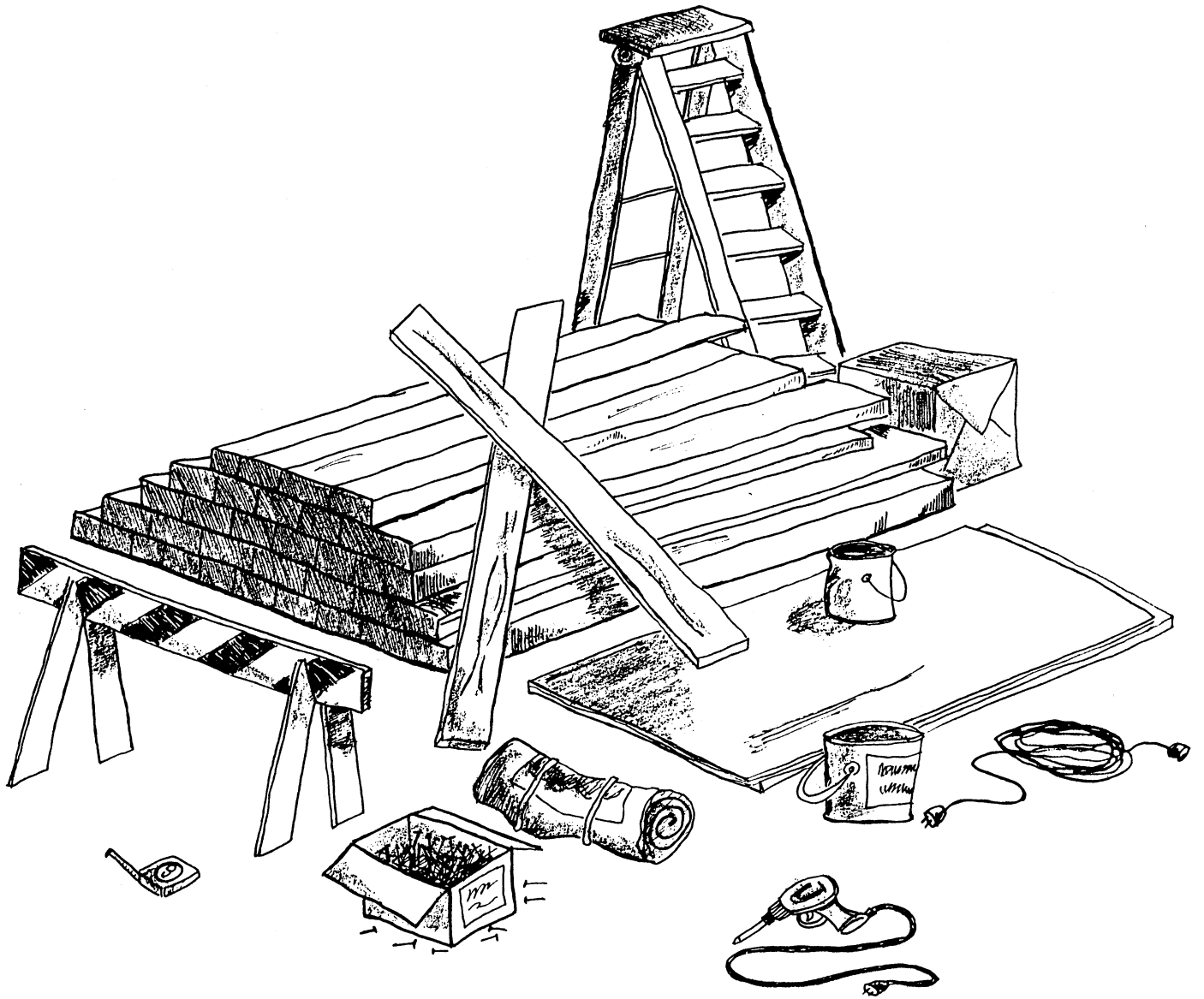


SPECIFICATIONS

It is the ability to choose which makes us human.

- Madeleine L'Engle



SPECIFICATIONS



Specifications are a written document for organizing the graphic information depicted on the Drawings. All the construction details are shown on Drawings as they relate to one another, with no attempt to ***separate diverse materials***. It is the Specifications that break down the interrelated information shown on Drawings into ***organized, technical sections*** so Trade Contractors and Suppliers are more able to identify the work to be performed. Since they are written instructions, Specifications are frequently adjudged by the courts as having greater importance than Drawings when these documents are in conflict, and judgments are frequently resolved on the basis of the Specifications.

The "*Sample Specifications*" that follow describe in detail the materials to be used and the workmanship required to construct a typical residential construction project. This information will act as a general guide to collect and record data pertinent to your project. Although this outline may seem comprehensive, ***there is no substitute for reviewing your situation as unique and different.***

SAMPLE SPECIFICATIONS

1. Excavation and Grading:

1.1 Remove top soil and stockpile on property for reuse.

1.2 In laying-out building, front, side and rear yards will conform to zoning laws, covenants, and setback requirements.

1.3 All foundations and footings will be placed on solid undisturbed soil to meet inspector's approval. The minimum depth of the footings will be in accordance with requirements of Building Department.

1.4 After foundation walls and footings are in place and properly set they will be backfilled. Backfill will be free from debris.

1.5 On completion of construction the topsoil removed during excavation will be spread around buildings and graded to drain water away from building.

1.6 If additional topsoil is necessary it will be hauled to the site; all earth not used for backfilling or grading will be hauled away.

1.7 Remove only the trees and shrubs indicated on site plan for removal.

1.8 Finish grade will be a minimum of 8" below exposed siding.

2. Foundation, Concrete Work, and Drainage:

2.1 Footings and walls of foundation will be poured concrete, sizes as noted on Drawings.

2.2 Concrete forms will be steel, fiberglass, or wood and be properly cleaned and oiled before using. Forms will not be left-in-place.

2.3 Concrete work includes footings, walls, floor slabs, piers, grade beams as indicated on the Drawings. Concrete mix will have a minimum strength of 2500 pounds per square inch after a 28 day cure.

2.4 Use agitator-type trucks for hauling and deposit concrete as nearly as practicable in its final position to avoid segregation. Once started, complete as continuous operation until end of pour.

2.5 All interior concrete slabs are to have a 6 mil plastic vapor barrier over a 4" gravel base. All slabs and grade beams are to be reinforced with 6"x6"-10/10 welded wire mesh except at basement/cellar, crawl space, or as noted on Drawings. Apply smooth, steel trowel finish to house, basement, and garage slabs. Concrete will be smooth and exposed aggregate finish on patios, sidewalks, and garage apron.

2.6 Protect all concrete work from sun, wind, rain, freezing until thoroughly hardened. If necessary, erect barriers to protect surface while concrete cures.

2.7 Full basement foundation walls and adjacent footings will be damp-proofed with asphalt emulsion or other approved waterproof coating

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to grade line.

2.8 Provide perimeter footing drains at exterior foundation footings as required by building code or site drainage conditions. Tight line from gutter downspouts will drain stormwater to dry well or storm system as required by local ordinance.

2.9 Provide perimeter footing drains at exterior foundation footings as required by building code or site drainage conditions. Footing drains will be 4 inch perforated plastic pipe installed in a continuous, uniform manner. Fill around and a minimum of 12 inches over pipe with washed gravel; cover with 15 pound roofing felt followed by topsoil.

3. Structural and Miscellaneous Steel:

3.1 Reinforcing steel, steel beams, columns, lintels will be the size shown on the Drawings and conform to the recommendations of the Building Department.

3.2 Rough framing hardware and accessories will be installed according to manufacturer's specifications and placed according to requirements of Building Department.

3.3 No paint will be applied to steel parts embedded in concrete.

3.4 The Owner will furnish other decorative items of steel construction such as wrought iron grills and railings as indicated on the Drawings or required by the Owner.

4. Chimney, Fireplace, and Wood Stoves:

4.1 The chimney will be built of new hard burned brick, unless otherwise noted on Drawings, and laid in cement mortar with 1/2" joints.

4.2 Terra cotta flues will be used of sizes designed on Drawings. Grout carefully around all flue lining with cement mortar as the chimney is going up.

4.3 Chimney wash cap will be cement unless otherwise shown and top

will extend not less than 2 feet above the ridge or nearest roof point within 10 feet.

4.4 Prefabricated flues will be of the size recommended by the manufacturer of unit they serve and housed as shown on the Drawings or in a prefabricated chimney housing and fire protected as per codes and manufacturer's recommendations.

4.5 Masonry fireplaces will be built as shown on Drawings with a 4 inch fire brick lining at sides, back and floor. Provide a cast iron or heavy gauge steel damper of proper size or approved metal liner insert unit of proper size.

4.6 Prefabricated fireplace units will be of the heat recirculating type installed per the manufacturer's instructions, fire codes and ordinances.

4.7 Prefabricated fireplace units will include double-wall chimney assemble per manufacturer's instructions and cap will be of spark-resister type if conditions demand.

4.8 Wood stoves and prefabricated fireplace units are to be energy efficient and have heat resistant glass doors and dampered outside combustion air ducts on all installations.

5. Termite Protection:

5.1 The wood sill around the house is to be pressure treated lumber in conformance with standards of building code.

Note: Termite protection may not be necessary in some areas. Check local codes, conditions and construction practices.

6. Framing and Exterior Finish:

6.1 All structural lumber such as studs, joists, headers, rafters, girders will be HEMLOCK-FIR except where noted and graded No. 2 or better of size shown on plan.

6.2 Protect lumber from weather by providing donnage and plastic cover.

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6.3 Layout, fit, and erect all framing true, plumb, and level. Verify location of all fixtures, appliances, and hardware to conform to joist and stud location. Supervise cutting and boring by Trade Contractors to maintain integrity of structure.

6.4 Exterior wall studs will be 2"x6" @ 16" o.c. unless otherwise noted. Wall will be sheathed with 4'x8'x1/2" Oriented Strand Board (OSB) or C/D Exterior (CDX) plywood with stamp of the American Plywood Association. A vapor barrier of 15 pound asphalt saturated felt or equivalent air infiltration barrier.

6.5 Exterior finish will be determined by Owner. The following list itemizes possible finishes:

6.5.1 Wood siding either horizontal or vertical;

6.5.2 Wood shingles in a variety of patterns;

6.5.3 Vinyl, aluminum, or waferboard siding;

6.5.4 Brick or field stone.

6.6 Interior walls will be 2"x4" studs @ 16" o.c. unless otherwise noted. Backing will be provided for all specialty items as noted on plan such as backing for drywall, medicine cabinets, curtain rods, towel bars, lower and upper cabinets, ledgers, recessed fixtures.

6.7 Double joists will be placed under all partitions parallel to them and for bearing at all headers and trimmers. All joists will have at least 3" bearing on supporting members. Bridging will be metal or wood placed mid-span but not spaced greater than 8 feet o.c.. All joists will be placed with the crown "up" and maintain a uniform width. All joists will follow a layout which takes into consideration installation of plumbing, HVAC, and masonry.

6.8 Subfloor will be 3/4" CDX, tongue and groove plywood and securely glued with construction adhesive and nailed with a ringed-shank nail per manufacturer's instructions and requirements of building code.

6.9 Glue subfloor to joists using a superior grade construction adhesive

suitable for adverse weather conditions.

6.10 Truss package will be designed by a licensed engineer and accompanied by 2 sets of drawings and instructions. Trusses will be delivered and set by manufacturer's truck.

6.11 Roof will be covered with 4'x8'x1/2" OSB or CDX sheathing and nailed per manufacturer's instructions and building code requirements.

6.12 All roof joist spaces will have through ventilation; no blocked air spaces.

7. Roofing:

7.1 For roof pitches above 4" in 12" use self-sealing asphalt, fiberglass shingles applied over 15 pound, asphalt impregnated felt paper.

7.2 For roof pitches below 4" in 12" use self-sealing asphalt, fiberglass felt paper, overlapping each course according to manufacturer's instructions.

7.3 Manufacturer, type, and color of shingle are to be determined by Owner. Follow manufacturer's specifications and application procedures.

7.4 Trade Contractor will provide a 5 year written unconditional warranty against leakage due to faulty materials or workmanship.

7.5 The following list itemizes other roofing possibilities:

7.5.1 Shake: use 1" x 4" skip sheathing;

7.5.2 Tile: upgrade trusses and use 1" x 2" skip sheathing.

7.5.3 Metal: review manufacturer's instructions.

7.6 Skylights will be installed per manufacturer's instructions using flashing provided by manufacturer.

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8. Sheet Metal, Flashing, and Sealants:

8.1 All roof and chimney flashing will be either copper, aluminum, or plastic of approved standard gauges per Drawings.

8.2 Flashing will be provided by manufacturer with galvanized treatment or baked-on enamel surface. Cut and bend flashings neatly; fold edges under. No hammered or marred metals exposed to view.

8.3 Window, door, and wall flashing will be copper, aluminum, or plastic as required. Preflashed window and door units are acceptable.

8.4 Roof vents and exhaust ducts will be galvanized sheet metal which meets or exceeds building code requirements. Ducts and outlet covers for clothes dryer, kitchen, laundry, and bathroom ventilation will provide complete and proper operation of appliance and fan units. Terminate all ducts with positive, air-tight connection to outlet covers in a plumb, level manner.

8.5 If gutters and downspouts are used comply with the following:

8.5.1 Hung gutters use wood, metal, or plastic type of stock design. Color choices or profile per Owner's choice.

8.5.2 Standard gutter hangers for the type of gutters being used, not to exceed 4 feet o.c. spacing.

8.5.3 Downspouts will be 2" x 3" rectangular or 3" diameter round to conform to gutter style. Provide adequate wall supports for same. Provide splash blocks or other provisions for stormwater to drain away from house.

8.6 Gutters and downspouts will be neat, straight, and free from dents and scrapes. All connections will be made with standard formed pieces provided by manufacturer.

8.7 Sealants will be type and application best available per manufacturer's instructions for a flexible, durable seal. Caulk behind all splices or butted joints in exterior lumber; do not rely on surface caulking. Sealants will be installed behind all trim around windows and door frames to make entire

building assembly water and air tight.

9. Windows, Doors, Cabinets:

9.1 Windows

9.1.1 Windows will be of size and type as shown on Drawings, style and color of Owners choice.

9.1.2 All windows will meet or exceed applicable energy and ventilation codes. Control of heat loss and weatherization to meet or exceed same codes. Screens will be supplied by window manufacturer. Exterior and interior finish millwork to be supplied by agreement.

9.1.3 Windows will be installed plumb at height allowing alignment of liners with adjacent windows and door frames. Examine windows prior to installation for possible defects. Windows will be neatly fit in opening, completely air-tight, and waterproof.

9.1.4 Verify that window sizes, heights, and operators in bedroom locations conform to egress requirements of building code.

9.2 Doors:

9.2.1 Exterior doors will be 1 3/4" thick of solid core wood or insulated steel types per energy code and completely weather stripped and draft sealed. Type, style, colors, finish per Owner's choice.

9.2.2 Interior doors will be 1 3/8" thick of hollow core wood or hardboard types. Closet doors will be 1 1/8" thick. Type, style, colors, finish per Owner's choice.

9.2.3 Fire protected doors will be self-closing and with U.L. approved plate mounted on door with a minimum 1 hour rating.

9.2.4 Trim, casing, accessories, hardware will be supplied with each door as a package with prehung unit per Owner's choice.

9.2.5 Prior to drywall installation, door vendor will visit site and confirm all door locations and measurements.

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9.2.6 All doors will be prefinished prior to site delivery following Owner's direction.

9.2.7 Door thresholds and weatherstripping will be airtight and watertight after installation.

9.3 Cabinets

9.3.1 Cabinets and counter tops will be job measured for size after room finish materials are applied to assure a correct fit.

9.3.2 Kitchen, bath, laundry, and other required cabinets as shown on Drawings will be shop manufactured. Type, style, hardware, and color per Owner's choice.

9.3.3 Cabinets and counter tops will be installed level, plumb, and square. Counter tops and back splash type, style, color will be per Owner's choice.

9.3.4 Confirm equipment and appliance dimensions to assure accurate fit with cabinetry.

9.3.5 Adjust all moving parts to operate smoothly before final acceptance.

10. Stairs and Interior Finish:

10.1 Stairs

10.1.1 Rough framing for stairs will be shown on Drawings and installed per requirements of building code. Framing will conform to stair kit specifications.

10.1.2 Stair kit will be shop manufactured to requirements of building code. Owner will choose style, color, finish.

10.1.3 Install stair kit plumb, square, and firmly attached to wall or tread; secure rigidly and permanently in place.

10.1.4 If stair kit is prefinished, final product will be free of marks, scrapes, discoloration. If stair kit is finished on site, staircase will be isolated

from residence to avoid over spray.

10.2 Interior Finish

10.2.1 Millwork package will be protected from weather and other damage prior to installation. Before finishing, belt sand and final sand to smooth, uniform appearance. Stain and lacquer will be applied per Owner's choice; finish material before installation.

10.2.2 Millwork type, style, and finish will be determined by Owner.

10.2.3 Install all material true, plumb, and level. Where splices are necessary, cut at 45 degrees. Set finish nails to depth which allows for putty; match putty to appearance of finish product.

11. Floor Covering:

11.1 Floor coverings will be per Owner's choice of type, style, color, finish. The following list itemizes possible coverings:

11.1.1 Carpet;

11.1.2 Vinyl;

11.1.3 Tile;

11.1.4 Stone;

11.1.5 Wood.

11.2 All floor applications will conform to manufacturer's instructions. Installation and Specification sheets will be provided to Owner prior to installation.

11.3 Subfloor will be scraped and thoroughly clean prior to installation of floor covering. Fill all voids and sand all irregular surfaces. House interior will be heated until moisture content of subfloor is 8% to 10% using moisture meter.

11.4 Special conditions for installation such as temporary heat, floor

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preparation, storage on site, coordination with other Trade Contractors will be responsible of installer and prior notice will be provided to Owner at time of contract negotiation.

12. Drywall:

12.1 All walls and ceilings will be covered with gypsum wallboard 4'x12'x1/2" or as noted on Drawings, and screwed and nailed to the requirements of the building code.

12.2 During installation and finishing of gypsum wallboard, adequate heat and ventilation will be provided to assure proper drying.

12.3 Where walls are to be in a "moist" room, they will be covered with waterproof gypsum wallboard or cement backer board (See " Note" below).

12.4 Garage walls and ceilings will be covered with gypsum wallboard as required by applicable code.

12.5 Inside and outside corners will be finished with factory manufactured materials for this purpose. Owner will choose type of outside corner either bullnose or square.

12.6 All joints will be covered with tape and 3 coats of joint compound. All nails will be spot covered with 3 coats of joint compound.

12.7 All joint compound will be sanded smooth for painting. Sanding will occur in all areas including inside closets, difficult corners, attic access, garage area, and behind washer and dryer.

12.8 Finished walls will be sealed and allowed to dry for final requiring additional joint compound and sanding.

12.9 Prior to texture application or primer, gypsum wall board on exterior walls will receive one coat of a vapor barrier paint which meets requirements of energy code.

12.10 Texture will be applied to all finished walls except those areas designated for smooth wall. Type of texture will be Owner's choice.

12.11 Trade Contractor will be responsible for protection of all floors during seal and texture stages. Trade Contractor will remove all debris from site.

12.12 All electrical boxes and all other rough-in openings must be cleaned of joint compound by Trade Contractor.

Note: In "moist" rooms where tub surround, tub and shower walls will be finished with ceramic tile, cement backer board will replace gypsum wallboard.

13. Stain, Paint and Wall Coverings:

13.1 All interior finish millwork will be colored and finished per Owner's choice. Interior doors will be sanded, colored and finished as directed by Owner.

13.2 All exterior finish millwork will be primed as soon as practical and then colored and finished as directed by Owner.

13.3 Prior to application of any stain, paint, or sealant, clean all loose material, dust, or foreign matter to assure adhesion. All surfaces must be dry before application.

13.4 Cover all finished surfaces with plastic to avoid overspray. Use drop cloths when working above finished work. Appearance of paint or stain will be free of runs, sags, or skips.

13.5 All siding will be given a double coat of stain or paint using a product which conforms to characteristics of siding material. Color will be per Owner's choice.

13.6 All interior ceilings and walls will be given a double coat of paint and backrolled in two separate directions. Paint color and sheen (gloss, semi-gloss, or flat type) and location will be determined by Owner.

13.7 Where wallpaper is to be used Owner will be given an allowance per roll at Trade Contractor's price.

13.8 Exterior decks, stairs, guardrails, and handrails will be covered

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with a product specifically designed for this application. Where exterior wood is left natural, a suitable clear sealer will be utilized.

14. Plumbing:

14.1 Groundwork, excavation for plumbing, and access holes will be responsibility of Trade Contractor. Requirements will be made known to Owner at time of contract negotiation.

14.2 Analyze all framing conditions affecting plumbing work to avoid improper layout of joist, studs, posts, and beams. Coordinate with other Trade Contractors to maintain harmony of all mechanical systems.

14.3 All waste lines, vents, water pipes, meters, valves will be installed in accordance with the Uniform Plumbing Code and requirements of inspection agency having jurisdiction.

14.4 All water pipes will be of copper and sized according to applicable code. Trade Contractor will be responsible for metal cover plates to prevent nail penetration.

14.5 Insulation will be provided for water pipes in unheated spaces. Water service will be protected from freezing.

14.6 All waste and vent pipes will be of plastic and sized according to applicable code. Trade Contractor will be responsible for metal cover plates to prevent nail penetration.

14.7 Extend vent lines through roof according to code and local ordinance providing flashing for each vent. Vents will be distanced from all openings per applicable code.

14.8 Waste drain from house will be connected to whatever means of disposal required by site conditions as determined by Health department and applicable code.

14.9 Water service to building will be plastic tube placed in a trench below frost line and bedded in sand. Water line will be protected from contact with concrete at the point where it passes through foundation.

14.10 Hose bibs will be placed per Owner's requirements and be of the type which inhibits valve from freezing.

14.11 Shower stalls and tubs which need to be placed in their location during framing phase will be provided by Trade Contractor at that time and installed. Insulation and backing will be included during installation and these requirements will be provided to Owner at contract negotiation with respective Trade Contractors.

14.12 Plumbing fixtures and trim package will be chosen by Owner. All items will be delivered to site in the original packing boxes, carefully uncrated, and protected. All use, maintenance, and installation instructions will be provided to Owner.

14.13 Trade Contractor will be responsible for all final caulk on all fixtures where applicable. All fixtures, drains, faucets, sprays, bibs, valves, and connections will be placed under water pressure during both rough and finish phases and checked by Trade Contractor for leaks and drips. All such problems will be corrected prior to final payment.

Note: In areas where plastic or copper pipes will create noise in living areas, Trade Contractor will use alternative methods, materials, and sound deadening devices to decrease nuisance.

15. Heating/Ventilation/Air Conditioning (HVAC):

15.1 Installation of HVAC system will comply with regulations of National Board of Fire Underwriters, Uniform Mechanical Code, and applicable building code.

15.2 Ventilation and combustible air will comply with local energy code.

15.3 Type and method of system will be selected by Owner with recommendations of the Trade Contractor as to design preferable for site and house considerations.

15.4 HVAC system design will provide even, quiet, and efficient heating, cooling, ventilation. Prior to installation HVAC calculations will be reviewed

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by Owner.

15.5 Plumber and HVAC Trade Contractors will meet with Owner during framing phase to discuss rough installation and layout considerations to allow for compatibility of both systems.

15.6 HVAC installer will provide layout on site to indicate placement of furnace, thermostat, hot air vents, air conditioner, heat pump, cold air returns, sheet metal ducts, oil tank and lines, and stacks.

15.7 All roof and wall penetrations will be responsibility of Trade Contractor. Flashing and vent stacks will be provided as part of mechanical assembly.

15.8 At time of installation, Trade Contractor will provide insulation for all duct work in unheated spaces. Areas which require additional insulation before enclosure will be brought to Owner's attention.

15.9 Trim package will be chosen by Owner.

15.10 Trade Contractor will provide use and maintenance instructions in addition to manufacturer's installation and specification literature.

15.11 If HVAC Trade Contractor provides hot water tank then all product literature will be made available at time of installation. If Plumbing Trade Contractor provides hot water tank then all product literature will be made available by this installer. Hot water tank provider will take responsibility for all aspects of installation and warranty.

15.12 At completion of project, Trade Contractor will balance the entire system and adjust controls to provide efficient operation. Owner will be instructed in proper use and care of system during turn-over.

16. Electrical:

16.1 All work will be in accordance with the regulations of the latest edition of the National Electric Code and the local inspection agency having jurisdiction.

16.2 All switches, base receptacles, face plates, adequate circuits,

circuit breaker box, junction boxes, and panel box will be provided. Ground Fault Interrupt (GFI) units at all kitchen, bath, utility, and outside receptacles will be installed to fit situation and required by codes.

16.3 Local electric utility will provide electric meter and secondary cable to site per Owner's direction. Trade Contractor will assist Owner in coordination with utility company.

16.4 Local television cable company will provide cable and connections to site per Owner's direction. Trade Contractor will assist Owner in coordination with cable company.

16.5 Local telephone company will provide cable and connections to site per owner's direction. Trade Contractor will assist Owner in coordination with telephone company.

16.6 Smoke detectors will be installed per code.

16.7 Front door chimes and rear door bell will be provided per Owner's direction.

16.8 Proper connections to heater, washer, dryer, electric range, hot water tank, dishwasher, double oven or any other special equipment as selected by Owner will be provided. If wall heaters are utilized, Trade Contractor will assist Owner in layout of units.

16.9 Electric fixtures will be selected by Owner. Specialty items such as ironing board, hair dryer, vacuum system, and computerized controls will be provided to Owner at contractor's price.

16.10 Circuit breakers will be installed and properly labeled.

16.11 Test all circuits prior to installation of gypsum wallboard so repairs do not require extensive remodel.

17. Hardware:

17.1 Hardware during rough and finish phases will be provided by each Trade Contractor's vendor per building code. Where appropriate

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Owner will select product prior to installation.

17.2 When specific items require long-lead time in order to maintain schedule, it will be the Trade Contractor's responsibility to inform Owner at time of contract negotiation. Owner will choose type, style, color, and finish of item.

17.3 If specific item chosen by Owner is unavailable at time of order, it will be the Trade Contractor's responsibility to go-between Supplier and Owner to select an alternative to original choice. The new item will become a special order item to maintain schedule and flow of work.

18. Insulation and Weatherization:

18.1 All insulation will comply to Energy Code and applicable building code. Trade Contractor will insure that installation is compatible with all other products and systems.

18.2 During foundation phase insulation will be placed on cold side of concrete slabs and walls at living areas. Insulation material will be minimum value of R-10 sized 24"x96"x2" rigid styrene, non-absorbent, non-rot specifically manufactured for this purpose.

18.3 Install an integral, air-tight vapor barrier using either 6 mil poly plastic over interior of insulation or a poly latex paint over interior of drywall according to applicable building and energy code.

18.4 During framing phase insulation will be placed in spaces behind shower stalls, tubs, corners, partitions, and end joist bays. Precautions will be taken to insure that insulation will not become water damaged.

18.5 Install an air infiltration barrier over all exterior wall sheathing using type of barrier approved by local building and energy code. Lap all joints so water sheds to exterior.

18.6 Install insulation at all water piping and heating ducts exposed to cold weather. Require respective Trade Contractor to take responsibility for insulation of their work.

18.7 Prior to drywall installation and after all rough-ins are complete firestuffing will be placed in all vertical and horizontal penetrations per applicable codes and inspector's approval. At the same time, weatherization stuffing will be placed around all windows and doors. Baffles will be placed in rafter bays which contain attic vents to keep insulation from blocking air flow.

18.8 Floor, wall, and ceiling insulation will be of type and R value required by building and energy code. If necessary, secure insulation with staples, twine, or metal rods. Trade Contractor will be responsible for installation consistent with schedule and work flow.

19. Appliances and Decor:

19.1 Appliance schedule will list all appliances and their locations and considered part of these Specifications. Schedule will include manufacturer, model number, type, color per Owner's selection. Long-lead time items will be identified in order to maintain project schedule and work flow.

19.2 Decor schedule will list all specialty items to be included at time of construction. Items to be included are greenhouse structures, awnings, blinds, sauna accessories, maintenance parts, ornamental wrought iron. Schedule will include manufacturer, model number, type, color per Owner's selection. Long-lead time items will be identified in order to maintain project schedule and work flow.

19.3 Install all Appliances and Decor per manufacturer's recommendations. Provide copies to Owner of all installation instructions, warranties, maintenance instructions, and parts lists.

20. Sidewalks, Curbs, Patios, and Driveways:

20.1 All concrete flatwork will conform to local ordinances and building codes.

20.2 Finished surfaces will drain away from building and site conditions will allow for drainage of stormwater.

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20.3 Concrete will be placed on solid, undisturbed soil or compacted in a manner to eliminate settling or erosion.

20.4 Where finished surface will carry loads other than pedestrian traffic, concrete will contain 6"x6"-10/10 welded wire mesh midway in concrete pour. If required by situation, 1/2" reinforcing bar grid will be placed in concrete pour in lieu of welded wire fabric. Owner will be responsible to establish need for additional structural support and retain professional engineer at own expense for design if required.

20.5 During concrete finishing, bring sufficient mortar to surface for proper troweling. Float by hand or machine to hard, dense surface, free from trowel marks. Apply scored, tooled control joints and tooled edges.

21. Landscaping:

21.1 Final grade for building site will contain original soil from site excavation and allow stormwater to drain away from building in a manner which conforms to local building code. Additional fill will be hauled to site at Owner's expense.

21.2 Top soil, landscape bark, or decorative gravel will be provided at Owner's expense.

21.3 Planting material will be responsibility of Owner and will include items such as sod, trees, shrubs, and flowers.

21.4 Site conditions and requirements of Owner will determine type of driveway and appearance of final product.

22. Guarantees & Warranties:

22.1 All Trade Contractors will guarantee installation and material used in their work for a period of one year. Any defects in workmanship or product which develop in that period will be corrected to Owner's satisfaction and without charge to the Owner.

22.2 ***Manufacturer's warranty will be responsibility of Trade Contractor who provided product for installation.*** Supplier of products will provide installation instructions, specifications, and warranties. All such

information will be provided to Owner prior to installation and at completion each Trade Contractor will provide turn-over files.

22.3 Trade Contractors and Suppliers will share responsibility for using materials, methods, and products which are within federal guidelines for emission of volatile organic compounds and formaldehyde off-gassing.

22.4 Each Trade Contractor will be responsible for removal, recycle, or reuse of all construction debris from their respective phase of construction. Any debris which remains for Owner's disposal will be hauled to Trade Contractor's place of business at their expense.

23. Special Notes:

23.1 References made on Drawings as to size, type, or quantity of material will agree with Specifications. Discrepancies will be brought to Owner's attention for review and decision.

23.2 It is desirable that advice be sought by the Owner in such matters as the suitability of the site on which the house will be constructed, and adherence to local zoning ordinances, building codes, and practices.

23.3 In addition to these Specifications and Drawings which they accompany, a written contract, prepared with competent advice, will include specific items such as contractor's license and bond, insurance coverage, schedule of payment for work performed, scope of work to be performed, and authority for disputes and jurisdiction.

REMEMBER: Every region has special geological, biological, and meteorological conditions which must be taken into consideration when writing Specifications. For instance, in some regions radon gas emits naturally from geological formations, and will enter your home through the soil below the foundation. Special ventilation will be required to rid your home of this gas. Another example would be hurricanes or tornadoes which may be part of your region's regular weather pattern; if so, extreme wind forces will be placed on your home. The foundation and roof assembly will require additional hardware for a positive, uniform connection. ***Pay attention to natural phenomena affecting Design/Build considerations and consult your local Building Department during Design Development.***