The features and their weights are as follows:

History and Reputation.....	25
Ownership and Management.....	25
Financial Condition.....	25
Future Prospects.....	25

337. The following list of factors will be of assistance to Mortgage Risk Examiners in determining the rating of the respective features under which they are shown:

(1) History and Reputation.

Date of incorporation, capital authorized, subscribed, and paid-in, and purposes of operation;

Character and reputation of majority owners, officers, and directors;

Business record of corporation;

Corporate record in discharging obligations;

Experience in this line of business;

Corporate failures, litigations, judgments, and disputes.

(2) Management and Ownership.

Capital ownership or control;

Age, experience, and ability of officers;

Time principals devote to the business;

Operating program;

Contractual obligations.

(3) Financial Condition.

Sources of funds for financing business and method of control;
Balance Sheet;
Contingent liabilities;
Income profit and loss statement;
Current credit position.

(4) Prospects for Future.

Possibilities for marketing merchandise;
Advantages and hazards created by the current financial situation;
Burdensome contracts;
Possible risks in contingent liabilities;
Progressiveness of corporation.

338. In rating a corporate borrower, corporations and individuals whose signatures appear as co-makers or endorsers of the note, bond, or evidence of debt shall be considered separately for the purpose of determining sufficiency of financial ability but rated as one borrower.

339. To be considered and rated as the corporate borrower, it is not required that each individual whose signature appears as co-maker, joint maker or endorser of the note, bond, or evidence of debt, have a legal interest in the real property conveyed by the mortgage. However, the Federal Housing Administration regulations require that the signature of all parties who own the legal title shall appear as makers of such note, bond, or evidence of debt.

ENDORSERS, CO-SIGNERS, AND CO-MAKERS

340. In some cases, the title to the real property involved will be vested in several individuals. In such instances it is necessary for all the parties owning an interest in the real property to execute the mortgage, note, bond, or other evidence of debt. In cases of this nature, all such parties shall be considered separately but rated as one borrower.

341. Unless coupled with an interest in the real estate involved in the application for mortgage insurance, the eligibility of a mortgage loan for insurance shall not in any degree rest upon the presence or absence of co-makers', co-signers', or endorsers' financial responsibility or rating, except in the following cases:

(1) Where property is in the name of either the husband or wife, but not both, and both sign the credit instrument their joint income and credit character shall be considered in the rating of the borrower. This would not be true, however, if the husband or wife were legally separated.

(2) Where a son or daughter of legal age desires to sign the credit instrument with the parent or parents, weight may be given to the amount of income such son or daughter can contribute in determining whether or not sufficient financial ability exists. At the discretion of the Mortgage Risk Examiner, this will also be permitted in cases involving close relatives where it is assured that they have the interests of the owners at heart and where their own interest in the obligation is sincere and dependable.

(3) Where the borrower is a corporation or a corporate operative-builder borrower, the ability to pay of joint or co-makers may be considered in determining whether or not sufficient financial ability exists. Endorsements may be considered only when such endorsements are made by responsible officials of the corporation.

PART II
SECTION 4
RATING OF MORTGAGE PATTERN

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PART II

SECTION 4

RATING OF MORTGAGE PATTERN

GENERAL RISK-RATING INSTRUCTIONS

Rating of Mortgage Pattern

Feature	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value		4	3	15	18	20	
Ratio of Debt Service to Rental Value		3	4	6	8	10	
Ratio of Life of Mortgage to Economic Life of Building		1	2	3	4	5	
Lowest Category Rating (.....)		10	15	20	25	30	
Intermediate Category Rating (.....)		4	8	15	18	20	
Highest Category Rating (.....)		3	6	9	12	15	
TOTAL RATING OF MORTGAGE PATTERN							%

401. The term "Mortgage Pattern" refers to the relationships which exist between the mortgage security, the borrower, and the provisions and conditions in the mortgage transaction. The expression "Rating of Mortgage Pattern" refers to the degree to which these relationships are satisfactory, acceptable, proper, and advantageous from the point of view of investment in the mortgage. Therefore, the Rating of Mortgage Pattern is a measurement of the economic soundness of the mortgage. For practical purposes a mortgage is considered to be economically sound when the Mortgage Pattern may be rated 50% or more. If the rating is less than 50%, the mortgage is not economically sound, and it is not eligible for insurance. Ineligible mortgages must be rejected unless modifications can be introduced which raise the rating to at least the 50% level.

402. Rating of this category is accomplished by considering the extent to which risk is created by the characteristics of the security, the borrower, and the provisions and terms contained in the mortgage instrument. The Rating of Mortgage Pattern combines the Rating of Property, the Rating of Location, the Rating of Borrower, and the major factors in the mortgage transaction to arrive at a final conclusion with respect to the eligibility of the mort-

gage. The six features which are embraced in the Mortgage Pattern are listed below with the weights which have been ascribed to them:

(1) Ratio of Loan to Value.....	20
(2) Ratio of Debt Service to Rental Value.....	10
(3) Ratio of Life of Mortgage to Economic Life of Building..	5
(4) Lowest Category Rating.....	30
(5) Intermediate Category Rating.....	20
(6) Highest Category Rating.....	15

The ratios which comprise the first three features shall always be expressed in whole numbers except as stated below. All decimals and fractions shall be dropped. Thus, if the ratio of debt service to rental value is 78.8%, record the ratio as 78%; if 102.3%, record it as 102%. However, if the ratio of loan to value is any amount in excess of the maximum permitted, the exact percentage to two decimal places must be recorded. This, of course, will occur only where no counter-proposal is feasible.

403. Rating of Mortgage Pattern shall be accomplished by rating separately each feature. At the left side of the Reject column on the Mortgage Pattern grid is a column for the various percentages used in rating the features in this category. The Chief Underwriter transcribes or computes these percentages and places them in this column. Three blank spaces are provided opposite the last three features in which to place the abbreviations, "Property", "Location", and "Borrower", in the order applicable in the particular case. The features have been weighted upon a scale of 100% in order to retain the relative importance of each when all are combined to obtain a rating of the Mortgage Pattern. Each feature is rated on a scale of from "1" to "5", "5" being the highest rating. The rating grid which appears on Report of Chief Underwriter, and which is reproduced above, enables this rating to be recorded easily and quickly. For example, assume that the Chief Underwriter is ready to rate the various features. The first is "Ratio of Loan to Value." If the ratio is less than 60%, he puts an X mark in the "5" column. He immediately carries over to the extreme right-hand column of the grid the figure appearing in the marked square, in this case "20". If the mark were to be placed in the "1" column, the number in that square would be carried over ("6" in this case). If the ratio is more than the limit prescribed by the National Housing Act, or more than is considered economically sound, the Chief Underwriter determines the amount he is willing to insure and then rates the feature Ratio of Loan to Value in the appropriate column according to the amount permitted for insurance. One reject rating anywhere in any risk category will necessitate a recommendation for the rejection of the application for insurance. In the event an X mark appears

in the Reject column, the word "Reject" must be written in the Rating column opposite the feature so rated and again on the Total Rating line. If no such rating appears after any of the features, the final rating of the Mortgage Pattern is obtained by adding the figures in the right-hand column. The system is so designed that the figures will be an expression of the rating on a percentage basis.

404. In cases where repairs, alterations, or additions are contemplated by the mortgagor, or where such work is found by the Underwriting Department to be necessary if the loan is to be acceptable for insurance, the Chief Underwriter shall follow the instructions stated in Part I, Section 1, in which provision is made for the Architectural Inspector and Valuator to give due credit in risk rating and valuation for such necessary repairs or contemplated improvements. The conditions which must be complied with if a commitment is to be issued are stated on the Report of Chief Underwriter.

RATIO OF LOAN TO VALUE

405. The ratio of the mortgage loan to the value of the property is the first, and a very important, feature in the Mortgage Pattern category. The greater the loan, the smaller is the equity of the borrower in the property. If the borrower's equity is not substantial, he is more likely to default on the mortgage debt because he has comparatively little to lose, and may even be willing to lose the property if, by so doing, he can free himself from a burden of debt that proves to be too heavy for him to carry.

406. The element of safety is increased as the percentage of loan to value is lowered. This enhances the chance of full recovery of the money invested in the mortgage if the property is sold in a forced market. Default is usually preceded by a period of financial distress of the owner. During this period the property is allowed to deteriorate through lack of proper maintenance. It is, therefore, self-evident that the wider the margin between the amount of the loan and the value, the less is the chance for loss. The borrower is also a better risk when his equity is greater. If the property and financing are suited to the needs and ability of the borrower when the loan is made, default is less likely to occur. If the margin between the amount of the loan and the value of the property is wide and the ratio low, unforeseen burdens of expense and obligation on the borrower may not be sufficiently heavy to overtax his ability. Also, the borrower is more apt to maintain an excellent attitude toward his obligation. A still further advantage of the lower ratio is that should default be threatened, the borrower will make every effort to preserve his equity and will attempt to maintain and repair the property and dispose of it himself and thus relieve the lending insti-

tution or the Federal Housing Administration from acquiring the property.

407. This situation would also be true in cases where the owner does not live in the property but rents it to others. In such cases a burden of debt that is too heavy might reduce the net income from the property to the vanishing point, and the owner might not then be willing to make any special effort or sacrifice to retain ownership or to use income from other sources to carry the property. It is a decided advantage to have the ratio of loan to value low because if the owner becomes distressed and is forced to rent on a low basis, the smaller rental will be sufficient to take care of the debt service. The same condition would be true in depressed times when all rentals decline to lower levels.

408. Attention is called to the existence of two kinds of equities that may exist when a house is purchased at a bargain price. A cash equity is created in the amount of cash, or its equivalent, which the owner actually pays. This cash equity or its equivalent must be of such size as will encourage the owner to make every effort to protect his investment. The greater his cash interest the greater will be his effort to protect it. Since the Administrator must determine the economic soundness of a loan for mortgage insurance, minimum requirements for such cash equity or its equivalent are established and will be found in the administrative rules. The other equity, which is not to be confused with the one just set forth, is the difference between the sale price and the value of the property. The two together constitute the total equity.

409. The loan-value ratio has been used in traditional mortgage-lending practice as the most important and, in some instances, as the sole test by means of which to determine investment quality and risk. Its significance is not under-estimated in the risk-rating system of the Federal Housing Administration. It may be noted that a relatively low rating in this feature requires considerable compensation in other Mortgage Pattern features if a high final rating of the category is to be obtained. It is a basic assumption of the National Housing Act that high-percentage, long-term loans are adequately secured when they are made in good, stable neighborhoods on property owned by borrowers who themselves are good risks.

410. This feature shall be rated according to the ratio of the amount of the loan to the Federal Housing Administration valuation of the property, and in accordance with the following instructions:

If the loan is		Place X in column
Less than	60% of FHA Valuation.....	5
60% but less than 65%	".....	4
65% "	70% ".....	3
70% "	75% ".....	2
75% to and including the maximum % permitted in Act.....		1
In excess of permitted maximum.....		Reject

RATIO OF DEBT SERVICE TO RENTAL VALUE

411. As a feature in the Mortgage Pattern, the Ratio of Debt Service to Rental Value is only partially analogous to the foregoing feature, Ratio of Loan to Value. Much emphasis is placed on the ability of the borrower to pay. The smaller the carrying charges the more able is the borrower to pay. The Ratio of Debt Service to Rental Value introduces still another angle, namely, the ability of the income of the property itself to pay the monthly debt service as it accrues. The ability of the monthly rental to pay the monthly debt service will not only encourage the owner to continue his obligation, but will better enable him to do so in the event his financial condition becomes distressed. A favorable ratio between the debt service and the rental value will also assist the lending institution or the Federal Housing Administration in recovering the investment in the event of acquisition by default. It cannot, therefore, be presumed that this feature is a repetition of the foregoing feature, although, in general, the direction of the rating tends to be the same because the feature contains factors which also reflect conclusions in the other feature rating.

412. The fact that the monthly gross rental of a property will be sufficient to take care of the total monthly payments of the loan will give strength of security to the lender. As the monthly gross rental increasingly exceeds the monthly debt service, the degree of security increases. By the same token, as the monthly gross rental becomes insufficient to meet the monthly debt service, the risk becomes correspondingly greater.

413. In rating this feature the Chief Underwriter shall calculate the ratio of the debt service to the rental value by dividing the former by the latter to secure a percentage. Having established this percentage, Ratio of Debt Service to Rental Value will be rated in the Mortgage Pattern according to the following table:

If the debt service is		Place X in column
Less than	75% of rental value.....	5
75% but less than 90%	".....	4
90% "	110% ".....	3
110% "	135% ".....	2
135% to	200% ".....	1
Over	200% ".....	Reject

414. Monthly Debt Service.—The Monthly Debt Service consists of all the estimated charges which the owner must pay during the year on the insured mortgage, but prorated on a monthly basis.

It is composed of the following:

- (a) Monthly payment on principal and interest
- (b) Monthly service charges by mortgagee
- (c) Taxes and special assessments
- (d) Ground rentals (if leasehold)
- (e) Fire and hazard insurance
- (f) Federal Housing Administration insurance premium

415. Rental Value.—The rental value figure used in connection with the computation of Ratio of Debt Service to Rental Value is the rental value reported by the Valuator on Report of Valuator. The rental value of a property will be computed on the basis of the typical rental being received for similar properties in accordance with the instructions contained in Part I, Section 3, of this Manual.

416. If the ratio of debt service to rental value is more than 200%, the Chief Underwriter may recommend a commitment for a smaller loan amount. This has the effect of cutting down the debt service. However, the rejection point, over 200%, is rather low, and it is seldom that a slight lowering of the loan amount will appreciably lower the high ratio. It is likewise probable that the condition creating the low ratio will have been reflected in the Rating of Borrower, Rating of Property, and Rating of Location. The mere fact that the monthly debt service is 200%, or slightly less, of the monthly rental value and results in a rating in the "1" column is not sufficient evidence that the loan is sound in that respect. If there are other low feature ratings lack of economic soundness may be indicated if the ratio of debt service to rental value is rated in the "1" column. If the latter rating is caused by unusual circumstances, such, for example, as by a large debt service resulting because the loan is for a short term rather than because it is for a large amount, and it is compensated by strong ratings of other features, the Chief Underwriter must use his judgment in determining whether or not economic soundness is present, and, if not, what counter-proposal, if any, shall be made.

417. The point of rejection for this feature has been placed at a fairly low level, namely, where the ratio of debt service to rental value is more than 200%. It was so placed because (1) properties of higher value tend to have relatively low rental values, and (2) short term loans where borrowers are willing and able to reduce the

mortgage debt at a rapid rate and which should be accepted might otherwise be rejected.

RATIO OF LIFE OF MORTGAGE TO ECONOMIC LIFE OF BUILDING

418. The relationship expressed by the ratio of the "life" (that is, the remaining term, in years) of the mortgage to the estimated remaining economic life of the building will result in a high or low rating of this feature according to the extent to which the remaining economic life of the building exceeds the life of the mortgage. In rating this feature, the Chief Underwriter uses the estimate of remaining economic life recorded on Report of Valuator.

419. The Ratio of Life of Mortgage to Economic Life of Building is significant because it deals with the extent to which there is time within which to recover the mortgage investment. It recognizes that there is a strong probability in practically all cases that the value and usefulness of properties will decline and that the mortgage pattern should take account of such declines. It might appear axiomatic that loans for shorter terms are necessarily more attractive as investments and subject to less risk. If this were universally true it would be feasible to rate the life of a mortgage rather than the ratio of its life to the remaining economic life of the building. It is not feasible to rate a mortgage directly in accordance with its life because the factors which together increase or decrease risk do not affect risk in the same direction simultaneously. For example, shortening the life of a loan reduces risk by reducing the hazards which result from rapid declines in value. At the same time, shortening the life of a loan increases the debt service, and thereby increases risk. However, the ratio of the life of the mortgage to the remaining economic life of the building is ratable, and changes in the ratio always affect risk in the same direction. Thus while the ratio is admittedly subject to some criticism because the estimation of the economic life of a building is a matter of considerable conjecture, the use of the ratio as a factor in the Mortgage Pattern is justified.

420. The ratings shall be made in accordance with the following instructions:

If the life of the mortgage is				Place X in column	
50% or less				of economic life of bldg.....	5
More than	50%	but less than	57%	"	4
	57%	"	"	"	3
	66%	"	"	"	2
	80%	"	"	"	1
More than	100%	not over	100%	"	Reject

CATEGORY RATINGS

421. The final ratings ascribed to the Property category, the Location category, and the Borrower category are used to establish the ratings of the last three of the six features in the Mortgage Pattern. The relative importance of the first three risk categories differs from case to case. "A chain is no stronger than its weakest link." If, in a given case, the Property and the Borrower have received fairly high ratings and the Location has received a fairly low rating, the relative importance of the Location category rating is great. If, in another case, the Property receives a low rating and the other two categories receive high ratings, the relative importance of the Property category is greatly increased. If, in still another case, the three categories receive ratings which are about the same, there is no great difference in their relative importance. In the last case, this is true whether the ratings are high or low.

422. In order to reflect the changes in relative importance of the first three categories, the last three features in the Mortgage Pattern are weighted differently. The first of these three features, "Lowest Category Rating", is the most heavily weighted and the rating ascribed to it is based on the rating of the category which has the lowest rating. The second of the three features, "Intermediate Category Rating", is less heavily weighted and the rating ascribed to it is based on the rating of the category which has the next to lowest rating. The third of the three features, "Highest Category Rating", is given the lightest weighting and the rating ascribed to it is based on the rating of the category which has received the highest rating. Where the three ratings are exactly alike it makes no difference how they are arranged for the purpose of rating the last three features of the Mortgage Pattern. If two are alike, the same is true provided the third one is used for the rating of the first or third feature, depending upon whether it was rated lower or higher than the other two.

423. In rating the three features, the Chief Underwriter enters the names of the categories and the ratings ascribed to them on the grid to the left of the Reject column in the spaces provided. The following table is used in rating these features:

If category rating is		Place X in column
80% to 100%	-----	5
70% but less than 80%	-----	4
60% 70%	-----	3
55% 60%	-----	2
50% 55%	-----	1
Under 50%	-----	Reject

424. Following are two examples of correctly filled-out Mortgage Pattern grids. It will be noted that whole numbers only are recorded on the grid; all fractions or decimals are dropped. This practice is to be followed in all instances except that if the ratio of loan to value is in excess of the prescribed maximum it shall be computed to two decimal places and so recorded. Of course, this condition will never occur if a counter-proposal is submitted. In the first example the result of examination revealed the following conclusions:

Principal Amount of Loan.....	\$3, 800
FHA Valuation.....	\$5, 000
Total Debt Service.....	\$26.74
Rental Value of Property.....	\$40.00
Life of Mortgage.....	20 years
Remaining Economic Life of Building.....	40 years
Rating of Property.....	73%
Rating of Location.....	85%
Rating of Borrower.....	55%

Rating of Mortgage Pattern

Feature	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 76 %		X					6
Ratio of Debt Service to Rental Value 66 %						X	10
Ratio of Life of Mortgage to Economic Life of Building 50 %						X	5
Lowest Category Rating (...Borrower....) 55 %			X				15
Intermediate Category Rating (...Property....) 73 %				X			16
Highest Category Rating (...Location....) 85 %					X		15
TOTAL RATING OF MORTGAGE PATTERN							67%

In the second example the result of examination revealed the following conclusions:

Principal Amount of Loan.....	\$2, 000
FHA Valuation.....	\$4, 000
Total Debt Service.....	\$17.48
Rental Value of Property.....	\$37.50
Life of Mortgage.....	15 years
Remaining Economic Life of Building.....	45 years
Rating of Property.....	91%
Rating of Location.....	65%
Rating of Borrower.....	82%

Rating of Mortgage Pattern

Feature	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 50 %						X	20
Ratio of Debt Service to Rental Value 46 %						X	10
Ratio of Life of Mortgage to Economic Life of Building 33 %						X	5
Lowest Category Rating (...Location....) 65 %			X				20
Intermediate Category Rating (...Borrower....) 82 %				X			20
Highest Category Rating (...Property....) 91 %					X		15
TOTAL RATING OF MORTGAGE PATTERN							90%

REJECTIONS AND COUNTER-PROPOSALS

425. The Rating of Mortgage Pattern is made from results already determined and is therefore a more or less mechanical process or recapitulation of the risks. If reject ratings of any one of the features have occurred in one of the risk categories, that category rating will have been recorded on one of the other report forms as "Reject" in accordance with instructions in this Manual. In such cases the Mortgage Pattern on Report of Chief Underwriter shall be filled out as follows:

Rating of Mortgage Pattern

Feature	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 80%		6	X	15	16	20	6
Ratio of Debt Service to Rental Value 185%		2	X	4	5	10	2
Ratio of Life of Mortgage to Economic Life of Building 100%		1	X	2	3	4	1
Lowest Category Rating (...Location...) Reject%	X	10	15	20	25	30	Reject
Intermediate Category Rating (...Property...) 59%		4	5	X	15	20	8
Highest Category Rating (...Borrower...) 70%		3	4	5	15	20	12
TOTAL RATING OF MORTGAGE PATTERN							Reject%

426. If a category rating is less than 50%, the Mortgage Pattern shall be filled out as follows:

Rating of Mortgage Pattern

Feature	REJECT	1	2	3	4	5	RATING
Ratio of Loan to Value 65%		6	5	15	X	20	12
Ratio of Debt Service to Rental Value 89%		2	4	5	X	10	8
Ratio of Life of Mortgage to Economic Life of Building 79%		1	2	X	3	4	2
Lowest Category Rating (...Property...) Reject% 42%	X	10	15	20	25	30	Reject
Intermediate Category Rating (...Borrower...) 62%		4	5	15	X	20	12
Highest Category Rating (...Location...) 62%		3	4	5	X	15	9
TOTAL RATING OF MORTGAGE PATTERN							Reject%

The intention is that the Mortgage Pattern grid shall show a percentage rating only for each category in which no reject feature ratings occur; and that the need for rejection in any case shall be made apparent by entry of the word "Reject" after any category rating which is less than 50%. A percent total is never to be recorded on the Total Rating line when reject feature ratings or category ratings less than 50% occur.

427 (1). In instances in which the Rating of Mortgage Pattern, when based on the loan described in the application, is less than 50%, Chief Underwriters are required to determine whether or not a modified loan having (1) a smaller principal amount and a shorter life, or (2) simply a smaller principal amount, will qualify as economically sound. If a counter-proposal appears feasible, the

Chief Underwriter recommends it and modifies the Rating of Mortgage Pattern to correspond with the counter-proposal. The alternative proposal should be made for the largest principal amount and longest life of mortgage which trial ratings of the Mortgage Pattern show as eligible. Where the Rating of Borrower is affected, the Report of Mortgage Risk Examiner is amended. In many cases the counter-proposal requires the re-rating of all three of the first three features in the Mortgage Pattern. In other instances only the first two will be affected. In cases where no feasible counter-proposal will result in a Rating of Mortgage Pattern of 50% or more, the grid is marked according to the terms of the loan described in the application and the word "Reject" is entered on the line provided for the Total Rating of Mortgage Pattern.

427 (2). If the ratio of loan to value exceeds the prescribed maximum, and there are no reject feature or category ratings, the Chief Underwriter recommends a counter-proposal for the largest principal amount which can be insured. In this connection reference is made to paragraph 168 of Part I. This procedure will preclude rejection of any case on account of a too high ratio of loan to value. However, if reject feature or category ratings occur and it is not feasible to make a counter-proposal, the ratio of loan to value, if in excess of the maximum, will be computed on the basis of the application as submitted and recorded in the Mortgage Pattern without modification.



REPORT OF ARCHITECTURAL INSPECTOR

11. Garage.....	Floor	Walls	Roof	Doors					
12. Drives, walks...	Drives		Walks						
13. Miscellaneous...									

(k) The following repairs, alterations, or additions, estimated to cost \$....., are necessary to avoid "Reject" ratings in the Rating of Physical Security: ☐ None required. ☐ Following required:

Items

Cost

NOTE.—In space above explain why any "Reject" ratings in the Rating of Physical Security are justified.

Have you ever inspected this property before? ----- State when, and for whom -----

CERTIFICATION

I, the undersigned, do hereby certify that I have carefully inspected this property, or the drawings and specifications of proposed new building improvements; that to the best of my knowledge and belief the statements made in this report are correct; that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage; and that in my opinion the decisions with respect to the Rating of Physical Security and the Estimate of Cost herein set forth are justified.

DATE -----

(Signed) -----

☐ *Fee Architectural Inspector.* ☐ *Staff Architectural Inspector.*

Approved ----- (If not approved, state reasons and recommendation under "Remarks").
(Yes or no)

REMARKS:

CERTIFICATION

I, the undersigned, do hereby certify that to the best of my knowledge and belief, the statements and decisions made in this Report of Architectural Inspector, subject to the exceptions, if any, stated under "Remarks" immediately preceding this certification are correct; and that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage.

DATE -----

(Signed) -----

Chief Architectural Supervisor.

REPORT OF VALUATOR

(Serial number)

6. Floors.....						
7. Partitions.....						
8. Plumbing.....						
9. Heating.....						
10. Lighting.....						
11. Garage.....						
12. Drives, walks.....						
13. Miscellaneous.....						

(k) The following repairs, alterations, or additions, estimated to cost \$....., are necessary to avoid "Reject" ratings:

☐ None required. ☐ Following required:

Items

Cost

NOTE.—In space above explain why any "Reject" ratings in the Rating of Property are justified.

(v) Neighborhood data: ☐ Part of metropolitan area. ☐ Close-in. ☐ Partly built-up. -----% ☐ Increasing population.
(One mark in each column) ☐ Isolated community. ☐ Outlying. ☐ Built-up. -----% ☐ Stationary population.
☐ Declining population.

REMARKS: (Include brief report on Mortgagor, if possible.)

NOTE.—In space above explain why any "Reject" ratings in the Rating of Location are justified.

Have you ever inspected this property before? ----- If so, state when and for whom -----

CERTIFICATION

I, the undersigned, do hereby certify that I have carefully inspected this property, that to the best of my knowledge and belief the statements made in this report are correct; that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage; and that in my opinion the decisions set forth herein are justified.

DATE ----- (Signed) -----
☐ Fee Valuator. ☐ Staff Valuator.

APPROVED ----- (If not approved, state reasons and recommendation under "Remarks.")
(Yes or no)

REMARKS:

CERTIFICATION

I, the undersigned, do hereby certify that to the best of my knowledge and belief the statements and decisions made in this Report of Valuator, subject to the exceptions, if any, stated under "Remarks" immediately preceding this certification, are correct; and that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage.

DATE ----- (Signed) -----
Chief Valuator.

REPORT OF MORTGAGE RISK EXAMINER

(INDIVIDUAL BORROWER)

Past Record								
TOTAL RATING OF BORROWER								%

CERTIFICATION

I, the undersigned, do hereby certify that I have carefully examined and considered all the necessary reports relative to Rating of Borrower; that to the best of my knowledge and belief the statements made in this report are correct; that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage; and that in my opinion the decisions set forth in this report are justified.

DATE _____

(Signed) _____

Mortgage Risk Examiner.

Approved _____ (if not approved, state reasons and recommendation under "Remarks").
(Yes or no)

REMARKS:

CERTIFICATION

I, the undersigned, do hereby certify that to the best of my knowledge and belief the statements and decisions made in this Report of Mortgage Risk Examiner, subject to the exceptions, if any, stated under "Remarks" immediately preceding this certification, are correct; and that I have no personal interest, present or prospective, in the property, applicant, or proceeds of the mortgage.

DATE _____

(Signed) _____

Chief Mortgage Risk Examiner.

DATE

(Signed)

Chairman of Review Committee.

REPORT OF CHIEF UNDERWRITER

..... Dollars (\$.....),
for an amortization period of years, bearing interest at% per annum and
payable in monthly installments of \$....., and PROVIDED FURTHER
that the requirements, if any, listed on the reverse side hereof shall be met. A Commitment for Insurance
in accordance with these conditions and terms should be issued.
☐ It is necessary to reject the application for the following reasons:

Estimated total monthly payment first year \$..... Annual service charge%

For new construction only (transcribe following from FHA Form No. 2014):

AREA OF PLOT	% LAND COVERAGE	NUMBER OF FAMILY UNITS	NUMBER OF ROOMS	NUMBER OF BATHS	GARAGE		WALL MATERIALS—MAIN BUILDING		ESTIMATED REPLACEMENT, COST OF MAIN BUILDING
					Type	No. of Cars	Exterior	Structural	

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