



2023 New Construction Specifications

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1 - Submission Guidelines & General Notes

Bid Submission:

Please submit all bids to:

bids@habitatdane.org

Questions or clarifications can be directed to
Adam Helt-Baldwin, Vice President - Construction
Habitat for Humanity of Dane County
PO Box 44189, Madison WI 53744
608.255.1549 x 105:
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Donations:

Habitat for Humanity of Dane County makes homeownership attainable with support from across the community. As an IRS-designed 501(c)(3) nonprofit charity, your gifts are fully tax-deductible as allowed by law. Habitat gives preference to vendors and subcontractors who can discount or donate in-kind products or services as part of their proposal. Habitat also reserves the right to substitute donated products or services from other vendors even after the acceptance of other bids.

Insurance:

Contractors must furnish a certificate of insurance showing proof of Worker's Compensation insurance and Commercial General Liability or Comprehensive General Liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) in the aggregate.

Federal funding disclosure:

Notice is given that Habitat for Humanity of Dane County projects receive funding through CDBG and other federal / state / local sources. These projects may require Section 3 and other certification reporting.

Specs Revised 4.10.2023



2 – Excavations, Laterals and Backfill

Contractor to furnish and install all labor, materials, equipment and consumables to complete the following scope of work as listed below:

1. Furnish and install silt socks as required for proper erosion control at lot line along public right of way and at neighboring lot lines when grade is below Habitat lot. Habitat and Contractor to determine if silt fence is a better solution based on specific lot conditions.
2. Supply and place 1 load of 3" stone for access pad at future driveway location.
3. Excavate from back of municipal curb to foundation of home for the 4" sewer lateral and 1" water lateral. Supply and place PVC sanitary lateral and copper water lateral from back of City curb into foundation footprint. Provide and place 1 load of clear stone for bedding of new utilities.
4. Excavate for home footing and foundation based on approved site plan. Excavation to be completed in accordance with all applicable OSHA requirements (see page 2). Stockpile clean soil onsite for backfill.
5. Truck soils off-site as needed. Trucking to be included in base bid of contract with the exception of additional trucking due to unstable soil conditions. In the event of unstable soil conditions, contractor to notify Habitat immediately of the issue and invoice all additional expenses to Habitat on a T&M basis not to exceed \$500. If work is estimated to exceed \$500, contractor must get written approval from Habitat before proceeding with work. Please provide T&M rates on next page.
6. Furnish and place clear stone over exterior form-a-drain a minimum of 12" in each direction. Coordinate any required inspections with municipality before proceeding with backfill.
7. Provide and place clear stone in egress window wells up to 8" from bottom of window and around exterior of well up to grade.
8. Provide and place clear stone inside garage up to floor grade
9. Spread existing topsoil to rough grade removing tripping hazards and any remaining debris.
10. Include all dump and tipping fees necessary to complete this scope of work.
11. Contractor responsible for all damages and replacement to any erosion control, public right of way and neighboring property if damage is caused by this contractor.



EXCAVATION SAFETY REQUIREMENTS

OSHA requires that all excavations more than 5 feet deep that are to be entered by personnel shall be shored, sheeted, braced or supported. The preferred method is to slope the sides of the excavation to an angle of control at which the soil will remain at rest. There are generally 3 different soil classifications in Southeastern Wisconsin and the restrictions for each are as follows:

- **Type A soil: Clay, silty clay, sandy clay and clay loam.** In this type of soil an excavated bank may only extend vertically 5 feet high without being shelved. Any bank over 5 feet must have a minimum of a 2 foot deep horizontal shelf for every 5 feet of vertical rise or must be sloped at a ratio of $\frac{3}{4}$ to 1 or a 53 degree slope. There must also be a minimum of 2 feet between the beginning of the vertical bank and any form work that is to be placed in the excavation.
- **Type B soil: Angular gravel (similar to crushed rock) silt, silt loam and sandy loam.** In this type of soil excavated banks must be shelved or sloped at a 1 to 1 (45 degree) ratio. In other words, for every 4 feet of vertical height the excavated bank must be shelved 4' horizontally or dug at a 45 degree slope. There must also be a minimum of 2 feet between the beginning of the vertical or sloped bank and any form work that is to be placed in the excavation.
- **Type C soil: Gravel, sand and loamy sand.** In this type of soil the excavated banks are to be sloped at a $1\frac{1}{2}$ to 1 or 34 degree slope. This means that for every 4 feet of height the grade must slope 6 feet back. There must also be a minimum of 2 feet between the beginning of the slope and any form work that is to be placed in the excavation.
- All spoil piles must be at least 2 feet away from the edge of the excavation.

TIME AND MATERIAL RATES

The agreed T&M Rates are as follows:

1. T&M rate for a backhoe (4' bucket) with an operator is \$_____/hr.
2. T&M rate for mini-backhoe (2' bucket) with an operator is \$_____/hr.
3. T&M rate for a skid steer with an operator is \$_____/hr.
4. T&M rate for a general laborer is \$_____/hr.
5. T&M rate for quad axel dump truck is \$_____/hr.



3 - Foundations

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Furnish and install Form-A-Drain tile system with bleeders.
2. Form, pour and finish concrete footings per plan. Strip footings to include two rows of #4 rebar continuous throughout footings.
3. Furnish and install basement windows at each basement window location with drain tile connected to the footing tile. **Habitat will supply egress window bucks**
4. Form, pour and strip concrete foundation walls per plans. Include anchor bolts as required per code. Anchor bolts to be installed 3" from exterior face of foundation wall.
5. All inspections are the responsibility of the contractor.
6. Include the proper rebar placement as required by code. All rebar to be centered in concrete. Include rebar to ground electrical system near meter pedestal location
7. Place control joints at basement windows and all spans over 20' long.
8. Furnish and spread in place #1 stone for the interior concrete slab. Top of stone to be flush with top of footings
9. Include all conveying charges necessary to complete this scope of work.
10. Repair / replace all erosion control measures damaged during Contractor's scope of work.
11. Contractor responsible for repairing all drain tile damaged before installation of stone.
12. Contractor includes all winter conditions extras including concrete additives and surcharges, and concrete blankets to protect the concrete from frost as necessary.

4 – Foundation Waterproofing

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Prep foundation & spray 15 year warranty waterproofing up to grade.
2. Install 18"x24" sealed sump crock with 1/3 HP sump pump. Piping by others.
3. Apply Insulcrete or equivalent synthetic stucco product over exposed insulation on foundation down from top of wall to grade (typically average of 1 ft)



5 - Concrete Flatwork

Interior

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Supply and grade clear stone as needed prior to pouring floor.
2. Install 1" rigid foam insulation (provided by Habitat) over stone and footings.
3. Furnish and install 4 mil vapor barrier over interior stone. Lap a minimum of 12" each direction. Tape all seams and penetrations per code.
4. All required inspections are the responsibility of the Contractor.
5. Furnish, pour and finish basement floor. Slab to be 3" thick, #3000 minimum.
6. Tool or saw cut control joints into slab per industry standards.

Exterior

1. Grade yard and/or provide fill as necessary to achieve proper sub base grading for concrete flatwork per plans. Includes removing all excess spoils from site and all necessary trucking.
2. Furnish and install 3" min. of clear stone at all concrete flatwork areas. Mechanically compact all sub base.
3. Replace all erosion control damaged during the completion of this scope of work.
4. Excavate and remove tracking pad stone as required for parking pad and walkways
5. Form and pour all concrete flatwork, 4" thick per site plan. Contractor responsible for ensuring all elevations are set according to the site plan. Contractor to notify Habitat immediately if there are any conflicts in the plans.
6. All exterior concrete shall be broom finished with control joints per industry standard. Any time there are steps present, the sides of the steps will need to be finished.
7. All sidewalks to be 48" wide unless noted otherwise on the plans with control joints every 4' per industry norms.
8. All garage floors to be smooth finish, with 4" of pitch from back to front, unless otherwise noted on plans.
9. All driveways to shall be broom finished with control joints no more than 10' increments
10. Rebar or fiber-mesh required as necessary per code and industry standard.
11. Public sidewalks and driveway approaches poured to thickness and spec's of local municipality



6 - Roofing

1. Habitat furnishes all the following material:

Felt underlayment, Ice & Water shield, Lifetime dimensional shingles, metal drip edge and gutter apron, continuous ridge vent and all other appropriate flashings.

2. Contractor to install above material with 3 ft. of Ice & Water along eaves.
3. Contractor will remove all waste and excess material.
4. Contractor must include 1 year warranty on all labor
5. Contractor shall follow all OSHA fall-protection regulations
6. Standard house roof pitch is 6/12.

7 – Gutters & Downspouts

1. Furnish and install 5” prefinished “K-Style” seamless aluminum gutters along all eaves as necessary. Colors will be PlyGem/Masitc White, Wicker or Cameo
2. Pitch gutters as necessary for adequate draining per industry standards.
3. Furnish and install appropriately-sized downspouts and extensions so that they discharge per the drainage noted on the site plan



8 - Plumbing

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Contractor to furnish and install all sanitary (soil, waste, and vent) piping as needed per plan and all applicable building codes and municipal ordinances.
2. All water pipe to be PEX, CPVC, or PVC.
3. Contractor to properly secure copper water supply pipe in basement to water utility specifications.
4. Contractor responsible for trenching and replacing stone under basement slab as needed for underground plumbing. Contractor also responsible for proper removal of all excess spoils from interior basement excavation relating to this scope of work.
5. Contractor to install the following fixtures supplied by Habitat: kitchen sink, kitchen faucet, dishwasher, shower mixer and finish trim, shower faucet, vanity faucet(s), toilet(s).
6. Contractor to furnish and install the following items: shower module(s), tub drains, in-line backwater flow valve, laundry tub sink, laundry tub faucet, frost proof hose bibs with interior shut off valve, 40-gallon, natural gas power-vented water heater, 24,000 grain water softener
7. If I-joist is cut in a way that requires structural repair, plumber will be required to pay for and perform repairs to satisfaction of Habitat.
8. Contractor to caulk or spray foam all penetrations that result from this scope of work.
9. Contractor to pull necessary permits and schedule inspections.



9 - HVAC

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Contractor to furnish and install all HVAC systems, equipment, parts, materials, and accessories required per the plans, specifications and all applicable codes including but not limited to intake, supply and return ductwork, duct insulation, cabling, wiring and controls, drain and condensing lines as needed, registers, louvers, grills and diffusers, duct sealing, dampers, dryer vent ducting, and programmable thermostat, unless noted otherwise.
2. Furnaces, A/C coils, and A/C condenser will be furnished by Habitat. Contractor to install. Specific model information to be provided by Habitat when known.
3. Exhaust fans (bath and range) will be furnished by Habitat and installed by Contractor. Venting to be furnished and installed by contractor.
4. Contractor to furnish and install gas pipe to the hot water heater, furnace, dryer and stove. Contractor to perform pressure testing on all pipe and double check fittings to ensure proper seal.
5. Contractor will furnish and install all dryer vents with hook-ups.
6. Contractor is responsible for sealing of penetrations relating to this scope of work.
7. Contractor is responsible for all low voltage wiring including all motor controls and disconnects to all HVAC equipment. Line voltage by others.
8. Contractor will furnish two furnace filters during furnace installation.
9. Contractor responsible for all quality control and examination of HVAC equipment including but not limited to: control sequencing, report submittals, air design quantities and final air quantities, balance reports, etc.
10. Contractor's field staff to work with Habitat's field staff to remedy issues in a timely manner.
11. Contractor responsible for pulling all necessary permits as needed per municipality.



10 - Insulation

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Install ventilation baffles in attic as required for blown in insulation
2. Install advanced air-sealing package in attic, spray-foaming over ceiling penetrations and top-plates.
3. Blow unconditioned, truss-style attic with fiberglass insulation to R-50. Include rulers on multiple trusses to ensure that appropriate depth is achieved throughout.
4. Spray 1st floor rim joists with closed-cell foam insulation to R-21 value.
5. Install R-21 unfaced fiberglass batt insulation into all wall cavities with 4 mil poly vapor barrier.
6. Spray foam around windows, doors, and other openings where fiberglass is not practical. Include fiberglass in 2nd floor joist cavities.
7. Caulk any remaining cavities where spray foam / fiberglass is not practical.

11 - Drywall & Painting

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Furnish drywall material for house: ½" for walls, 5/8" for ceilings, garages, and party-walls in duplexes and moisture-resistant board in bathrooms.
2. Furnish labor and materials to tape and finish all walls, window returns (including sills), and ceilings.
3. Spray orange peel texture and primer on all drywall surfaces. Protect finished surfaces as required prior to spraying texture (windows, fixtures, doors, etc).
4. Remove from premises debris/waste generated during and after finishing.

Option 1: Provide cost to hang drywall throughout house,

Option 2: Provide cost to supply and paint all walls and ceilings Hallman Lindsey - Elusive white



12 - Landscaping

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Rough grade project sites as needed for proper drainage away from foundations. Includes removing and/or furnishing spoils as necessary. Rough grade to be 2" below top of concrete flatwork and proposed final grade as noted on the building permit survey. Rough grade to be completed after all exterior flatwork.
2. Contractor is responsible for all conveying charges necessary to complete this scope of work.
3. Contractor to maintain erosion control during completion of this scope of work.
4. Contractor to furnish and install 2" of screened topsoil to fine grade for new lawn.
5. Contractor to furnish and install shrubs, trees, and mulch per landscaping plan.
6. Contractor to furnish and install grass seed, starter fertilizer and straw erosion blanket
7. If Contractor determines sod is a better solution than seed / erosion netting, it must be approved by Habitat.
8. Contractor to keep erosion control in place until grass has germinated along public right of way.



13 - Electrical

Contractor to furnish and install all labor, materials, equipment and consumables to complete the scope of work as listed below:

1. Install temporary electric pole (provided by Habitat) at start of framing stage.
2. Contractor shall complete all work according to building plans and in compliance with appropriate building codes. Any discrepancies shall be brought to the attention of Habitat prior to work commencing.
3. Contractor to furnish and install all wiring, boxes, switches, outlets and covers.
4. Habitat to furnish meter pedestal, 200A electrical service, breakers, fixtures and appliances. (see below for details)
5. Contractor is responsible for removing debris and/or waste generated by their work. Waste containers may be available on the work site.
6. Contractor to arrange for permits and inspections as required by municipality.

Basic Design Criteria

No switched outlets

No can lights

200 Amp service with whole house surge protection

Kitchen

HFHDC provides the garbage disposal, over-range microwave, and light fixtures.

Wire for both 110V and 220V ranges

Wire for garbage disposal

Wire for dishwasher

Wire for over-range microwave

Dedicated circuit for refrigerator

Bathrooms

HFHDC provides bathroom fan, fan wall control, and vanity light.

Wire for ceiling mount bath fan with light

Wire for wall mount vanity light

Hallway / Stairway

HFHDC provides the light fixtures.

Wall sconce in stairway, no ceiling fixtures

Ceiling fixture in hallways

Combination smoke/carbon monoxide detector in bedroom hallway(s) (Placement per code)

Living Room

1 combination cable / telephone jack

Ceiling fan with lights per plan



All Bedrooms

HFHDC provides the ceiling fan and light fixture

Ceiling fan with light

Smoke detector

1 combination cable / telephone jack

Basement

110V Washer outlet

Both 110V and 220V dryer outlets

110 V single device outlet for sump pump hookup

Combination smoke / carbon monoxide detector

Keyless porcelain fixtures as per plan

Wiring to furnace, water heater, and softener

Unfinished Rooms in Basements

Outlets placed on exterior walls every 12' on center

Garage

110 V single device outlet, 15 Amp wire for future garage door opener

Low-voltage wiring for future garage door opener

Keyless porcelain fixtures as per plan

1 GFI outlet

If detached garage, disconnect for detached garage in breaker box (not as switch)

Exterior

HFHDC provides the external light fixtures and door bell & chime kit.

1 light by each entrance (front door and side or rear door(s))

2 lights by overhead garage door

Doorbell at each entrance (front door and side or rear door)

2 exterior outlets (one at porch, and one to service rear/side door area)

AC disconnect per plan

All products provided by HFHDC include:

200 Amp meter pedestals and panel

Necessary breakers

Whole house surge protector

Light fixtures

Ceiling fans with light kits

Over-range microwave

Dishwasher

Bathroom fan

Bath fan wall control