



U.S. Department of Housing and Urban Development
New York State Office
Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York 10278-0068
<http://www.hud.gov/local/nyn/>

#3

Section 202 and 811 Procedures

Cost Estimating

INTRODUCTION

Federal procurement regulations require that an official government estimate be made of all work involving construction. In certain circumstances, this estimating work is contracted to private firms. Due to program changes recently enacted, the selection and the actual contract for these services may occasionally be done by Sponsors submitting applications to the Department. When this is the case, the Department is not responsible for the payment of this consultant, and will not release monies to cover his fee until the closing of the Construction Contract (Initial Endorsement or Initial Closing).

Regardless of whether the Cost Estimator is retained directly by the Department, or by persons doing business with the Department, the responsibility for their work remains the same. The estimate submitted will be used to judge the appropriate amounts of compensation due to contractors building projects receiving Federal funds or assistance. It will not usually be extensively reviewed by Department employees, except for general reasonability. Therefore, the Cost Estimator is directly responsible for decisions affecting the dispersing of Federal funds. In addition, State and Local actions may be influenced by this estimate. The Cost Estimator will therefore be required to work with utmost care and to the highest professional standards.

While the Cost Estimator must assume this responsibility, they do not operate in isolation. The requirements for their work are generally covered in the HUD Handbook 4450.1 Rev 1, Cost Estimation for Project Mortgage Insurance, dated 5/12/88. Copies of relevant sections are included herein, and the entire handbook is available from the Handbooks number provided below. In addition, HUD personnel will always be available to consult and assist with problems encountered. Note the following:

HUD Cost Personnel:

Mr. Sal Alini, Construction Analyst, (212) 542-7879
Mr. Charles Hockensmith, Construction Analyst, (212) 542-7880

Fax Number: 212-264-1277
HUD Handbooks Number: 800-767-7468
HUD User #: 800-245-2691
Home Page: <http://www.hud.gov>

When undertaking a Cost Estimation project, it is important to know who will be responsible for taking off the square footage amounts for use by the entire Development Team. The numbers used must be consistent throughout the presentation to this Office. Similarly, responsibility for completion of associated paperwork, including HUD Forms 2013 and 2264, must be established.

COST ESTIMATE; Trade line items

The standard HUD estimate is done using comparable projects. Adjustments are made for square footage, number of units, location, and time. Specific adjustments are then made for differences between the subject and the comparable projects.

In order to facilitate the work of contracted specialist, the standard HUD procedure will not be imposed upon the Cost Estimator. Instead, the CE will be allowed to utilize their own method of estimating, subsequently adapting the results to the HUD format to facilitate communication with the Contractor and with us. This Office will not dictate standards or methods, as long as the documentation allows checking the process and the result. This documentation must include the unit takeoffs, unit prices, adjustments and multipliers, and reference the standards used for data. If the price data used is not a standard cost estimating reference, (Means, Marshall Swift, Boeckh's, etc.) the standards will be reviewed by this Office.

It is crucial to account for the requirements of the Davis-Bacon wage rates in the estimate. Generally, all projects must conform to the requirements of this act, which, among other things, requires the payment of wages consistent with industry standards for each trade. The determination is updated monthly, issued for each county, and subdivided by trades. It is often summarized as being tied to unionized wage rates, and is consistent with the wage rates periodically updated by the Means Index.

As previously mentioned, the final result of the estimate must be presented in the standard HUD format (See attachment A). This consists of 31 structures trade lines including accessory structures, 6 land improvement trade lines including unusual site conditions, and 5 lines for allowances and fees. The following principles apply;

1/ Structures line items include anything that occurs within the foundation or footprint of the building. Land Improvements is generally outside this area, except for excavation, which includes both areas. Despite the fact that certain trades may be bought from subcontractors combining work within and outside the building footprint, they must be separated on the HUD estimate. One commonplace exception involves rooftop recreation areas, where the seating, planting, and other improvements are included under site improvements, although the walking surface is usually included in roofing.

2/ This Office does not use the Accessory Structures line, except when an accessory structure's cost can be entirely attributed to one subcontractor, as with a modular building.

COST ESTIMATE; Trade line items (continued)

3/ Generally, the Special Construction line is used for interior demolition on rehabilitation projects. Demolition of existing buildings to make way for new construction is not a mortgageable item, and should never be included in the estimate. Occasionally, Special Construction is also used to segregate the cost of sprinklers.

4/ In order to avoid confusion about the allocation of items in the standard HUD Land Improvements estimate, refer to the backup sheets for the 2326 (Attachment B). Do not complete this form, just be consistent with the contents.

5/ Unusual Site Conditions refers to any construction required to overcome site conditions not generally encountered in the project area. (Attachment C, page 4-1, paragraph 4-2) Examples include foundation conditions, water, rock, poor bearing, lengthy access roads, lengthy utility services, retaining walls, and excessive fill. The costs on this line should not be included on any other line of the estimate. Due to the impact on the financial transaction, consultation with HUD personnel is encouraged before using this line, and the result communicated to the Appraiser for use in determining the value of the property.

COST ESTIMATE; Allowances and fees

Allowances and fees are generally calculated using straightforward percentage multiples of previous line items. Detailed estimates of items are not required, except when project conditions vary from the norm. A general description of each category is contained in Attachment C.

A/ General Requirements: In addition to the items listed on page 1-4, paragraph A, the General Requirements include;

- Typical onsite supervision
- Typical onsite clerical
- Field Engineering
- Field Office Expenses (telephone, supplies)
- Permits and fees including expediting
- Temporary construction (protection, storage, access)
- Temporary utilities
- Medical and First Aid facilities
- Clean up and removals
- Security
- Equipment and rentals as required for above operations
- Insurance to cover operations (vandalism, liability)

Typically, these expenses run between 6% and 11% of the subtotal, Land and Structures. Refer to attachment C, Average Prices, for more detailed data.

B/ Overhead: Includes all expenses of "front office" operations, including the salaries of Project Managers and owners. Required to be calculated as 2% of the subtotal of Land, Structures, and General Requirements (L+S+GR)

C/ Profit: Calculated on a sliding scale as a percentage of the subtotal of Land, Structures, and General Requirements (L+S+GR). Percentage calculated as follows:

L+S+GR < 1,000,000; .0835 - (.025 x L+S+GR/1,000,000)
L+S+GR < 11,400,000; .0635 - (.025 x L+S+GR/10,000,000)
L+S+GR > 11,400,000; .035

The following benchmarks result from the formula:

L+S+GR = 100,000; 8%
L+S+GR = 1,000,000; 6%
L+S+GR = 5,000,000; 5%
L+S+GR = 9,000,000; 4%
L+S+GR > 11,400,000; 3.5%

Up to 1% may be added to the above formula based upon the considerations outlined in paragraph B.2, page 1-5. Such adjustments are rarely used, and then only on the most complex projects where expertise beyond normal construction is required, such as on complicated health care construction.

COST ESTIMATE; Allowances and fees (continued)

D/ Other Fees: Other Fees is made up of two components. The Contractor's Other Fees are reserved for those projects which require a Cost Certification. The fee for this work varies from \$2,000 to \$7,500 depending on the size of the project. Except for very simple construction operations, use \$7,500. This item is not generally required except when the Sponsor is also acting as General Contractor (not permitted on 202 or 811 projects). Consultation with HUD personnel is encouraged before using this line. The Sponsor's Other Fees include borings, surveys, building department filing fees, construction testing, and other information gathering activities both prior to and during construction. Usually, these are calculated as .5% (.005) times the total contractor's costs outlined above. When special zoning or environmental problems warrant, this fee is sometimes increased to 1%, but only with the preparation of an itemized budget. The cost of a Sponsor's Cost Certification is not included on this line. The total of Builder's and Sponsor's Other Fees is included in Other Fees on the 2013 and the 2264.

E/ Bond Premium: This item is calculated as a percentage of the total of the construction costs. This Office uses tables periodically updated by companies issuing bonds. Calculated on a sliding scale including all the contractor's costs. Frequently 1% is used as the benchmark figure, but it actually varies between .75% and 2.1%.

F/ Contingency Reserve: Contingency Reserve is only used on rehabilitation projects. The intention is that it will serve to cover conditions that are not apparent during pre-construction inspections and should be calculated as 5% of the total of land improvements, structures and general requirements.

COST ESTIMATE; Result

An estimate must be made for each structure type, as well as a total for the entire project. Estimates for each building are not necessary, if buildings are identical. Land Improvements may be included only on the total if the buildings are all on one site. Estimates must be complete, including structures, land improvements and fees for each project type when multiple sites are involved.

As previously stated, the purpose of the cost estimate is to verify a proposed construction amount. Since no two estimators are likely to arrive at exactly the same conclusion, the New York Office has determined a range in which reasonable verification is established. Due to the minimized risks to the Government on smaller projects, this range has been widened on smaller projects, where small differences of opinion about cost can make larger percentage variations.

<u>Construction Amount</u>		<u>Allowable Estimate Variance</u>
below	\$ 500,000	7%
	\$ 1,000,000	5%
	\$ 5,000,000	3%
	\$10,000,000	2%
above	\$10,000,000	1%

COST ESTIMATES – submission of unit costs shall be consistent and within range of HUD data. Unsubstantiated out of range costs will not be accepted. In such cases, recommendations will be made to acquire additional bids.

SUPPLEMENTAL COST ESTIMATES

HUD Cost Processing requires estimates beyond the basic cost of construction. These estimates affect the final grant or loan amounts, and must be prepared and documented to the same standards as the construction estimate.

A/ Cost Not Attributable to dwelling use Also known as CNA and B/A (B over A). This calculation is to make allowances for the construction cost of both building and sitework elements which are not directly associated with dwelling use. "A" is the total raw costs of land and structures (trade line items). "B" is the costs associated with non-dwelling functions.

Reference attachment C, pages 4-2 and 4-3 for the list of typical Cost Not Attributable items. Note that the typical Group Home has minimal Costs not Attributable, because the common spaces do not qualify for this designation.

Occasionally, unusual requirements of state and local authorities are allowed. Facade work required to meet the requirements of the NYSHPO, or work required to get special local zoning approvals, are examples in this category. Never process any cost not attributable for items outside the worksheet and handbook without consulting the HUD Cost Processor for your project.

Finally, the "as is" value of the net square feet of rehabilitated space must be included. Reference attachment C, page 7-5. Note that the completion of this form must be in coordination with other members of the Development Team, who must provide the appraised value of the structure.

Traditionally, the costs of building square footage have been calculated based upon the cost of the building as a whole. Note that the worksheet utilizes a net square foot cost, not the gross square foot cost, for spaces in the building. The costs of sitework have been calculated on a take-off basis. If the square footages involved in both interior and exterior space have been calculated by the Cost Estimator, they should be communicated to the Development Team for further incorporation into the processing.

Reference attachment D, for the NY Office format for the calculations. Note that the ratio is established on the bare trade costs, without fees.

SUPPLEMENTAL COST ESTIMATES (continued)

B/ Offsite Requirements The definition for this category is contained in attachment C, pages 4-3, paragraph 4-5. For the purposes of the New York Office, customary work beyond the property lines such as sidewalks, street trees, curbs, bituminous paving within 5' of the curb, and utility connections in the street affronting the site, usually within 50 feet of the property line, are accepted as On-site. Offsite work is generally not mortgageable by this Office, and will result in an escrow requirement. It is therefore important that such work be brought immediately to the attention of the Development Team and the HUD Cost Processor.

The Offsite estimate is prepared as a bare trade line estimate, without general requirements, overhead or profit. Generally, it is prepared with the same 6 trade format as sitework. The work is not included in the main estimate, and is entered in a different area on the HUD forms.

C/ Site Not Attributable (Usually referred to as SNA) Traditionally processed by the Appraisers at HUD, this item must be coordinated on every development team. Directly linked to the B/A calculation outlined in A above, it is required in order to make financial allowances for the value of property underlying both building and sitework elements which are not directly associated with dwelling use. Parking, paved outdoor recreation, and proportionate shares of the building footprint are included.

This calculation adds directly to the grant or loan amount available from this Department. Whether calculated by the Cost Processor or the Appraiser, the coordination of the information on the B/A and the SNA is critical to an acceptable application.

Reference attachment E, excerpted from HUD Handbook 4480.1, Forms Catalog, for the explanation and worksheet for this process.

Attachment "D" Submissions: Must include the areas (S.F.) underlying parking and site work (recreational only and walks leading to it). The net areas are to be inserted on lines 22 & 23. Supplementary estimates for the improvements on these areas must consist of a detailed breakdown of bare cost.

Contractor's and/or Mortgagor's Cost Breakdown

U.S. Department of Housing and
Urban Development
Office of Housing
Federal Housing Commissioner

OMB No. 2502-0044 (exp. 08/31/2003)

Schedules of Values

Public reporting burden for this collection of information is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is required to obtain benefits. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB Control Number.

Section 227 of the National Housing Act (Section 126 of the Housing Act of 1954, Public Law 560, 12 U.S.C., 1715r), authorizes the collection of this information. The information is required for a general contractor when an identity of interest exists between the general contractor and the mortgagor or when the mortgagor is a non-profit entity and a cost plus contract has been used. The information is used by HUD to facilitate the advances of mortgage proceeds and their monitoring.

Privacy Act Notice. The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. While no assurances of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information request.

Date	Sponsor
Project No.	Building Identification
Name of Project	Location

This form represents the Contractors and/or Mortgagors firm costs and services as a basis for disbursing dollar amounts when insured advances are requested. Detailed instructions for completing this form are included on the reverse side.

Line	Div.	Trade Item	Cost	Trade Description
1	3	Concrete		
2	4	Masonry		
3	5	Metals		
4	6	Rough Carpentry		
5	6	Finish Carpentry		
6	7	Waterproofing		
7	7	Insulation		
8	7	Roofing		
9	7	Sheet Metal		
10	8	Doors		
11	8	Windows		
12	8	Glass		
13	9	Lath and Plaster		
14	9	Drywall		
15	9	Tile Work		
16	9	Acoustical		
17	9	Wood Flooring		
18	9	Resilient Flooring		
19	9	Painting and Decorating		
20	10	Specialties		
21	11	Special Equipment		
22	11	Cabinets		
23	11	Appliances		
24	12	Blinds and Shades, Artwork		
25	12	Carpets		
26	13	Special Construction		
27	14	Elevators		
28	15	Plumbing and Hot Water		
29	15	Heat and Ventilation		
30	15	Air Conditioning		
31	16	Electrical		
32		Subtotal (Structures)		
33		Accessory Structures		
34		Total (Lines 32 and 33)		

Line	Div.	Trade Item	Cost	Trade Description			
35	2	Earth Work					
36	2	Site Utilities					
37	2	Roads and Walks					
38	2	Site Improvements					
39	2	Lawns and Planting					
40	2	Unusual Site Condition		Nonresidential and Special Exterior Land Improvement (costs included in trade item breakdown)		Offsite Costs (costs not included in trade item breakdown)	
41		Total Land Improvements					
42		Total Struct. & Land Imprvts.		Description	Est. Cost	Description	Est. Cost
43	1	General Requirements					
44		Subtotal (Lines 42 and 43)					
45		Builder's Overhead					
46		Builder's Profit					
47		Subtotal (Lines 44 thru 46)		Total \$			
48				Other Fees		Total \$	
49		Other Fees		Demolition (costs not included in trade item breakdown)			
50		Bond Premium				Description	Est. Cost
51		Total for All Improvements					
52		Builder's Profit Paid by Means Other Than Cash					
53		Total for All Improvements Less Line 52		Total \$		Total \$	

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.
Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Mortgagor	By	Date	
Contractor	By	Date	
FHA (Processing Analyst)	Date	FHA (Chief, Cost Branch or Cost Analyst)	Date
FHA (Chief Underwriter)		Date	

Instructions for Completing Form HUD-2328

This form is prepared by the contractor and/or mortgagor as a requirement for the issuance of a firm commitment. The firm replacement cost of the project also serves as a basis for the disbursement of dollar amounts when insured advances are requested. A detailed breakdown of trade items is provided along with spaces to enter dollar amounts and trade descriptions.

A separate form is prepared through line 32 for each **structure type**. A summation of these structure costs are entered on line 32 of a master form. Land improvements, General Requirements and Fees are completed through line 53 on the master 2328 **only**.

- Date**—Date form was prepared.
- Sponsor**—Name of sponsor or sponsoring organization.
- Project No.**—Eight-digit assigned project number.
- Building Identification**—Number(s) or Letter(s) of each building as designated on plans.
- Name of Project**—Sponsors designated name of project.
- Location**—Street address, city and state.
- Division**—Division numbers and trade items have been developed from the cost accounting section of the uniform system.
- Accessory Structures**—This item reflects structures, such as: community, storage, maintenance, mechanical, laundry and project office buildings. Also included are garages and carports or other buildings. When the amount shown on line 33 is \$20,000.00 or 2% of line 32 whichever is the lesser, a separate form HUD-2328 will be prepared through line 32 for Accessory Structures.
- Unusual Site Conditions**—This trade item reflects rock excavation, high water table, excessive cut and fill, retaining walls, erosion, poor drainage and other on-site conditions considered unusual.
- Cost**—Enter the cost being submitted by the Contractor or bids submitted by a qualified subcontractor for each trade item. These costs will include, as a minimum, prevailing wage rates as determined by the Secretary of Labor.
- Trade Description**—Enter a brief description of the work included in each trade item.
- Other Fees**—Includable are fees to be paid by the Contractor, such as sewer tap fees not included in the plumbing contract. Fees paid or to be paid by the Mortgagor are not to be included on this form.
- Total For All Improvements**—This is the sum of lines 1 through 50 and is to include the total builder's profit (line 46).

Line 52—When applicable, enter that portion of the builder's profit (line 46) to be paid by means other than cash and/or any part of the builder's profit to be waived during construction.

Non-Residential and Special Exterior Land Improvement Costs—Describe and enter the cost of each improvement, i.e. on-site parking facilities including individual garages and carports, commercial facilities, swimming pools with related facilities and on-site features provided to enhance the environment and livability of the project and the neighborhood. The Design Representative and Cost Analyst shall collaborate with the mortgagor or his representative in designating the items to be included.

Off-Site Costs—Enter description and dollar amount including fees and bond premium for off-site improvements.

Demolition—Enter description and dollar amount of demolition work necessary to condition site for building improvements including the removal of existing structures, foundations, utilities, etc.

Other Fees—Enter a brief description of item involved and cost estimate for each item.

Signatures—Enter the firm name, signature of authorized officer of the contractor and/or mortgagor and date the form was completed.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

B

FHA FORM NO. 2326-L1

FEDERAL HOUSING ADMINISTRATION

**LAND IMPROVEMENT
COST ESTIMATE**

Effective Cost Date _____ Source _____

Project No. _____

Section of Act _____

Name of Project: _____
 Location: _____
 Type of Project: Mobile Home; Titlex; Sub-Div; PUD; Other _____
 Accessory Structure(s): _____ Gross Structure Area _____ S.F.
 Description of Site: _____
 Number of Lots, Mill Stands, Units, Etc. _____
 Water System: Indiv.; Community; Public Sewer System: Indiv.; Community; Public
 Unusual Site Features: _____

Residential Land Area	GROSS LAND AREA
Common Land Area	
Commercial Land Area	

TRADE ITEM	C.O.P.	ESTIMATED COST	GROSS S.F. COST	% OF TOTAL	ADJUSTED COST	L. N. F.	UNUSUAL SITE CONDITIONS (Cost reflected in Total for All Improvements)
EARTH WORK:						1	DESCRIPTION COST
Clearing & Grubbing						2	
Stripping & Piling						3	
Cut (Include Street & Walk)						4	
Fill						5	
Rock Excavation						6	
Bldg. Bulk Excav. & Backfill						7	
Hauling						8	
Miscellaneous						9	
SITE UTILITIES:						10	
Water Supply & Related Items						11	
Sanitary Sewer & Related Items						12	TOTAL \$
Electric Service & Connections						13	REFUNDABLE ITEMS (Cost Reflected in Total for all Improvements)
Street & Grounds Lighting						14	
Gas Service & Connections						15	DESCRIPTION COST
Heating Tunnels						16	
Storm Sewer & Drainage						17	
Miscellaneous						18	
ROADS AND WALKS:						19	
Curbs & Gutters						20	
Pavement for Vehicular Area						21	
Special Area Surfacing						22	
Walls, Steps, Handrails, Etc.						23	TOTAL \$
Miscellaneous						24	ONSITE SPECIAL LAND IMPROVEMENT
SITE IMPROVEMENTS:						25	(Cost Reflected in Total for all Improvements)
Equipment for Special Areas						26	
Fences, Walls, Etc.						27	DESCRIPTION COST
Trash Collection Stations						28	
Street & Entrance Signs						29	
Bridges						30	
Swimming Pool						31	
Mobile Home Pads						32	
Miscellaneous						33	
LAWNS AND PLANTING:						34	TOTAL \$
Topsoil & Improvement						35	COST PER LOT, STAND, UNIT: \$
Finish Grading						36	
Seeding, Sprigging & Sodding						37	GROSS AREA (SITE)
Planting						38	Lot, Stand, Unit: _____ S.F.
Miscellaneous						39	OFFSITE COSTS
TOTAL LAND IMPROVEMENTS				100%		40	DESCRIPTION COST
* Accessory Structure(s)						41	
TOTAL LAND AND STRUCTURE(S)						42	
General Requirements				%		43	
SUBTOTAL (LINES 42 & 43)						44	
Builder's Overhead				%		45	
Builder's Profit				%		46	
SUBTOTAL (LINES 44, 45, 46)						47	
Arch./Engr. Fee (Design)				%		48	
Arch./Engr. Fee (Superv.)				%		49	
Other Fees				%		50	
Bond Premium				%		51	TOTAL \$
TOTAL FOR ALL IMPROVEMENTS						52	DEMOLITION
						53	DESCRIPTION COST

* Execute Standard 2326 "Project Estimate" Form To Line 33 for each Structure Type if the Amount is Significant to Total Land Improvements.

REMARKS: _____

TOTAL	\$
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ESTIMATE PREPARED: _____ DATE _____

ESTIMATE REVIEWED: _____ DATE _____

1-4 ALLOWANCES AND FEES. Collect information from data bank projects and field sources on typical allowances and fees in the Field Office jurisdiction. Record as lump sum dollar amounts or a percentage.

A. General Requirements is an allowance for the general contractor's Job overhead for a specific project.

- 1) Items will vary due to project type, location and site conditions. Include:
 - a) Supervision and job site engineering.
 - b) Job office expenses including clerical wages, whether on-site or offsite, if for the project.
 - c) Temporary buildings, tool sheds, shops and toilets.
 - d) Temporary heat, water, light and power for construction.
 - e) Temporary walkways, fences, roads, siding and docking facilities, sidewalk and street rental.
 - f) Construction equipment rental not in trade item costs.
 - g) Clean-up and disposal of construction debris.
 - h) Medical and first aid supplies and temporary facilities.
 - i) Watchman's wages, security cost, and theft and vandalism insurance.
- 2) Salaries of owners, partners or officers of the general contracting firm are not part of general requirements. Actual work on the job in a trade or supervision is allowable.

B. Builder's Fee is the profit and overhead of the general contractor. Gather data on customary fee for various project types, sizes and structural systems.

- 1) General overhead is the cost of continuing operations of a building construction firm.
- 2) Profit is the return anticipated for providing building construction services under competitive conditions. For a specific project consider:

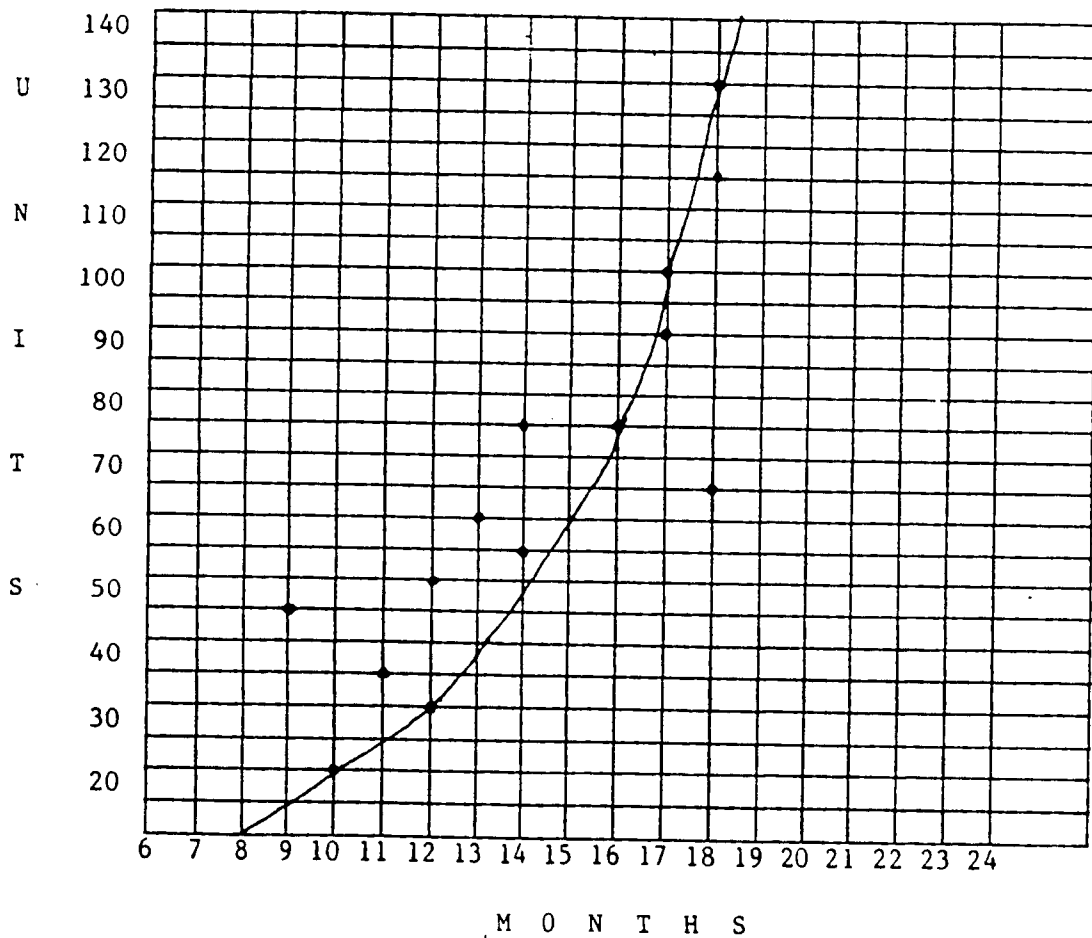
-
- (1-4)
- a) On-site construction time.
 - b) Work performed by the general contractor.
 - c) Number of subcontractors and extent of subcontract work.
 - d) Risk and responsibility.
- 3) In processing, estimate the builder's fee from data as a percentage.
- a) Always compute general overhead as 2 percent of the total cost of land improvements, structures and general requirements.
 - b) Apply the remaining percentage to the same total cost to determine profit.
- 4) For projects with a Builder's and Sponsor's Profit and Risk Allowance (BSPRA), compute only the 2 percent general overhead as the builder's fee. Do not include an amount for profit.

C. Architect's Fees are the typical amounts paid professionals for design and construction contract administration (supervision).

- 1) Include information on architectural, structural, mechanical and other engineering and consultant services.
 - a) Data must be convertible to a fixed fee (stipulated sum) but may be on the basis of: a percentage of construction costs; stipulated sum; hourly billing; fixed fee plus expenses; multiple of direct expenses; or any other local practice.
 - b) Separate data for design and supervision services.
- 2) In estimating the architect's fees for a specific project use data from projects similar in design and services rendered.
 - a) Determine the professional services from review of the project's Owner-architect Agreement, AIA Document B1 1.
 - b) Consider all factors in the agreement that may influence the fees--such as repetition, redesign, design complexity, research, client identity, location.

-
- (1-4)
- c) Use the fees stated in the Agreement unless totally unreasonable in comparison with data.
 - d) Document the method of estimating the fees.
- D. Bond Premium is the typical cost for various bonds required for building construction.
- 1) Record data at the rate charged.
 - 2) Use the applicable rates to calculate the cost of the bond premium for a specific project.
- E. Other Fees are the costs of various required items and services. Record data as typically a cost to either the owner or contractor.
- 1) Site and topographic surveys.
 - 2) Subsurface exploration (test borings).
 - 3) Soil tests, concrete tests, and other construction testing.
 - 4) Fees for utility taps and connections.
 - 5) Building permits and licenses.
 - 6) Fees for cost certification.
- 1-5 CONSTRUCTION TYPE. Record number of months required to construct various types of projects.
- A. Categorize this data by:
- 1) Project type.
 - 2) Structural system (A further breakdown between on-site "stick built" and factory components or modules may be made).
 - 3) Number of units.
- B. Plot the data on graphs.
- 1) Develop a graph for each project type and structural system.

- (1-4)
- 2) Units are on the left, vertical, increasing in number from the bottom.
 - 3) Months are on the bottom, horizontal, increasing in number from the left.
 - 4) Each project's construction time is a dot opposite the number of units and over the number of months for construction.
 - 5) Draw a trend line interpolating the data.
 - 6) Example: Two-Story Walk-up Wood Frame



- C. Estimate the construction time for a project from the graph for the applicable project type and structural system.
- 1) Make any adjustments due to knowledge of the job, such as location, contractor, or labor and material market.
 - 2) Document the method of estimating the construction time.

CHAPTER 4. SUPPLEMENTAL COST ESTIMATES

- 4-1 PURPOSE. To complete the basic estimate, additional detailed estimates are necessary. These supplemental cost estimates will vary depending on the program and specifics of the project.
- 4-2 UNUSUAL LAND IMPROVEMENTS are the work to cure project site conditions not common to competitive sites.
- A. Design Representative and Appraiser determine existence of condition.
 - 1) Excessive excavation.
 - 2) Cuts and fills.
 - 3) Rock excavation.
 - 4) High water table.
 - 5) Problem soils.
 - 6) Special foundation.
 - 7) Other similar conditions.
 - B. Make a site visit if necessary to determine the extent to the condition.
 - C. Describe and calculate the cost for each identified unusual condition on a worksheet.
 - D. Enter the total cost of unusual land improvements on Form HUD-92264, Section G, line 36a and file the worksheet.
- 4-3 DEMOLITION is the work to remove existing structures, footings, foundations, and utilities to prepare the site for new construction. Include the removal and disposal of debris, fill and compaction of excavations, and salvageable material or equipment.
- A. Describe and calculate the cost of each demolition item on a worksheet, deduct value of salvageable material or equipment. Include general overhead and profit for all demolition work as lump sum.
 - B. Make entries on Form FHA 2326, under "demolition," and Form HUD-92264, Section O, for the use of the Appraiser, or interline as part of Section G, line 36 if in the drawings and specifications. File the worksheet.

4-4 COST NOT ATTRIBUTABLE TO DWELLING USE (CNA) include structure and land improvement items not specifically for dwelling use, whether or not income producing.

A. The CNA categories (underlined below) from Form HUD-92264, Section M, and items to consider as not attributable to dwelling use are:

- 1) Parking areas and the walks and driveways leading to them not including roads and streets.
- 2) Garages or garage spaces and covered parking for the use of the dwelling unit occupants, and the walks and driveways leading to them not including roads and streets.
- 3) Commercial areas or buildings and improvements directly attributable to the commercial use.
 - a) Include only the basic and permanent structure improvements typical in vacant commercial space. Do not include equipment, fixtures, movable partitions, special finishes, etc., for a special business.
 - b) Include central dining rooms and kitchens if the dwelling units contain cooking and eating facilities. Also include integrated, built-in or attached kitchen equipment.
- 4) Special Exterior Land Improvements are features unusual or in excess or those typical in projects for similar occupancy.
 - a) Include such items as gazebos, sitting areas or patios for the use of all occupants, specimen trees and shrubs, fountains and pools, and ornamental lighting and fencing.
 - b) Always include exterior works of art.
 - c) Do not include earthwork, roads and streets, lawns, typical plantings, private balconies and patios, utility lines, retaining walls, and security lighting and fencing.

(4-4) 5) Other improvements are:

- a) Project administrative and maintenance spaces, such as: offices, repair shops, employees' toilets, and janitor or cleaning closets.
- b) Community space, such as: lounges, multi-purpose rooms, game rooms, libraries, and hobby or craft rooms.
- c) Storage facilities not for occupant use.
- d) Recreational facilities, such as: swimming pools, tennis courts, basketball courts, and tot lots, with related and necessary equipment and appurtenances.
- e) Interior works of art.

B. Do not consider entrances, lobbies, halls, corridors, stairs, and elevators used by the occupants to enter or leave dwelling units in CNA. A proration of such circulation elements between dwelling use and any category in CNA is not permitted.

C. Prepare a worksheet describing by category each item considered in CNA, showing calculation of cost of each item or category, the basis of measurement, and unit price. Summarize the categories and total.

D. To determine the percentage of CNA to that attributable to dwelling use (the B over A ratio) divide the total CNA by the total cost of land improvements and structures.

NOTE: The B over A ratio may not exceed 15 percent (less any commercial CNA) without prior approval of Headquarters', Office of Insured Multifamily Development.

E. Make entries on Form HUD-92264, Section M, and file the worksheet.

4-5 OFFSITE REQUIREMENTS are improvements which serve the project but are outside the property lines.

A. Include utilities, walks, curbs, gutters, streets, drainage structures, landscaping, and similar improvements.

B. Do not include extensions of utilities, walks, curbs, and drainage structures beyond the property lines to connect with those adjacent to the project site. Consider these short extensions, and the public sidewalk and similar improvements next to the property lines, as on site.

NOTE:
10% For
Section 202+811

-
- (4-5) C. Describe and calculate the cost of each offsite improvement on a worksheet. Include the cost of labor, materials, equipment, job and general overhead, profit, and applicable taxes.
- D. Make entries on Form FHA 2326, Offsite Costs, and Form HUD-92264, Section M. File the worksheet.



Figure 1

REHABILITATION COST NOT ATTRIBUTABLE TO RESIDENTIAL USE

1. Total Rehab Cost
(Without fees -Lines G 36c. + G 41.) ** \$ _____
2. Rehab Cost Not Attributable
(Dollar amounts without fees) ** \$ _____
3. Ratio of Not Attributable
Project Not Attributable Square Feet
_____ sq. ft. divided by Total
Project Gross Square Feet _____ sq. ft. ** = _____ %
4. "As-Is" Not Attributable
Total "As-Is" (Land and Structures)
\$ _____ X Ratio from #3 _____ % = \$ _____
5. Total Cost Not Attributable
"As-Is" Not Attributable (#4) \$ _____
and Rehab Cost Not Attributable (#2)
\$ _____ = \$ _____
6. Cost Without Fees
Total Rehab Cost Without Fees \$ _____
(From #1) + Total "As Is" Value \$ _____
(From Line 73. of Form FHA 2264) = Total = \$ _____
7. The Percentage Not Attributable
Divide Total Rehab Cost Not Attributable
(#5) \$ _____ by Total Cost Without
Fees (#6) _____ %
8. Line G 74.
Total Estimated Replacement Cost of
Project* \$ _____ X
Percentage Not Attributable (#7) _____ % = \$ _____

* The Total Estimated Replacement Cost must be that developed by a Replacement Cost Formula. Cost Not Attributable must not be adjusted if the Total Estimated Replacement Cost later changes.

** From Cost Analyst

B/A CALCULATION FORM
HUD-NEW YORK AREA OFFICE

PROJECT NAME: _____ COST PROCESSOR: _____
PROJECT #: _____ DATE: _____

ITEMS:	ENTRIES	INSTRUCTIONS:

LINE NET SQUARE FEET	0	
1 RESIDENTIAL (REV + NON-REV)	0	(FROM PROCESSING)
2 COMMUNITY	0	(FROM PROCESSING)
3 MANAGEMENT	0	(FROM PROCESSING)
4 COMMERCIAL	0	(FROM PROCESSING)
5 LAUNDRY	0	(FROM PROCESSING)
6 PARKING	0	(FROM PROCESSING)
7 CIRC (LOBBY, CORR, STAIRS, ELEV)	0	(FROM PROCESSING)
8 OTHER	0	(FROM PROCESSING)
9 TOTAL	<u>0</u>	(ADD LINES 1-8)

COSTS		
10 STRUCTURES	0	(FROM PROCESSING)
11 TOTAL SITE	0	(FROM PROCESSING)
12 SUBTOTAL (A)	<u>0</u>	(ADD LINES 10+11)
13 SITE NOT ATTRIBUTABLE(-)		(REC AND PARKING)
14 TOTAL	<u>0</u>	(LINE 12-LINE 13)
15 COST PER NET SF	0	(LINE 14/LINE 9)

LINE	ITEM	NET SF	FACTOR	TOTAL	INSTRUCTIONS:

16	COMMUNITY	_____	_____	0	(LINE 15*NSF*FACTOR)
17	MANAGEMENT	_____	_____	0	(LINE 15*NSF*FACTOR)
18	COMMERCIAL	_____	_____	0	(LINE 15*NSF*FACTOR)
19	LAUNDRY	_____	_____	0	(LINE 15*NSF*FACTOR)
20	PARKING (INT)	_____	_____	0	(LINE 15*NSF*FACTOR)
21	OTHER	_____	_____	0	(LINE 15*NSF*FACTOR)
22	PARKING (EXT)	_____			(FROM PROCESSING)
23	REC. (EXT)	_____			(FROM PROCESSING)
24	TOTAL			0	(ADD LINES 16-23)
25	PERCENT			0	(LINE 24/LINE 12)



Cost Not Attributable to Dwelling Use. For each project where the trial 2264A indicates the mortgage will be limited by criterion #4, the portion of site value allocated to facilities not attributable to dwelling use will be calculated by the appraiser and entered in the Remarks portion. This calculation is necessary for use by the Mortgage Credit Staff in its determination of maximum insurable mortgage and/or qualifying the project for FNMA/GNMA participation.

For an explanation of facilities which qualify for consideration as not attributable to dwelling use, see Handbook 4450.1, Cost Estimation for Project Mortgage Insurance, Paragraphs 2-3c and 2-3d.

Depending on the design of the project, there are two methods to be used in making this calculation:

- (1) The first is for facilities located outside the exterior walls of residential structures. These facilities may be, for example, swimming pools and related facilities (bath house, etc.), detached community buildings and/or attached garages and/or carports, open parking spaces, sidewalks, private roads, exterior works of art, totlots, etc.

The value of the land underlying these facilities will be calculated by multiplying the area of this land by the warranted price of land fully improved per square foot ascribed to the total site area.

EXAMPLE

Site Area Underlying Swimming Pool and Related Facilities	5,000 Sq. Ft.
Open Parking Areas	20,000 Sq. Ft.
Total Land area not attributable	<u>25,000 Sq. Ft.</u>
Warranted Price of Land Fully Improved Per Sq. Ft.	\$5.00
Value of Site Allocated to Facilities Not Attributable to Dwelling Use (25,000 Sq. Ft. x \$5.00) =	<u>\$125,000</u>

- (2) The second method is used for calculating the site value allocated to non-attributable facilities within the exterior walls of a residential structure.



EXAMPLE

Gross Building Area	120,000 Sq. Ft.
Not-Attributable Facilities:	
Commerical and/or Community Space	7,000 Sq. Ft.
Parking Garage	20,000 Sq. Ft.
Total Area Not Attributable	<u>27,000 Sq. Ft.</u>
Ratio Area of Not-Attributable Facilities to Gross Building Area (27,000 Sq. Ft. : 120,000 Sq. Ft.)	22%
Total Site Area	75,000 Sq. Ft.
Warranted Price of Land Fully Improved Per Sq. Ft.	\$5.00
Site Area Underlying Building	20,000 Sq. Ft.
Site Area Attributable to Not- Attributable Facilities (20,000 Sq. Ft. x .22)	4,400 Sq. Ft.
Value of Site Allocated to Facilities Not-Attributable to Dwelling Use (4,400 Sq. Ft. x \$5.00) =	\$22,000

In projects having "not attributable" facilities in both of the above mentioned categories, both methods must be used to find the total value of those portions of the site considered not attributable to dwelling use.

If processing indicates that Cost Not Attributable becomes a critical factor in the conditional commitment processing of the project, the conditional commitment letter must state that subsequent change in this item can cause a change in the mortgage.

Processing Variation to be Followed in the Event that Unusual Site Costs (Item 14(2)) Exceeds Fair Market Value of Land Fully Improved (Item 14(1))

When this situation occurs, processing will be accomplished in accordance with the foregoing instructions with the following exceptions:

Project Name: _____ Cost Rep. _____
Project Number: _____ Tele. No. 212-264-0777 Ext.

Project Exhibit Review - 96-102 Process

Cost Comments

- B/A - (Cost Not Attributable) method of calculation is not correct.
- B/A - Community floor areas are not consistent with drawings.
- Provide a supplementary cost estimate for the exterior recreational facility.
- Provide a supplementary cost estimate for the parking facility.
- Provide the areas (In S.F.) underlying the recreational and parking facilities.
- B/A ratio exceeds 10%. Provide an estimate of excess cost & operating cost of ammenities.
- SNA - (Site Not Attributable) not included in application
- Provide a detailed construction cost estimate, breakdown each applicable trade item.
- Provide a FHA - 2328 that is consistent with the 2013 application
- Bottom line significantly exceeds established benchmarks.
- Cost as submitted exceeds Capitol Advance HCP Limit.
- Variance Check:
Cost Analyst Estimate: _____ Diff. % #DIV/0!
Contractor' Cost Estimate (2328): _____
- Other: In depth cost review is in order.