

Scope of Work for 3005 West Kilbourn Avenue

3005 West Kilbourn Avenue is in the Historic Concordia Neighborhood. Both property requires renovations to return it to its original, historic condition. Contractor must be skilled and experienced in renovating older, distressed properties. Renovations require like-with-like materials that match patterns and dimensions on the existing house. Contractor is responsible for verification of all field measurements and material quantities.

Items that need renovation are listed below followed by general specs for repair items. Note that this list is to be used in conjunction with the technical specifications that are part of the bid package. Contractor must read and follow all technical specifications – (for example - comply with the lead safe rehab standards as outlined in Section 01810 LeadDust Hazards, etc...)

Bids to include all labor and materials. Change orders will not be approved for routine repairs that are part of exterior renovations and should be included in the base bid. Change orders will be considered for extraordinary circumstances that arise during renovation work and that cannot be determined through initial inspections.

3005 West Kilbourn Avenue

1. Structure has incurred severe water damage and framing must be rebuilt at all deteriorated areas. This includes wall framing, floor joists, sill plates to attic eaves. Framing to be rebuilt from inside of house in order to preserve exterior masonry walls. All new framing must be secured to existing framing and exterior masonry walls.
 - Deterioration is particularly severe on east wall, east bay and areas where roof valleys meet exterior wall.
 - Wall framing must include appropriate rough framing and exterior trim for all affected window openings.
2. Rebuild decorative masonry piers where roof valleys meet exterior wall structure. Front and side gables require rebuild of small brick piers to match brick coins at corners. Restore wood trim and sheet metal at these points to recreate original caps with appropriate crown molding and dentil work. Wood to be cedar. All roof junctures at these locations to be appropriately framed and flashed to allow proper drainage.
3. Roof to be repaired and any leaks must be sealed. Remove the two dormers, one at front and one at east side of house roof. Rebuild roof structure at these locations, install sheathing at these locations and install roofing to match existing roofing. Repaired roof area must be integrated into existing roof and not be noticeable.
 - Repair roof and gutters on east bay. Repair brick and wood at eaves.
4. Remove all trees and shrubs in front, side and backyard, at property lines and at perimeter of house and east of driveway along neighboring building. Grind down any large tree stumps.
5. 3005 West Kilbourn Avenue has two chimneys. East chimney requires tuckpointing and stone caps must be reset or repaired if cracked.
 - West chimney must be dismantled to below the roofline. Repair roof and eaves at this location.
 - East Chimney - Brick pattern and details must be carefully documented, chimney dismantled, bricks saved and cleaned. Any replacement bricks must match materials and dimensions of original brick. Clean chimney after complete; this is especially necessary if brick used is discolored cream city brick. Cleaning product to be Diedrich's applied per manufacturer's directions. Brick cleaning to be done before roofing to avoid staining roof. All wood and roofing to be protected from masonry cleaning chemicals.

6. At rear of house remove fire escape. Repair any damaged brick areas. Board any open windows or doors exposed by demo and removal of fire escape.
7. All wood repairs/replacement to wood siding, trim and decorative details must be with clear, smooth wood with no knots and no sapwood. Wood to be Eastern White Pine, Spanish Cedar or Western Red Cedar. (Western or Ponderosa Pine is not recommended as it rots prematurely in most exterior applications.
Cedar must be used in trim areas most exposed to weather such as fascia boards, soffits, brackets, porch skirting etc...
8. Rebuild eaves; replace any rotted or missing fascia boards, soffit boards, crown molding, trim, brackets etc... All new trim must replicate historic trim of house.
9. Full exterior paint job with Benjamin Moore, Moor-Gard latex paint. All existing trim to be scraped thoroughly and carefully. Provide smooth surface for paint application. All new wood installed to be primed and painted. Paint all exterior wood surfaces with one coat of bonding primer and two coats of exterior paint. Color of trim to be specified by the owner. (Window sashes do not need to be painted. Aluminum storms remain in place. Any wood storms must be painted)
10. House to be secured at the end of each work day. All boards to be replaced on doors and windows to prevent vandalism and break-ins.

General Specifications for Roofing and Gutters

Roofing shingles to be used are GAF Timberline, Natural Shadow in Pewter Gray or Barkwood color, unless otherwise specified. Drip edges, gutter apron and roof valleys should match color of roof shingles as closely as possible (e.g. use black drip edge etc... when installing pewter gray shingles.)

- 1) Tear off all roofing material down to the original boards.
- 2) Inspect and replace rotted, damaged or missing boards using like-with-like dimensioned boards.
- 3) Sheath the roof with OSB a minimum of 7/16" thick to create a continuous nailing surface.
- 4) To avoid interior water damage only tear off as much roof area as can be repaired and sheathed in the same day. No roof shall be left with open areas overnight. Any roof that has not had felt applied shall be securely tarped at the end of the work day.
- 5) Install 15 lb. (non-perforated) felt with 3" minimum overlap using T-50 3/8" staples.
- 6) Install 3 ft. wide "Ice and Water Shield" along all eave lines. On eaves extending out more than 3 feet add a second row of "Ice and Water Shield" with a 6" overlap.
- 8) For all roof venting cut a 3" wide channel along the gable peak to within 2 feet of the roof edge for installation of a ridge vent. (NOTE: Pan vents are NOT permitted unless approved by owner's representative.)
- 9) Install manufactured **Black** aluminum 1-1/4" drip edge along entire gable roof edge, and **Black** gutter apron with 1/4" shingle overlap at eave edge. Install using 1-1/4" galvanized roofing nails.
- 10) Install a full shingle starter strip along the base of the roof. The architectural shingles are to be nailed down using roofing nails. The size of the nail is determined by the thickness of the roofing material (typically 1-1/4"). Nail the shingles just below the tar strip using 4 nails per shingle, or in the thickest area of the shingle follow manufactures specifications.
 - a) Install the first architectural shingle 1/4 inch over the edge of the roof to force any water away from the fascia. It will also help prevent any fascia deterioration.
 - b) Next mismatch the shingle gaps by cutting different amounts of material from each piece of shingle before it is laid. For example; the first row should be

left alone, the second row would be cut 5 inches, the third row 11 inches and on in 6-inch increments. This staggers the architectural shingles as they are installed so the gaps from each shingle do overlap each other. Continue this process until the entire roof surface is covered, leaving the peak of the roof bare.

c) Install ridge cap of architectural shingles over the peak of the main roof. These shingles will require a 2" nail on each side to hold them in place.

11) All roof valleys shall be installed as open roof valleys using 26 gauge prefinished **Black** aluminum. Start by running a piece of ice and water shield 36" wide up the entire length of the valley and stapled against the wood, then run 15 # felt lapping past the valley 12"-18" on each side of the valley.

a) Using a metal valley with a "w" bend in the metal, to slow water from rushing under the shingles, run the metal valley piece up the valley starting at the bottom of the valley and work your way to the top. The metal valley needs to be black in color to compliment the color of the roof shingles.

b) Install the shingles past the valley center on one side of the flashing all the way up. Do not drive nails into the flashing. Then install shingles on the other side. Again, do not drive nails through flashing. Overlap shingles as you go, much like weaving.

c) Snap a chalk a line 3 inches from the center of the valley at the top of the valley and widen the gap by 1/8" per running foot on each side of the valley as it runs downward.

d) Place a piece of sheet metal under the shingles to make sure you will not damage the flashing. Use a utility knife with a hook blade to cut the shingles along the chalk line.

e) Snip off the corners of adjacent shingles (dub) to protect against water being channeled under shingles. Lift up shingles and use a hook blade to cut all the pointed unexposed ends. Make each cut about 2 inches from the point.

f) Caulk twice between shingles and flashing. Using roofing cement in a caulk tube, insert the tube's tip all the way under the shingles and run a continuous bead. Then hold the nozzle 2 inches back and apply a second bead nearer the edge. Then lift up each top shingle and apply roofing cement to adhere the shingles to each other. This is to seal out water and to attach the shingles because there are no nails.

Gutters

Install new half-round gutters and downspouts. Gutter and downspout color to be **granite gray** unless otherwise specified. Gutters to be half-round unless otherwise specified.

a) Half-round gutters must be installed with brackets or straps installed under the roof shingles and not directly mounted to the fascia board. All gutters shall be a minimum of .032 gauge, maintain a minimum slope of 1/2" per 10 running feet of gutter, and shall be attached approximately every 32" on center, or every other rafter tail, and shall be a minimum of 1/2" from the fascia board.

b) Gutters longer than 40 feet should be sloped in two directions from the midpoint of the gutter and connected to a minimum of a 4" diameter downspout. All downspouts shall be a minimum of 024 gauge.

Go to this link to find out more about 1/2 round gutters vs. K style including price, <http://www.guttersupply.com/p-halfround.gstml>

Aluminum half round gutters are supplied by the gutter store in various colors. www.merchantcircle.com/business/The.Gutter.Store.414-258-8000

Chimneys and flashing

- If the chimney exits the roof below the ridge, a chimney saddle must be installed where none exist.
- All chimneys shall be flashed with permanent metal base flashing and counter flashing. Step flashing to be installed when specified.
- Install appropriate flashing at any wall and roof intersections.

Decorative tin ornamentation and metal flashing

- To be repaired per specifications provided by owner's representative

GENERAL SPECIFICATIONS for CARPENTRY

These guidelines to be followed where applicable

All wood repair and replacement to be made with **clear wood, no knots, no sapwood**. All new wood must be primed and painted as soon as possible after installation to insure durability of paint job.

Repair and replacement of wood siding, shingles and trim must match dimensions and patterns of existing siding, shingles and trim.

Porch Repairs/Reconstruction:

1. Secure porch roof while deck, posts and roof are inspected for deterioration. Replace damaged or deteriorated framing members with same dimensioned materials. Install new porch foundation piers directly below each column.
2. Raise and level porch roof leaving a slight slope to allow water runoff. Install new 6"x 6" posts that extend from the ground to the porch roof. Columns are to be placed in same locations as existing columns. Sheathe roof with 7/16" OSB and apply appropriate roofing. OSB must not be visible on finished porch roof. See drawings supplied for boxing columns and capitol design.
3. When rebuilding wood porch decks use primed Fir tongue & groove 5/4" x 4" decking. Deck boards to be primed on all sides before installation. All decking shall extend a minimum of 1" beyond the porch skirt framing
 - a) All porch decks shall have a slope from the house to the outer porch edge of 1/8" per linear running foot.
 - b) All decking will be laid perpendicular to the house and be supported at the house with a ledger board and by joists a minimum of 16" on center (if new), or IAW with the specifications of the UDC.
 - c) All joists will be mounted by means of joist hangers properly installed.
4. Porch railings to be a maximum of 36" tall on residential homes in historic areas unless otherwise indicated.
 - a) Porch hand rails will include a bread loaf upper rail and a bottom rail built up with 2X and 1X material (see plans). Bottom rail to be installed 3" inches above the porch deck.
 - b) Railings will be attached to newel posts, columns, or the house with 4" galvanized counter-sunk screws to allow future repair and replacement.

- c) Railings will have 2" x 2" (actual 1-1/2" x 1-1/2") square stock spindles spaced 1-1/4" apart, and all spindles will be installed in a minimum 1/4" x 1-1/2" blank with galvanized 1-1/2" screws.
 - d) Stair rails will mirror the design of the hand railings and be attached to newel posts.
 - e) Upper porch railings on second floor porches will mirror the design and appearance of the first floor railing, except that newel posts may be designed proportionately narrower.
5. When repairing or rebuilding porch skirts all materials will be of like-with-like wood replacement of the same design and dimensions as originally existed or as specified by the drawings provided by the Owner's Representative.
- a) All porch skirts will be installed with a continuous board frame that is a minimum of 6" in width. Clear cedar boards must be used where wood meets the ground in areas such as porch skirt board frames and stairs.
 - b) All framing will cover the rough framing lumber of the support posts, columns and beams.
 - c) All skirts will incorporate a slat design that will closely mirror the design of the wood railings above or as specified by the Owner's Representative.
6. When repairing or rebuilding stairs all components will be of like-with-like clear wood materials (no knots, no sapwood).
- a) All stairs will be supported by a minimum of three stringers with steps of equal height, and no step will exceed 8 inches in height.
 - b) There will be no more than a 3/16" variation between steps.
 - c) Each step will have a minimum tread width of 11" with a tread overhang of no more than 1 inch.
 - d) Each step will be constructed with a corresponding riser.
 - e) Any stairs with more than three steps will include a hand railing along each side of the stairs that attaches to a lower newel post and an upper newel post or column.

Siding and Trim repair and replacement. Windows and Doors:

Miscellaneous repairs or replacement to existing items such as the water table boards, soffits, fascia boards, crown moldings etc... will use like-with-like materials of the same design and dimensions. (clear wood no knots)

Quarter sawn vertical grain clapboards to be used for replacement of wood clapboards (for example see wardclapboards.com). Sawn wood replacement shingles to be all clear cedar, vertical grain with no knots or sapwood. (Premium Grade Sidewall, 100% Vertical Grain Shingles)

Any new elements such as the addition of or removal of windows or doors will be indicated by the Owner's Representative and specify the design and dimension of each new element.

Generally new windows will be wood, double-hung with proportions and trim work similar to other existing windows. Doors must match existing historically accurate doors and be a minimum of 6'8" in height and 36" in width, and will reflect the panel design of other exterior doors on the house.

GENERAL SPECIFICATIONS for MASONRY

All brick and mortar repairs must blend with existing brick and mortar color, patterns, mortar mix and joint thickness. Repairs must maintain the historic integrity of existing brick and masonry work. These guidelines to be followed where applicable.

- 1) When doing mortar or brick repair, or replacement on historic homes the following process/procedure is to be followed:
- 2) Inspect all masonry for signs of deterioration. Identify any bricks that are cracked or spalled, and determine the reason for the damage. Replace damaged bricks using like-with-like material.
- 3) Check for cracks in the mortar joints and determine if excessive settling has occurred which will require additional foundation repairs.
- 4) When repairing foundations be sure to incorporate the same brick pattern. The contractor shall use like-with-like dimensioned bricks of similar color and density for any repairs.
- 5) When removing any damaged brick from a chimney, or rebuilding a chimney it is critical that the contractor take photos of the existing chimney, so that they can duplicate the corbelling pattern that exists. Rebuilt chimneys MUST be completed using the same type, pattern and dimensions as the existing chimney. When in doubt the chimney design on page 97 of "As Good As New" may be used if approved by the Owner's Representative.
- 6) When tuckpointing brick or block the old mortar must be removed to a minimum depth of 3/4" by means of a tuckpointer's rake pulled across the joint or lightly tapping with a hammer. If the mortar does not come loose a hammer and plugging chisel should be used. Either of these methods is preferred. Use of an electric grinder should only be done in areas that are not visible to the general public such as rear walls, and then only after being approved by the Owner's Representative. Great care must be taken not to damage the brick. "No mortar removal is to be done using a reciprocating saw with a masonry blade."
- 7) When applying the new mortar to Cream City brick the joint should be damp but not dripping wet. The new mortar should use a lime mortar mix with one part lime to two parts sand. Use Type "K" mortar if available and Type "O" mortar as a second option.
- 8) When tuckpointing it is important that the mortar match the existing mortar in color. New mortar must be colored or tinted and installed in an inconspicuous test area, prior to installing it in highly visible areas.
- 9) When applying mortar a grout bag or knife-like tuckpointing tool should be used to push the mortar all the way back into the joint. Tuckpointing should be

done in 1/4 inches layers, packing each layer before applying the next. Apply mortar as neatly as possible and avoid smearing mortar on the face of the brick.

10) When the final layer begins to set up slightly, it MUST be tooled to match the style of the existing joints. (See pg 85 of "As Good As New"), unless another style is approved by the Owner's Representative prior to initiating any project work.

11) Clean up any excess mortar immediately using phosphoric acid. If this does not work use muriatic acid. Use muriatic acid in a solution of 1 part muriatic acid to 10 parts water. Apply the acid mixture with a large sponge. Leave the acid in contact with the masonry for 30 seconds then use a scrub brush to remove any excess mortar. When clean, rinse thoroughly with water and neutralize the cleaned area with 1 cup of household ammonia to 1 gallon of water. Muriatic acid is dangerous so do not get in contact with eyes or skin, and always keep a neutralizing agent like baking soda on hand.