



City of Bellingham

Community Development Block Grant Home Rehabilitation Program Construction Standard Specifications

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I. GENERAL REQUIREMENTS

A. HOME REHABILITATION PROGRAM POOL OF CONTRACTORS

1. The City of Bellingham is committed to providing equal opportunities to the State of Washington certified Minority, Disadvantaged and Women's Business Enterprises in contracting activities.
2. The City of Bellingham Home Rehabilitation Program is always seeking qualifications from licensed, bonded, and insured general contractors experienced with the rehabilitation of single family (1-4 unit) homes.
3. Contractors interested in working through the Home Rehabilitation Program must complete a Contractor Qualification Form. The qualification form is available for pickup at the City of Bellingham, Planning and Community Development Department, 210 Lottie St Bellingham WA 98225 or on the web at <https://www.cob.org/services/housing/pages/rehabilitation.aspx>.
4. All City of Bellingham Home Rehabilitation Program (HRP) Projects are made possible by federal funds allocated to the City by the Department of Housing and Urban Development (HUD). In order to continue to use those funds for construction purposes, the city is required to create a list of Certified Section 3 Contractors (see Section "C" below).
5. Selected contractors, both Section 3 and non-Section 3 contractors, will be included in a contractor pool, which will then have the opportunity to respond to the City's Request for Proposal (RFP) on privately owned single-family (1-4 unit) rehabilitation construction projects. The City has elected to use the Competitive Proposal Process rather than the Sealed Bid process as permitted under 24 CFR 85.26(d)(3).
6. A background check will be made as needed to ensure that contractors and sub-contractors are not debarred, suspended or otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension" (24 CFR 85.35).
7. This list of qualified contractors is intended only for the Home Rehabilitation Program.
8. This list is **not** for the Small Work roster for Public Works Projects or for the City of Bellingham on-call list for consultant services.

B. CONTRACTOR LICENSING & BONDING REQUIREMENTS

1. General Contractors submitting responses to the RFP for HRP projects shall hold and maintain a valid Washington State Contractors License and a valid City of Bellingham Business License.
2. Responses to the RFP will be received for the execution of the entire work called for on drawings and specifications, and each contractor will be required to include all the various branches and subcontracts as listed herein.
3. The General Contractor shall meet the bonding requirements of Washington State Department of Labor and Industries for the General Contractor's License.
4. All sub-contractors shall also meet the above license requirements.
5. All Contractors shall furnish evidence of comprehensive public liability insurance coverage for not less than \$1,000,000/\$300,000 bodily injury including death, and \$50,000 property damage.

C. SECTION 3 CONTRACTORS

1. The requirements of Section 3, a provision of the Housing and Urban Development Act of 1968, apply to all City of Bellingham Home Rehabilitation Program Projects.
2. Becoming certified as a Section 3 business concern is strictly voluntary; however, firms that meet this qualification will receive preference for HRP projects as they become available.
3. The list of certified Section 3 business concerns shall be posted on the City of Bellingham, WA website.

D. COMPETITIVE PROCESS/PROCEDURE

1. As HRP projects become available, contractors on the HRP list of contractors shall be notified of the RFP via email.
2. The HRP list of contractors is not exclusive, contractors or other firms wishing to submit a response to the RFP may fill out a Contractor Qualification Form to qualify at any time prior to the due date specified in the RFP (24 CFR 85.36(c)(4)).
3. The "Competitive Proposal" method of soliciting for proposals shall be used as outlined at 24 CFR 85.36(d)(3) and available on the City's website to competitively seek contractors for HRP projects.
4. A minimum of three proposals shall be solicited for each project.
5. The RFP shall consist of:
 - a. Contact information: The home owner's address & phone number;
 - b. The Scope of Work for the project;
 - c. Drawings and/or floorplans of the project, as applicable;
 - d. Preference for Section 3 business concerns ;
 - e. The deadline for submittal of proposals.
6. HRP Projects are not subject to the Davis-Bacon Act (prevailing wage) per 24 CFR §570.603(a) for CDBG -funded projects and 24 CFR §92.354(a) for HOME-funded projects
7. Addenda. Addendum (Addenda) are written or graphic instructions issued by the HRP prior to the receipt of responses to the RFP in accordance with these procedures, which interpret, clarify, correct, modify, add, or delete portions of the RFP. Addenda will become part of the Contract when the HRP Construction Contract is executed.
8. Responses to RFPs may be submitted via email, through postal services, or hand delivered to the HRP located in the Planning and Community Development Department at 210 Lottie St, Bellingham WA 98225.
9. Any responses received after the deadline will not be considered.
10. Upon review by the HRP and the home owner of all RFPs received by the deadline, the successful responder will be notified and given the opportunity to perform the project.

Exceptions

- a. If the lowest responsible estimate is not from a Section 3 business concern, the home owner shall be given the option to select a section 3 contractor that is within 10% of the lowest responsible proposal received.

b. The home owner has the option to choose a contractor with a higher priced proposal contingent on the home owner paying the difference out of pocket between the lowest responsible estimate and the contractor of the home owner's choosing.

E. PROTEST

There is no right of protest in the RFP process.

F. RIGHTS OF REJECTION OF RFP RESPONSES AND NEGOTIATION

Parties submitting responses to the RFP are to understand that the City of Bellingham and/or the owner of the property, reserves the right to negotiate the final agreed figure, and to reject any and all responses.

G. LABOR AND MATERIAL

Each contractor is to furnish all cartage, labor, materials, scaffolding, tackles, and implements at his/her own expense which may be necessary to the completion of his contract. Unless otherwise specified and authorized, all materials must be new and the best quality called for, and the labor performed by mechanics skilled in their trade.

H. OMISSIONS

In case of materials that have been omitted (all trades) from the plans, and are necessary for a complete job, the contractor shall furnish and install same of equal quality to that specified.

I. SUBSTITUTION

Reference to a specific product by trade name is for clarity only in establishing quality standards. Before any substitution is made of lesser grade or quality, prior approval must be obtained in writing. It is not the intent to exclude any product of equal merit to those specified.

J. ALTERNATES

Alternates shall be listed in a separate paragraph in bid form under branch of work it is called for.

K. AS-BUILT RECORDS/CHANGE ORDER

1. Contractor shall keep up-to-date records of all changes or deviations from indicated work, whether because of Change Order or job conditions.
2. All changes on original contract amount will be in writing using an HRP change order form, signed by all parties (Contractor, home owner and HRP).

L. SITE CONTIDIONS

1. Project site shall be left 'broom clean' at the end of each working day.
2. All debris generated from the project shall be recycled to the maximum extent practicable before going to a landfill.

II. APPLICABLE CODE REQUIREMENTS

A. Permits

The General Contractor is responsible to see that proper permits are obtained for building, plumbing, mechanical, and electrical work performed on HRP projects.

1. Unless a more stringent or specific requirement is specified in these Standards, all new work performed by the contractor shall comply with current Washington State Building Codes and any applicable local amendments.
2. All existing structural, mechanical, plumbing, electrical components and systems, including emergency egress, shall comply with the currently adopted edition of the International Property Maintenance Code.
3. In all cases, heat and smoke detectors with audible alarms and carbon monoxide(CO) sensors shall be installed per current Washington State Building Codes and any applicable local amendments.

III. INDOOR AIR QUALITY

A. Low/No VOC Adhesives and Sealants

1. All interior adhesives must comply with the most recent version of Rule 1168 of the South Coast Air Quality Management District.
2. All interior caulks and sealants must comply with Regulation 8 Rule 51 of the Bay Area Air Quality Management District (BAAQMD).
3. Adhesives caulks and sealants that are used outside the weather resistive barrier or to seal the weather barrier to itself to the building openings are exempt from this mandatory requirement. The weather resistive barrier includes the roof membrane.

B. Interior Composite Wood Products

1. Composite wood products exposed to the interior (inside the weather resistive barrier) shall be free of added urea formaldehyde. This includes particleboard, plywood, OSB, medium density fiberboard, cabinetry and any other wood products.

IV. CARPENTRY MILL WORK TRIM AND FINISH

A. Walls and Ceilings

1. When walls and ceilings are replaced, new material shall be dry wall, minimum 1/2 inch thickness, unless noted on Bid Specifications. All joints shall be taped, outside corners shall have metal corner beads and "L" type channel beads where drywall meets other surfaces. Finished surfaces shall be ready for painting or decorating.
2. Surfaces are to be glued, nailed or screwed per manufacturer's instructions. Use "double nail" method. All blown texture shall be medium or hard finish only - no coarse. Tape, second coat and finish coat on all sheet rock work.

B. Sub floor

Minimum thickness per current IRC, approved grade structural panels.

C. Underlayment

1. Unless otherwise specified, for kitchen and bathrooms and utility areas, underlayment shall be exterior grade solid core approved grade plywood, 1/4" minimum thickness.
2. Other areas may be hard board or particle board 3/8" minimum thickness. No resilient floor covering (such as vinyl) shall be installed over a board or plank floor or sub floor. Meeting edges of the underlayment must be nailed to the same sub floor board. Joints and nail heads shall be filled with a minimum of Durobond 90 and properly sanded.

D. Floor Covering

1. General

Subfloor shall be inspected for damage, repaired and leveled prior to installation of new flooring.

2. Floor Tile

- a. Brand: Armstrong, Kentilex or equal.
- b. Adhesive shall be low VOC designed for this purpose and applied to manufacturer's specifications.

3. Sheet Flooring

- a. Materials approved for use; linoleum, marmoleum, cork, FloorScore certified sheet vinyl
- b. Adhesive to be low VOC.
- c. New flooring shall have a wearing surface of no less than .010 millimeters, meet or exceed FHA requirements, and shall be labeled as such.

4. Carpet

- a. Replacement carpet shall be Green Label or similarly certified carpeting New carpet to be Armstrong, Mohawk, Shaw or approved equal..
- b. No carpet shall be installed within 3 feet of an exterior entryway.
- c. All pad and carpet to meet FHA minimum requirements for the use area as applicable(Moderate Wear Area or Heavy Traffic Wear Area).

5. Wood Flooring

- a. Hardwood
 - (1) Use of recycled/sustainable hardwood wood flooring is encouraged whenever possible.
 - (2) Hardwood flooring shall be pre-finished.
 - (3) Vapor barrier installed under all hardwood flooring, 15 pound tar paper(min).
- b. Laminate Wood Flooring
 - (1) Laminate wood flooring type shall be pre-finished, glueless ('floating') with a wear layer of 3mm(min) thickness and overall thickness of 10mm(min)
 - (2) Underlayment foam shall be "Combo" type(foam w/ vapor barrier layer), 3mm(min) thickness.

6. Exterior flooring

- a. 1" x 4", top grade vertical grain Douglas Fir, Grade "C" or better, unless otherwise specified. Exterior grade 1/2" Douglas Fir plywood or MDO may be substituted under some circumstances upon approval .
- b. If the exterior flooring will be exposed to weather, the wood must be pressure treated.

E. Exterior Siding

1. Existing Siding

- a. Existing siding, when not required to be replaced, shall have all rotted, broken or otherwise deteriorated materials removed and replaced with like material, properly nailed and finished.

2. New Siding

- a. T - 111 5/8" structural sheathing
- b. Primed hard board vertical panels- Georgia Pacific, Weyerhaeuser or approved equal
- c. Primed fiber cement vertical panels – Hardie Plank, CertainTeed or approved equal
- d. Primed lap siding - Hard Board 7/16" economy grade or better
- e. Fiber Cement lap siding - Hardie Plank, CertainTeed or approved equal.

F. Decks

1. Foundations

- a. Pier blocks or poured concrete set level on undisturbed native soil, w/adjustable saddles.
- b. Framing members shall be hem fir(or equal) pressure treated wood

2. Ledger board

- a. Lag or through bolted to rim joist. Lags or bolts exposed to moisture are to be hot dipped galvanized, stainless steel or equal.
- b. Ledger shall be properly flashed to prevent moisture intrusion.
- c. Deck joists attached to ledger with appropriately sized joist hangers listed for exterior use(z max or equal). Joist hanger nails to be listed for use with the selected joist hanger in exterior conditions.

3. Deck planks

- a. Materials; 5/4 treated wood, Trex or approved equal.
- b. Fastened to joists with approved screws(stainless steel, hot-dip galvanized)
- c. 2 screws (min) on deck planks at each joist.
- d. Wood planks sealed with 2 coats quality water seal.

4. Guardrail required for decks over 30" above finished grade.

5. Stairs - when required, there shall be a firm and level landing 36" in the direction of travel at the base of the stairway.

G. Handrails and guardrails

Shall meet current Washington State Building Codes and any applicable local amendments.

H. Insulation

1. Batt Insulation

- a. Fiberglass or similar material, either 15" or 23" widths, for exterior and interior walls when specified. Insulation of attic space shall, in all cases, be R-38 minimum thickness, R-15 minimum for exterior walls and R-30 minimum for floors. Where wall cavities allow R-21 batts, the minimum standard is R-21.
- b. If water pipes are located in an unconditioned space(attic or crawlspace), water pipe insulation shall be included with insulating that space.

2. Blown Insulation

- a. Exterior Walls- Access each wall cavity and probe to locate fire stops or other obstructions which may necessitate additional entry holes to assure maximum pressurization practical for that cavity. Fill all wall cavities with loose fill cellulose in conformance with current ASTM standards.
- b. Attic- Loose cellulose blown in to achieve 'R' value of R-38. Coverage should be as level as possible. Install soffit baffles as needed. Note: maintain clearance from combustible materials in accordance with NFPA Requirements
- c. Vaulted Ceilings - when vaulted roof cavities are exposed during rehabilitation, the cavity shall be insulated to R-38 or maximum practical.

I. Kitchen Cabinets/Countertops

1. Kitchen cabinets

- a. Kitchen cabinets by Connor, Yorktown, Excel, or equal.
- b. Custom cabinets shall be constructed and finished to meet the above quality and finish.
- c. Steel cabinets shall not be used unless specifically listed in the bid specifications.
- d. Unless stated, pressboard cabinets are unacceptable.

2. Countertops

- a. Counter tops shall be securely bonded to 3/4" plywood high density particle board or equivalent materials.
- b. Top materials shall be Formica or equal. Color and pattern to be specified by owner.
- c. A 4" back splash(min) shall be provided when abutting walls. Backsplash shall be sealed with low VOC silicone or equal to prevent moisture intrusion.
- d. All edging and trim moldings to be in accordance with standard local practice.

J. Stairways

1. Stairways, including basement stairs, shall be constructed to current Washington State Building Codes and any applicable local amendments.

K. Roof Covering

1. All new sheathing shall be installed to current City Code specifications. Where a new section of sheathing meets an existing roof section, the joint shall be flush and level.
2. All shakes, wood singles, built up roofs or other material, shall be to current City Code standards and product manufacturers' installation specifications.

3. Approved composition shingles shall be Iko, Pabco or approved equal Class C, Mineral Surface Asphalt 235 lbs./sq or better, dual-layer laminated asphalt shingles applied to manufacturer's specifications. It should be noted that fiberglass shingles are not 235 lbs. but offer A fire rating and a 30% longer guarantee.
4. Re-roofing shall comply with current City Code Specifications. Existing roof surface should be smooth, secure and sound. Final inspection problems will require re-installation at the expense of the contractor.

L. Gutters and Downspouts

1. Complete new installation shall be of enameled aluminum or baked enamel on steel. Minimum thickness of aluminum shall be .027" and steel shall be minimum of 29 gage.
2. Partial repairs and replacement shall be of like kind and material, properly cleaned, primed and painted. Do not mix aluminum or copper with galvanized.

M. Flashing and Counter Flashing

1. Flashing shall be installed to current City Code Specifications.
2. Cap flashing at chimneys shall be set ¾" into the mortar joints with mortar or approved sealant.

N. Doors and Windows

1. Exterior Doors

- a. Exterior doors shall afford safety and protection for the household, person, and possessions of the occupants, and shall be easily and readily maintainable.
- b. Exterior doors shall be a standard 6'8" height unless otherwise specified, and shall be Energy Star Rated -refer to Energy Star website (<http://www.energystar.gov/>).
- c. Exterior doors shall have aluminum thresholds. A key-operated lock and at least two keys shall be furnished to the owner on completion of construction.
- d. Install new exterior door unit complete with door, jamb, weatherstripping, trim, threshold and hardware. Install door plumb with 1/8" clearance at head jamb and 1/8" clearance at-floor threshold or rug, whatever the case may be.
- e. Mortise new door to receive appropriate lock. Door shall have dead pin lock and peep hole. Adjust all hardware so door works properly.

2. Aluminum Combination Storm Doors

- a. Minimum 1" stock aluminum storm door. Door is to be pre-hung aluminum with storm chain, hydraulic closer, and lock-in latch.
- b. When replacing existing door, new door swing to be the same. Patch scarring from old door.
- c. The owner shall be permitted to select either natural finish or baked enamel finish.
- d. All glass must be safety glass and contain push bar grille. All doors must have a minimum of one aluminum or fiberglass screen insert.

3. Interior Door - Hollow Core

- a. Interior door shall be standard 6'8" in height and shall be a standard 1-3/8" in thickness, unless otherwise specified, and shall have cardboard or similar spacers to maintain internal stability within the door.
- b. Install plumb with 1/8" clearance at head and jamb and 1/8" clearance at floor threshold or rug, whatever the case may be. Mortise new door to receive an appropriate knob (Weiser or equal).
- c. All bath and toilet compartment doors will be provided with a lock-in knob.
- d. Adjust all hardware so door works properly and leave door clean, smooth, and finished as specified.

4. Locks

- a. Entrance Locks: To be keyed Kwikset (#400B), Westlock, or equal.
- b. Passage Set: To be Kwikset (#200B), Westlock, or equal.
- c. Bedroom Lock: To be Kwikset (#300B), Westlock, or equal.
- d. Bath lock will be "privacy".

5. Windows

a. General

(1) All replacement windows shall ;

- ❖ Be Energy Star labeled (<http://www.energystar.gov/>)
- ❖ Double pane, with minimum heat transmission of U-30.
- ❖ Be flashed to prevent moisture intrusion to structural members
- ❖ Have new wood stops installed unless otherwise noted
- ❖ Have a positive weeping system
- ❖ Be lockable
- ❖ Meet safety glazing requirements specified in the International Residential Code
- ❖ Meet current energy code requirements.

b. Double Hung Windows(Wood)

(1) Double hung windows being installed shall have the aluminum flashing at head, weather stripped spring balanced with locks and pulls installed

(2) Andersen, Jen-Weld, Marvin or approved equal to be used.

c. Vinyl windows

Vinyl windows shall be constructed of quality vinyl, have multi chambers and welded corners. Certainteed, Milgard, Weathervane or approved equal to be used.

d. Skylights

When skylights are replaced, all skylights must meet a minimum thermal heat transmission of U-0.40

e. Glazing

(1) All glass for windows and doors shall not be less than "B" quality.

(2) Glass set in wood shall be secured in place with glazing points and face-puttied. In doors, bed in putty and secure with wood stops.

6. Caulking

- a. Caulk all open joints around all exterior door and window openings and at all other exterior openings where there is a possibility of moisture penetration through expansion and contraction of joints.
- b. Gaps larger than ¼" shall be filled with backing rod, low expansion foam, or wood prior to caulking.
- c. Where applicable, caulk all exposed edges of steel lintels and stone sills.
- d. The contractor shall check all exterior surfaces of the property to become familiar with the extent of the caulking involved. Only a complete and weather tight job shall be accepted.
- e. Color of compound shall be neutral gray and paintable unless specified otherwise.

7. Base molding

- a. Rubber base- Armstrong 4" vinyl base or equal. Color to be selected by owner.
- b. Wood base- 2-1/2"(min height). Materials: solid wood, formaldehyde-free MDF. Corners shall be mitered. Style selected by owner.

V. WEATHERIZATION

A. General

When weatherization is specified, a prescriptive method of weatherization and air sealing shall be used.

B. Mechanical Ventilation

1. Provide a whole house mechanical ventilation system in compliance with the International Residential Code as amended by Washington State or AHSRAE Standard 62.2 - 2004.

C. Air Sealing

1. All accessible exterior joints around windows and door frames, openings between walls and foundation, between walls and roof and wall panels; openings at penetrations of utility services through walls, floors and roofs; and all other openings in the building envelope shall be sealed, gasketed or weatherstripped to prevent air leakage.
2. All exterior doors or doors serving as access to an enclosed unheated area shall be weatherstripped to prevent leakage around their perimeter when in a closed position.

VI. PAINTING AND DECORATING

A. Lead Based Paint

1. Any painted surface on houses built before 1978 that will be worked on per the scope of work shall be assumed to contain lead-based paint, or a Lead-Based Paint Risk Assessment will be performed that identifies all lead-based painted surfaces. Any work on lead-based painted surfaces shall be accomplished by RRP certified firms and RRP certified employees using lead-safe work practices(LSWP) according to HUD guidelines. A current copy of firm and employee certifications shall be made available to be kept on file with the HRP.

2. No paint containing more than .05% lead by weight (calculated as lead metal) in the total non-volatile content of the paint or equivalent measure of lead in the dried film of paint already applied, shall be applied to any surface.
3. Any interior surface or accessible exterior surface on which paint is cracking, scaling, chipping, peeling, or loose is considered an immediate hazard, due to the threat to life and safety posed by lead poisoning. All such defective paint surfaces shall be thoroughly cleaned (washed, sanded, scraped, wire brushed, and otherwise cleaned) so as to remove all cracking, scaling, peeling, chipping and loose paint and then repainted with a suitable non-lead paint.
4. Where the paint film integrity of the surface cannot be maintained, the paint shall be completely removed or the surface recovered with a suitable material such as gypsum wall board, plywood, or plaster before any repainting is undertaken.

B. Painting and Decorating

1. General

- a. Paint Brands approved for use: Sherwin Williams, Behr, Dutch Boy, Olympic Stain, C & C, Preservative Paint, or equal.
- b. All paints or other coatings shall be delivered in their original containers. All products specified must be applied as per manufacturer's instructions.
- c. Contractor shall request color selections and styling data from owner.
- d. Whether painting the interior or exterior, all areas shall be covered with drop cloths to protect household belongings and landscaping from splattering.

2. Interior

- a. Quality low VOC paint shall be used on interior surfaces.
- b. New Plaster Work: All new plaster work shall receive one coat of wall primer and sealer before painting or wall papering.
- c. Drywall: All new drywall surface shall receive one coat of PVA wall primer before painting or wall papering.
- d. All finish coats in kitchen and bathrooms shall provide a durable and washable finish.
- e. Wall paper: Wall paper in kitchen and bathrooms shall be waterproof type or shall be waterproof.
- f. No finish coat shall be applied until prime coat has been inspected. Paint contractor shall be responsible to call for this inspection.

3. Exterior

- a. Exterior Wood Surfaces: Knots and resinous wood shall be sealed with a prepared knot sealer prior to priming. Any nail holes or cracks shall be filled with putty.
- b. Masonry and wood and metal surfaces shall be free of loose and scaling paint before applications of primers and paints.
- c. Wood Porch Floors and Decks: Apply one coat of primer and at least one coat of floor and deck enamel designed for exterior use.

- d. Concrete masonry units or brick: Concrete masonry units or brick, except foundation walls, shall be painted to provide a water-resistant finish when applicable.
- e. No finish coat shall be applied until prime coat has been inspected. Paint contractor shall be responsible to call for this inspection.

VII. PLUMBING FIXTURES AND ACCESSORIES

All new work will be accomplished in accordance with current City of Bellingham building code requirements, and shall be properly inspected and passed by the Building Inspector prior to acceptance.

A. Fixtures

1. All new plumbing fixtures shall comply with water conservation limits as specified in the WaterSense EPA Partnership Program;
http://www.epa.gov/WaterSense/about_us/watersense_label.html
2. Bathtub - Porcelain enameled cast iron, porcelain steel or acrylic or fiberglass reinforced plastic.
3. Lavatory - Vitreous china - wall-type or vanity base as specified.
4. Water Closet - Vitreous china (floor fastened).
5. Kitchen Sink - Double bowl cast iron, stainless steel, or porcelain steel sink - 3 hole, 24" x 21". Fittings shall include a mixing faucet with movable spout and a basket-type strainer.
6. Approved listed brands such as Crane, Eljer, Kohler, American Standard, or equal quality. Variations of bathtub and kitchen sink size or type may be called for in the bidder's specifications when necessary.

B. Accessories

1. Grab bar and soap dish at bathtub.
2. Grab bar and toilet paper holder at water closet.
Note: Grab bars shall be positively anchored to studs in the wall.
3. Soap dish at lavatory (may be integral with lavatory).
4. Towel bar (24" x 3/4" square-surface mounted).
5. Mirror and medicine cabinet or equivalent enclosed shelf space (Miami-Carey 13" x 19").
6. In all cases where shower head is installed, provide a shower rod or a shower door.
7. Above materials shall be heavy chrome plated.

C. Water Heaters-Gas Fired or Electric

1. Replacement hot water heaters/tanks shall be Energy Star labeled. Refer to Energy Star website(<http://www.energystar.gov/>) for current energy star ratings.
2. Water Heaters: AUI type, glass lined (Rheem or equal) storage capacity shall be not less than 40 gallons for gas fired water heaters and 52 gallons for electric heaters, and shall provide hot water in quantities sufficient for the needs of the occupants.
3. Direct fired water heaters shall be listed and labeled by an approved listing agency and installed in accordance with the listing unless otherwise indicated.

4. All water heaters shall be provided with a combination temperature and pressure relief valve. Blow off pipe to terminate at exterior of building or approved locations.
5. All water heaters shall be provided with seismic restraint in accordance with current City Codes.

VIII. HEATING

A. Heating-Gas Furnace Installation

1. Replacement gas furnaces shall be Energy Star labeled with a 95% AFUE (min) rating. Brands- Lennox, Tappan, Warner, Trane or equal quality.
2. All heating equipment shall be installed in accordance with current City Codes and shall be properly inspected and passed by a City building inspector prior to acceptance.
3. Heating contractors shall be responsible for any new gas line or electrical wiring required for this installation.
4. Heating systems shall be designed, installed and balanced or adjusted to provide for the distribution of heat to all habitable rooms and other spaces (including bathrooms) in accordance with the calculated heat loss of the spaces to be heated.
5. Whenever new work, such as heat runs, cold air returns, chimney pipes, etc., are exposed in any habitable room or bathroom, the heating contractor shall be responsible for the boxing in of such work and finishing same in a manner appropriate to the area involved.

B. Ductwork Located in Unconditioned and Semi-conditioned Spaces

1. All existing ductwork shall be inspected. Damaged ducts are to be repaired or replaced with new ductwork.
2. All joints are to be inspected to assure they are mechanically fastened as required by the mechanical code.
3. All existing ducts shall be insulated to R-8(2-1/2") if the existing insulation is less than R-4(1-1/2") insulation.

C. Heating - Space and Wall Heaters

1. Room and wall heaters: Gas-fired heaters shall be listed by AGA.
2. Electrical forced air wall heaters, where specified, shall be UL approved.

IX. ELECTRICAL FIXTURES AND APPLIANCES

A. General

In all cases, light fixtures, switches, convenience outlets, etc., shall be UL approved. The quality in keeping with the General Standard of construction involved, if not otherwise specified and approved.

B. Smoke Detectors and Carbon Monoxide Sensors.

1. Smoke detectors and CO detectors with audible alarms are required where missing, First Alert, Kidde, or approved equal.
2. Smoke detectors shall be dual-sensor alarms (ionization and photoelectric).

3. Smoke detectors shall be hard wired and interconnected when a building permit is required for any work on an HRP project. Hard wiring is not required if it is necessary to remove wall or ceiling finishes to supply building power to the smoke alarms.
4. Battery operated SD's with a 10 year lithium battery installed on all other projects.
5. Carbon Monoxide detectors are required regardless of presence of combustion appliances.
6. Carbon Monoxide detectors shall be AC powered with battery backup

C. Light Fixtures

New or replaced light fixtures shall be High Efficacy Luminaires, whose lamps or other light source have a minimum efficiency of;

1. 60 lumens per watt for lamps over 40 watts,
2. 50 lumens per watt for lamps over 15 watts to 40 watts,
3. 40 lumens per watt for lamps 15 watts or less.

D. Ground Fault Circuit Interrupter(GFCI) Outlets

Ground Fault Circuit Interrupter (GFCI) outlets shall be installed where required by current City of Bellingham Codes.

E. Appliances

When appliances are specified to be replaced, the new appliances shall be Energy Star labeled, as applicable. The following models are suggested as minimum standards. All are to be installed in compliance with current City Codes and to manufacturer specifications.

1. **Stove**- Frigidaire, Magic Chef, General Electric, Westinghouse
2. **Range hood** - Whirlpool, Kenmore, Broan. Range hoods shall be variable speed w/light, 200 CFM (min) and be vented to the outdoors.
3. **Refrigerator** - Frigidaire, Magic Chef, General Electric, Westinghouse.
4. **Dishwasher** - General Electric, Whirlpool, Maytag. Dishwashers to have several wash cycle options.
5. **Garbage Disposal** - General Electric, In-Sink-Erator, Kitchen Aid. ½ HP (min) continuous feed, sound insulated.
6. **Bath Fans** - Panasonic Whisper Green or equal, 80 CFM (min) vented to the outdoors. Bath fans shall be equipped with a timer, humidistat sensor, or operate continuously.
7. **Washing Machines** - Washing Machines shall be Energy Star-Labeled; General Electric, Kenmore, Whirlpool or equal.
8. **Clothes Dryers** - General Electric, Whirlpool, Kenmore or equal, vented to the outdoors with metal ductwork.
9. All appliance warranties shall be properly recorded with the manufacturer and evidence of same delivered to the owner at contract completion. Any rebates shall go to the homeowner.

X. VENTILATION

A. Crawl spaces

Crawlspaces shall have ventilation with as much ventilation area and cross venting as possible. Dead corners shall be eliminated as much as possible

B. Attic

Attics shall have a minimum of two louvered gable vents, sufficient number of roof jacks or ridge venting.

C. Roof Replacement

All projects involving a complete re-roof shall require that attic ventilation be provided in compliance with current City Codes.

D. Vent Protection

All vents shall be protected with ¼" galvanized screen.

XI. PEST CONTROL

When required, only a licensed and insured professional exterminator will be used to treat for powder post beetles, termites, rodents or other pests. Upon completion of items called for, the exterminator will furnish a certificate of completion.

XII. CONSTRUCTION WASTE MANAGEMENT

A. Project site shall be left 'broom clean' daily.

B. All debris generated from project to be removed from site and recycled to the maximum extent practicable before bringing to landfill;

1. Recycle all cardboard
2. Recycle all wood
3. Recycle all drywall
4. Recycle all metals
5. Recycle all concrete, brick and asphalt
6. Recycle all appliances that will be replaced

XIII. FINAL INSPECTION

In addition to the regular required inspections and progress inspections, a final inspection is required by the Home Rehab Program prior to release of funds and completion of the contract.