

TERRA-DOME SPECIFICATIONS & INFORMATION

I. EXCAVATION AND GRADING

Clean all stumps, trees, and debris and square up the excavation for the house location. Allow 4 to 6 feet over dig from the outside face of concrete wall to the face of excavation. By using a transit, determine the finish level of the house on job site location. If at all possible, face house in a southerly direction.

Trenches carried deeper than required by plans shall be filled with concrete. In no case shall fillings under foundations or footings be done with earth. Bottom of excavations shall be made level and kept free of rubbish.

Excavations for footings and trenches may be cut to accurate size and side forms omitted if concrete is poured in cleaned out trenches without cave-ins. Excavate for utilities, water sewage, electric, heating plenum and transit ductwork. Protect bottoms of excavations from frost. Do not place foundations, footings or slabs on frozen ground.

Where the indoor pool applies to the home, the excavation for the pool will occur after the house excavation.

Site should be excavated level 14" below top of finished floor height.

II. DRAINAGE AND STONE WORK

Perimeter Drain: Install a 4" perimeter drain of 4" perforated holes or 4" flexible drain tile down on a bed of fresh stone. The drain shall run around perimeter of house and should be able to free gravity drain on each side of house. Backfill with 4"- 12" medium size clean stone over perforated pipe with minimum of 4" straw over stone.

Crushed Stone: Where percolation is needed apply crushed, washed 3/4" stone as follows:

- a) Under floor slab 10" thickness or to top of footings.
- b) 4" under perforated drain tile located at lowest point out to grade.
- c) Under furnace plenum, 4" minimum thickness.

These stone areas must be drained back to perimeter drains specified above.

Note: It is essential that the supply ducts and plenum be kept absolutely dry for heating economy.

(Drainage and Stonework Cont.)

Back-Fill: When house is waterproofed, insulated and all utilities in place, back-fill with a clean material (don't use large rocks, lumber, stumps, debris, etc.). This could cause a break in waterproofing membrane.

Earth cover over roof to consist of 2' to 6' of earth minimum and sloping from center of house to the perimeter exterior walls. Take care not to crush insulation. Utilize machinery up to 955 loader for backfilling upon fully cured concrete (28 days).

Note: The superimposed design load of 327 lb. per square foot has included an auto live load of 50 lb. per square foot. Do not overload the concrete roof deck with heavy machinery. Terra-Dome Corp. is released of all liabilities if these directions are not followed.

III. CONCRETE WORK

Footings: All footings shall be reinforced steel as indicated on plans. All footings are to be cast in place on undisturbed earth using a 3500# concrete mix.

Walls: To be cast of 4000# concrete and a minimum of 5 1/4 bag mix, 3/4 aggregate with 3% air entrained.

Walls are all 10" thick and 8' high with #4 bar at 12' X 12" centers each way. Place all vent pipes, chimneys, utilities in walls or roof.

Where needed, electrical outlets with 3/4" PVC conduit are placed in wall before pour and front covered with tape.

Roof: Roof is same mix as walls with rebar placed according to specifications. Walls, roof and overhang of each module are poured at one time (monolithic pour) with Terra-Dome's special form systems.

Floors: Is same concrete mix as walls and roof, 4" thick. Vapor barrier of 4-mil polyethylene is under slab. Finish smooth with steel trowel.

IV. ELECTRICAL

Conduit: PVC plastic conduit shall be used in walls. Plastic conduit to be used under floor slab. Provide suitable type lock nuts, bushings, couplings, etc. for use with the conduit to make rigid connection between conduit boxes. Conduit shall be cut square (reamed) and made up to give a smooth channel. Connections other than at outlet boxes shall be watertight. Conduit shall be of adequate size and so installed that wires can be easily inserted or withdrawn without injury to insulation, using long sweep bands at all angles. Conduit shall be concealed in the floors, slabs, walls, etc. of the house construction in all finished areas. Furnace room conduit may be exposed on walls. Conduit placed on poured concrete to be a minimum of 1/2" in size.

(Electrical Cont.)

Wires: Wire shall be moisture proof for underground and where required by code. No wire smaller than No. 12 shall be used and where length of run would cause voltage drop of more than 2% in size No. 10 wire shall be used. Wire shall be different colors to identify the various lines. Where Romex cable is used with metal studs, use a plastic grommet to protect wiring from metal studs. MC cable can be utilized without grommets with a grounding screw.

Outlets: Outlet boxes and covers shall be galvanized. For concrete work the boxes shall be selected to facilitate electrical work and minimize interference with placing of reinforcing steel provide galvanized utility and gang boxes for switches. Conduit and outlet boxes in concrete masonry shall be installed as work progresses and shall not be cut in later.

Cleaning: All fixtures, panel boards, motors and all other heating, ventilating or electrical equipment furnished or installed by this contractor shall be thoroughly cleaned prior to leaving the job.

Access Panels: The electrical contractor shall furnish to the general contractor for installation access panels as required for proper access to any junction boxes.

Receptacles: Receptacles to be heavy duty, grounding type, flush duplex 20 amperes, 120 volts. Mount all receptacles in horizontal position unless specifically noted otherwise. Outdoor receptacles to be weatherproof, complete with duplex grounding type receptacle and double stainless steel gasket cover.

Electrical Service: 200 ampere to 100 ampere, depending on size of house. 240 volt, 60 cycle single-phase underground service with outside meter mounted on stub post or above entry vestibule.

Stove, Refrigerator, Washer and Dryer: Dryers vented through roof next to plumbing vent or out the front of the building under floor slab. The four items listed will be furnished by owner and installed by this contractor.

Dishwasher: Owners discretion

Air Exhaust: In bathrooms, use Nutone Model, air delivery 70 c.f.m. at .10 sr, sound level 3.5 Sones. Mount in drop ceiling.

V. HEATING AND AIR CONDITIONING

Heating unit can be electric, gas, oil or wood. A counter flow central air system is recommended over plenum. Separate units can be installed in separate rooms of house.

You can also heat with airtight wood stove or fireplace. All units except electrical need combustion air line.

Plenum: To be cast into floor construction. Check with HVAC contractor for details.

Ductwork: General Plastics is the recommended supplier. See links page on website.

Shall be constructed entirely of PVC plastic for sizes shown on drawing. See drawing for details and specifications from HVAC contractor.

VI. PLUMBING

All plumbing fixtures, drains, valves, etc. shown on the plans shall be connected, complete with necessary supplies, waste and vents, whether or not the roughing in or piping is shown or indicated.

Cleaning: All plumbing fixtures, metal, trim, drains, fittings and connections shall be thoroughly cleaned and left ready for service for the home buyer.

Flashing: Provide flashing for floor drains in waterproofed floors. Fasten flashing to drain clamp device and make watertight.

Clean Outs: Furnish and install clean outs as indicated on the plans, or even if not shown, as required according to local and state codes.

Sewers: Lay piping true to line and grade. Fit ends together and match so that sewer will have smooth and uniform invert throughout its length. Unless otherwise indicated or directed, maintain 30" minimum cover above piping. Pipe shall be provided with firm support. Follow local codes.

Ordinances and Permits: The owner shall obtain and pay for all permits required for installation and inspection as required by the existing ordinances. All work shall conform to state and local codes.

Water Service: The plumbing contractor shall arrange with the local water department and pay for the installation of a domestic water supply service. The water meter and installation of same shall be included in the plumbing contract.

Fixtures: To be supplied by owner or plumbing contractor.

VII. FIREPLACES AND CHIMNEYS

The fireplace shall be a heatilator type using a vent from house air handler unit to circulate around firebox and act as a natural heatilator.

All freestanding wood-burning fireplaces as indicated on plans shall be furnished at owner's request.

The chimney shall be a clay flue liner or metal piping recommended by manufacturer. Cap all chimneys for water penetration.

Outside air source must be placed under floor for all fireplaces or woodstoves.

VIII. WATERPROOFING

Recommended supplier is EPRO Services. See links page on the website.

Terra-Dome waterproofing membrane is a tar modified polyurethane elastomer. It is applied as a liquid and forms a bonded synthetic rubber membrane. The material can be applied with a brush or roller or can be sprayed to a thickness of 1/16 inch. This permanent bond will prevent travel of water below the membrane even if the membrane is punctured. The elastic properties will permit the membrane to span ordinary shrinkage cracks up to 1/16 inch.

A bentonite sheet good material is used in conjunction with rubber membrane on overhangs parapet walls and cold joints.

A plastic liner may be placed over the entire structure.

IX. INSULATION

Two 1" layers of 1" X 4' X 8' Styrofoam placed directly over top of structure with offset joints

One 1" layer of Styrofoam placed over vertical walls.

One 2" X 4' X 8' extruded Styrofoam placed over exterior walls or 3" X 4' x 8' expanded polystyrene

Parapets and overhangs require 1" X 4' X 8' extruded or 2" X 4' X 8' expanded.

X. STEEL OR WOOD STUDS

All metal or wood studs to be 3-5/8" wall studs. Shoot top and bottom metal plate into concrete with ramset gun at 24" O.C. or use concrete nail or tapcon screw.

Place metal or wood studs 16" O.C. as detailed on plans

All wood sill plates should be pressure treated.

XI. DRYWALL

All walls to be 1/2" fire code drywall painted with 2 coats smooth and all ceilings with one coat sprayed acoustic and/or 1 coat flat latex paint over splatter finish. Fasten drywall to metal studs with 1"-1 1/4" long screws at 12" O.C.

XII. OUTSIDE FINISH

All walls exposed to the exterior of the home will have 2" extruded Styrofoam insulation or 3" expanded Styrofoam insulation. Finishes over insulation include the following:

- Synthetic Stucco
- Conventional Stucco
- Stone
- Siding
- Brick
- Log

XIII. INTERIOR FINISHES

Interior concrete walls to be coated with plaster material (recommend a perlited gypsum plaster called Structolite manufactured by US Gypsum). Also a skim coat of drywall compound will be applied to make a smooth surface to be textured and painted by owner.

XIV. CARPENTRY

Door and Door Frames: Standard 4-112" pre-hung and pre-finished doors and frames to be selected by owner.

Garage Doors: To be selected by owner. See plans for location and size.

Sliding Glass Doors: If specified on plans, contractor will furnish thermo-pane glass door.

Kitchen and Vanity Cabinets: Pattern to be selected by owner. Kitchen wall typically furred out to allow for electrical and plumbing requirements.

Plastic Laminate Counter: Kitchen and vanity shall be pressure laminate self-edged on a base of flakeboard. Kitchen backsplash same material applies directly to wall board and extends to underside of cabinets. Vanity backs and end splashes 4" high self-edged as for counter tops or other material selected by owner.

XV. FLOORING CHOICES OVER CONCRETE FLOORS

- Carpet w 1/2" pad.
- Tile
- Vinyl Flooring
- Laminate floating floor system
- Real wood floating floor system
- Stone
- Stained concrete
- Stamped concrete
- Synthetic decorative concrete

DISCLAIMER

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