



NY Rising Housing Recovery Program

Home Elevation Design Guidance

October 13, 2014

The following provides construction related information to a Homeowner and/or Design Professional for designing and elevating a dwelling in the 100-year flood plain using funding provided by the NY Rising Program. **Please also see the “Fact Sheet for Optional Items” which explains NY Rising Program requirements and funding guidelines.**

Basic Elevation Requirements of the NY Rising Program

The Program will assist you to elevate your home if it is within the 100-year flood plain identified by the FEMA Flood Insurance Rate Map or by the local Authority Having Jurisdiction (AHJ). If your home was substantially damaged, as determined by your municipality, you **MUST elevate your home, and if it was not substantially damaged you have the option to elevate with Program assistance. The elevation must be to a height of the Base Flood Elevation plus two feet, although some municipalities may require a higher elevation. If so, and the requirement is in writing from the municipality, the Program will fund the additional height.**

- 1. Hiring a Designer** - Because elevating a home is complicated and technical, Homeowners **must** work with a licensed Design Professional (designer) to develop the best alternative for their specific project. A designer, which could be an architect or engineer, is able to coordinate the architectural, foundation design and structural, lifting and setting of the dwelling, site work as well as the mechanical, electrical, plumbing and HVAC design requirements of the project. A contractor is not authorized to complete all the forms that the Program requires prior to approving the elevation scope of work (**see #5 & 6 below**).
- 2. Environmental Risk Assessment Surveys** – Before you begin your elevation work, you should schedule environmental risk assessment survey(s) to identify the presence of asbestos (for all homes) and lead-based paint (for homes built before 1978) that may be disturbed by the elevation and therefore require that special mitigation measures be taken during construction. The Program will conduct this inspection for you at no cost, but you must call us at (516) 830-3560 to arrange for the survey prior to beginning elevation. If asbestos or lead-based paint mitigation measures are needed, the Program will adjust your award to reflect the estimated cost of these measures. You should also review your Tier 2 environmental site assessment to determine whether you require any wetlands permit prior to starting construction.
- 3. Beginning the Design Process** - Have your designer conduct a site visit. If the designer determines that pre-design investigative services, such as those described below, are necessary to assist in evaluating the existing conditions of your home, the costs for these services are eligible Program expenses up to certain maximums:



- a. **Land Survey** – A survey performed by a licensed professional land surveyor will provide property boundary information as well as the location of the existing home on the site and other important information necessary to complete your project.
- b. **Soil Boring Report** – In some cases, a soil boring report might be necessary to determine how to design the best and most cost effective foundation for your home. This process involves drilling a small hole to a depth identified by your designer.
4. **Pre-construction Elevation Certificate** - **The Program requires that you submit** this document, which is typically prepared by a surveyor. It will identify which flood zone your home is in, the current height of your home, the adjacent grade (the ground) and the height of Base Flood Elevation. If you are also doing a land survey, this document can be prepared simultaneously by the surveyor.
5. **Documenting the Scope of Your Elevation Work** - At the time of the initial inspection of your home the Program prepared a rough estimate of the Estimated Cost of Repair (ECR) for elevation. The documentation that your designer submits will allow the Program to arrive at a final approved elevation cost. The designer must evaluate all of the following and compare these to the initial ECR for elevation on the **“Scope of Work Change Itemization” form (aka 6100 form)**. **This form and all other required Program forms are available on the Program website: <http://stormrecovery.ny.gov/homeowner-resources-and-forms>**. **The Program will use the designer’s specifics of size, depth, linear feet, and quantities to determine the final approved cost.**
- a. **Required Height** – The designer should use required elevation height (Base Flood Elevation plus 2 ft. and statutory additional height, if any) and align it (up or down) with the height provided in the Program’s original estimate of ECR.
- b. **Foundation Piles or Piers** –The designer must determine the type, depth and number of piles or piers, if any, which are necessary for your foundation based on the soil boring report and measurements of your home. The standard depths that are used are 16’, 20’, and 25’ with a separate unit cost for each 5’ extension. The designer should specify the total number and dimensions of any piers as well as the pier footings for your project.
- c. **Foundation perimeter walls** –These are walls that extend from the ground to the bottom of the elevated structure and may be wood, reinforced concrete or concrete block. The designer should specify the height and linear feet of the walls above grade and beneath grade with the size of the footing beneath.
- d. **Grade Beams/Pile Caps** – These are reinforced concrete beams that extend in each direction from the top of the piles or between piles and that offer stiffness to the piles. If required, the designer should provide the material, dimensions (width and height) and the total linear feet required.
- e. **Stairs** – Given the height of the elevation, the designer must determine the height of the stairs. The Program provides a cost per vertical foot for stairs. The designer should also look at the stair design to determine where the stairs will “land” on the ground. The survey will identify any setbacks or non-buildable areas, on which the stairs cannot be constructed. If they stairs must turn 90 or 180 degrees in order to avoid the setback, this will require an additional landing and should be accounted for.



- f. **Landings** – The Program provides a cost for a landing at each exterior door of your home according to minimum code requirements. The designer should align the number of door exits that you have with the number provided in the original ECR plus any that may result from the stair alignment.
- g. **Utilities** – The Program provides an allowance for the disconnection, raising and reconnection of utilities based on the square footage of the home and the vertical elevation. Based on the elevation height, the designer should include any necessary extensions for the reconnection of utility lines. The General Contractor will coordinate with licensed electricians, plumbers and HAVAC sub-contractors to disconnect and reconnect the utilities.
- h. **Other** – in addition to the above items, the designer should also consider other items that may be applicable to the project, such as ramps or lifts for accessibility to persons with special needs, removal of existing concrete walls or slabs, structural beams that may be required, the resetting of electrical-mechanical equipment or backfill and leveling of crawlspaces or basement areas.
6. **How the Designer Submits the Scope** – Your designer must complete the **Design Request for Change Form and the Scope of Work Change Itemization Form (Form 6100)** and submit a designer stamped version of the 6100 in pdf format as well as an excel version of the form. Please also keep in mind that:
- a. Your designer is not required to provide costs for scope items requested in the scope change, only scope descriptions, quantities and unit of measure.
- b. If you are requesting funds to cover the cost of pre-design investigative services such as surveys and soil tests, these services must be itemized in the Form 6100 and **paid invoices documenting the actual cost of these services must be submitted**. The Program will cover up to \$8,000 of the actual costs of these services up to the following maximums for each service: \$1,000 for a land survey by a registered surveyor, \$750 for a pre-construction elevation certificate, and up to \$5,000 for an engineer’s geotechnical investigation including borings, testing, lab results and final report.
- c. If you have opted to do any additional optional work, such as bulkhead repair, or optional mitigation measures, or if you have acceptable evidence that you require special needs accommodations, your designer should document this work on the same forms in a comparable manner.
- d. The designer must use the **HUD CPD Green Building Retrofit Checklist** found on the Program website as the minimum design standard for all items included on the checklist (i.e. duct work and building envelope).
7. **Supplementary Information** - In addition to preparing the above mentioned forms, the designer is encouraged to prepare and provide schematic (basic) level drawings. 1) a base floor plan of the home with the location and number of piles under the exterior and all load bearing walls; 2) a building section (side view cut-away) of all floors of your dwelling; 3) height information for the bottom floor, next floor, adjacent grade, base flood elevation and freeboard height should also be indicated on the building section. This will aid in the interpretation of the information provided on the Form 6100 and expedite the review process.



8. **Elevation Permit** - An elevation permit must be applied for and secured from the local municipality and submitted to the Program.
 9. **Submitting Required Materials** – A checklist of all the materials the Program requires is found at the end of this document. These materials must be emailed to your Customer Representative.
 10. **How Your Award will be Determined** - The Program will use Xactimate pricelists and templates to establish unit costs for items that may be approved and added. The review of the information will not comprise a detailed “take-off” of all elements and components of the design information. An order of magnitude and/or systems-unit approach will be utilized within Xactimate. Once the review is complete and changes approved, the final approved ECR for elevation will be determined.
 11. **New Award Table** – When the elevation work and the final approved ECR for elevation have been approved, a new Award Table will be sent to you. You will have the opportunity to review it and make a final determination if you wish to proceed with the work. Assuming you want to proceed you would sign the new Grant Agreement, and receive a check for 50% of the approved elevation cost, minus the design funds already received.
 12. **Engaging a Contractor** – After receiving the first construction payment, you should use the permit documents and Form 6100 for pricing and contract negotiations in order to engage a general contractor.
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Design Document Checklist

- Designer’s signed original properly completed Scope of Work Change Itemization Form (Form 6100) in pdf format;
- Scope of Work Change Itemization Form (Form 6100) - in excel format;
- Design Request for Change Form properly executed by the Designer;
- Pre-construction elevation certificate prepared by the surveyor;
- Land survey, as necessary;
- Subsurface soil report, as necessary;
- Elevation Permit issued by the municipality;
- Schematic base floor plan, highly recommended;
- Schematic building section, highly recommended;



Photographs/sketches as necessary.