August 6, 2011

Address: 5700 Elgin Street

Date of review: August 3, 2011

To Whom It May Concern:

Three Rivers Inspection & Engineering, Inc. conducted a major systems review at 5700 Elgin Street. A major systems review is intended to identify significant problems with the major systems. The following provides the results of that review. Several less significant issues have been included as a courtesy.

A shorter period of time was spent on site as compared to that required for a full home inspection. As such, these results are intended to act as a guide to the overall condition of the house.

LISTING OF MATERIAL DEFECTS:

(As defined in the Home Inspector Law, a material defect is a problem with a residential property or any portion of it that would have a significant adverse impact on the value of the property or that involves an unreasonable risk to people on the property. Also, as noted in the Home Inspector Law, the fact that a structural element, system, or subsystem is near, at or beyond the end of the normal useful life of such a structural element, system or subsystem is not by itself a material defect.)

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Shingles

The shingles on the low slope top faces of the main roof have failed to a functionally significant extent. The shingles on the higher slope, lower faces are in moderately better condition but will need to be replaced when the top shingles are replaced.

Retaining Walls

The poured concrete retaining wall built along the right edge of the back yard has tilted to a significant extent in the backmost 2/3 of the wall, approximately, and further displacement has occurred since the last time the resulting cracks were patched. Replace this failing wall.

The retaining wall built at the back edge of the driveway leading toward the opening into the garage has displaced to a structurally significant extent and should be rebuilt.

Install a fence above the retaining wall noted above to prevent falls to the sidewalk below.

Foundation Wall

The back foundation wall of the garage has been displaced inward to a structurally significant extent. Further displacement, which can be expected, will eventually lead to a collapse of the wall. It is recommended that this wall be replaced.

Wall Brick Mortar

There are various spots where the brick mortar joints are very soft or missing. Have a masonry contractor in to make the necessary repairs (repointing). Note that it is more important to keep the mortar intact in buildings with solid masonry exterior walls (as compared to wood frame houses with brick exteriors) because of the possibility of rainwater finding a path through the solid masonry into the interior plaster. At least one area of infiltration, apparently because of deteriorated brick mortar joints, was noted: On the left wall of the first floor bathroom, above the window.

Chimneys

The left side chimney has loose bricks in the top area of the chimney and one of the chimney walls has bowed outward near the top. The top part of this chimney will need to be rebuilt to regain a state of structural soundness.

The right side chimney has areas of deteriorated brick mortar joints that will need to be repointed to avoid structural distress, as observed on the left side chimney.

Electrical Issues

OVERALL ELECTRICAL SYSTEM

The installed 100 amp circuit breaker box is not sufficient to properly power a house of this magnitude. A 150 or 200 amp electrical service and appropriate sized box should be installed.

There are 12 110-volt electrical circuits in the house. Even if these circuits are distributed ideally through the house, 12 circuits will not likely be sufficient to avoid overloading an individual circuit. The most likely result will be tripping a circuit breaker or two regularly. Installing several new circuits will most likely be necessary to avoid tripping circuit breakers.

KNOB AND TUBE WIRING

The house wiring includes visible, active knob and tube type wiring in the basement ceiling (and certainly elsewhere in the building, obscured within walls and ceilings). There are at least a few locations in the basement ceiling where electrical connections have been made between the original knob and tube wiring and updated wiring. These connections were not been made inside junction boxes and were not per code when the work was done. Primarily, however, these splices can cause more current to flow through the original knob and tube wiring than originally intended. The usual corrective action in this situation is to remove all of the visible active knob and tube wiring in the process of fixing any improper connections. This usual approach allows the knob and tube wiring within the walls and ceilings to remain (because, when properly connected to the house wiring system, the obscured knob and tube wiring is less problematic).

MISCELLANEOUS

The light switch in the second floor bathroom shower should be moved to a safe location.

Furnaces

The following discussion applies to both furnaces:

> The heat exchanger is the device that separates the hot flue gasses (products of combustion) from the heated air being blown to the living spaces. Whenever there is a breach (crack) in the heat exchanger, it is possible for the flue gasses, which could contain carbon monoxide, to mix with the heated air being blown to the living spaces. Therefore, a breached heat exchanger is a safety issue.
>
> The furnace has a crack in at least one of its heat exchanger chambers.

Because of the significant age of this furnace, the only practical approach would be to replace this furnace. Confirm this diagnosis with a qualified HVAC contractor.

Plumber Issues

WATER HEATER

The water heater is not venting properly. A portion of the flue gas is escaping into the basement atmosphere via the draft hood immediately above the water heater. These flue gasses may contain carbon monoxide. Have a plumber, heating contractor, or chimney sweep in to correct this situation. The expert called in to eliminate the back drafting will likely recommend installing a sheet metal flue liner in the chimney flue. The flue liner would reduce the cross sectional size of the flue and would thereby allow the water heater to properly create a draft that causes the flue gasses to rise up through the flue.

The installed 40 gallon water heater will have marginal capacity, especially if the house is to be occupied by persons taking simultaneous or nearly simultaneous baths or showers. It would be possible to add another 40 gallon tank in series or, possibly, replace the older installed 40 gallon tank with a 50 or 75 gallon tank.

NATURAL GAS

The natural gas distribution piping is routed through a return duct in the basement ceiling. This condition violates prevailing codes. The gas line should be rerouted over this short distance.

The copper tube used to route natural gas to the water heater violates prevailing codes and should be replaced with a per-code gas line.

One gas leak was found using a combustible gas meter. The leak was found at the shut off valve in the gas line to the water heater. Have a registered plumber in to make the necessary repairs.

Cap the open gas line above the water heater to prevent a leak to the atmosphere should the shut off valve be inadvertently opened.

MISCELLANEOUS

The main soil stack (the main vertical drainpipe for a bathroom) in the basement back left room has split through its cast iron wall. Have a plumber in to replace the damaged section, as a minimum, and, possibly, the entire main soil stack.

The main soil stack at the middle of the basement back wall has deteriorated to a significant extent and will need to be replaced.

The basement commode was not checked. This commode should either be repaired as necessary and flushed occasionally or the commode should be removed and the drainpipe should be capped. Leaving a commode dry can allow sewer gasses or rodents to enter the basement.

The water shut off valve in the ceiling of the basement back left room leaks water to the floor and therefore should be replaced. The same advice applies to two shut off valves above the basement commode (and, most likely, to a few other such valves in the basement ceiling).

The commode was missing from the second floor back bathroom and the opening to the tub drain has been taped off. This bathroom appears to be in need of a complete renovation.

The cracked and rusted fitting in the vent or drain line in the basement ceiling below the first floor bathroom should be appropriately repaired.

Mold

A significant accumulation of what appears to mold was found on the basement ceiling. It is recommended that an indoor air quality expert be called in for a further evaluation regarding the best manner available to eliminate this potentially health threatening condition.

To prevent a return of the mold once it has been removed, the significant water infiltration into the basement will need to be stopped. It is recommended that a qualified basement water proofing contractor be called in for a further evaluation. The most effective means available to sufficiently stop the water infiltration will likely be considered to be installation of an inside French drain system around much of the basement perimeter.

RELATIVELY MINOR REPAIR ISSUES WHICH SHOULD BE ADDRESSED NOW OR IN THE NEAR FUTURE:

(The issues in this section can be important to buyers because of their relative urgency but these issues have a relatively minor cost of repair and do not represent “unreasonable risk to people” and therefore do not fall into the “material defect” category.)

Railing

Replace or repair the loose railing along the concrete steps up to the back yard from the right side sidewalk.

REPAIR ISSUES WHICH SHOULD BE ADDRESSED BUT WHICH DO NOT REQUIRE IMMEDIATE ACTION:

(The issues in this section are provided as a road map for repairs, which do not require near-term action. This is primarily because the conditions discussed are (1) not expected to degrade significantly in the near-term; (2) not expected to cause other problems and (3) not related to significant safety issues.)

Miscellaneous Exterior Issues

Replace the missing sections of aluminum trim on the right and left edges of the main roof. In addition, replace the missing aluminum trim at the back right corner soffit and facia.

The pipe coming out the house front wall vents the sanitary sewer line routed from the house to the municipal sewer. The screen or grate over the top of this pipe is missing. This can allow rodents to enter the basement via the sanitary sewer system. Install a screen over the top.

The front right corner of the front porch concrete slab floor has broken off because of rust accumulation on the steel post that supports the railing. Pour a patch of concrete after treating the railing post to prevent further rusting.

Miscellaneous Interior Issues

The steel beam that supports the concrete slab roof above the garage door opening has rusted to a significant extent. As a minimum, this beam will need to be renovated. This beam, which was not sufficiently accessible to evaluate fully, may need to be replaced, at significant expense.

Install a garage door in the garage door opening. (significant expense)

The plaster in many areas in the house has deteriorated and will need to be removed and replaced (or, at least, significantly patched). (significant expense)

MAINTENANCE ISSUES TO BE ADDRESSED IN THE NEAR FUTURE:

(The issues noted in this section are considered to be part of the normal house maintenance.)

Exterior Wood Trim

The exterior wood trim, such as on the back porch, should be painted in the near future. The paint is peeling off the wood, thereby exposing the wood to weathering and possible rot.

NOTATIONS:

Miscellaneous Notes

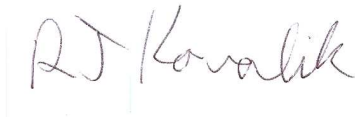
It is recommended that the sewer lateral between the house and the municipal sewer be inspected by a plumber equipped with a camera on a snake. The large tress near the route of the sewer lateral may have caused damage to the terra cotta sewer pipe. As discussed during the inspection, the conditions existing on and near the basement floor suggest the possibility that the floor drain may have backed up (a condition sometimes directly related to sewer problems).

A material suspected of containing asbestos was covering several areas in the heating ducts in the basement ceiling. Corrective action doesn't appear to be necessary. The material was not friable (crumbly). Further and more definitive information regarding asbestos in the home can be found at the following web site: http://www.epa.gov/iaq/pubs/asbestos.html.

Note that Three Rivers does not perform a comprehensive or expert evaluation for the presence of asbestos in the home.

Please feel free to call with any questions or for further information.

Sincerely,



Russell J. Kowalik
President, Three Rivers Inspection & Engineering, Inc.