



# PLANNING DEPARTMENT

City and County of San Francisco 1660 Mission Street, Suite 500 San Francisco, California 94103

## SOUNDNESS REPORT REQUIREMENTS FOR PROPOSED DEMOLITION OF RESIDENTIAL BUILDINGS

Applicants proposing demolition of a residential structure subject to the Planning Commission Policy requiring mandatory Discretionary Review (a public hearing before the Commission) shall provide the Planning Department with a Soundness Report prepared in accordance with the requirements described below, if the Applicant is justifying the demolition request on the basis that the subject building is unsound. Without a determination that the dwelling is unsound, the recommendation of approval is harder to make, and in that case, the applicant may be advised to consider a project that alters, rather than demolishes, the existing structure.

**Who prepares the Soundness Report?** Soundness Reports are required to be produced by licensed design or construction professionals (architects, engineers, and contractors) or by certified specifiers, construction cost estimators or physical inspectors. The author of the report must be a disinterested third party at “arm’s length” from the project, that is, not involved in its ownership, design or construction. Professionals who prepare such reports must be familiar with the demolition standards and procedures adopted by the Planning Commission and requirements of the San Francisco Building and Housing Codes, and knowledgeable about construction assemblies and processes and their cost.

**How is Soundness defined?** “Soundness” is an economic measure of the feasibility of repairing a sub-standard dwelling. It compares an estimate of construction-repair cost called the Upgrade Cost to an estimate called the Replacement Cost.

Replacement Cost is defined as the current cost to construct dwellings exactly like the size of those proposed for demolition. The Department has adopted the following unit costs:

For all occupied, finished spaces	\$200.00	x existing square footage
For unfinished space with flat ceiling & > 7'-6" of headroom (e.g., basements, garages)	\$80.00	x existing square footage
For unfinished space with sloping ceiling & > 5'-0" of headroom (e.g., attic space below pitched roof)	\$25.00	x existing square footage
For non-occupiable space without legal headroom (e.g., 30" high crawl space below raised floor)	\$0.00	
For site work (e.g., walks, driveways, landscaping, retaining walls not part of the building foundation, etc.)	\$0.00	

Upgrade Cost is an estimate of the cost to make the existing house “safe and habitable,” that is, the cost to bring a sub-standard dwelling into compliance with the minimum standards of the Housing Code and with the Building Code in effect at the time of its construction, with certain retroactive life-safety exceptions.

Note that programmatic shortcomings of the existing house have no bearing on the soundness report. Costs to add floor space in a rear addition, to increase headroom in a basement or attic, to install granite countertops, etc., cannot be included, nor can certain “soft costs” and site improvements listed below. Bringing the structure into compliance with *current* seismic requirements of the Building Code is not an allowable expense, even though it may be prudent for the homeowner or desirable for the public good, or even if required by the Building Code for the scope of repair work. Routine, repetitive maintenance costs must also be excluded. Contractor’s profit and overhead and permit costs may be included, but Architects’ and Engineers’ design fees, and allowances for construction contingencies may not.

Minimum habitability standards\* for One- and Two-Family Dwellings as summarized below should also be used a guide to what may and may not be included in upgrade Costs. Authors of Soundness Reports need to be focused on the concept that “Soundness” is an economic measure, based on the Housing Code, not an issue of structural compliance with the Building Code. Further, they need to distinguish costs to upgrade elements that were original

\* Taken from a Memo dated May 7, 2003, provided by Laurence Kornfield, Chief Building Inspector, DBI.

construction deficiencies from those elements needing repair due to deferred maintenance, as explained below.

**Soundness Determination:** The Planning Commission has adopted a policy that a residential building is considered *unsound* if the cost to upgrade construction deficiencies exceeds 50% of the replacement cost.

If the soundness report cannot support that finding, the next step is to calculate a second upgrade cost, including the costs calculated for the 50% upgrade, and also adding in the cost of any necessary habitability repairs attributable to lack of maintenance. For example, if a significant roof leak went unrepaired for a sufficient length of time to cause mildewed gypsum board and rotted structural members, their repair could be included in this upgrade, if it is certain and demonstrable that the leak was the cause. If this second upgrade cost exceeds 75%, then the dwelling is determined to be unsound.

**Just because a building component or system is not pristine or modern does not justify its replacement**, as long as it meets required functional standards and is not a hazard. For example, **rusted ductwork** on a heating system that can maintain the temperature requirement detailed below does not justify replacement of the heating system. The presence of **knob and tube wiring**, unless unequivocally documented as a hazard, does not justify replacement of the electrical service with conduit or Romex. The cost to replace a pull-out **fuse box** that is not a hazard with a new circuit breaker panel cannot be included as an upgrade expense, even if it is part of the proposed work.

Further examples: **Flashing**, replacement of roof flashing, step flashing, coping, gravel stops, diverters, etc should be excluded, because these items can be replaced as part of the re-roofing process, and in that sense are maintenance items. Replacement of corroded galvanized sheet metal head flashing over doors and windows might be allowed at the 75% level if it is clear that the corrosion resulted from lack of painting or other improper maintenance. **Windows:** the Building Code requires that windows, like all elements of structure, be maintained and repaired. Replacement of windows meeting the code requirements at the time of their installation cannot be included in upgrade costs. E.g., replacing single-glazed windows installed in 1972, before Title 24 energy requirements, with double-glazed, energy efficient windows, would not be an allowed upgrade cost. Repair of leaky or aged windows may be included at the 75% threshold to the extent that it is demonstrable that the repair is necessitated by poor maintenance. **Stairs:** Removal and replacement of existing stairs without legal headroom can be included (at the 50% level) only if the stairs are a means of egress **required** by the Building Code. If the stairs are not part of a required exit system, but for example provide access to a basement or garage, their replacement to meet current headroom requirements or rise and run ratios cannot be included. Wooden exterior stairs have a finite life, and their periodic replacement is considered a maintenance issue. Only if it can be documented that improper construction led to the early loss of the stairs could their replacement be included in upgrade costs for soundness determination.

For general guidelines, see the descriptions in the three lists below: Also note that in general, the code requires that buildings be maintained in accordance with the codes in effect at the time or their original construction, although the Housing Code does incorporate a number of retroactive standards, which require upgrades to maintain minimum standards of safety and habitability. Below is an excerpt of basic minimum standards for housing habitability as detailed in the 2001 San Francisco Housing Code. These 2001 San Francisco Housing Code standards reflect those in the State of California Health and Safety Code. Please note that standards of housing habitability are minimum standards. Some of the concepts addressed in these standards are not detailed, and can only be determined upon review of specific cases by competent professional persons. Please note that additional standards apply to dwelling units within apartment buildings, hotels, or other specialized facilities.

**WORK THAT COULD BE INCLUDED IN THE UPGRADE COST ESTIMATE FOR THE 50% THRESHOLD:**  
**(Include costs to correct original construction deficiencies that affect habitability, NOT deferred maintenance items or programmatic requirements of the project.)**

- Building Permit Application cost
- providing room dimensions at a minimum of 70 sq. ft. for any habitable room
- providing at least one electrical outlet in each habitable room and 2 electrical outlets in each kitchen
- providing at least one switched electrical light in any room where there is running water
- correcting lack of flashing or proper weather protection if not originally installed
- installing adequate weather protection and ventilation to prevent dampness in habitable rooms if not originally constructed
- provision of garbage and rubbish storage and removal facilities if not originally constructed (storage in garage is permitted)

- eliminating structural **hazards** in foundation due to structural inadequacies
- eliminating structural **hazards** in flooring or floor supports, such as defective members, or flooring or supports of insufficient size to safely carry the imposed loads.
- correcting vertical walls or partitions which lean or are buckled due to defective materials or which are insufficient in size to carry loads.
- eliminating structural **hazards** in ceilings, roofs, or other horizontal members, such as sagging or splitting, due to defective materials, or insufficient size.
- eliminating structural **hazards** in fireplaces and chimneys, such as listing, bulging or settlement due to defective materials or due to insufficient size or strength.
- upgrading electrical wiring which does not conform to the regulations **in effect at the time of installation**
- upgrading plumbing materials and fixtures that were not installed in accordance with regulations **in effect at the time of installation**
- providing exiting in accordance with the code **in effect at the time of construction**.
- correction of improper roof, surface or sub-surface drainage if not originally installed
- correction of structural pest infestation (termites, beetles, dry rot, etc.) to extent attributable to original construction deficiencies (e.g., insufficient earth-wood separation)
- Contractor's profit & overhead, not to exceed 18% of construction subtotal, **if unit costs used for repair items do not include p & o**

**WORK THAT COULD BE INCLUDED IN THE UPGRADE COST ESTIMATE FOR THE 75% THRESHOLD:**  
**(Include costs to correct habitability deficiencies resulting from deferred maintenance)**

- repair of fire-resistive construction and fire protection systems **if required at the time of construction**, including plaster and sheet rock where fire separation is required, and smoke detectors, fire sprinklers, and fire alarms **when required**.
- wood and metal decks, balconies, landings, guardrails, fire escapes and other exterior features free from hazardous dry rot, deterioration, decay or improper alteration
- Repairs as needed to provide at least one **properly operating** water closet, lavatory, and bathtub or shower.
- repair of a kitchen sink not operating properly
- provision of kitchen appliances, when provided by the owner, in good working condition, **excluding minor damage**.
- repair **if needed** of water heated to provide a minimum temperature of 105° and a maximum of 120°, with at least 8 gallons of hot water storage
- both hot and cold running water to plumbing fixtures
- repair to a sewage connection disposal system, **if not working**
- repair heating facilities that allow the maintenance of a temperature of 70° in habitable rooms, **if not working**
- repair ventilation equipment, such as bathroom fans, where operable windows are not provided, **if not working**
- provision of operable windows in habitable rooms (certain exception apply)
- repair of electrical wiring **if not maintained** in a **safe** condition.
- repair of plumbing materials and fixtures **if not maintained** in good condition.
- correcting vertical walls or partitions which lean or are buckled due to deterioration
- eliminating structural **hazards** in ceilings, roofs, or other horizontal members due to deterioration
- eliminating structural **hazards** in fireplaces and chimneys, such as listing, bulging or settlement due to deterioration

- eliminating chronic, severe mold and mildew.
- repairing proper weather protection, including exterior coverings such as paint and roof coverings and windows and doors due to lack of maintenance
- repairing deteriorated, crumbling or loose plaster, gypboard, and floor finishes due to faulty, poorly maintained weather protection
- Contractor's profit & overhead, not to exceed 18% of construction subtotal, **if unit costs used for repair items do not include profit & overhead**

**WORK THAT MUST BE EXCLUDED FROM THE UPGRADE COST ESTIMATE FOR BOTH THE 50% & THE 75% THRESHOLDS:** (Although these elements may be required, prudent, or desirable, the costs associated with them are not included in upgrade estimates.)

- Architects' fees, Engineers' fees, and other design fees
- construction contingency allowance
- addition of floor space, or increasing headroom, or other programmatic requirements that are not required habitability standards as part of the original dwelling
- interior and exterior painting except to assemblies required to be repaired or replaced under habitability standards
- adding electrical receptacles to kitchens that already have at least two, or to other rooms that have at least one
- installation of a higher capacity electrical service, unless the existing is a **hazard**
- finish upgrades, such as new cabinetry, countertops, tile or stonework
- routine re-roofing except to assemblies required to be repaired or replaced under habitability standards
- site work, such as repairs to walkways, drives, decks on grade, and retaining walls not part of the building foundation
- landscape and irrigation work
- removal of fire hazards, such as a buildup of combustible waste and vegetation.
- removal of accumulation of weeds, vegetation, trash, junk, debris, garbage, stagnant water, combustible materials, stored paint, and similar conditions
- elimination of insect, vermin or rodent infestation
- other routine, repetitive maintenance costs

**What constitutes a "hazard?"** For the purposes of Soundness Reports, the Department shall define "hazard" in the following way: *"All buildings, structures, property, or parts thereof, regulated by the Planning Code, that are structurally unsafe or not provided with adequate egress, or that constitute a fire hazard, or are otherwise dangerous to human life, safety, or health of the occupants or the occupants of adjacent properties or the public, are for the purpose of this policy, defined as hazardous."*

**What should be in the Soundness Report?** The Soundness Report should begin with a thorough description of the building in question: its age, size (e.g., footprint area, height, number of stories, habitable square footage), roof form (e.g., flat, hip, gable), roofing material (built-up, single ply, roll, tile, composition shingle), construction type (e.g., wood frame, unreinforced masonry, masonry with seismic upgrade, steel frame), foundation and floor system (e.g., spread footing, pier and grade beam, raised floor, slab-on-grade), exterior siding (e.g., stucco, horizontal wood siding, vinyl, plywood, curtain wall), interior wall finish (e.g., gypsum board, plaster), and a description of repairs, maintenance, and any remodeling or additions. Documentation supporting the previous should be included in an appendix, using copies of the building permit history of the building.

Next, the Replacement Cost should be calculated using the methodology described above. Both the 50% threshold and the 75% threshold should be computed and noted.

The 50% Upgrade Cost should be described next, with line item descriptions of each element qualifying for upgrade (those due to initial construction deficiencies), followed by the unit cost, the unit multiplier, and the total cost for that element. If the sum of these cost items does not exceed 50% of the Replacement Cost, then a 75% Upgrade Cost

can be detailed, including the previous upgrade items and adding in costs for repair of qualifying items deteriorated due to deferred maintenance, presented in a similar format.

Generalities and assertions unsupported by professional, detailed justification, or by photographic evidence or other documentation will undermine the essential credibility of the report. Replacement of many structural assemblies and mechanical systems is justified only if the existing elements are **hazards**. Careful and thorough demonstration of the hazardous condition is required, to justify including the replacement in an upgrade cost estimate.

Copies of any pest report, if such repair work is needed, and any other documentation supporting the conclusions of the soundness report, should be provided. Pest control work should be carefully analyzed to determine which portions of work and cost are applicable to the 50% threshold and which to the 75% threshold.

Clear and well-labeled photographs of the façade, and close-ups that document elements needing upgrade work, are essential to support assertions that the elements in question qualify for inclusion in the upgrade cost.

A **factual** summary of the findings is a useful conclusion to the document.

**How will the Planning Commission decide whether to approve the demolition application?** The General Plan guides the orderly development of San Francisco. It instructs the Department to discourage the demolition of sound housing. If the Soundness Report is credible and demonstrates that the dwelling in question is not sound, the Department will probably recommend to the Commission that it approve the demolition.

Because a finding that a building is unsound makes approval of the demolition more probable, and because some costs included in the soundness report represent a subjective professional judgment, there may be a temptation to inflate the upgrade cost estimate, by including costs of elements that do not require repair under the Housing Code, or by exaggerating the cost of repairs, or by suggesting seismic or other structural upgrades beyond the scope of habitability requirements. Resist this temptation. Presentation to the Planning Commission of soundness reports with inflated upgrade costs or low replacement costs have led to denial of the related demolition permits.

If the house is determined to be sound, then the project must comply with a preponderance of other General Plan Policies and Objectives for the Commission to approve the demolition. Such policies may include the provision of new family housing, adding units to the City's housing stock, proposing a high quality design for the replacement building that preserves and enhances the character of the neighborhood, or providing affordable rental or ownership opportunities.

The Case Planner will advise the applicant prior to the hearing date whether the Department will recommend approval of the demolition application to the Planning Commission, based on the project's overall conformity with the General Plan. (See Checklist of Criteria on The Planning Department's Residential Demolition Application Form

If the proposed demolition is denied due to historical, environmental, or General Plan considerations, the project sponsor may choose to modify the proposal to retain significant elements of the existing building and thereby to expand or remodel the building under an alteration permit, and withdraw the demolition application.