

# CDBG HOUSING REHABILITATION STANDARDS AND SPECIFICATIONS



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# CDBG REHABILITATION STANDARDS AND SPECIFICATIONS

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## Rehabilitation Standards and Specifications

The specifications and standards described on the following pages are templates that must be incorporated into HOME rehabilitation contracts financed through the Maine State Housing Authority's HOME Rehabilitation Program. These standard specifications are grouped by trade and include general and specific requirements for various rehabilitation tasks. Rehab Techs are to use these template standards when developing a project specification by "copying and pasting" the appropriate standards for the appropriate task into his/her specification document. It is understood that these templates will not cover all circumstances encountered during property inspections and that the templates may have to be further modified to fit a particular situation. If necessary, the Rehab Tech can modify the language of these standards to more precisely fit the task to be performed.

The goals of these standards and specifications are as follows:

- Provide guidance to Rehab Techs in developing job specifications;
- Achieve consistency in job specifications throughout all Community Action Agencies to the greatest extent possible;
- Improve customer satisfaction;
- Minimize contractor/owner disputes by better defining the work to be performed;
- To satisfy U.S. HUD regulations that require written job specifications and standards for federally funded rehabilitation projects; and
- To perform work in a lead-safe manner.

It is not desired to exclude any product of quality equal to those specified herein. Trade names are generally used to establish the level of quality desired, but before any substitutes are made, the approval of the Owner and the lender staff must be obtained. **Property inspections will be conducted in accordance with the Housing Quality Standards (HQS) inspection form. All building components not meeting HQS criteria for being safe, sanitary, and operable, shall be repaired in accordance with the rehabilitation standards and specifications herein. After all necessary rehabilitation work, the entire home must meet HUD Housing Quality Standards.**

This template is based on several models made available to the Maine State Housing Authority including the following: "City of Jackson Home Implementation Manual" and "On Solid Ground" both written by ICF Consulting Housing and Community Development Group of Fairfax, Virginia, the National Center for Lead-Safe Housing Single Family Rehab Standards, and rehabilitation standards and specifications from various HOME rehabilitation programs throughout the country including the State of Maine.

## Characteristics of an Accurate and Effective Work Write-Up/Specification

**Quantity** – Include quantity measures (sq. ft., numbers, etc.) as opposed to phrases such as “as needed”

GOOD – Install 25 sq. ft. of 2 inch x 2 inch new bath tiles...

POOR – Install new bath tiles as needed...

**Dimensions** – Specification of size is essential; if the doors are to be 7 feet by 3 feet, say so.

GOOD – Replaster 3 feet x 5 feet section in center of north wall of living room as indicated on sketch

POOR – Replaster walls in living room as needed

**Location** – Be specific

GOOD – Scrape and repaint floor and columns of front porch

POOR – Scrape and repaint porch (which one – front or back? All of it or just some of it?)

**Quality** – If the new wall to wall carpet is supposed to be first quality acrylic pile carpet of 15 denier or coarse, and not wool or lesser density, say so

**Method** – there are usually many ways to fix something and how it is done makes a difference – in cost, time, and aesthetics

GOOD – Replaster 1 foot x1 foot damaged plaster on northeast corner of rear bedroom...

POOR – Repair damaged plaster in rear bedroom

**Use “repair” or “replace”, but not together!** – there are major differences in cost, quality and expectations.

When using “repair”, couple with the construction method

GOOD – Repair tub in front bath by (method)...

GOOD – Replace tub in front bath with...

POOR – Repair or replace tub...

**Use “and” or “or”, but never together!**

GOOD – Repair sashes on two north windows of front bedroom and replace two east windows with...

POOR – Repair and/or replace defective windows...

**Use the active, imperative voice** – the active, imperative voice (command) is clearest, strongest and requires the least number of words.

GOOD – Install ceiling light fixture. Owner shall furnish the fixture.

POOR – The contractor shall install ceiling lighting which will be provided by the owner

**Phrases to Avoid** – or equal, etc., standard size, approximately, as necessary, all missing or damaged, or any



## REHABILITATION STANDARDS AND SPECIFICATIONS

### SECTION 1 – GENERAL

#### Section 1 - General Requirements for All Project Specifications

1. All measurements are approximate and must be verified by the Contractor.
2. All Materials having color or pattern shall be selected by the Owner
3. Building permits, electrical permits, plumbing permits and other permits required by local or State authorities shall be obtained by the contractor and the costs shall be incorporated into the proposal amount submitted by contractor. Contractor must obtain permits prior to commencement of work and must provide copies of permits to the Owner and the lender agency for documentation. Failure to obtain required permits will result in nonpayment of work until the necessary permits are obtained.
4. Workmanship and materials not covered by manufacturers warranty shall be warranted by the Contractors for a period of at least one year from date of final payment to the contractor. All manufacturer warranties shall be delivered by the Contractor, to the homeowner along with the final billing.
5. All repair work shall conform to the Rehabilitation Standards herein and local building codes. If there are no local building codes, then repairs must conform to the 1995 Building Officials and Code Administrators (BOCA) standards. Where applicable, rehabilitation work shall also conform to the following standards: the BOCA National Plumbing Code, the NFPA 70, National Electric Code, NFPA 101 Life Safety Code, American Society for Testing Materials (ASTM) Standards, and the International Code Council /American National Standards Institute (ICC/ANSI) standards for Accessible and Usable Buildings and Facilities; ICC/ANSI A117.1-98.
6. All work must be performed in accordance with HUD Lead-Based Paint regulations as described in 24 CFR Part 35 et al, with the exception that certain contractors such as electrical, plumbing, roofing, weatherization and heating specialists may be exempt from using HUD lead safe practices so long as they do not disturb any more than two square feet of painted surfaces per room or a total of 20 square feet of painted surfaces on the exterior. Contractors performing work in accordance with HUD Lead-Based Paint regulations as described in 24 CFR Part 35 et al must have attended a Lead-Smart Renovator course taught by a Maine DEP certified training provider. Lead safe practices must be employed in all work that disturbs painted surfaces. After completion of all work, contractor must clean the work area(s) to meet HUD Lead Dust clearance standards as follows;

Hard floors and Carpeted floors = 40 micrograms (ug) per square foot (ft<sup>2</sup>).

Interior Window Sills = 250 ug/ ft<sup>2</sup>

Window troughs = 800 ug/ ft<sup>2</sup>

Other nonporous surfaces = 40 ug/ ft<sup>2</sup>

Porous Surfaces = 800 ug/ ft<sup>2</sup>

**If dust wipe samples do not pass the above standards, contractor must return to the job site ,at his own expense, and clean until these standards are met. Final payment will be withheld until clearance standards are achieved. Costs incurred for an additional site visit and dust wipe sampling costs will be taken from monies due to the contractor. In homes where there are children under 6 years of age the Owners must, at their own expense, temporarily relocate these children from work areas where paint will be disturbed until the work has been completed and the dust wipe clearance standards shown above have been achieved.**

## SECTION 2 - ELECTRICAL

### 2.1 - General Electrical Requirements

The Electrical Contractor is responsible for obtaining and payment of electrical permits, assurance of inspections of the completed work by local electrical inspector if there is one or the Rehab Tech if there is none, and for disconnect and reconnect fees charged by the local utility.

All materials and equipment shall be new, of consistent quality throughout, and shall conform to the latest UL and ANSI and FS standards, as well as to all other applicable standards and local building codes. All materials and equipment shall be clearly marked to permit identification of manufacturer, model and type.

The contractor shall furnish all instruments, gauges and equipment required for testing and shall perform those tests required by the related authorities. Equipment, materials or work found to be defective during testing shall be replaced by new work and be retested until proven satisfactory.

All finished parts and materials shall be protected against damage from whatever cause during the progress of the work and until completion. All electrical materials and equipment in storage and during construction shall be covered in such a manner that no finished surfaces will be damaged or marred. All parts of the electrical apparatus and equipment shall be thoroughly cleaned of cement, plaster, and other foreign materials.

All wiring, fixtures, switches, receptacles, etc., shall be installed with covers and all accessories. New cable will be installed as straight as conditions allow and properly secured with staples as required by

the current National Electric Code. All electrical equipment and exposed wiring not in use shall be disconnected and removed. All exposed knob and tube wiring shall be disconnected, removed and replaced. The electrical contractor shall convert all single outlets to duplex and replace all missing switch and outlet covers. Fixtures, equipment and materials furnished by others that require electrical wiring, connection, or related electrical work shall be connected by the electrical contractor.

The contractor shall do all drilling, cutting and patching required for the installation of the work. All holes made by electrician must be patched and sanded with the same materials, workmanship and finish as the original work and shall match all surrounding work, painting excluded. **If more than 2 square feet of painted surfaces are disturbed in any one interior room or space, contractor shall clean floors, window sills and window troughs to meet HUD clearance criteria for lead dust.**

Each home must have, in addition to the minimum room standards described below, a separate ground fault 20 amp circuit in the kitchen for the refrigerator or gas appliances, a separate 220V, 50 Amp circuit for an electric range and a separate 220V, 30 Amp clothes dryer circuit.

Minimum room electrical requirements are: Livingroom, dining room, bedrooms and other family type rooms must have two duplex outlets or one duplex outlet and one ceiling or wall type fixture. Kitchens must have two ground fault duplex outlets and one ceiling or wall type fixture. Bathroom must have one ground fault outlet and one ceiling or wall type fixture. Note: for new construction or remodeling, electrical wiring must conform to the current National Electric Code.

The contractor shall keep all parts of the building and site free from accumulation of rubbish and waste materials caused by work and shall remove such accumulation from the site.

### **2.2 - Repair Doorbell System.**

1. Repair door bell system by installing one non-lighted pushbuttons per unit [ Nutone PB-10WH or equal ], one transformer per pushbutton [ Nutone 515T or equal ], one buzzer per unit [Nutone LB-12WW or equal] and wiring to the current National Electric Code.

### **2.3 - Replace Exterior Electrical Service Entrance**

1. Install new 220 volt 200 Amp electric service. Work to include properly sized type SE cable, weatherhead and meter socket enclosure. Service must be grounded to copper cold water pipe before the water meter or to 8' copper ground rod. Install new type SE cable to existing / new interior load center.

### **2.4 - Install New Interior Electrical Service Panel.**

1. Install new 220 volt 200 Amp electrical panel [ GE, Cutler-Hammer, Square D or equal ] in basement with 200 Amp main breaker and with a least 16 circuit breaker positions.
2. Connect all new and / or existing branch circuits into new panel on appropriately sized circuit breakers and wiring to code. .
3. Install new ground wire. Water pipe must be in use and clamps should be on both sides of water meter or attached to an 8' exterior grounding rod. Minimum wire size will depend on size of service and determined by the Electrical contractor.

### **2.5 - Replace Ground Wire.**

1. Replace defective ground-wire strap with new approved clamp. Replace ground wire, if defective. Water pipe must be in use and clamp shall be on both sides of water meter. Minimum wire size will depend on size of service. All products to be U. L. listed.

### **2.6 - Replace /Install New GFCI Outlet in Kitchen /Bath**

1. Install GFCI outlet and plate [ GE, Leviton or Equal ], nonmetallic box and 12 / 2 NM cable or cable as required by the National Electric Code.

### **2.7 - Replace / Install New Duplex Outlets.**

1. Install duplex outlet using grounded outlet [ GE, Leviton or equal ], metal box with rabbit ears and appropriate sized Romex cable with ground.

### **2.8 - Install New Range Outlet.**

1. Install new range outlet in kitchen using 50 Amp surface mounted outlet [ GE, Leviton or equal ], and appropriate sized cable as required by the current National Electric Code.

### **2.9 - Install New Dryer Outlet.**

1. Install new dryer outlet using 30 Amp surface mounted outlet [ GE, Leviton or equal ] and appropriate sized cable as required by the current National Electric Code.

### **2.10 - Replace / Install New Wall Switch.**

1. Install new single pole / 3-way wall switch using silent wall switch [ GE, Leviton or equal], ], metal box with rabbit ears and appropriate sized Romex cable with ground.

### **2.11 - Replace / Install New Ceiling Light**

1. Install new ceiling light [ two light bulb capacity ] using fixture [ with or without pull chain selected under a \$25.00 fixture allowance. Fixture to be from Timely Lighting, Progress Lighting, Universal or equal installed with metal box with rabbit ears and appropriate sized Romex cable with ground.

### **2.12 - Replace / Install New Wall Mounted Light.**

1. Install new wall mounted light using fixture [ with or without pull chain ] selected under a \$25.00 fixture allowance. Fixture to be from Timely Lighting, Progress Lighting, Universal or equal installed with metal box with rabbit ears and appropriate sized Romex cable with ground.

### **2.13 - Replace / Install New Exterior Light.**

1. Install new exterior light using fixture selected under a \$25.00 fixture allowance. Fixture to be from Timely Lighting, Progress Lighting, Universal or equal installed with metal box with rabbit ears and appropriate sized Romex cable with ground.

### **2.14 - Replace Missing Junction Box Cover.**

1. Repair defective junction box by installing new metal cover.

### **2.15 - Install New Timer Switch.**

1. Install new 120 / 240 volt 24 hour timer switch [ Torx or equal ] and 12 / 2 with ground Romex cable, according to the current National Electric Code.

### **2.16 - Install Smoke Alarms.**

1. Install one new smoke alarm in each bedroom area. Unit to be U.L. or N. F. P. A. approved [ GE, Firex, or approved equal ]. Unit will be AC with DC back up [ hardwired with battery back up].
2. Installation shall be according to manufacturer's specifications, the current National Electric Code and N.F.P.A. and include non-metallic / metal box with rabbit ears and 12/2 with ground Romex cable.

## **SECTION 3 - FLOORING**

### **3.1 - Remove Existing Flooring**

1. Remove and dispose of existing flooring if practical or needed.

### **3.2 - Install Vinyl Floor Tiles or Inlaid**

1. Install 1/4" luaun plywood underlayment using 7d ring-shank nails or 1" flooring screws: 6" on face and 4" along seam. Apply Levelastic floor leveler [ or approved equal ] to all seams created by new underlayment to create smooth surface.
2. Install new 1/8" vinyl floor tiles [ Armstrong, Standard, Excelon, Tarkett Artflecs, Tarkett Thru-Chip or approved equal ] or new vinyl inlaid [Tarkett, Mannington, Armstrong of

equal]and secure using full spread waterproof cement according to the manufacturers specifications. All edge tile will be approximately the same width for an even appearance. Color and pattern shall be owner's choice.

3. Install 4" flexible vinyl cove base or wooden base along baseboard.

### **3.3 - Install New Wall to Wall Carpet with Pad**

1. Install new FHA-approved, Nylon, stain release carpet [Salem Carpets or approved equal] over 6# rebond padding using tack strips according to the manufacturer's specifications. Owner to select in stock color / pattern under a \$18.00 / SY (installed ) allowance. Carpet to have minimum 10 year warranty against fiber loss.
2. Install 4" flexible vinyl cove base or wooden base along baseboard.

### **3.4 - Refinish Hardwood Floor.**

1. **Determine presence of Lead-based Paint or Lead-based Floor Varnish.**
2. Inspect floor for protruding nails. Countersink all protruding nails and wood putty holes.
3. Sand entire floor down through all finishes to bare wood **using Lead Safe Practices if needed.** Avoid gouges, swirl marks and waves. Floor to be of a uniform even surface when sanding completed. Wipe with clean cloth.
4. Apply two coats of polyurethane, Hydrolite [ a water based urethane ] or Hydrolite [ a water based acrylic urethane ] or equal floor finish, sanding between coats or as required by manufacturers

### **3.5 - Install New Hardwood Floor-Unfinished.**

1. Install new 3/4" x 2-1/4" #1 common white oak flooring [Bruce, Chickasaw Flooring or approved equal] according to manufacturer's specifications.
2. Sand smooth and apply three coats of polyurethane, Hydrolite [ a water based urethane ] or Hydrolite [ a water based acrylic urethane ] sanding between coats or as required by manufacturer's specifications.

### **3.6 - Install New Hardwood Plank or Parquet Pre-Finished Floor.**

1. Install new 3/8" x 3" 3-ply oak plank flooring [Bruce, Chickasaw Flooring or approved equal] according to manufacturer's specifications.
2. Install new 5/16" x 12" x 12" 3-ply oak parquet flooring [ Bruce, Chickasaw Flooring or approved equal ] according to manufacturer's specifications.

## **SECTION 4 – GUTTERS, FASCIA, SOFFIT, TRIM AND MOLDING**

### **4.1 - Remove and dispose of all Rotted Existing Gutters, Trim, Fascia Soffit and Molding**

1. Remove and dispose of all rotted and damaged sections of gutters, trim, fascia, soffit and molding **using Lead Safe Practices if determined necessary.**

#### **4.2 - Replace / Install New Wood Gutters**

1. Install complete new 4" x 6" Spruce or #1 Fir gutter to replace removed rotted items. Work to include all required downspout, extensions and splashblocks. New wood gutters to be properly caulked, oiled and pitched

#### **4.3 - Replace / Install New Aluminum Gutter**

1. Install all new 4" x 5" aluminum [ .027 gauge ] gutter system [ Alcoa, Alside or equal ], properly pitched, according to the manufacturer's specifications. Work to include all required hangers, clamps, connectors, downspouts, extensions and splashblocks. Downspout to be sized according to roof area being drained. Color of gutter system to be selected by owner from manufacturer's standard colors.

#### **4.4 - Replace / Install New Plastic Gutters.**

1. Install all new 4" plastic [ Plastmo, Raingo or equal ] gutter, properly pitched, and installed according to manufacturer's specifications. Work to include all required hangers, clamps, connectors, downspout, extensions and splashblocks. Downspout to be sized according to roof area being drained. Owner to have choice of color from manufacturer's standard selection.

#### **4.5 - Replace / Install New Fascia, Trim, Soffit and Molding.**

1. Install new Pine fascia trim, soffit and / or molding [ molding to match existing as close as possible ] using properly sized galvanized nails. Apply one coat of white, oil-based primer after sealing all knots with a shellac based sealer [ Killz, B-I-N-S or approved equal ]. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **SECTION 5 - HEATING SYSTEMS**

#### **General Requirements**

All heating systems must be installed by Maine licensed technicians and in accordance with regulations promulgated by the Maine Oil and Solid Fuel Board. Contractor is responsible for obtaining and paying for permits necessary for installation of the new system and/or disposal of the old system including any hazardous wastes associated with the removal of the old system [such as asbestos coating or insulation].

#### **5.1 - Removal of Existing Heating System**

1. Remove defective heating system by dismantling, removing and disposing of the existing boiler or furnace from the premises. Contractor shall be responsible permits, fees and costs for the professional removal of any pipe or boiler insulation such as asbestos, which will require added safety measures, removal precautions and disposal fees.
2. Professional removal and disposal of asbestos pipe or duct insulation and/or asbestos boiler insulation.
3. Repair walls, floors, ceilings or any other home component damaged or left incomplete as a result of the removal of the heating system radiators, oil tank or any other part of the heating system.

- Existing, permanently installed, functional electric heaters, floor furnaces or other types of automatic heating systems **which will be supplemented by the installation of a new heating unit or system** do not need to be removed except in the following instances: The system has asbestos or other hazardous materials on the unit or distribution system, or removal of the system will substantially improve the livability and/or comfort of the home.

### **5.2 - Install Forced Hot Air Heating System Gas**

- Supply and install one complete new gas-fired, forced hot air furnace of sufficient capacity to heat each habitable room to a minimum of 68 degrees Fahrenheit measured 36 inches off the floor when the outside temperature is -5 degrees Fahrenheit. Unit to be Arcoaire, Carrier Weathermaker or approved equal. Installer to supply heat loss calculations [ used to determine size of furnace ] from system designer to rehab specialist. Furnace will be installed and leveled on 8" concrete blocks to protect the furnace from water damage. Furnace shall be 85% AFUE or better. Furnace will have a minimum life of 20 years.
- Install complete new smoke pipe in basement and reuse existing hot and cold air sheet metal ducts. Check duct sizing to ensure adequate heat delivery capacity to all rooms. Seal all duct joints with RDC #6 or equivalent.
- Install all required safety switches, round dial type thermostat [ Honeywell, Robertshaw or approved equal ] and wiring to service unit.
- Make all required gas connections to unit. All work to conform to local and state codes. New unit to be complete and operating according to the manufacturers specifications. Before firing, unit to be inspected by Northern Utilities (or other gas utility) for safety. **All operations and maintenance manuals are to be given to the owner.**

### **5.3 - Install Forced Hot Air Heating System/Oil.**

- Supply and install one complete new oil-fired, forced hot air furnace of sufficient capacity to heat each habitable room to minimum 68 degrees Fahrenheit measured 36 inches off the floor when the outside temperature is -5 degrees Fahrenheit. Unit to be Thermopride, Olsen, or approved equal. Unit to have flame retention burner. Installer to supply heat loss calculations [used to determine size of furnace] from system designer to rehab specialist. Furnace will be installed and leveled on 8" concrete blocks to protect the furnace from water damage. Furnace shall be 85% AFUE or better. Furnace will have a minimum life of 20 years.
- Install complete new smoke pipe in basement, reuse existing hot and cold air ducts. Check duct sizing to ensure adequate heat delivery capacity to all rooms. Seal all duct joints with RDC #6 or equivalent
- Install all required safety switches, round dial type thermostat [ Honeywell, Robertshaw or approved equal ] and wiring to service unit.
- Make all required oil supply connections to oil storage tank.
- Make any necessary repairs to registers to put into good working order. All work to conform to all local and state codes. New unit to be complete and operating according to the manufacturers specifications. **All operations and maintenance manuals are to be given to the owner.**

### **5.4 - Install Forced Hot Water Heating System/Gas**

- Supply and install one complete new gas-fired, forced hot water boiler of sufficient capacity to heat each habitable room to a minimum of 68 degrees Fahrenheit measured 36 inches off the floor

when the outside temperature is –5 degrees Fahrenheit. Installer to supply heat loss calculations [ used to determine size of boiler ] from system designer to rehab specialist.

Boiler will be installed and leveled on 8" concrete blocks to protect the boiler from water damage. Boiler will have a minimum life of 20 years.

2. Boiler to be Heatmaker, Carrier, Weil Mclain or approved equal with cast iron boiler.
3. Domestic hot water to be provided by tankless coil / super store tank
4. Install complete new flue pipe in basement.
5. Install all required safety valves, switches, new round dial type thermostat [ Honeywell, Robertshaw or approved equal ] and wiring to service unit.
6. Make any necessary repairs to radiators / baseboard radiation to put in good working order. New unit to be complete and operating according to the manufacturers specifications. All work to conform to local and state codes.
7. Make all required gas connections to unit. Before firing, unit to be inspected for safety by Northern Utilities (or other local gas utility). **All operations and maintenance manuals are to be given to the owner.**

#### **5.5 - Install Forced Hot Water Heating System/Oil.**

1. Supply and install one complete new oil-fired, forced hot water boiler of sufficient capacity to heat each habitable room to 68 degrees Fahrenheit measured 36 inches off the floor when the outside temperature is –5 degrees Fahrenheit. Installer to supply heat loss calculations [used to determine size of boiler] from system designer to rehab specialist. Boiler will be installed and leveled on 8" concrete blocks to protect the boiler from water damage. Boiler to have a 20 year life expectancy.
2. Boiler to be Carrier, Weil Mclain, Burnham, HB Smith or approved equal with cast iron wet base boiler.
3. Domestic hot water to be provided by tankless coil / super store tank
4. Install complete new smoke pipe in basement.
5. Install all required safety valves, switches, round dial type thermostat [ Honeywell, Robertshaw or approved equal ] and wiring to service unit.
6. Make all required connections to oil storage tank.
7. Make all necessary repairs to radiation to put it in good working order. All work to conform to local and state codes. New unit to be complete and operating according to the manufacturers specifications. **All operations and maintenance manuals are to be given to the owner.**

#### **5.6 - Install New Steam Heating System/Oil-Fired.**

1. Supply and install one complete new oil-fired, steam boiler of sufficient capacity to heat each habitable room to a minimum of 68 degrees Fahrenheit measured 36 inches off the floor when the outside temperature is –5 degrees Fahrenheit. Installer to supply heat loss calculations [ used to determine size of boiler ] from system designer to rehab specialist. Boiler will be installed and leveled on 8" concrete blocks to protect the boiler from water damage.
2. Boiler to be HB Smith or approved equal with cast iron wet base boiler and to have a life expectancy of 20 years.



3. Install new smoke pipe in basement.
4. Install all required safety switches, valves, thermostat [ Honeywell, Robertshaw or approved equal ], automatic feed, and wiring to service unit.
5. Make all required connections to oil storage tank.
6. Make any necessary repairs to radiators to put in good working order. All work to conform to local and state code. New unit to be complete and operating according to the manufacturers specifications. **All operations and maintenance manuals are to be given to the owner.**

#### **5.7 - Repair Incorrect Radiation Pitch.**

1. Repair defective radiator by correcting pitch, blocking legs, bleeding system to assure proper operation, and re-packing angle valves and / or new venting valves.

#### **5.8 - Install New Free Standing Radiation.**

1. Repair defective / missing heat by installing new cast iron radiator of sufficient capacity to heat room to 68 degrees Fahrenheit. Piping to be done to IBRM and manufacturer's specifications.

#### **5.9 - Install New Hot Water Baseboard Radiation.**

1. Remove defective heating components by removing all free standing radiation and supply lines and disposing.
2. Install new fin type hot water baseboard radiation of sufficient capacity to heat each habitable room to 68 degrees Fahrenheit. Installation to include all necessary valves and trim in accordance with the manufacturer's specifications and the Maine State Plumbing Code. Unit to be Petite 7, Slantfin or approved equal. Approx. \_\_\_\_ LF.

#### **5.10 - Install New Electric Baseboard Radiation.**

1. Remove defective heating by removing all free standing radiation and disposing.
2. New baseboard shall be able to maintain a temperature of 70 degrees F. at a point of three feet above the floor in all habitable rooms when the outside temperature is -10 degrees F., without overloading or scorching the walls. New heaters shall be medium density type, limited to 250 watts per foot of baseboard. Where possible, install on outside walls and under windows. Each room or air circulation area shall have only one thermostat.
3. Installation to include all necessary wiring and trim. Installation to be done in accordance with manufacturer's specifications and the National Electric Code.
4. Thermostats [ Honeywell, Robertshaw or approved equal ] to be wall mounted according to local and National Electric Code.
5. In bathrooms, baseboard heaters shall not be within reach of the bathtub. Wall or ceiling type heaters are acceptable substitutes.

#### **5.11 - Install New Oil Storage Tank.**

1. Remove oil storage tank from the premises and dispose.

2. Install new 275 gallon oil storage tank complete with all necessary hook ups and safety devices to AST standards.
3. Install complete new oil line to oil burners. Work to conform to SBC and State Fire Protection Code.

**5.12 - Install New Oil Burner Gun Unit.**

1. Remove defective oil burner gun unit and dispose.
2. Install new oil burner gun with all necessary piping and wiring [ Texaco model TFR, Beckett AFG or equal ]. Burner must be a flame retention burner. Installation shall be in accordance with manufacturer's specifications and local and state codes. Unit to be complete and operational.

**5.13 - Install New Heating Zone.**

1. Install baseboard radiation or hot air duct work and properly connect to the existing boiler or furnace. New zone is to be installed in accordance with manufacturer's specifications and all local and state codes.
2. Install new circulator and all necessary controls and wiring including a new round dial thermostat (Honeywell, Robertshaw or approved equal).

**5.14 - Install New Smoke Pipe.**

1. Remove existing smoke pipe and dispose.
2. Install new smoke pipe in accordance with all applicable state and local codes. Insulate any smoke pipe within 18" of a combustible partition / materials with magnesium pipe covering. Installation to be in accordance with manufacturer's specifications and all local and state codes.

**5.15 - Repair Ceiling Over heating System.**

1. Repair defective ceiling over heating unit by installing 5/8" fire code sheetrock or cement board to retard combustion in the area. Installation to be in accordance with applicable city and state codes.

**5.16 - Install New "Monitor" Heating System / Kerosene.**

1. Supply and install a complete new kerosene-fired Monitor 41 heater (s) sufficient to heat each habitable room to minimum 68 degrees Fahrenheit. Install all required safety switches, pump, thermostat and wiring to service unit. Make all required supply connections to kerosene storage tank.

**5.17 - Install New "Rinnai" Heating System / Gas-Fired.**

1. Supply and install a complete new gas-fired Rinnai heater(s) sufficient to heat each habitable room to minimum 68 degrees Fahrenheit. Install all required safety switches, thermostat and wiring to service unit. Make all required supply connections to gas source [ Natural or Propane ] according to all local and state codes.

**5.18 - Install New Space Heating System/Gas-Fired.**

1. Supply and install one complete new gas-fired heater [ Empire or approved equal ] sufficient to heat each habitable room to minimum 68 degrees Fahrenheit measured 36 inches off the floor when the outside temperature is -5 degrees Fahrenheit. Install all required safety switches, thermostat and wiring to service unit. Make all required supply connections to gas source [ Natural or Propane ] according to all local and state codes. Make all required supply connections to Chimney according to all local and state codes.

## **SECTION 6 - INSULATION**

### **6.1 - Install Fiberglass Insulation In Open Areas / New Construction.**

1. Install fiberglass insulation according to manufacturer's specifications [ Owens Corning, Certainteed or equal ]. Sidewalls will be insulated to a depth of 3-1/2" for a 2x4 wall and 5-1/2" for a 2x6 wall
2. Floors to a depth of 6".
3. Attics to a depth of 12" (two 6" layers with the second layer of fiberglass insulation to be installed perpendicular to the ceiling joists.
4. Install Prop-A-Vent at the eave edge of all rafter bays for proper ventilation. Maintain 3" of clearance at all electric motors and recessed light fixtures.
5. A continuous vapor barrier will be installed on all "winter warm" surfaces.

### **6.2 - Install Blown-in Insulation**

1. Existing siding will be removed in a careful manner and saved to be reinstalled after insulation is completed.
2. Insulate sidewall areas by boring holes, filling all areas [ including unheated stairwells ] with "class 1" Cellulose fiber insulation and installing correct size plug after filling cavity. Use the tube method when possible and the two hole method where necessary. Degree of flammability under 25 and a density of 3.6. Work to be done in accordance with manufacturer's specifications. Contractor will be responsible for patching all holes.
3. Install cap by blowing in class 1 Cellulose fiber insulation to a thickness of 12". Degree of flammability under 25 and a density of 3.6; settlement of less than 1-1/2" in open attic spaces.
4. Insulate sidewall areas by boring holes, filling all areas [ including unheated stairwells ] with fiberglass insulation and installing correct size plug after filling cavity. Use the tube method when possible and the two hole method where necessary. Work to be done in accordance with manufacturer's specifications. Contractor will be responsible for patching all holes. Approx. Qty=
5. Install cap by blowing in fiberglass insulation to a thickness of 12" according to the manufacturer's specifications.
6. Provide adequate cross ventilation by installing louvers, roof vents or turbine ventilators to prevent moisture build-up [ 1 SF per 150 SF of ceiling area w / o vapor barrier and 1 SF per 300 SF of ceiling area with vapor barrier ].

### **6.3 - Install Styrofoam Insulation.**

1. Install closed cell styrofoam insulation according to manufacturer's specifications [ Amoco, Owens Corning, Certainteed or equal ]. [ Bead board or "open cell" insulation is not acceptable.]
2. Sidewalls will be insulated to a depth of 2".
3. Floors to a depth of 4".

## **SECTION 7 - INTERIOR PAINTING AND CEILING AND WALL REPAIR**

**For all interior paint work that disturbs a lead paint surface, contractor shall employ the use of lead-safe practices.**

### **7.1 - Scrape and Paint Ceiling.**

1. Scrape peeling paint using lead safe practices, apply bonding agent [Plasterweld or equal] before patching crack ,fill depressions with joint compound and joint tape as necessary, Allow to thoroughly dry, sand smooth, and spot prime. All water stains shall be covered with one or more coats of Shellac based stain killer [ B-I-N-S, Killz, Kilstain or approved equal ].
2. Apply two coats [ 1 primer coat and 1 finish coat ] of washable latex flat ceiling paint [Sherwin Williams, Devoe, California or approved equal] according to manufacturer's specifications using a suitable brush or roller. Primer coat to be Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe ceiling white latex flat or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **7.2 - Replace Acoustical Ceiling Tile.**

1. Remove and dispose of defective ceiling.
2. Install new 1 x 3 Spruce strapping with 8d [minimum] common nails. Level new strapping to the greatest extent possible.
3. Apply 12" x 12" scored ceiling tiles [ Armstrong #258 or approved equal ] over new strapping according to the manufacturer's specifications.
4. Install new pine 2-1/4" [ paint grade or fingerjointed ] cove molding.
5. Apply two coats [ 1 primer coat and 1 finish coat ] of washable latex semi-gloss paint to the cove molding [Sherwin Williams, Devoe, California or approved equal ] Primer and finish coat to be Promar 200 latex semi-gloss enamel, Devoe Wonderspeed semi-gloss or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **7.3 - Install New Suspended Ceiling.**

1. Remove structurally defective ceiling. Scrape all peeling paint and remove all loose plaster using lead safe practices.
2. Install T-bar suspension system [ Chicago Metallic, Armstrong Custom Grid or equal ] with 2' x 4' acoustical panels [ Armstrong #942 textured or equal ] according to the manufacturer's

- specifications. Replace existing ceiling light with new 2' x 4' light fixture with translucent panel [ Lithonia VC 240 or approved equal ] and lower to new ceiling height [ minimum=7'-6" ]. Approx. Qty=
3. Install T-bar suspension system [ Chicago Metallic, Armstrong CustomGrid or equal ] with 2' x 2' acoustical panels [ Armstrong #914 or equal ] according to the manufacturer's specifications. Replace existing ceiling light with new 2' light fixture with translucent panel [ Starlight M-1237-8 or approved equal ] and lower to new ceiling height [minimum=7'-6"].

#### **7.4 - Repair, Patch and Paint or Paper Walls.**

1. Repair defective walls by patching removing wallpaper and disposing and taping plaster cracks and voids using lead safe practices. Cracks to be undercut prior to filling. Apply bonding agent
2. [ Plasterweld or equal ] before patching crack.
3. Sand smooth all rough and patched areas.
1. Apply two coats [ 1 primer coat and 1 finish coat ] of washable latex satin paint [ Sherwin Williams, Devoe, California or approved equal or install textured, fabric backed, vinyl wall paper [Waltex, Borden or approved equal], selected under a \$12.00 per single roll allowance by the owner, according to the manufacturer's specifications.
2. Apply paint] according to manufacturer's specifications using a suitable brush or roller. Primer coat to be Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe Wondertones latex flat or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **7.5 - Wash and Paint Walls.**

1. Clean area to be painted by washing thoroughly with TSP [ Trisodium Phosphate ] and removing all smoke, grease, grime, dirt, etc using lead safe practices. Allow to dry thoroughly.
2. Apply two coats [ 1 primer coat and 1 finish coat ] of washable latex flat paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe Wondertones latex flat or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **7.6 - Paint Woodwork.**

1. Repair chipped woodwork by sanding smooth using lead-safe practices.
2. Scrape peeling paint, fill depressions with wood putty, sand smooth, and spot prime using lead safe practices.
3. Apply two coats [ 1 primer coat and 1 finish coat ] of washable latex semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to manufacturer's specifications using a suitable brush or roller. Primer and finish coat to be Promar 200 latex semi-gloss, Devoe Wonderspeed semi-gloss or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

## **SECTION 8 - DRYWALL**

### **8.1 - Install New Sheetrock [ gypsum wallboard ] Walls.**

1. Repair defective walls by removing deteriorated sections and disposing using lead safe practices.
2. Install new 1/2" sheetrock [ gypsum wallboard ] ( Domtar, USG or approved equal ) fastened to framing using bugle head screws or ring-shanked nails. Approx. Qty=
3. Tape and seal all seams and nail heads using joint compound [ U. S. Gypsum, Gold Bond or equal ] Use three coat method. Sand smooth between coats.
4. Sand smooth top coat of joint compound and apply two coats [ 1 primer and 1 finish coat ] of washable flat latex wall paint [ Sherwin Williams, Devoe, California or approved equal ] according to manufacturer's specifications using a suitable brush or roller. Primer coat to be Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe Wondertones latex flat or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Approx. Qty=

### **8.2 - Install New Sheetrock [ gypsum wallboard ] / Ceilings.**

1. Repair structurally defective ceilings by removing deteriorated sections and disposing using lead safe practices.
2. Install new 1 x 3 spruce strapping with 8d [ minimum ] common nails. Level new strapping to the greatest extent possible.
3. Install new 1/2" sheetrock [ gypsum wallboard ] ( Domtar, USG or approved equal) fastened to framing using bugle head screws or ring shanked nails. M-R sheetrock [Greenboard ] shall not be used on ceilings.
4. Tape and seal all seams and nail heads using joint compound [ U. S. Gypsum or equal ]. Use three coat method. Sand smooth between coats.
5. Sand smooth top coat of joint compound and apply two coats [ 1 primer and 1 finish coat ] of washable flat ceiling paint [Sherwin Williams, Devoe, California or approved equal] according to manufacturer's specifications using a suitable brush or roller. Primer coat to be Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe ceiling white latex flat or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

## **SECTION 9 - EXTERIOR PAINTING**

### **9.1 – General Standards**

1. All chipping and peeling exterior lead-based paint shall be stabilized using lead-safe practices.

### **9.2 - Paint Exterior Walls, Trim, Doors, and Sashes.**

1. Repair exterior walls by preparing and painting all exterior walls, porches [ railings, columns, ceiling and decking ], windows [ frames, sashes, and casing], doors [ jamb, door, and casing ] and trim [ fascia, soffitt, rake, molding, frieze and water table ] to prevent deterioration due to weather.

2. Work to consist of all necessary scraping, sanding, caulking, putty, prime painting and 1 finish coat of paint [ Sherwin Williams A100, Devco Wonder-shield or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Lead safe practices must be employed in pre-1978 buildings containing lead-based paint. A tinted primer may be necessary depending on the owners color selection. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Owner to have choice of 3 color paint scheme.
3. Sidewalls will receive a flat latex exterior paint and all trim will receive a semi-gloss latex exterior paint. Porch decking to receive a latex floor and deck enamel.
4. Contractor will remove all storm window frames and inserts. Paint sashes and window trim. Caulk all voids and spaces.
5. Replace storm windows using clear caulking.
6. Exterior painting will not be done in rainy, damp, or frosty weather unless surface has thoroughly dried after such conditions. Owner to have choice of color from manufacturer's standard color selection.

### **9.3 - Paint Exterior Walls and Trim.**

1. Repair exterior walls by preparing and painting all exterior walls, porches [ railings, columns, ceiling and decking ], window frames, doors and frames and trim [ fascia, soffitt, rake, molding, frieze and water table] to prevent deterioration due to weather.
2. Work to consist of all necessary scraping, sanding, caulking, puttying, prime painting and 1 finish coat of paint [ Sherwin Williams A100, Devco Wonder-shield or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Lead safe practices must be employed. A tinted primer may be necessary depending on the owners color selection. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.
3. Contractor will not paint window sashes.
4. Sidewalls will receive a flat latex exterior paint and all trim will receive a semi-gloss latex exterior paint. Porch decking to receive a latex floor and deck enamel.
5. Exterior painting shall not be done in rainy, damp or frosty weather or unless surface has thoroughly dried after such conditions.

### **9.4 - Paint Trim and Sashes.**

1. Repair exterior trim by preparing and painting all exterior porches, [ railings, columns, ceiling and decking ], windows, doors and trim [ fascia, soffitt, rake, molding, frieze and water table ] to prevent deterioration due to weather.
2. Work to consist of all necessary scraping, sanding, caulking, puttying, prime painting and 1 finish coat of paint [ Sherwin Williams A100, Devco Wonder-shield or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Lead safe practices shall be employed. A tinted primer may be necessary depending on the owners color selection. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Owner to select color from manufacturer's standard color selection.
3. All trim will receive a semi-gloss latex exterior paint. Porch decking to receive a latex floor and deck enamel. Caulk all voids and spaces.
4. Contractor will remove storm window frames and inserts.

5. Paint sashes and trim. Replace storm windows using caulking.
6. Exterior painting will not be done during rainy, damp or frosty weather unless surface has thoroughly dried after such conditions. Approx. Qty=

### **9.5 - Paint Exterior Trim.**

1. Repair exterior trim by preparing and painting all exterior porches [ railings, columns, ceiling and decking ], windows, doors and trim [ fascia, soffitt, rake, molding, frieze and water table ] to prevent deterioration due to weather.
2. Work to consist of all necessary scraping, sanding, caulking, puttying, prime painting and 1 finish coat of paint [ Sherwin Williams A100, Devoe Wonder-shield or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Lead safe practices shall be employed. A tinted primer may be necessary depending on the owners color selection. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Owner to select color from manufacturer's standard color selection.
3. All trim will receive a semi-gloss latex exterior paint. Porch decking to receive a latex floor and deck enamel. Caulk all voids and spaces.
4. Contractor will not remove storm window inserts or screens or paint sashes.
5. Exterior painting will not be done in rainy, damp or frosty weather unless surface is thoroughly dried after such conditions. Owner to select color from manufacturer's standard color selection.

## **SECTION 10 - PORCHES**

### **10.1 - Replace Existing Porch.**

1. Remove and dispose of existing porch from first to \_\_\_\_\_ floor level using lead safe practices.
2. Maintain existing roof rafters, sheathing and roofing.
3. Excavate hole for 8" sonotube with footing to a depth below frostline [ approximately 4' ]. Fill sonotube with 3,000 psi concrete and allow to dry thoroughly. One hole for each vertical member. One galvanized post base anchor for each vertical member.
4. Install complete new porch using 4 x 4 standard grade pressure treated lumber for vertical columns and girts, include all required trim.
5. Install new 2 x 8 standard grade pressure treated floor joists at each level; include 8" aluminum cap flashing between joists and siding.
6. Install all new decking using 1-1/4 x 6 standard grade pressure treated decking or similar acceptable material. Contractor will repair any siding damaged during porch repair.
7. Install new handrail using 2 x 4 standard grade pressure treated top and bottom rails, 2 x 2 standard grade pressure treated balusters spaced 5" O.C. And 4 x 4 standard grade pressure treated post.
8. Install new standard grade pressure treated lattice work using 1 x 6 standard grade pressure treated lumber to conceal all ends of the lattice.



9. Install new stairs using notched 2 x 12 standard grade pressure treated stringers, 1 x 8 standard grade pressure treated risers and 2 x 6 standard grade pressure treated treads, set on 36" x 12" x 4" concrete pad.
10. Porches shall be structurally sound, reasonably level, with smooth even surfaces and have a 10-year life expectancy.

#### **10.2 - Install New Columns / Corner Posts/ Girts.**

1. Remove and dispose of existing column(s), corner posts and girts using lead safe practices.
2. Excavate hole for 8" sonotube with footing to a depth below frostline [approximately 4']. Fill sonotube with 3,000 psi concrete and allow to dry thoroughly. One hole for each vertical member. One galvanized post base anchor for each vertical member.
3. Install new standard grade pressure treated columns, corner posts or girts of the -same approximate size as originals.

#### **10.3 – Replace / Install New Deck.**

1. Replace flooring by removing and disposing of existing decking and floor joists.
2. Install new 1-1/4 x 6 standard grade pressure treated decking over new 2 x 8 pressure treated floor joists ( installed 16" O. C. ) including 8" aluminum cap flashing between joists and siding.
3. Re-install existing handrail.
4. Re-install existing steps and handrail.
5. Replacement decks shall be structurally sound, reasonable level, with smooth and even surfaces and shall have a life expectancy of 20 years.

#### **10.4 - Install New Decking Over Existing Joists.**

1. Repair decking by removing and disposing of existing decking.
2. Install new 1-1/4 x 6 standard grade pressure treated decking over existing floor joists. Include 8" aluminum cap flashing between joists and siding.

#### **10.5 - Repair Lattice Work.**

1. Repair defective lattice work by removing broken/damaged portions and disposing.
2. Install new 2 x 4 standard grade pressure treated framing to prevent movement by new lattice.
3. Install new standard grade pressure treated lattice work using 1 x 6 standard grade pressure treated lumber to conceal all ends of the lattice. Approx. Qty=

#### **10.6 - Install New Brick / Block Piers.**

1. Remove existing pier(s) and dispose.
2. Construct new pier(s) using 16" x 16" x 8" concrete footings and 12" x 12" pier(s).

3. Use new brick or 12" concrete blocks to fit and support overhead structure. All work to be done in accordance with building code. Approx. Qty=

## **SECTION 11 – MASONRY**

### **11.1 - Repair Masonry Foundation.**

1. Repair loose and broken foundation wall by removing loose bricks. Tuck point outer walls by raking joints to a depth of 3/4" and wetting work
2. Replace brick in new mortar or patch holes with new mortar. Mortar shall be mixed to match existing as close as possible. Care will be taken not to use an overly hard mortar mix that will cause the bricks to break after hardening. Mortar shall conform to Brick Institute of America [ B.I.A. ] standard specification for Portland cement-lime mortar for brick masonry (M1-88 ). Finish joints to have a concave surface [ or match existing style ]. Repair shall have a minimum life of 10 years.

### **11.2 - Repair Concrete Walk.**

1. Repair existing concrete walk. Patch hole by breaking up defective sections, leveling earth, and tamping broken concrete in place. Pour in new 3,000 psi concrete patches to meet existing level. Wood float / broom finish.

### **11.3 - Rebuild Chimney.**

1. Remove all bricks down to roof line, save bricks for reuse. Rebuild chimney using new and used bricks.
3. Install new lead flashing.
2. Finish all mortar joints to a concave surface [ or match existing style ]. Care will be taken not to use an overly hard mortar mix that will cause the bricks to break after hardening. Mortar shall conform to Brick Institute of America [ B.I.A. ] standard specification for Portland cement-lime mortar for brick masonry ( M1-88 ). Qty=
5. Install a new chimney cap. New chimney cap shall be at least 4 inches thick at the outside edge and shall slope away from the flue.
6. Repaired/rebuilt chimney shall have a life expectancy of 15 years.

### **11.4 - Point Chimney.**

1. Repair chimney by raking joints to a 3/4" depth and wetting work. Tuckpoint bricks with new mortar to match existing as close as possible. Care will be taken not to use an overly hard mortar mix that will cause the bricks to break after hardening. Mortar shall conform to Brick Institute of America [ B.I.A. ] standard specification for Portland cement-lime mortar for brick masonry (M1-88). Finish joints to have a concave surface [ or match existing style ].

### **11.5 - Remove Chimney.**

1. Remove unused chimney to below roof line and dispose. Block remaining flue with mortar and brick.
2. Close in opening where chimney was removed with jack rafters [ sized to match existing ], 1/2" CDX plywood sheathing / or 3/4" boards [ to match existing ] and new roofing [ match existing as close as possible ].

### **11.6 - Repair Concrete Retaining Wall.**

**General:** New walls shall be structurally sound and durable. Walls shall be designed to resist the lateral pressure exerted by the earth behind the wall including the material above the top of the wall. Masonry walls shall be constructed in accordance with the recommendations of the National Concrete Masonry Association. They shall have a 6 inch wide layer of gravel, crushed rock or sand between the earth and the wall, extending the full height of the wall. Block shall be set in mortar beds with joints tooled smooth, except where the exposed surface is to be parged. Reinforce block laterally and vertically where needed and fill cavities containing reinforcement with mortar. Place weep holes 10 feet on center, and at the lowest point possible above grade. All weep holes shall be screened. The top course shall contain a bond beam or be capped to provide a finished surface. All retaining walls constructed to a public way shall have the design approved by the local planning/public works department prior to commencement of work.

1. Repair defective retaining wall by removing deteriorated sections and disposing.
2. Excavate below frost line to undisturbed soil and pour new footings using new 3,000 psi concrete.
3. Form and pour new concrete wall using new 3,000 psi concrete with weep holes and #6 [ or size required by code ] reinforcement rods [ rebar ].

### **11.7 - Repair Concrete Block Retaining Wall.**

**General:** New walls shall be a minimum of 8 inches thick and shall have poured in place concrete footings no less than 6 inches thick that extend below finish grade as required by the particular installation. Block face shells shall provide a 1-1/2 inch wide mortar bed. The first course shall be set in a full mortar bed. Joints shall not exceed 3/4 inch and shall be tooled smooth, except those on an exterior face being parged. The joints between wall and footing shall be tight and have a cove of elastic caulking compound on the exterior side. Stack bond shall be laterally reinforced every second course. Provide other reinforcement where needed, or specified. Location of control joints shall be determined by the height of the wall. The top course shall be filled or capped with at least 4 inches of solid masonry or wire mesh reinforced concrete, unless the sill plate board rests on both inner and outer face shells. Anchor bolts shall be placed no more than 6 feet on center and extend through sill and cap and two filled courses. Walls shall be bonded, keyed, or anchored to existing and intersecting walls.

Porch and entrance slabs and areaways shall be anchored to the wall. All openings in the wall shall be covered with at least one coat of Portland cement parging no less than 3/8 inch thick. Walls shall have at least one coat of bituminous damp proofing material from the footing to finish grade. Backfill material shall be an appropriate sand gravel mixture for proper soil drainage. The top 3 inches shall be topsoil suitable for plant growth. Replace sod or install new sod unless otherwise specified.

1. Repair defective retaining wall by removing deteriorated sections and disposing.
2. Excavate below frost line to undisturbed soil and pour new footings, using new 3,000 psi concrete. Approximate size= 8"deep X 24" height.
3. Construct new wall using 8" x 8" x 16" concrete blocks set in new mortar; provide weep holes and cap for top of wall. Approximate size of wall=

## **SECTION 12 - PLUMBING**

**12.1 - General:** All materials, piping, fittings, fixtures, etc., shall conform to the latest ANSI (American National Standards Institute), ASTM (American Society for Testing and Materials), CS (Commercial Standards) and FS (Federal Specifications) standards. All equipment and materials used shall be new and clearly marked to permit identification of manufacturer, model and type. The contractor shall furnish all permits, instruments, gauges and equipment required for testing and shall perform those tests required by the related authorities (local and state code). Equipment, materials or work found to be defective during testing shall be replaced by new work and be retested until proven satisfactory.

All replacement sewer, water, or gas systems shall be installed complete and, if necessary, final connections shall be made to the sewer main, gas meter, or water meter.

All equipment and items installed shall operate safely, without leakage, undue noise, vibration, corrosion, or water hammer. All fixtures shall be securely supported so that no strain is placed on the connected piping. All work, fixtures and materials shall be protected at all times. All service and supply lines installed in a location where freezing may occur shall be insulated with closed cell foam insulation or wrapped with fiberglass batt insulation without vapor barrier.

When a rough in for new equipment requires connections to the existing plumbing system, the contractor shall obtain necessary data on locations, sizes, connections, fittings and arrangements needed to ensure proper installation of that equipment.

All drilling, cutting and patching necessary for a proper installation of work shall be done by the contractor. All patching shall be of the same materials, workmanship and finish as the original work and shall accurately match all surrounding work. All work shall be done without damage to structural members.

Sleevings shall be provided where required and upon completion of rough in work. Sleeves shall be made sound and fire tight. Penetration of stud and masonry walls, floors and ceilings shall be fire stopped.

All joints and connections in the plumbing and drainage systems shall be gas and water tight for the pressures required by the test of the system, with the exception of those portions of piping which are installed for the purpose of leading ground or seepage water to the underground storm drains. The contractor shall be required to wet test all plumbing systems at the expected working pressure of the system after repair and/or replacements have been made.

Existing plumbing systems, or portions thereof, including building sewers (side sewers), to remain in use shall operate free of fouling and clogging and shall not have cross-connections which may cause contamination of the water supply by back-siphonage.

Gas lines shall be blown clean with compressed air, and all valves and filters shall be checked.

Repaired plumbing fixtures shall have a life expectancy of several years and replacement plumbing fixtures shall have a life expectancy of 20 years.

### **12.2 - Repair Basement Water Supply Main.**

1. Remove all defective supply piping in basement and dispose.
2. Install complete new water supply main from meter to \_\_\_\_ floor using 3/4" type 'L' copper piping complete with all required fittings, hangers and shut-offs according to the Maine State Plumbing Code. Approx. Qty=

### **12.3 - Replace Water Piping.**

1. Remove existing pipes and dispose

2. Install new piping using 1/2" [ or larger to match existing ] type 'L' copper complete with all required fittings ,hangers, and shut-offs according to the Maine State Plumbing Code.

#### **12.4 - Repair Drain / Waste / Vent System.**

1. Repair Drain, Waste, Vent system by removing defective sections and disposing.
2. Install all new pipes and fittings in accordance with the Maine State Plumbing Code. All above ground sanitary waste and drainage piping shall be approved schedule 40 PVC pipe.
3. Repaired systems shall have a minimum life of fifteen years. Replaced components shall have a minimum life expectancy of 20 years.

#### **12.5 - Install New Washing Machine Hook-Up.**

1. Install separate drain and hot and cold water hook-ups for washing machine.
2. Drain to be 1-1/2" schedule 40 PVC, properly trapped, vented and tied to stack in accordance with the Maine State Plumbing Code.
3. Water supply lines to be 1/2" type 'L' copper with appropriate shut-offs.

#### **12.6 - Repair Blocked Soil Pipe.**

1. Repair blocked soil pipe / storm drains by cleaning out blockage.
2. Use electric roto-rooter; check sewer lines for damaged.

#### **12.7 - Install New Sump Pump.**

1. Repair water condition in basement by constructing new barrel sump with 6" base of compacted gravel.
2. Install new [Ideal DB-3 SX or equal] automatic sump pump complete with all required wiring and discharge hose. Locate sump for maximum effectiveness and make all necessary alterations for proper water discharge-water not to be directed into sanitary sewer lines.

#### **12.8 - Replace Gas Piping.**

1. Repair defective and obsolete gas piping to entire structure by disconnecting and capping all obsolete gas lines.
2. Re-pipe all [ existing / new ] gas stoves using 3/4" black iron gas piping. All piping to be concealed where possible.
3. Contractor will make all required repairs to walls, floor and / or ceilings to match existing. All work to be done in accordance with Maine State Plumbing Code. Work to be inspected for safety by Northern Utilities (or other local gas utility) before initial firing.

#### **12.9 - Install New Sink and Wood Base Unit.**

1. Remove existing kitchen sink, trap, and defective piping and dispose.

2. Install new single bowl, Stainless Steel drop-in sink [ Federal American Model MR-2522 or approved equal ] with complete metal basket strainer assembly according to the manufacturer's specification and the Maine State Plumbing Code.
- 2a. Install new double bowl, Stainless Steel drop-in sink [ Federal American Model MR-3322 or approved equal ] with complete basket strainer according to the manufacturer's specification and the Maine State Plumbing Code.
3. Install new chrome plated single lever faucet [ Moen, Peerless, Delta or approved equal ] according to the manufacturer's specification and the Maine State Plumbing Code.
4. Install new 1-1/4" PVC trap, 1/2" copper pipes, shut-offs and associated trim.
5. Install new \_\_\_" wood base unit [ Merrilatt "Omni", Yorktowne or approved equal ] with post-formed plastic laminate counter-top and backsplash. Owner to choose cabinets and countertop from manufacturer's standard selection. Unit to be as plumb and level as existing conditions allow. Caulk all seams between countertop and wall with caulking. =

#### **12.10 - Replace Drain and Trap.**

1. Remove defective drainage piping and trap and dispose.
2. Install new 1-1/4" [ bath ] / 1-1/2" [ kitchen ] PVC trap and metal tailpiece to put fixture in good operating and sanitary condition. Qty=

#### **12.11 - Install New Faucet.- Kitchen**

1. Remove existing faucet on kitchen sink and dispose.
2. Install new chrome plated faucet [ single lever / two lever / twins [ to match existing ] with metal connections under a \$65.00 fixture allowance according to the manufacturer's specification and the Maine State Plumbing Code. Unit to be Moen, Peerless, Delta or approved equal.

#### **12.12 - Install New Faucet - Bathroom**

1. Remove existing faucet on bath lavatory and dispose.
2. Install new chrome plated faucet [ single lever / two lever or twins [ to match existing ] with metal connections under a \$50.00 fixture allowance according to the manufacturer's specification and the Maine State Plumbing Code. Unit to be Moen, Peerless, Delta or approved equal.

#### **12.13 - Install New Shower Valve**

1. Remove existing shower valve and dispose.
2. Install new chrome plated faucet [ single lever / two lever or twins [ to match existing ] with metal connections under a \$90.00 fixture allowance according to the manufacturer's specification and the Maine State Plumbing Code. Work to include shower head and / or tub spout, if specified. Unit to be Moen, Peerless, Delta or approved equal.

#### **12.14 - Install New Toilet**

1. Remove existing toilet and dispose.

2. Install new free standing 1.6 gallon toilet complete with new seat, shut-off valve and all required trim and piping according to the manufacturer's specification and the Maine State Plumbing Code. Unit to be Eljer Aqualine, Universal-Rundle Atlas, American Standard or equal. Caulk all seams between lavatory and floor surface. Qty=

#### **12.15 - Install New Handicapped Toilet.**

1. Remove existing toilet and dispose.
2. Install new free standing 18" vitreous china toilet complete with new seat, shut-off valve and all required trim and piping. Unit to be Universal-Rundle 1.6 gallon or equal. Caulk all seams between lavatory and floor surface. Qty=

#### **12.16 - Install New Wall Hung Lavatory.**

1. Remove existing lavatory unit and dispose.
2. Install new wall hung lavatory [ American Standard Model Declyn ] with new faucet-[ single lever / two lever or twins [ to match existing ], 1-1/4" chrome trap, two chrome shut-off valves and all associated trim. Unit to be Eljer, American Standard or approved equal. Caulk all seams between lavatory and wall surface. Qty=

#### **12.17 - Install New Handicapped Wall Hung Lavatory.**

1. Remove existing lavatory unit and dispose.
2. Install new wall hung vitreous china lavatory [ Universal-Rundle Model 4682 { 8" O.C. } 4683 { 4" O.C. } or equal. Install new faucet with wrist paddles and goose neck riser or equal. Work to include 1-1/4" handicapped chrome trap, two chrome shut-off valves and concealed arm carrier. Caulk all seams between lavatory and wall surface. Qty=

#### **12.18 - Install New Vanity.**

1. Remove existing lavatory unit and dispose.
2. Install new one piece cultured marble lavatory in new 20" free standing vanity according to the manufacturer's specification and the Maine State Plumbing Code. Vanity to be Merrilatt, Yorktowne or approved equal. Lavatory to be Eljer, American Standard or approved equal.
3. Installation to include new faucet-[ single lever / two lever / twins [ to match existing ], 1-1/4" PVC trap, two shut-off valves and all associated trim. Lavatory and faucet to be Eljer, American Standard or approved equal.

#### **12.19 - Install New Bathtub / Shower Unit.**

1. Remove existing bathtub and dispose.
2. Install new 5' recessed fiberglass tub with complete shower facilities [ Lasco Model 2603-trio, 2603-2p or approved equal] according to the manufacturer's specification and the Maine State Plumbing Code.
3. Install new chrome plated shower valve [ single lever / two lever ] [ to match existing ]. Work to include low flow shower head and tub spout, shower rod and all associated trim. Valve unit to be Moen, Peerless, Delta or approved equal. Caulk all seams between fixture all surfaces using “ brand caulk or equal.

### **12.20 - Install New Handicapped Bathtub.**

1. Remove existing bathtub and dispose.
2. Install new 60" fiberglass tub with complete shower facilities [ Universal-Rundle Summit 60 TS, Aquaglass Model SC6183 or approved equal ] according to the manufacturer's specification and the Maine State Plumbing Code.
3. Install new pressure balanced chrome plated shower valve [ Symmons Temptrol or equal ]. Work to include shower head, tub spout, hand held shower head, shower rod and all associated trim. Caulk all seams between fixture all surfaces.

### **12.21 - Install New Handicapped Shower Unit.**

1. Remove existing bathtub / shower unit and dispose.
2. Install new 48" fiberglass shower [ Universal-Rundle Summit Series 60S, Aquaglass Model SC4983 or approved equal ] according to the manufacturer's specification and the Maine State Plumbing Code.
3. Install new pressure balanced chrome plated shower valve [Symmons Temptrol or approved equal]. Work to include low flow shower head, tub spout, hand held shower head, shower rod and all associated trim. Caulk all seams between fixture and other surfaces.

### **12.22 - Install New Three Piece Bathroom.**

1. Remove existing plumbing and fixtures and dispose, including floor, fixtures and piping throughout bathroom.
2. Install new 4" and 1-1/2" schedule 40 PVC drain and waste lines and 3" vent piping, complete with all fittings and traps.
3. Install new 1/2" type 'L' copper water supply lines with shut-off valves at all fixtures.
4. Install new free standing 1.6 gallon toilet complete with new seat, shut-off valve and all required trim and piping according to the manufacturer's specification and the Maine State Plumbing Code. Unit to be Eljer Aqualine, Universal-Rundle Atlas, American Standard or equal. Caulk all seams between lavatory and floor surface with caulking. Qty=
5. Install new one piece cultured marble lavatory in new 20" free standing vanity according to the manufacturer's specification and the Maine State Plumbing Code. Vanity to be Merrilatt, Yorktowne or approved equal. Lavatory to be Eljer, American Standard or approved equal.
6. Installation to include new single lever chrome faucet [ Moen, Peerless, Delta or approved equal ], 1-1/4" trap, two shut-off valves and all associated trim. Owner to select vanity top color from manufacturer's standard colors.
7. Install new 5' recessed fiberglass tub with complete shower facilities [ Lasco model 2603-trio, 2603-2P or approved equal ] according to the manufacturer's specification and the Maine State Plumbing Code. Owner to select fixture color from manufacturer's standard colors.
8. Install new chrome plated single lever shower valve. Work to include low flow shower head and tub spout. Shower valve to be Moen, Peerless, Delta or approved equal. Install shower rod and all associated trim. Caulk all seams between fixture all surfaces.



### **12.23 - Install New One Piece Shower Stall.**

1. Install new 36" x 36" fiberglass shower stall [ Lasco 1363, Swan, Eljer or approved equal ] according to the manufacturer's specification and the Maine State Plumbing Code. Caulk all seams between fixture and floor.
2. Install new chrome plated single lever shower valve lever [ Moen, Peerless, Delta or approved equal. Work to include low flow shower head, shower rod and all associated trim.

### **12.24 - Install New Built-up Shower Stall.**

1. Repair shower by constructing new shower stall receptor using 2 x 4 Spruce studs [ #2 or better ] and 1/2" M-R sheetrock [ Greenboard ]. Frame opening for plywood access door to plumbing fixtures.
2. Tape and seal all seams and nail heads using joint compound -three coat method.
3. Finish walls using 4-1/2" x 4-1/2" glazed ceramic tiles [ American Oleans or approved equal ] with all required trimmers using thin set method.
4. Installation to include new chrome, single lever, non-scald valve and connection to all supply lines and drains. Size= \_\_\_" x \_\_\_" x \_\_\_". Caulk all seams between fixture all surfaces. Qty=

### **12.25 - Install New Diverter.**

1. Remove existing diverter and dispose.
2. Install new anti-scald type diverter with all associated trim. Unit to be Eljer, Delex or approved equal. Contractor will repair walls to match existing. Qty=

### **12.26 - Convert Clawfoot Bathtub to Bathtub / Shower.**

1. Install new Portofino add-a-shower [ RX2300-RX2350 or approved equal ].

#### **If Construction or Retrofit Required for Tub or Shower Installation:**

1. Frame in end of bathtub using 2 x 4 Spruce plates and studs (16" O. C.) and 1/2" M-R [Greenboard] sheetrock. Frame opening for plywood access door to plumbing fixtures.
2. Tape three coats and sand smooth between coats.
3. Apply two coats [ 1 primer and 1 finish coat ] of washable flat latex wall paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 latex primer, Devoe Wondertones latex primer or other such paint that is labeled as a latex primer. Finish coat to be Promar 200 latex flat wall, Devoe Wondertones latex flat or approved equal. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Owner to select fixture color from manufacturer's standard colors. Approx. Qty=

### **12.27 - Install New Electric Hot Water Heater.**

1. Remove existing hot water heater and dispose.
2. Install new 30 / 40 / 50 gallon electric hot water heater [ Bradford-White, State or approved equal ] according to the manufacturer's specifications and the Maine State Plumbing Code. Unit

to have all required cold water shut-off valves, vacuum relief valves, and self closing temperature and pressure relief valves. Make all required electrical connections. If new installation, hwh to have separate circuit breaker. Unit to be inspected by local Plumbing Inspector and local Electrical Inspector.

#### **12.28 - Install New Gas Hot Water Heater.**

1. Remove existing hot water heater and dispose.
2. Install new 30 / 40 / 50 gallon gas hot water heater [ Bradford-White, State or approved equal ] according to the manufacturer's specifications and the Maine State Plumbing Code. Unit to have all required cold water shut-off valves, vacuum relief valves, and self closing temperature and pressure relief valves. Make all required connections to gas supply lines. Unit to be inspected by Northern Utilities for safety before firing. Unit to be inspected by local Plumbing Inspector.

#### **12.29 - Install New Sprinkler Head Over Boiler / Furnace.**

1. Install new sprinkler head over the existing boiler / furnace and connect to the nearest domestic water line according to the Maine State Plumbing Code. Qty=

### **SECTION 13 - ROOFING AND SHEATHING**

**13.1 - General Requirements:** Prior to starting work, the contractor shall examine the roof to determine that all repairs affecting roofing have been completed as scheduled.

When new metal chimney, vent stack, roof vent, etc., are scheduled to be installed, the contractor shall cooperate with other contractors in installing flashing and counter flashing. This contractor shall also install new flashing in place of all damaged, deteriorated or missing flashing incidental to the repair or new installation. New flashing shall be installed in all valleys. The contractor shall seal all roof openings and exposed roof edges, chimneys, porch roofs, dormers, skylights and vents, with plastic asphalt cement as needed to insure water tight joints. Roofing shall be applied in accordance with the recommendations of the manufacturer. Once it has been started, the roof application shall not be delayed, except when absolutely necessary due to inclement weather. Each layer of roofing felt shall have been surfaced or glazed by the end of the working day. Should inclement weather arise it is the responsibility of the contractor to provide adequate protection of the structure and its contents.

When a new roof is installed, roof vents shall be installed to provide adequate ventilation in all attic areas. New roofing installation shall conform to the requirements for the Underwriter's Laboratories, Inc. Class C label; a copy of the guaranteed fire classification shall be provided to the owner. New roofing material shall have a minimum 25 year manufacturer's guarantee. When existing roofing is brittle, badly cupped, or rotted, new material shall not be placed over existing.

The quality of materials and workmanship for repairs shall meet the same standards as new installation. The contractor shall make repairs or replacements needed to roofing, flashing, drip edges, cant strips, gravel stops, etc., to provide a water proof installation. When removing damaged sections of existing roofing, replace asphalt-saturated felt. Color, size and texture and type of new roofing material shall match existing as closely as possible. Roof shall be structurally sound and shall not cause leakage of roof or walls.

Other general repair standards include the use of fiberglass asphalt, 3 tab, Class A shingles weighing at least 200 and up to 240 lbs with a prorated 25 year warranty with continuous ridge vent.

#### **13.2 - Strip Off Existing Roofing / Install New Strip Shingles.**

1. Remove existing roofing down to sheathing.

2. Repair defective sheathing with new sheathing [ match existing boards or CDX plywood]. Allow for replacement of 10% of total roof area.
3. Lay down 15# Felt according to the manufacturer's specifications. Install 8" aluminum drip edge at eave edge and rake. Install 3' wide 'Grace' ice and water shield [ or approved equal ] at eave edge and all valleys. Use an approximate 12" wide strip of ice and water shield under existing or new chimney flashing to counter flash chimney flashing. Install new asphalt 3-tab strip shingles-235# per square [ IKO AM Armour Seal, Celotex Sol-Seal 20, Certainteed Sealdon 20 or approved equal ] using roofing nails [ staples are not to be used ]. Shingles to have a 25 year warranty. Work to include all necessary metal flashing. Shingles to carry National Underwriter's class 'C' label. All valleys are to have the shingles weaved together.

### **13.3 - Install New Asphalt Shingles Over Existing Roof.**

1. Repair defective roof by install new asphalt 3-tab strip shingles -235# per square [ IKO Armour Seal, Celotex Sol-Seal 20, Certainteed Sealdon 20 or approved equal ] using roofing nails [ staples are not to be used ]. Shingles to have a 25 year warranty. Shingles to carry National Underwriter's class 'C' label. Work to include 8" aluminum drip edge, caulking with roof cement and / or replacement of all flashing.

### **13.4 - Install New Tar and Gravel Roof.**

1. Repair defective flat roof by removing tar and gravel roofing down to base sheet and disposing.
2. Apply new three-ply tar and gravel roof over new buttoned felt base sheet using fasteners recommended by the manufacturer. Install new aluminum edge cleat. Finished surface shall be composed of three successive layers of 15# Felt impregnated with hot asphalt or hot coal tar with a final layer in which roofing gravel is imbedded. Replace all metal flashing and shoes on stacks.  
Approx. Qty=

### **13.5 - Install New Balled Roof.**

1. Remove defective flat roof down to base sheet and dispose.
2. Repair all breaks and bares with patches of 15# felt nailed down with fasteners recommended by the manufacturer and sealed with hot asphalt.
3. Install new metal edge cleat. Apply three successive layers of 15# Felt impregnated with hot asphalt. Cover entire area with flood coat of hot pitch.

### **13.6 - Install New Rolled Roofing Over Existing \Roofing.**

1. Repair pitched roof covered with rolled roofing by applying new 90# double coverage rolled roofing over existing roofing using roofing nails [ staples are not to be used ]. Use new aluminum edge flashing at gutters.
3. Roofing material [ Bird, GAF or approved equal ] to be installed in accordance with manufacturer's specifications including roof cement and blind nailing.

### **13.7 - Strip Off Existing Roofing / Install New Rolled Roofing.**

1. Remove existing roofing down to sheathing and dispose.
2. Replace any defective sheathing [ match existing plywood or boards ] using galvanized common nails. Allow for replacement of 10 % of the total roof area.

3. Apply single layer of 15# Felt and new 90# double coverage Rolled Roofing; installation in accordance with manufacturer's specifications including roof cement and blind nailing with roofing nails [ staples are not to be used ].
4. Trim roof into gutter for proper drainage.

### **13.8 - Strip Off Existing Roofing / Install New Membrane Roof.**

1. Repair defective flat roof by removing roofing down to base sheet and disposing.
2. Install a fully adhered elastomeric sheet with membrane underlay over existing substrate. Install flashing around vents, pipes and chimney as per manufacturers recommendations. Install new membrane to new roof drain [ Uflow or approved equal]. Replace broken pipes as necessary.
3. Roofing contractor shall be responsible for all work at roof area, including flexible sheet roofing system and new metal cap flashing. These systems shall be completely integrated and provide a water tight roof assembly.
4. Obtain primary flexible sheet roofing from a single manufacturer. Provide secondary materials as recommended by manufacturer of primary materials.
5. Install flexible sheet roofing in order to minimize seams and to accommodate contours of the roof deck and proper drainage across shingled laps of sheets.
6. Install flexible sheet roofing as per manufacturer's recommendations. Install mechanical fasteners, flashing and counterflashings and accessories at locations and as specified by manufacturer. Provide tapered cants, crickets and other areas of tapered insulation as may be required by roof manufacturer for positive drainage.
7. Flexible sheet roofing material shall be not less than 60 mils and equal to Firestone "Rubber Guard".
8. Warranty period shall be not less than 10 years after date of substantial completion to repair / replace defective materials and workmanship, 25 years for membrane. Roofing contractor shall provide owner with certificate that the warranty has been purchased and that the warranty seal has been installed on the roof by the manufacturer's representative, if available. Approx. Qty=

### **13.9 - Repair Flashing and Valleys.**

1. Repair pitched roof by installing new lead sheet base flashing to chimneys.
2. Repair or renew valleys and any necessary work to put roof into first class shape. Provide owner with one year guarantee. Approx. Qty=

### **13.10 - Patch Tar and Gravel Roof.**

1. Repair flat roof by patching existing roofing by scraping to base sheet.
2. Apply three ply tar and gravel roof with connection to old roof.
3. Install new flashing where needed and any further required work. No Guarantee. Approx. Qty=

## **SECTION 14 - SIDING**

### **14.1 - Install New Wood Siding.**

1. Repair siding by covering all sidewalls with new siding [ 1/2" x 6" R. C. / Pine clapboards, W. C. Shingles or 5 / 8" T1-11 ] using existing siding as an underlayment. Clapboards will be installed at 4" exposure [ to the weather ] and shingles will be installed at 5" exposure [to the weather ]. Siding to be installed in accordance with the manufacturer's specifications using galvanized nails [aluminum or stainless steel for Red Cedar]. Lead safe practices shall be employed when disturbing painted surfaces.
2. Install new Pine molding [ prime painted ] as required.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior flat paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be A100 alkyd exterior primer, Devoe Allweather primer or other such paint that is labeled as a latex primer. Finish coat to be A100 latex flat wall, Devoe Wondershield latex flat or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.
4. Apply two coats [ 1 primer and 1 finish coat ] of exterior solid stain [ Sherwin Williams, Devoe, California or approved equal ]. Primer coat to be Sherwin Williams solid color exterior stain, Devoe solid color latex stain or approved equal. Finish coat to be Sherwin Williams solid color latex stain, Devoe solid color latex stain or approved equal.

All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **14.2 - Install New Aluminum Siding.**

1. Repair siding by installing new aluminum siding to entire structure.
2. Prepare walls by re-nailing existing siding to provide smooth surface. Install all required Spruce laths. Lead safe practices shall be employed when disturbing painted surfaces
3. Install new 1/4", 3/8" Amocor fanfold underlayment extruded Polystyrene insulation according to the manufacturer's specifications. All joints will be sealed with 3M contractor sheathing tape. All cuts at windows and doors will be cleanly cut and closely fitted.
4. Double four (8") or double five (10") aluminum siding shall be installed with all required trimmers in accordance with the manufacturer's specifications [ ALCOA 4NA or D519, or approved equal ]. Siding to be properly grounded in accordance with the National Electric Code.

### **14.3 - Install New Vinyl Siding.**

1. Repair siding by installing new vinyl siding to entire structure.
2. Prepare walls by re-nailing existing siding to provide smooth surface. Lead safe practices shall be employed when disturbing painted surfaces.

3. Install new 1/4", 3/8" Amocor fanfold underlayment extruded Polystyrene insulation according to the manufacturer's specifications. All joints will be sealed with 3M contractor sheathing tape. All cuts at windows and doors will be cleanly cut and closely fitted.
4. Install all required Spruce laths or starter strips.
5. Double four ( 8" ) or double five ( 10" ) vinyl siding [Alcoa Liberty, Alside, Certainteed or approved equal] shall be installed in accordance with manufacturer's specifications. Owner to select color from manufacturer's standard colors. Work to include all starter strips, J molding and corner boards.
6. Exterior window sills, jambs and header will be covered with white aluminum coil stock using color coordinated nails.
7. Install new ventilated vinyl soffitt, aluminum coil stock fascia and rake [ Bird, Mastic, Alside or approved equal ] to entire roof line according to the manufacturer's specifications.

#### **14.4 - Repair Wood Cornice and Moldings.**

1. Repair wood cornice by removing rotted/defective soffitt boards, rake boards and molding and dispose. Lead safe practices shall be employed.
2. Install new 1 x \_\_\_ Pine members-select or better using common galvanized nails.
3. Apply 1 coat of Shellac based sealer [ Killz, B-I-N-S or approved equal] to all knots.
4. Apply two coats [ 1 primer and 1 finish coat ] of exterior flat paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 alkyd exterior primer, Devoe Allweather primer or other such paint that is labeled as a latex primer. Finish coat to be Sherwin Williams A100 latex flat wall, Devoe Wondershield latex flat or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **SECTION 15 - STAIRS AND RAILS**

#### **15.1 - Install Complete New Interior Stairs.**

1. Remove existing stairs and dispose using lead safe practices if existing stairs are painted.
2. Install new stairs using notched 2 x 12 Spruce stringers, 1 x 8 Pine risers and 10-1/2" Hard Pine treads, set on [ existing ] concrete.
3. Install new 2 x 4 Spruce top and bottom handrail, 2 x 2 Spruce balusters spaced 5" O. C. And 2 x 4 Spruce post-anchored to solid footing.
4. Sand smooth edges of 2 x 4 Spruce to reduce splintering.
5. Apply two coats [ 1 primer and 1 finish coat ] of interior paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams industrial enamel, Devoe latex enamel undercoat or approved equal. Finish coat to be Sherwin Williams industrial enamel, Devoe porch and floor latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.2 - Replace Railings and Balusters.**

1. Replace defective / missing railings by installing all new wood rails [ Brosco or approved equal ], balusters [ Brosco or approved equal ] and posts [ Brosco or approved equal ] to provide a safe railing according to the BOCA building code. Approx. Qty=
2. Apply one coat [ 1 primer coat ] of interior solid stain [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams solid color interior stain, Devoe solid color latex stain or approved equal. Finish coat to be Sherwin Williams polyurethane gloss varnish, Devoe Truglaze-WH gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.3 - Replace Defective/Missing Balusters.**

1. Repair defective / missing balusters by installing new Pine or Birch balusters-match existing as close as possible. Qty
2. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [Sherwin Williams, Devoe, California or approved equal] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones semi-gloss latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.4 - Secure Wall Hung Railing.**

1. Repair wall hung rail at stairs by blocking framing members top properly secure brackets or install new clear Pine backing secured to framing members and re-install rail to new Pine. Apply Shellac based sealer [ Killz, B-I-N-S or approved equal ] to all knots.
2. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones semi-gloss latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.5 - Install New Basement Handrail.**

1. Install a new 2 x 4 Spruce [ on flat ] handrail and 2 x 4 Spruce post-anchored to solid footing.
2. Sand smooth edges of 2 x 4 spruce to reduce splintering.
3. Apply two coats [1 primer and 1 finish coat ] of interior flat paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones satin latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.6 - Install New Handrail.**

1. Remove existing hand rail and dispose. Install new 1-1/2" oval Fir handrail [ Brosco #75 or equal ]. Qty=
2. Install brass handrail brackets [ Stanley, Ives, or approved equal ] spaced to provide adequate support. Approx. Qty=
3. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones satin latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **15.7 - Install New Exterior Wood Steps.**

1. Remove existing wood steps and dispose. If existing steps are painted, use lead safe practices to remove and dispose.
2. Install new wood steps using notched 2 x 12 standard grade pressure treated stringers, 2 x 6 standard pressure treated treads and 5/4 x 6 standard grade pressure treated risers.
3. Steps to bear on \_\_\_" x 12" x 4" concrete slab at grade.
4. Tread and riser ratio to conform to BOCA building code. Qty= # Risers; # treads
5. Install new handrail using 2 x 4 standard grade pressure treated top and bottom rails, 2 x 2 standard grade pressure treated balusters spaced 5" O.C. and 4 x 4 standard grade pressure treated post. Post to be lag bolted to stringers to provide adequate support for post.

### **15.8 - Install New Concrete Steps.**

1. Remove existing defective concrete steps and dispose.
2. Excavate below frost line and pour new footings using new 3,000 psi concrete containing rebar of sufficient size [ #6 minimum ] to support new steps.
3. Construct new plywood forms and pour concrete steps using 3,000 psi concrete. Broom finish.
4. Tread and riser ratio to conform to BOCA building code. Qty= Set(s); # treads= #risers=

### **15.9 - Install / Replace Brick Steps.**

1. Remove existing brick steps and dispose.
2. Install new concrete brick steps, set on new footings using new 3,000 psi concrete containing rebar of sufficient size [ #6 minimum ] to support new steps and capped with new bricks. Tread and riser ratio to conform to BOCA building code. Qty= Set(s); #treads= , #risers=
3. Point bricks with new mortar to match existing as close as possible. Care will be taken not to use an overly hard mortar mix that will cause the bricks to break after hardening. Mortar shall conform to Brick Institute of America [ B.I.A. ] standard specification for Portland cement-lime mortar for brick masonry (M1-88).
4. Finish joints to have a concave surface [ or match existing style ].



**15.10 - Install New Wheel Chair Ramp**

1. Wheel chair ramp must be installed in accordance with the American National Standards Institute (ANSI) ICC/ANSI A117.1-98 which addresses Accessible and Usable Buildings and Facilities.
2. Ramp runs shall have a running slope not steeper than 1:12. Exception: Ramps in or on existing buildings or facilities shall be permitted to have slopes steeper than 1:12 complying with the table below where such slopes are necessitated by space limitations.

Slope	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

A slope steeper than 1:8 shall not be permitted.

3. Cross slopes of ramp runs shall not be steeper than 1:48. The clear width of a ramp run shall be 36 inches (915 mm) minimum.
4. The rise for any ramp run shall be 30 inches (760 mm) maximum.
5. Ramps shall have landings at bottom and top of each run. Landings shall have a slope not steeper than 1:48 and clear width of landings shall be at least as wide as the widest ramp run leading to the landing.
6. Landing length shall be 60 inches (1525 mm) minimum clear. Ramps that change direction at landings shall have a 60 inch (1525 mm) minimum by 60 inch (1525 mm) minimum landing.
7. Ramps with a rise greater than 6 inches (150mm) shall have handrails complying with Section 505 of ICC/ANSI A117.1-98. Handrails shall not reduce the required clearances of a ramp run or landing.
8. Edge protection shall be provided on each side of ramp runs and at each side of ramp landings.

**SECTION 16 – BATHROOM WALLS, CABINETS, AND VENTS**

**16.1 - Install New Ceramic Wall Tile.**

1. Repair walls by installing new first quality glazed ceramic wall tile to 4' around walls and 5' above top rim of tub over 1/2" M-R sheetrock [ Greenboard ], Durock cement panel or approved equal, according to the manufacturer's specifications.. Tile to be 4-1/2" x 4-1/2" [ American Orleans, Wenzel, Mosaic Tile Co. or approved equal ] with all necessary trimmers and ceramic accessories. Use thin set method. Owner to select from manufacturer's standard color selection of tile and grout [ Hydroment or approved equal ].
2. Walls above tile will be covered with pre-pasted fabric backed vinyl wallpaper [ Walltex or approved equal ]. Installation of wallpaper will be according to the manufacturer's specifications. Owner to select wallpaper color / pattern under a \$12.00 per single roll allowance.
3. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 latex primer, Devoe Wondertones primer or other such paint that is labeled as a latex primer. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications.

All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **16.2 - Install New Laminated Hardboard Walls.**

1. Repair walls by installing new laminated hardboard [ Marlite or approved equal ] with waterproof adhesive to a height of \_\_\_' around the room; and to a height of \_\_\_' above the top rim of the tub, include all required trim. Installation to be done in accordance with manufacturer's specifications . Owner to select from manufacturer's standard color selection.

#### **16.3 - Install Lighted / Unlighted Medicine Cabinet.**

1. Remove existing medicine cabinet and dispose.
2. Install new surface mounted / recessed medicine cabinet with integrated incandescent / fluorescent light/ bar connected to a wall switch. Owner to have selection of cabinet up to \$100.00 allowance. Cabinet to be Nutone or approved equal.
- 2a.. Install new surface mounted / recessed non-lighted medicine cabinet. Owner to have selection of cabinet up to \$50.00 allowance. Cabinet to be Nutone or approved equal.

#### **16.4 - Install New Mechanical Vent.**

1. Provide adequate bathroom ventilation by installing new mechanical ventilation fan [ Nutone model 693 or lighted Model 671 ] and metal or vinyl ductwork connected to proper wall switch. Ventilation to meet requirements of BOCA building code. Unit must be vented to the exterior of the structure not into attic or crawl space.

### **SECTION 17 - DOORS**

#### **17.1 - Install New Exterior Door.**

1. Remove existing front / rear door , jamb and casing and dispose using lead safe practices of door components are painted.
2. Install new pre-hung 6 panel metal door with metal threshold and casing both sides [ 1 x 4 select Pine casing on the exterior and interior ]. Door to be Stanley K1, Brosco BE-70 or approved equal.
- 2a. Install new pre-hung 9-lite metal door with metal threshold and casing both sides [ 1 x 4 select Pine casing on the exterior and interior ]. Door to be Stanley K4, Brosco BE-89 or approved equal.
3. Install fiberglass insulation between door jamb and framing and latex caulk where specified by manufacturer's instructions. Do not overstuff cavity and bind door.
4. Work to include key-in-knob lockset [ Schlage F51 or equal ] and a deadbolt.
5. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devoe Wondertones latex semi-gloss or approved equal. All work

to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **17.2 - Install New Interior Door.**

1. Remove existing interior door and dispose. Employ lead safe practices if interior door is painted.
2. Install new [ 6-panel Pine / 6-panel Masonite / flush Luaun hollowcore ] pre-hung, split-jamb door.
3. 1 x 4 Pine / Colonial / Clamshell casing [ fingerjointed material allowed ] to be installed on two sides.
4. Work to include lockset [ Schlage F10 / F40 or approved equal].
5. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones satin latex or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Qty=

#### **17.3 - Install New Interior Door on Existing Jamb.**

1. Remove existing interior door and dispose. Use lead safe practices if door or existing jamb is painted.
2. Install new wood door [ style to match existing as close as possible ] on new 4-1/2" x 4-1/2" hinges [ Stanley or approved equal ] in existing frame. Lead safe practices shall be employed.
3. Work to include new lockset [ Schlage F10 / F40 or approved equal ].
4. Apply two coats [ 1 primer and 1 finish coat ] of interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Qty=

#### **17.4 - Rehang Existing Door.**

1. Repair existing door by rehangng door on new hardware 4-1/2" x 4-1/2" hinges [ Stanley or approved equal ]. Fit and adjust door to operate properly. Lead safe practices shall be employed when rehangng door that is painted or if jamb/frame is painted. Qty=

#### **17.5 - Install New Hardware.**

1. Repair defective door by replacing all missing / defective hardware including lockset. Hardware to be Stanley or equal / locksets to be Schlage F10 [ passage ] / F40 [ privacy ] / F51 [ entrance ] or equal. Qty=

#### **17.6 - Install New Storm Door.**

1. Remove existing storm door and dispose.

2. Repair entrance to make weathertight by installing new white, Vinyl clad, wood core, or solid wood self-storing storm door [ Waterville "Mainline Deluxe", Larsen model 290-SS [ Kwik Way Heritage series or approved equal]. Door to selected by owner.

#### **17.7 - Install New Weather Stripping.**

1. Repair front / rear door by weather stripping with exterior metal weather stripping.

#### **17.8 - Repair Broken / Cracked Storm Door Glass.**

1. Remove broken panes on door and clean rabbet.
2. Install new tempered safety glass with points and new putty or insert with rubber spline or gasket , or molding to match original. Putty to be as smooth and even as possible.

### **SECTION 18 - WINDOWS**

**All window work shall be performed in accordance with HUD Lead Safe practices. Replacement windows shall have a minimum life of 20 years.**

#### **18.1 - Install Complete New Wood Window.**

1. Remove existing window and dispose. Use lead safe practices if window is painted.
2. Install complete new vinyl clad / primed // double hung / casement / awning window, frame and casings. Window to have 1/2" insulated glass and full screen .Unit to be Andersen, Crestline, Weathershield or approved equal.
3. 1 x 4 Pine / Colonial / Clamshell casing [ fingerjointed material allowed ] to be installed on interior using appropriate size finish nails.
4. Install fiberglass insulation and caulking around perimeter of new window in accordance with the manufacturer's specifications. Do not overstuff fiberglass insulation into crevasses.
5. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] to new wood according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devoe Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **18.2 - Install Two New Wood Sashes.**

1. Remove existing window sashes and dispose. Use lead safe practices if window sashes are painted.
2. Install two new wood sashes with 1/2" insulated glass on aluminum / vinyl sash runs. Fit and adjust sash for easy operation.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] to new sashes according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devoe Wondertones satin latex or

approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. The contractor will not be responsible for refitting window shades or supplying new ones.  
Window qty=

### **18.3 - Install New Metal Window.**

1. Remove existing metal window and dispose.
2. Install new aluminum replacement window [ New England, Nu-Sash or approved equal ] according to the manufacturer's specification. Contractor will be responsible for replacement of all trim inside and out

### **18.4 - Install New Vinyl Window.**

1. Remove existing window sashes and dispose. Use lead safe practices if existing window(s) is painted.
2. Install new vinyl replacement window [ Alside, Certainteed, Poly-TEX, Atrium or approved equal ] according to manufacturer's specifications [ including insulating the window weight cavities and silicone caulking ]. Windows will be double hung, with tilt out sashes, 3/4" insulated glass and half screen.
- 2a. Install new vinyl replacement window [ Alside, Certainteed, Poly-TEX, Atrium or approved equal ] according to manufacturer's specifications [ including insulating the window weight cavities and silicone caulking ]. Windows will be double hung, with a fixed upper sash, with tilt out bottom sash, 3/4" insulated glass and half screen.

#### **IF:**

3. Any trim or molding broken by the contractor during removal of said trim / molding will be replaced and painted to match existing trim / molding.
4. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [ Sherwin Williams, Devco, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devco alkyd undercoat, or approved equal.

### **18.5 - Install One New Sash.**

1. Remove existing sash and dispose. If sash is painted, use lead safe practices.
2. Install one new wood sash with 1/2" insulated glass / single strength glass. Fit and adjust sash for easy operation.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [ Sherwin Williams, Devco, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devco alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devco Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **18.6 - Install New Sash Cords.**

1. Repair defective window(s) by installing new sash cord on left / right / both side(s). Qty=

#### **18.7 - Install New Parting Bead(s).**

1. Repair defective window ( s ) by replacing rotting / broken parting bead with new parting bead(s) on left / right / both side ( s ) of window. Qty= If existing parting beads are painted, use lead safe practices.

#### **18.8 - Adjust Side Stops ( Window Bands ).**

1. Repair defective window ( s ) by adjusting stops and fitting sash to allow easy operation. Qty= If existing stops are painted, contractor shall employ lead safe practices.

#### **18.9 - Install New Sash Runs.**

1. Repair defective window(s) by installing complete new [ Air-Loc or approved equal ] vinyl sash runs according to the manufacturer's specifications. Fit and adjust sash for easy, smooth operations.

#### **18.10 - Install New Storm / Combination Window.**

1. Remove existing storm windows and dispose.
2. Install new white / brown / mill finish triple track aluminum combination storm / screen units [ Harvey "Carefree", Waterville Mainliner or approved equal ] according to the manufacturer's specifications using caulking.

#### **18.11 - Replace Broken Pane.**

1. Repair broken window lite by removing sash from opening and dispose of broken glass.
2. Install new glass, after cleaning rabbet, using putty / glazing compound on both sides of new glass and glazing points. Putty shall be installed for a smooth uniform appearance.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devoe Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from runs, drips, voids, holidays and brush marks.

#### **18.12 - Repair Broken Storm Pane.**

1. Repair broken storm window pane by removing insert and dispose of broken glass.
2. Install new tempered safety glass or Lexan [ plastic glass ] in insert with appropriate spline or gasket.

#### **18.13 - Repair / Replace Wooden Skylight.**

1. Remove existing skylight and dispose
2. Install new venting wood skylight on existing hardware.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior / interior semi-gloss paint [Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams A100 / Promar 200 alkyd

enamel undercoater, Devco alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams A100 / Promar 200 latex semi-gloss, Devco Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

## **SECTION 19 – MISCELLANEOUS**

### **19.1 - Install New Post.**

1. Remove defective or temporary post(s). Use lead safe practices if existing post is painted.
2. Excavate and install new 12" x 12" x 8" concrete footing(s).
3. Install new 3-1/2" concrete filled lally columns with all necessary steel plates. Qty=

### **19.2 - Install New Sill(s).**

1. Repair existing sill(s) by shoring area and remove rotted / broken members. Use lead safe practices if existing sill is painted.
2. Install new \_\_ x \_\_ standard grade pressure treated sill(s). Qty= LF.

### **19.3 - Install New Center Girder.**

1. Repair defective center girder by shoring area and removing rotting / broken sections.
2. Install new \_\_ x \_\_ spruce / standard grade pressure treated lumber. Joists shall bear on a minimum of 3-1/2" on new work. Qty= LF.

### **19.4 - Install New Ceiling Supports.**

1. Repair ceiling framing by installing two permanent 3-1/2" lally columns with all necessary steel plates on new 12" x 12" x 8" concrete footings.
2. Install one new 4" x 8" header using construction grade lumber. Qty= LF.

### **19.5 - Install New Wood Bulkhead.**

1. Repair defective bulkhead by rebuilding doors and frame with new pressure treated lumber and galvanized hardware [ Stanley or approved equal ].
2. Apply two coats [ 1 primer and 1 finish coat ] of exterior semi-gloss paint [ Sherwin Williams, Devco, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devco alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devco Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

### **19.6 - Install New Metal Bulkhead.**

1. Remove existing bulkhead doors, frame and curb.

2. Install new concrete curb [ at top of existing ] to fit and install new metal bulkhead [ Bilco, Gilmore or approved equal ] according to the manufacturer's specifications.
3. Apply two coats [ 1 primer and 1 finish coat ] of exterior flat paint [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams Promar 200 alkyd enamel undercoater, Devoe alkyd undercoat, or approved equal. Finish coat to be Sherwin Williams Promar 200 latex semi-gloss, Devoe Wondertones latex semi-gloss or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks. Qty=

**19.7 - Repair Water in Foundation / Basement-Interior.**

1. Excavate 12" x 8" trench on the inside perimeter of the foundation.
2. Install 4" perforated pipe tied into the floor drain.
3. Fill trench with crushed rock level to floor surface. Approx. Qty= LF.

**19.8 - Repair Water in Foundation / Basement-Exterior.**

1. Excavate trench on the outside perimeter wall down to the footing. Approx. Qty= CF.
2. Apply one coat of asphalt foundation coating [ Euclid Water Barrier or approved equal ] to the foundation wall according to the manufacturer's specifications using a suitable brush or roller below existing grade level. Approx. Qty= SF.
3. Install one layer of 6 mil black polyethylene over the new foundation coating. Approx. Qty= SF.
4. Backfill trench with excavated material, compact with portable plate compactor. Additional backfill material will be compatible with existing soil conditions. Approx. Qty= CF.
5. Cover with 3" of loam and rake level. Approx. Qty= SF.
6. Apply new grass seed [ type selected by local nursery ] at a rate specified by the seed manufacturer. Approx. Qty= SF.

**19.9 - Remove Rubbish and Debris.**

1. Remove rubbish and debris from basement and entire property and dispose.

**19.10 - Driveway Paving.**

1. Excavate driveway area to a depth 9" below existing grade, as determined by grade stake along the perimeter of the driveway. Approx. Qty= SF.
2. Backfill excavated area with 6" [ compacted depth ] of 3/4" gravel. Compact gravel with portable vibrating plate compactor or 10 ton roller. Entire drive way shall be crowned and pitched for positive drainage. Approx. Qty= SF.
3. Apply an even layer of 3/4" crushed stone. Approx. Qty= SF.
4. Apply 2" base coat of bituminous asphalt. Roll smooth with roller. Approx. Qty = SF.



5. Apply 1" top coat of bituminous asphalt. Roll smooth with roller. Approx. Qty= SF.
6. Approximately 4 weeks after application of finish coat, apply a coat of jet sealer to entire new driveway according to the manufacturer's specifications. Approx. Qty=

### **19.11 - Asbestos**

#### **A. Asbestos Removal-Basement.**

1. Preclean entire basement.
2. Remove all asbestos insulation from heating pipes and boilers.
3. Remove all asbestos contaminated rubbish and debris and dispose at a legal disposal site.
4. Work to be performed by a licensed asbestos abatement contractor according to all applicable Federal, State and Municipal codes. A copy the final air quality report will be turned over to the rehab specialist. Approx. Qty= LF of pipe covering/ steam boilers.
5. Existing steam boilers to be removed by asbestos contractor. Units to be drained of water, all electrical disconnected and fuel oil line disconnected by plumbing contractor, prior to removal by asbestos contractor.
6. Asbestos contractor to nail strap hanger [ provided by plumbing contractor ] in place after removal of pipe covering for any or all steam pipes.

#### **B. Air quality Testing-Asbestos Abatement.**

1. A visual inspection and air quality samples shall be taken according to current state law by an independent testing facility.
2. Testing facility shall coordinate testing with the asbestos contractor to minimize delays.
3. Testing facility shall report its results to the asbestos contractor immediately upon completion of the testing, whether the tests are positive or negative. The owner of the building will be furnished with a copy of the test results.

### **19.12 - Construct New Interior non-bearing Wall.**

1. Construct new interior non-load bearing wall using 2 x 4 Spruce [ #2 or better ] studs and plates. Studs to be spaced 16" on center. Door opening shall be made according to the BOCA building code. Headers shall be made according to the BOCA Building Code.

### **19.13 - Repair Existing Fence.**

1. Repair existing fence by removing defective portion and disposing.
2. Install \_\_\_ linear feet of \_\_\_ feet high, new \_\_\_\_\_ type fencing.
3. Work to include all necessary rails, posts and gates.
4. All posts to be set in concrete. Post to be set 1/3 of their height deep in the ground; fill base with crushed rock for drainage and fill with 3,000 psi concrete.

5. Apply two coats [ 1 primer and 1 finish coat ] of exterior solid stain [ Sherwin Williams, Devoe, California or approved equal ] according to the manufacturer's specifications using a suitable brush or roller. Primer coat to be Sherwin Williams solid color exterior stain, Devoe solid color latex stain or approved equal. Finish coat to be Sherwin Williams solid color latex stain, Devoe solid color latex stain or approved equal. All work to be done in accordance with the manufacturer's specifications. All finishes shall be evenly applied and free from sags, runs, drips, voids, holidays and brush marks.

#### **19.14 - Kitchen Cabinets.**

##### **A. Install new base cabinets.**

1. Remove existing base cabinets and dispose.
2. Install new wood base cabinets according to manufacturer's specifications. Cabinets are to be installed as plumb and level as existing conditions allow. Owner to select from manufacturer's standard flat panel cabinet line. Scribe kickboard to allow level installation. Cabinets to be Merillatt, Yorktowne, Tri-Pac, American Woodmark or approved equal. Cabinets to have a solid wood front and particle board sides. All cabinets must bear a National Kitchen Cabinet Association certification label. Approx. LF.
3. Install new post formed countertop [ owner to have choice of countertop color / pattern ] with 4" backsplash according to manufacturer's specifications. Apply silicone caulking at wall / countertop seam. Approx. LF.

##### **B. Install new wall cabinets.**

1. Remove existing wall cabinets and dispose.
2. Install new wood wall cabinets [ match existing as close as possible ]. Cabinets are to be installed as plumb and level as existing conditions allow. Owner to select from manufacturer's standard flat panel cabinet line. Cabinets to be Merillatt, Yorktowne, Tri-Pac, American Woodmark or approved equal. Cabinets to have a solid wood front and particle board sides. All cabinets must bear a National Kitchen Cabinet Association certification label. Approx. LF.

#### **19.15 - Install New Kitchen Counter Top.**

1. Remove existing countertop and dispose.
2. Install new post formed countertop with 4" backsplash according to manufacturer's specifications. Owner to select from manufacturer's standard color / pattern selection. Install color coordinated end caps, if required. Re-install existing sink, using silicone caulking, and existing faucet. Test installation to ensure that no leakage occurs. Approx. LF. Apply caulking at wall / countertop seam.