

ATTACH (with Construction Specifications cover page) TO CONSTRUCTION CONTRACT AS APPENDIX A
MOBILE HOME REPLACEMENT PROGRAM
CONSTRUCTION SPECIFICATIONS FOR SINGLE FAMILY REPLACEMENT HOMES

PROPERTY:

Property Street

Property City

Property State

Property Zip

SECTION 1 - SCOPE OF WORK

1.1 Site Conditions

The Contractor is directed to inspect the site before bidding and note any discrepancies. (*Example: The site contains an area of ledge near the surface, however the Owner reports that adjacent areas do not have ledge close to the surface.*)

1.2 Connection to Utilities

The new house will be connected to the existing septic system and the existing water well.

SECTION 2 - CONTROL OF WORK

2.1 Warranties

Workmanship and materials not covered by manufacturer's warranty shall be warranted by the Contractors for a period of one year from date of final payment to the Contractor. All manufacturer warranties shall be delivered by the Contractor to the Owner at the completion of the work.

SECTION 3 - CONTROL OF MATERIALS

3.1 Selection by Owner

All materials having color or pattern shall be selected by the Owner.

SECTION 4 - LEGAL RESPONSIBILITIES

4.1 Permits and Fees

Contractor must obtain required permits prior to commencement of work and must provide copies of permits to the Owner and the CAA identified on the *Notice to Contractors* for documentation. Failure to obtain required permits will result in nonpayment of work until the necessary permits are obtained.

SECTION 5 - PAYMENTS and ALLOWANCES

5.1 Billing Cycles

Invoices submitted for payment will be paid by and according to the CAA billing cycle. Invoices shall be submitted to the CAA in writing, by emailed in pdf. format, or faxed to the CAA Representative identified on the *Notice to Contractors*. Questions regarding billing cycles and payments shall be directed to the CAA Representative identified on the *Notice to Contractors*.

5.2 Allowances

The final construction contract will include one allowance for appliances not to exceed \$1,000.00. The Contractor's attention is directed to Section 14.9.1 regarding how the appliance allowances are handled.

SECTION 6 - FOUNDATION WORK

6.1 Description

The work specified in this section includes construction of a concrete full basement-type foundation, as indicated.

6.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

6.3 Earthwork

The work shall include all excavation, backfill, finish grading, and seeding as necessary to construct the foundation and any related tasks. The earthwork, including backfill materials, shall be as shown on the *Floor Plans*.

6.3.1 Backfill Placement. Backfill adjacent to the foundation wall shall not be placed until the wall has sufficient strength to resist the associated loading, and the wall has been anchored to the floor deck.

6.3.2 Finish Grading. The work shall include establishing a finish grade slope from the foundation wall out 10'. The slope shall be 1/2" per foot, minimum, and be seeded and mulched.

6.4 Other Earthwork

Earthwork specific to a given project shall be covered in Section 21 - Site Work.

6.5 Drainage

The work shall include the installation of a drainage system to direct ground water away from the foundation. A gravity discharge system shall be installed when site conditions allow the drainage pipe to be routed to daylight. In addition, a pumped discharge system shall be installed in all cases.

6.5.1 Drainage Fill. A drainage bed shall be placed adjacent to the outside of the footing. The drainage bed shall be crushed stone and extend a minimum of 12" above the bottom of the footing. Stone shall be 3/4" to 1 1/2" in size. The bed of drainage fill shall be covered with a filter fabric.

6.5.2 Drainage Sleeves. Drainage sleeves shall be installed through the footing, leading from the drainage bed to the crushed stone base under the cellar floor slab. Drainage sleeves shall be 4" diameter pipe, located as shown on the *Floor Plans*.

6.5.3 Gravity Discharge System. The perforated drainpipe shall be embedded in the drainage bed, with a minimum of 2 inches of bed material under the pipe and not less than 6 inches of bed material over the pipe. The foundation drain piping shall be sloped away from the foundation at the rate of 1/16 to 1/8 inch per foot and routed to daylight.

6.5.4. Pumped Discharge System. A sump basket and sump pump shall be installed in the floor slab.

6.5.4.1 Sump Basket. The sump basket shall be positioned within the cellar such that at least one drainage sleeve can be connected to it, and such that the pump discharge piping can discharge toward the down-slope side of the structure. The sump basket shall be at least 24" in diameter or 20" square, shall extend at least 24" below the

bottom of the cellar floor, and shall be fitted with a cover. The basket shall be surrounded top and sides by a minimum of 4" thick crushed stone.

6.5.4.2 Sump Pump. The sump pump shall be submersible type, and of at least ½ HP rating. The pump discharge shall be piped with rigid pipe through the box sill. The discharge pipe shall be fitted with a 90 degree elbow as soon as it exits the wall and be piped vertically down the wall to approximately 6" above finished grade. The discharge pipe will shall be fitted with a flexible hose of the same diameter as the rigid discharge pipe which will, when extended, discharge the water a minimum of 12' away from the foundation.

6.6 Concrete Foundation

The work shall include construction of a full basement foundation in the location shown on the *Floor Plans*. The foundation shall conform in size, materials, and details to that shown on the *Floor Plans*. The minimum depth of the foundation footing below grade shall be 5'-0". Foundation work shall not include provision or installation of cellar way door and stairs, basement windows, or foundation wall insulation, which are covered in their respective Sections, herein.

6.6.1 Basement Slab. The drainage pad under the basement slab shall be crushed stone of the depth shown on the *Floor Plans*. Stone shall be ¾" to 1 ½" in size. Install a 6 mil polyethylene vapor barrier over the drainage pad and bond break material around the perimeter of the slab prior to placing concrete.

6.6.2 Floor Drain. Install a floor drain, 3-inch minimum diameter, in the center of the cellar floor. Slab floor shall pitch toward drain. Drain shall be connected to foundation drain system.

6.7 Utilities

The Contractor shall be responsible for all excavation and backfilling necessary to accommodate the connection of the new structure to the existing septic system (or municipal sewer) and water supply source.

6.8 Costs

The total cost of new foundations as indicated herein shall be specified in Part A, Separate Lump Sum Prices of the *Construction Proposal*, which represents the full compensation for performing all work as indicated

SECTION 7 - EXTERIOR DOORS & WINDOWS

7.1 Description

The work specified in this section includes furnishing and installing exterior doors and windows, as indicated.

7.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

7.3 Windows

All windows shall conform to the following:

7.3.1 Room Windows.

- a) Window W1 shall be sized to fit between the wall cabinets over the Kitchen sink, but shall not be less than 30 in. wide.

- b) Window W6 shall be not less than 2-0 X 3-0 in size.
- c) All other Windows shall be not less than 3-0 X 4-6 in size, and shall meet the following egress requirements: Clear opening - 5.7 sq. ft., minimum width - 20 in., minimum height - 24 in., maximum height above floor of bottom of opening - 44 in.
- d) All windows shall be white vinyl clad, double glazed with ¾" insulated glass, double hung, new construction-type windows conforming to ASTM D4099. All windows shall have an insulation value not less than R3 and be Energy Star rated. All windows shall have tilt-out sashes and be complete with screens and sash locks. All windows shall be installed and flashed per manufacturer's recommendations.

7.3.2 Window Interior Trim. All windows shall be trimmed with **either**:

- a) Sheetrock returns on top and sides. Install a pine sill and clamshell apron. Paint all with white semi gloss enamel, or
- b) Case opening with pine and trim with clamshell molding. Install a pine sill and clamshell apron. Paint all with white semi gloss enamel.

7.3.3 Basement Windows. Basement windows shall be white vinyl clad, awning type windows, 2'-8" wide, minimum, installed per manufacturers recommendations, in the location as shown on the *Floor Plans*. All joints and seams shall be sealed with silicone caulking material.

7.4 Entrance Doors

All exterior doors shall conform to the following:

- a) Doors shall be of the size as shown on the door schedule in the *Floor Plans*.
- b) Steel construction, polyurethane foam insulating core, entrance lockset with deadbolt.
- c) Installed per manufacturers recommendations.

7.4.1 Door Interior Trim. All entrance doors shall be trimmed with **either**:

- a.) Sheetrock returns on top and sides. Install a pine sill and clamshell apron. Paint all with white semi gloss enamel, or
- b.) Case opening with pine and trim with clamshell molding. Install a pine sill and clamshell apron. Paint all with white semi gloss enamel.

7.5 Cellarway Door

The cellarway door shall be a steel basement door of the type and size as shown on the foundation detail in the *Floor Plans*. The door shall be Bilco, or equal.

7.6 Costs

The total cost of furnishing and installation of exterior doors and windows shall be specified in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 8 - SIDING

8.1 Description

The work specified in this section includes furnishing and installing new siding as indicated.

8.2 General

All work shall be in accordance with these *Floor Plans*, *Construction Specifications*, and Maine Uniform Building and Energy Code, and as required for a complete and proper installation.

8.3 Siding Materials

New siding shall be vinyl clapboard style, labeled as conforming to Vinyl Siding Institute specifications. Color shall be a stock color, selected by Owner. Vinyl siding shall be 0.035-inch thick, minimum, and shall comply with ASTM standard specification for Rigid Polyvinyl Chloride (PVC) Siding #D3679 Class 2.

8.4 Installation

Installation shall comply with the manufacturers' instructions.

8.5 Location

New vinyl siding shall be applied to all exterior wall surfaces of the house.

8.6 Shutters

Install vinyl shutters on all windows, color by Owner.

8.7 House Address Numbers

Approved address numbers shall be placed in a position that is plainly visible and legible from the street or road fronting the property. Numbers shall be at least 4" high with a minimum stroke width of 1/2".

8.8 Costs

The total cost for the installation of new siding as indicated herein shall be paid for in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 9 - ROOF WORK

9.1 Description

The work specified in this section includes construction of roof structure and installing roofing materials, as indicated.

9.2 General

All work shall be as indicated on the *Floor Plans*, *Construction Specifications*, and Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

9.3 Roof Framing

The roof structure shall include the following:

9.3.1 Roof Load. The roof design loads shall meet local codes, where applicable, but in no case be less than 60 psf. Houses constructed North of Bangor shall have design roof loads not less than 70 psf.

9.3.2 Roof Trusses. All roof trusses shall be pre-engineered, with their design stamped by an engineer registered in Maine. Wood roof trusses shall be **6/12 pitch, minimum**, and spaced as required by the manufacturer to support the roof load. Trusses shall provide a raised heel height of 12 inches over the exterior wall. Gable end trusses shall be studded 24" o.c.

9.3.3 Truss Clips. Truss clips only shall be installed where the trusses cross interior partitions.

9.3.4 Roof Sheathing. Sheathing shall be ½" OSB with H-clips, or 5/8" OSB, tongue and groove.

9.4 Roof Trim

9.4.1 Fascia. The fascia trim shall be constructed of 2" X 6" with 1" X 3" top trim and all wrapped with aluminum coil stock, color by Owner. All joints and seams shall be sealed with silicone caulking material.

9.4.2 Gable End Trim. The gable end trim shall be built out approximately 12" from the end walls with 2x6 blocking spaced at 24" o.c.

9.4.3 Soffit. The soffit trim shall be white perforated vinyl.

9.5 Roofing

The roof shall be roofed with fiberglass or asphalt shingles, drip edge, self-adhering bituminous membrane, and felt underlayment, as indicated and required. Bituminous membrane shall be applied **six feet up slope** from all roof edges.

9.5.1 Installation Temperatures. Roofing materials shall not be installed when ambient temperatures are below that required by the product manufacturer, or above that where damage may occur to the roofing during installation.

9.6 Roofing Materials

Roofing materials shall conform to the following:

9.6.1 Asphalt Felt. Underlayment grade, saturated felt, minimum 15 lbs. per square.

9.6.2 Shingles. Granular surfaced, minimum 200 lbs. per square if asphalt, architectural style, color by Owner. Shingles shall be U.L. Class C, minimum **25-year** manufacturer's warranty.

9.6.3 Fasteners. Nails shall be zinc-coated steel, of sufficient length to penetrate roof sheathing. Staples are not allowed.

9.6.4 Drip Edge. Drip edge shall be aluminum, nominal 8" wide.

9.6.5 Bituminous Membrane. Bituminous membrane shall be "Ice and Water Shield", manufactured by W.R. Grace Construction Products, and applied per Section 9.5, above.

9.7 Costs

The total cost of roofing work as indicated herein shall be paid for under Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 10 - INSULATION & AIR SEALING

10.1 Description

The work specified in this section includes providing and installing thermal insulation, vapor barrier, ventilation devices, and performing air sealing as indicated.

10.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and Maine Uniform Building and Energy Code, the 1992 CABO Energy Code, and as needed for a complete and proper installation.

10.3 Air Sealing

Air sealing work shall include:

- a. Seal penetrations of sewer vent stacks and electric cable chaseways into attic using expanding foam caulk, as required.
- b. Install foam sill sealer between the foundation wall and floor sill plate.

10.4 Attic

10.4.1 Attic Access. Install attic access per Section 18.6 – Hallway. Insulate attic hatch with 12" fiberglass.

10.4.2 High Ventilation. Install two 12" x 12" gable vents, one on each end wall, or alternatively continuous ridge vent. Gable vents shall be white vinyl type. The contractor shall insure that installed attic ventilation has a net free area of 1/300 the area of the attic floor.

10.4.3 Low Ventilation. Install 24" x 48" foam vent chutes in each rafter bay at eaves. Dam ceiling joist bays at eaves to prevent insulation from entering soffit.

10.4.4 Vapor Barrier. Install minimum 4 mil polyethylene vapor barrier over the entire ceiling plane, overlap all seams by 12" min., with overlap taking place over a framing member.

10.4.5 Insulation. Install blown cellulose insulation as required to achieve a minimum insulation value of R49 throughout the attic. Insulate to R-38 if raised-heel trusses are used such that the full height of uncompressed insulation extends over the wall top plate.

10.5 Exterior Walls

10.5.1 Air Barrier/Drainage Plane. Install building wrap such as Tyvek, Typar, or equal, to all exterior wall surfaces.

10.5.2 Vapor Barrier. Install minimum 4 mil polyethylene vapor barrier over all exterior wall surfaces, overlap all seams by 12" min., with overlap taking place over a framing member.

10.5.3 Insulation. Install 6" x 24", R-19, unfaced fiberglass in all exterior wall bays.

10.6 Basement Foundation.

10.6.1 Box Sill/Band Joist. Insulate all band joists and box sills with R19 faced fiberglass insulation.

10.6.2 Wall Insulation. Insulate all foundation walls. If continuous insulated sheathing on the exterior or interior of the wall is used, insulate to R15. If cavity insulation is used at the interior of the wall, insulate to R19. Insulation shall extend from the top of the wall down to 10' below

grade or to the basement floor, whichever is less. Insulation shall be installed and protected following manufacturer's recommendations.

10.6.3 Cellar way Door. The cellar way door (Bilco) shall be insulated with 2" extruded polystyrene tongue & groove rigid foam. Ledgers and tracks shall be installed against the concrete as required to support the foam panels horizontally at the top of the foundation wall and vertically to enclose the space.

10.7 Pipe Insulation

10.7.1 Hot Water Supply Piping. All hot water supply piping shall be insulated to a minimum insulating value of R2.

10.8 Air Vents

Install two passive air vents in the exterior walls, one each in the Living Room and Kitchen. Passive air vents shall be "Fresh 80" vents distributed by Energy Federation Inc., or equal.

10.9 Certificate of Insulation

A permanent certificate of insulation R-value shall be posted in or on the electrical panel. The sticker shall not block any other labels. R values listed include; ceiling/roof, walls, and foundation. Also include U-factors and solar heat gain coefficient for windows.

10.10 Building Air-tightness and Insulation Compliance

Envelope air-tightness and insulation installation shall be demonstrated to comply the standards by one of the following options:

1. Blower Door test results will be acceptable when air leakage is less than seven air changes per hour at a pressure of 50 pascals.
2. Visual Inspection of air sealing and insulation installation by someone other than the installer.

10.11 Costs

The total cost for providing and installing insulation and performing other related work shall be paid for in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 11 - ELECTRICAL

11.1 Description

The work specified in this section includes furnishing and installing electrical cable, equipment, and lighting fixtures as indicated.

11.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, the National Electrical Code for One-and-Two-Family Dwellings, NFPA 70A, and the Maine Uniform Building and Energy Code. Only new materials shall be used, of the type and quality specified. Where Underwriters' Laboratories, Inc. have established standards for such materials, use only materials bearing the UL label.

11.3 Temporary Power

Work shall include furnishing and installing temporary electrical service at the job site during the construction period. Service shall be limited to energized circuit breaker panel and weatherproof

outlets. Contractor shall be responsible for all connection fees imposed by the servicing utility company. Temporary power pole, if required, shall be the responsibility of the Contractor. Electrical energy costs during the construction period shall be the responsibility of others

11.4 Service Entrance

Work shall include furnishing and installing a complete overhead electrical service entrance of 100 amp. minimum capacity. Entrance shall be attached to gable end wall of structure. Installation shall include 20-circuit panel box, main breaker, and branch breakers as necessary. All circuits shall be clearly labeled.

11.5 Receptacles

Work shall include provision of wall mounted duplex receptacles in locations as shown on the *Floor Plans*, complete with white cover plates. Receptacles shall include two outdoor receptacles, Kitchen and Bathroom GFIC receptacles, and one 220 v. receptacle to serve the washer/dryer if applicable. All branch circuits serving the Bedrooms shall be arc-fault protected.

11.6 Lighting

Work shall include furnishing and installing interior and exterior lighting fixtures and associated wall switches in locations as shown on the *Floor Plans*. Fixtures shall be of the type as shown in the lighting schedule in the *Floor Plans*.

11.6.1 Lamps. 50% of the lamps in permanently installed lighting fixtures shall be high-efficiency lamps.

11.7 Vent Fans

Work shall include:

11.7.1 Bathroom Vent Fan. Provide switched power only to the bathroom vent fan, V1, shown on the *Floor Plans*. The fan shall be wired so that one switch operates the vent fan and one switch operates the integral light. The switch that operates the fan shall be a humidistat control such as Regin HR-1, or equal. The humidistat shall be mounted in the hallway as shown on the *Floor Plans*. The humidistat shall be mounted within easy reach of occupants. The Contractor shall instruct the homeowner how to operate the humidistat. Bathroom vent fan shall be ceiling mounted and provided in Section 15.

11.7.2 Range Exhaust Fan. Provide power only to range hood exhaust fan, V2 as shown on the *Floor Plans*. Range hood and fan, and venting to the outside, is provided in Section 14.

11.8 Smoke Alarms

Work shall include furnishing and installing ceiling mounted, 110v.smoke alarms, in locations shown on *Floor Plan*. Four alarms shall be installed on the main floor, and one alarm shall be installed in the cellar. All alarms shall be interconnected such that any single alarm will activate all alarms. Any smoke alarm located within 20 feet of a kitchen or bathroom containing a tub or shower shall be a photoelectric-type smoke alarm.

11.9 Telephone

The work shall include providing and installing five telephone wall jacks and connecting wiring to an exterior connection box. Wall jacks shall be installed in locations as shown on the *Floor Plans*.

11.10 Cellar Wiring.

11.10.1 Well Pump. In the case of a private water source, the work shall include the provision of power only to existing submersible or jet well pump, including connection to the pump pressure switch.

11.10.2 Boiler. Provide power only to the oil-fired boiler.

11.10.3 Receptacles. Install the following receptacles:

1. 1 – 110 v. GFI, Washer
2. 1 – 110 v. GFI, General Use
3. 1 – 220 v. Dryer

11.10.4 Lighting. Install four ceiling mounted porcelain socket-type light fixtures in the basement. Combine these four lights with the light at the top of the cellar stairway and control the circuit with two three-way switches, one at the top of the cellar stairs, and one at the cellar way entrance.

11.11 Carbon Monoxide Alarm

The work shall include the installation of a wall-mounted carbon monoxide alarm in the Hall as shown on the *Floor Plans*. The alarm shall be 110 v. type with battery backup.

11.12 Costs

The total cost of electrical service, equipment, and fixtures as indicated herein shall be entered in Part A, Separate Lump Sum Prices of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 12 - PLUMBING

12.1 Description

The work specified in this section includes furnishing and installing plumbing piping, fixtures, and equipment as indicated.

12.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and the Internal Plumbing Code of the State of Maine, the Maine Uniform Building and Energy Code, and as required for a complete and proper installation.

12.3 Water Supply System

The new house shall be connected to either a private well or the municipal water main. The Contractors attention is directed to the Addendum for information regarding the source of water supply. The work shall include the installation of one of the following systems:

12.3.1 Private Well.

12.3.1.1 Well Pressure Tank. A steel well pressure tank suitable for use with a submersible well pump shall be installed in the basement in a location close to the inlet piping. The pressure tank shall include a pressure switch and have a minimum drawdown capacity of six gallons. Electrical connection is covered in Section B7 - Electrical.

12.3.1.2 Connection to Source. The work includes installing supply piping as required to connect the pressure tank to the well, however earthwork associated with the supply line shall be paid for under Section 6- Foundation Work.

12.3.2 Municipal Water Main.

12.3.2.1 Connection to Source. The work includes installing supply piping as required to connect the house water supply piping to the municipal water main, including arranging for the installation of a water meter. Earthwork associated with the supply line shall be paid for under Section 6- Foundation Work. Extra work or fees associated with the connection to a municipal water source shall be paid for under Section 21 – Site Work.

12.3.3 Supply Piping. All piping from the pressure tank or water meter to fixtures is included in this specification. All supply piping downstream of the well tank or water meter shall be copper of the proper type and size for the application intended, but not less than ½ inch diameter.

12.4 Boiler and Domestic Hot Water Piping

The work shall include connection of the boiler feed line and domestic hot water coil to the house supply system. The boiler shall not be located underneath the cellar stairs.

12.5 Kitchen Sink

A stainless steel, double basin kitchen sink, depth 7" min., shall be installed as shown on the *Floor Plans*. The sink shall be complete with all supply and waste piping, and faucet. The Contractor shall submit manufacturer's specifications for approval prior to contract award.

12.6 Bathroom Fixtures

A complete set of bathroom fixtures, color white, shall be installed in locations as shown on the *Floor Plans* and as indicated herein. The Contractor shall submit manufacturer's specifications for approval prior to contract award.

12.6.1 Shower Stall. Shower stall shall be corner-style and approximately 36"x 36" in size, constructed of fiberglass. Stall shall be installed complete with all necessary supply and waste piping, faucet, and showerhead.

12.6.2 Toilet. Toilet shall be standard, low-flush type, installed complete with supply and waste piping. Clearance: Not less than 12" from centerline of fixture to edge of tub or shower stall.

12.6.3 Lavatory Sink. Lavatory shall be single basin type sink, complete with lever-style faucet set, and supply and waste piping. Clearance: Not less than 4" from edge of toilet tank and not less than 4" from adjacent wall.

12.7 Washer Hook-up

Install a standard washer hook-up in the Bathroom, as shown on the *Floor Plans*, to serve a stacked washer/dryer combination.

12.8 Outside Hose Bib

Install one freeze protected outside hose bib in the location shown on the *Floor Plans*.

12.9 Sewerage

12.9.1 Connection to Septic or Sewer. The work includes installing piping as required to connect the new structure to the existing septic system or municipal sewer. The Contractors

attention is directed to the Addendum for information regarding the type of sewage system. Earthwork associated with this connection shall be paid for in Section 6 - Foundation Work. Extra work or fees associated with the connection to a municipal sewer system shall be paid for under Section 21 – Site Work.

12.9.2 Waste and Vent Piping. All waste and vent piping shall be PVC of the proper type and size for the application intended.

12.10 Radon Reduction System

The work shall include the installation of a passive sub-slab depressurization system to control radon. A minimum 3-inch diameter ABS, PVC or equivalent gas-tight pipe shall be embedded vertically into the sub-slab aggregate before the slab is cast. A “T” fitting or equivalent method shall be used to ensure that the pipe opening remains within the sub-slab permeable material. The pipe shall be extended up through the building floors without 90 degree elbows or horizontal pipe runs, and terminate at least 12 inches above the surface of the roof in a location at least 10 feet away from any window or other opening into the conditioned spaces of the building that is less than 2 feet below the exhaust point. Radon vent pipes shall be accessible for future fan installation through an attic or other area outside the habitable space. All exposed and visible interior radon vent pipes shall be labeled “Radon Reduction System”.

12.11 Costs

The total cost for the installation of the plumbing system shall be entered in Part A, Separate Contract Lump Sum Prices of the Construction Proposal, which represents the full compensation for performing all work as indicated.

SECTION 13 - HEATING SYSTEM

13.1 Description

The work specified in this section includes coordinating the installation of central heating systems, as indicated.

13.2 General

All work shall be in accordance with the *Construction Specifications*, National Fire Prevention Association codes, Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

13.3 Central Heating System

The work shall include providing and installing a complete central heating system including oil-fired boiler, oil tank, and baseboard radiation throughout the house.

13.3.1 Boiler. The boiler shall be oil-fired, direct vent, with separate ducted combustion air intake, and contain a domestic hot water coil, such as NY Thermal Caprice series, or equal. The boiler’s AFUE rating shall be 80% or higher. The boiler shall be sized as required to heat the house to meet ASHRAE guidelines. The boiler shall be installed according to the manufacturer’s recommendations in all regards, including vent clearance requirements. The boiler shall not be located under the cellar stairway.

13.3.2 Oil Tank. The oil tank shall be located in the basement and be 275 gal. capacity, complete with all piping and fittings.

13.4 Temporary Heat

If required, the Contractor shall be responsible for space heating of the structure during the construction period until the work is complete and accepted.

13.5 Costs

The total cost of heating equipment and temporary heat as indicated herein shall be entered in Part A, Separate Lump Sum Prices of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 14 - KITCHEN

14.1 Description

The work specified in this section includes furnishing and installing kitchen facilities, as indicated.

14.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, the Maine Uniform Building and Energy Code, and as required for a complete and proper installation.

14.3 Wall and Ceiling Finish

The walls and ceiling shall be painted with two coats of semi-gloss latex paint, color white.

14.4 Kitchen Cabinetry

14.4.1 Cabinets. Work shall include furnishing and installing kitchen cabinets of the type and size as shown on the *Floor Plans*. Cabinets shall be oak finish. Cabinets shall have solid wood doorframes, doors, and drawer fronts and be installed complete with all trim and fillers as required for good appearance. Drawers shall be equipped with ball-bearing glides. All doors and drawer fronts shall be equipped with pulls. Contractor shall submit manufacturer's specification on all cabinets for approval prior to Contract award. The Contractor is directed to check and confirm all cabinet sizes based on field measurements prior to ordering.

14.4.2 Countertop. Work shall include furnishing and installing stock post-formed countertop with integral backsplash. Color by Owner.

14.5 Floor Covering

Work shall include installing vinyl floor covering, complete with floor primer if required for a proper installation. Vinyl floor covering shall be standard grade, 0.090" thick, minimum, color by Owner.

14.6 Range Hood

Install a 30" wide range hood, complete with exhaust fan and light. Fan shall have minimum capacity of 200 cfm and not exceed 5 sones. Exhaust fan shall be vented to the outside. Contractor shall submit manufacturer's specification on the range hood for approval prior to Contract award.

14.7 Trim

Install baseboard trim as required on all walls. Trim shall be 3 1/2" minimum, molding, finished white.

14.8 Kitchen Appliances

The work shall include coordinating the installation of a new 30", electric, 4 burner, kitchen range and electric refrigerator (15 cf., min.), selected by the Owner.

14.9 Costs

The total cost of furnishing and installing Kitchen materials, except as noted below, shall be entered in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

14.9.1 Appliance Allowance. Furnishing and installing Kitchen appliances shall be paid for in the Appliance Allowance included on the Proposal Form. The Owner shall be directed to select appliances meeting the specification above.

SECTION 15 - BATHROOM

15.1 Description

The work specified in this section includes furnishing and installing bathroom facilities as indicated.

15.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, the Maine Uniform Building and Energy Code, and as required for a complete installation. Plumbing and electrical work associated with bathroom work is covered in their respective Sections.

15.3 Wall and Ceiling Finish

The walls and ceiling shall be painted with two coats of semi-gloss latex paint intended for use in bathrooms, color white.

15.4 Vanity Cabinet

Install an oak vanity cabinet, 24" wide, in the location shown on the *Floor Plans*. Clearances between all fixtures shall be minimum allowable: Min. 4" between vanity and adjacent wall, 4" to edge toilet fixture. New lavatory sink is covered in Section 8. The Contractor shall submit manufacturer's specifications for approval prior to Contract award.

15.5 Medicine Cabinet

Install an oak medicine cabinet above the lavatory. The Contractor shall submit manufacturer's specifications for approval prior to Contract award.

15.6 Floor Covering

The work shall include furnishing and installing vinyl floor covering, complete with floor primer if required for a proper installation. Sheet vinyl floor covering shall be standard grade, 0.090" thick, minimum, color by Owner.

15.7 Accessories

Install a new toilet paper holder adjacent to the toilet and three 24" towel racks on the wall opposite the fixtures.

15.8 Ventilation Fan

Install a ceiling mounted ventilation fan, V2, in the location shown on the *Floor Plans*. The fan shall be Panasonic Model FV-11VQL4, ceiling mounted, 110 cfm, with integral light. Electrical connection is provided in Section 11 – Electrical. The fan shall be vented to the outside using metal flex pipe or rigid PVC pipe, per manufacturer instructions. The vent pipe shall be installed within the attic insulation to limit freezing of condensate. The fan shall be vented through the gable end wall or roof only.

15.9 Trim

Install baseboard trim as required on all walls. Trim shall be 3 1/2" minimum, molding, finished white.

15.10 Door

Install an interior room door of the type shown on the Schedule in the *Floor Plans*. Trim and door shall be finished white.

15.11 Washer /Dryer Appliance

Provide and install one stacked washer/dryer combination unit in the location as shown on the *Floor Plans*. Color white. **The unit shall be electric, 24” wide, and be Energy Star rated.**

15.11.1 Dryer Vent. Install a vent kit to serve the dryer in the location shown on the *Floor Plans*. Note that PVC piping is not allowed by code for venting dryers.

15.12 Costs

The total cost of furnishing and installing Bathroom facilities shall be entered in Part B, Framing & Fit-out Lump Sum Prices in the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 16 - LIVING ROOM

16.1 Description

The work specified in this section includes furnishing living rooms as indicated.

16.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, the Maine Uniform Building and Energy Code, and as required for a complete and proper installation.

16.3 Wall and Ceiling Finish

The walls and ceiling in both the Living Room and the Hall shall be painted with two coats of latex flat paint, color white.

16.4 Floor Covering

Install carpet and pad wall to wall in both the Living Room and Hall. Carpet shall conform to the following minimum specifications:

Minimum Face Weight:

Nylon - 24 oz/sq.yd.

Polyester/polypropylene - 32 oz/sq.yd.

16.5 Trim

Install baseboard trim as required on all walls in Living Room and Hall. Trim shall be 3 1/2” minimum, molding, finished white.

16.6 Closet

16.6.1 Door. Install an interior door per Schedule in the *Floor Plans*. Trim and door shall be finished white.

16.6.2 Fit-out. Install a full-width closet shelf with clothes pole.

16.7 Costs

The total cost for furnishing and installing Living Room facilities shall be entered in Part B, Framing & Fit-out Lump Sum Prices of the *Construction Proposal*, which represents full compensation for performing all work as indicated.

SECTION 17 - BEDROOMS

17.1 Description

The work specified in this section includes furnishing and installing bedroom facilities, as indicated.

17.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and the Maine Uniform Building and Energy Code, and as required for a complete and proper installation.

17.3 Wall and Ceiling Finish

The walls and ceiling in all Bedrooms shall be painted with two coats of latex flat paint, color white.

17.4 Floor Covering

Install carpet and pad wall to wall in all Bedrooms. Carpet shall conform to the following minimum specification:

Minimum Face Weight:

Nylon - 24 oz/sq.yd.

Polyester/polypropylene - 32 oz/sq.yd.

17.5 Trim

Install baseboard trim as required on all Bedroom walls. Trim shall be 3 1/2" minimum, molding, finish white.

17.6 Doors

Install room entrance doors as shown on the *Floor Plans*. Trim and doors shall be finished white.

17.7 Closets

17.7.1 All Bedrooms. Construct the built-in closets as shown on the *Floor Plans*. Interior walls shall be sheetrocked and finished white. Closet doors shall be as shown on the Schedule. Doors shall be finished white. Closets shall be fitted out with full-width closet shelf and clothes pole.

17.8 Costs

The total cost for furnishing and installing Bedroom facilities shall be entered in Part B, Framing & Fit-out Lump Sum Prices of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 18 - STAIR & HALL WAYS

18.1 Description

The work specified in this section includes building entry decks, stairs and railing, as indicated.

18.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and the Maine Uniform Building and Energy Code, and as required for a complete and safe installation.

18.2.1 Stair Dimensions. The maximum riser height shall be 7 ¾ inches. The minimum tread depth shall be 10 inches.

18.2.2 Railings. Railings shall be 36 inches above stair level.

18.3 Front & Rear Entry Ways

Entry landings shall be built to serve both front and rear doors as follows:

18.3.1 Landings. Landings shall be built of the size and in the location shown on the *Floor Plans*. Posts shall be 4x4, supported on masonry blocks, or other approved supports, below grade.

18.3.2 Stairs. Stairs shall be constructed to serve each landing. Stair carriages shall be supported on masonry blocks or other approved supports, below grade.

18.3.3 Railings. Railings shall be installed on both sides of the stairs and all sides of the Landing. Install balusters in all railings, spaced not more than 4" apart. Install handrails on railings serving stairs. Handrail grip size shall have a circular cross section between 1-1/2" to 2".

18.3.4. Materials. All landings, stairs and railings shall be constructed of pressure-treated lumber and galvanized steel fasteners.

18.4 Cellar Stairs

Install a set of cellar stairs, treads only, in the location shown on the *Floor Plans*. Install railings with balusters per Code on both sides, or alternatively, install 2 X 4 partitions sheathed with 1/2" sheetrock on both sides of the stairwell.

18.5 Cellarway

Install a set of stairs, treads only, in the Cellarway.

18.6 Hallway

18.6.1 Attic Access. An attic access hatch shall be built in the ceiling in the Hallway. The access shall be 22" x 30", cased with pine, and trimmed with clamshell molding, finish white all. The hatch cover shall be 1/2" AC plywood, finish white. The hatch shall be fitted with silicone-bulb type weather-stripping and hook-and-eye hardware.

18.6.2 Wall and Ceiling Finish. The walls and ceiling in the Hallway shall be painted with two coats of latex flat paint, color white.

18.6.3 Floor Covering. Install carpet and pad wall to wall in the Hallway. Carpet shall conform to the following minimum specifications:

Minimum Face Weight:

Nylon - 24 oz/sq.yd.

Polyester/polypropylene - 32 oz/sq.yd.

18.6.4 Trim. Install baseboard trim as required on all walls in the Hallway. Trim shall be 3 1/2" minimum, molding, finished white.

18.7 Costs

The total cost for the construction of entryways, hallways, and stairs shall be entered in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 19 - OTHER ROOMS

19.1 Description

The work specified in this section includes finishing rooms not covered in other sections, as indicated.

19.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and the Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

19.3 Cellar

19.3.2 Cellar Door. Install an interior room door of the type shown on the *Floor Plans*. The door shall serve the cellar stairwell. Trim and door shall be finished white.

19.4 Costs

The total cost for finishing other rooms shall be paid for in Part B, Framing & Fit-out Lump Sum Prices of the *Construction Proposal*, which represents the full compensation for performing all work as indicated

SECTION 20 - FRAMING

20.1 Description

The work specified in this section includes constructing floors, interior and exterior walls, and other related work, as indicated.

20.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, the Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

20.2.1 Lumber Grading. Load-bearing dimension lumber for joists, beams, and girders shall be identified by a grade mark of a lumber grading agency and if not, a certificate of inspection issued by a lumber grading agency.

20.3 Floor Deck

Work shall include construction of the floor deck, including carrying beam, box sill, joists, and sheathing as shown on the *Floor Plans*. Floor deck design loads and allowable deflection shall be as shown on the *Floor Plans*. The Contractor may use floor trusses rather than joists if preferred. Use of floor trusses still requires installation of a box sill (header). Floor sheathing shall be installed with appropriate fasteners and adhesive.

20.3.1 Joist Construction. Joists framing from opposite sides over a bearing support shall lap a minimum of 3" and shall be nailed together with a minimum of three 10d face nails. Joists shall be supported laterally at the ends.

20.4 Exterior Walls

Work shall include construction of exterior walls, including plates, studs, headers, and sheathing, as shown on the *Floor Plans*. Sill plates shall be pressure treated lumber.

20.5 Interior Partitions

Work shall include construction of interior partitions in the locations shown on the *Floor Plans*. Interior partitions shall be 2x4 construction.

20.6 Fire Blocking

Install fire blocking at all openings around vents, pipes, cables, and wires.

20.7 Costs

The total cost for the construction of floor decks, walls, and other related work shall be entered in Part B, Framing & Fit-out Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

SECTION 21 - SITE WORK

21.1 Description

The work specified in this section includes miscellaneous items of site work specific to a given project, as indicated.

21.2 General

All work shall be in accordance with the *Floor Plans*, *Construction Specifications*, and the Maine Uniform Building and Energy Code, and as needed for a complete and proper installation.

21.3 Demolition

The work shall include the demolition of the existing mobile home, removal from the site and disposal of all demolition debris off site. Proof of disposal must be shown through invoice and/or other supporting documentation.

21.4 Extra Site Grading and Seeding

Site grading and seeding within 10' of the foundation is included in Section 6 – Foundation Work. All other disturbed ground adjacent to the new structure shall be fine graded, mulched, and seeded. In addition, all imported fill shall be fine graded, mulched, and seeded.

21.5 Costs

The total cost for site work shall be entered in Part A, Separate Lump Sum Price of the *Construction Proposal*, which represents the full compensation for performing all work as indicated.

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