

Soil Testing

Philadelphia is a city with older housing stock. Part of its charm lies in those twins and row homes dating back to the early 1900's when the city had a plethora of jobs in manufacturing and skilled trades. Neighborhoods bustled with corner stores and family-owned businesses attached to those row homes.

Sadly, the loss of manufacturing jobs and years of disinvestment and neglect have turned many of these properties into crumbling shells with few visible clues as to the past life of the property and its surrounding neighborhood. Hidden in the ground beneath many of these homes are the remnants of once successful auto repair shops, dry cleaners, or simply rusted out and forgotten oil heaters. Additionally, some areas of Philadelphia are built on former stream beds or areas that have been filled in and the ground beneath these former structures has shifted over time. Soil testing is needed for environmental reasons – to be sure we are not building homes on contaminated soil – and also to make sure that the ground can support the load of the planned development.

The soil investigation report is an important piece of information. It describes the soil type, soil group, depth to bedrock, depth to seasonal wetness, as well as the depth, color, and texture of the different soil layers. The soil investigator will perform five or six soil borings in the proposed area, to a depth of at least 10 feet below the proposed foundation depth. These will be used to test for environmental hazards as well as the soil group, depth to bedrock, and depth to seasonal. The soil boring report is valid as long as the land described in the report has not been modified by cutting away the soil or by adding fill soil.

The cost for this phase is roughly \$3,000 and can take as little as a week or two or as long as a few months depending on whether and what type of remediation is needed.

City Planning Commission

The next step in the process is to have an official engineered survey done by a surveyor. Based upon this information we have a site plan drawn up of our proposed houses by a professional architect for presentation to the City Planning Commission. This site plan outlines the size and the shape of the intended project and includes prospective building materials, the number of units to be constructed, etc. Staff at the City Planning Commission advise us about the appropriateness of the design and the intended purpose of the property given the overall plan for the area.

This phase of pre-construction takes roughly two - three months and costs \$4,000 on average, despite our ability to garner significant pro bono or reduced work from architects and engineers.

Zoning

Gaining zoning permits is the next hurdle to be traversed in the process. Philadelphia's zoning code is only slightly newer than its housing stock. With the last major revision having occurred in the 1950's much of what is required and enforced is sorely outdated.

In the 1950's the zoning code mandated the minimum size of all new houses built in the city at 1,440 square feet. Most Philadelphia row homes were built prior to the 1950's and are between

700 and 1,200 square feet, so any significant building is already in violation of the zoning code. This means that a variance to the code is required. Variances are also commonly needed for setback requirements and if we do not provide off-street parking. However to apply for a variance, one must first submit plans knowing that they will be refused. Once we have the “refusals” we appeal for the variance to the Zoning Board of Adjustment. The entire process of application/refusal/Zoning Board hearing typically takes about 3 months. In addition, all developers (even non-profits) must be represented by an attorney at the hearing. We have been fortunate in the past to have the representation of pro bono council at these hearings.

This process costs us any where from \$600- \$2500 per project.

Building Permits

Once a zoning permit has been approved we are free to apply for building permits for the property. This application requires the submission of structural plans, architectural drawings, plans for storm water management, an energy evaluation and if it is new construction, permits for street trees.

Award of the building permits can take anywhere from 2 weeks to more than a month depending on the complexity of the plans and the number of other submissions. There is currently not enough staff at the Department of Licenses and Inspection to handle the flow of permits.

The cost for this phase of pre-construction is roughly \$600 per unit.

The timeline above outlines the best case scenario for this process. As we all know, things do not always go as planned. Take for example the current Green Affordable Philadelphia project currently under construction. This project has been in the planning stages for six years and has faced the following hurdles:

These seven units are being built on nine original lots. Habitat Philadelphia has owned seven of the lots for five years. It took an additional 3.5 years to acquire the final two properties from the city. During that time, the community residents became much more aware of the economic value of their neighborhood as a National Register Historic District, making the initial plans for construction unacceptable to many in the community, as well as the planning commission and the zoning board. New designs incorporating brick fronts and porches had to be drawn up, adding 12% to the cost of construction. Additionally, the environmental standards for soil borings became more stringent meaning additional tests had to be performed – back to Phase I.

Hopefully you are gaining more insight into the complexities of building simple, affordable housing. Under the best case scenario, the pre-construction phase can take roughly five years to acquire property and another six months to prepare for building. And if you are keeping a tally, the costs for our best case house are currently at \$15,000 and we have yet to hammer a nail.