

Chapter 1 - Overview

Generally, this manual has been prepared as an aid to the House and Project Leaders of the Habitat for Humanity Greater Columbus. It does not deal with any of the work being done prior to the beginning of construction by volunteers. It also does not detail work which is done by the contractors. Each phase is laid out in a similar fashion beginning with what your site should look like at the start of the phase; what materials you should have on your site; what tools you will need to complete the tasks in that specific phase; a list of the tasks; and an explanation of each task. This manual does not make any assumptions concerning how many volunteers you have or their skill level. It does assume you have some prior experience with Habitat for Humanity’s building methods.

Resources

This manual is not intended to be used alone. You will also need your plans, prints, detail sheets, Safety Manual, Safety Huddle Booklet, sign-up sheets and waivers.

Safety

As always, you should be stressing safety first and quality construction while being respectful of your volunteers and neighbors. Start each day with a safety huddle to explain the tasks for the day and safety processes to be used. The Safety Huddle Booklet provides a guide for each session. Stress the requirement for safety glasses and hard hats (during certain phases) and the need for hydration, gloves and sunscreen. Stress safety throughout the day. Stop unsafe practices immediately.

Tools

Each phase will detail the tools needed. The numbers will vary depending on the number of crews and concurrent tasks. Volunteers should be told to bring the tools listed in the “general tools” and should have them well labeled. The House Leader should make sure that every volunteer has the tools listed in the “General” section and every crew has access to the tools listed in the “Site Tool” section. The House Leaders are also responsible to ensure the remaining tools are on-site for use. These tools are available to be checked out at the Habitat JobBox. The only pneumatic tools permitted on a Habitat site are pneumatic finish nailers pneumatic staplers and palm nailer. Habitat will supply all tools needed. Any tools supplied by the volunteers must be in good working order. Volunteers who are not proficient in the use of a tool should be instructed in its use before they begin work.

Figure 1.1 – General Tool List (Not repeated in each chapter)

Mini Mobile Tool Inventory - Master List	
Description:	Quantity:

Safety Materials	
First Aid Kit	1
Fire Extinguisher	1
Volunteer Safety Binder	1
Safety Board	1
MSDS Binder	1
Clip Board	2
Water Jug	1
Cups	1 Lg. box
Nail Aprons	1 tub (20)
Work Gloves	1 tub (20)
Safety Goggles	1 tub (30)
Hard Hats	20 green
Hard Hat wipes	1 box
Sanding Masks	1 pkg
Earplugs	1 box
Safety Tape	1 roll
"Do Not Operate" Tags	1 pkg
Rebar + Caps	4 each
Roof Jacks	24
2x6x10 boards	12 to 22
Hand Tools	
Hammer	25
Speed Square	10 to 15
Straight Edge	1
Carpenter's Square	2
Torpedo Level	1
2', 4', 6', 8' Levels	1; 1; 2; 1
6" Clamps, 16-28" Bar Clamps	4 and 4
Channel Locks	1
3/8" Ratchet and Socket Set	1
1/2" Husky Socket Set	1
Crescent Wrench	1
Tin Snips - Large	6
Metal Tape Measure 25' and 100'	15 and 1
Drywall T-Square	3
Chalk Line and Chalk	5; 2 blue 2 red
String Line - 100'	1
Utility Knife	15-20
Hand Saw 15"	2
Hammer Stapler	6
Phillips Screwdriver	3
Flat head Screwdriver	3
Snap Lock Punch	2
Nail Hole Slot Punch	2

Unlocking Tool	2
Chisel Set	1
Hand Rivet gun	1
Caulk Gun - Large, Small	2 and 3
Cats Paws and Flat Bars	3 each
Sledge Hammer	2
Saw Horses	3 pair
Hack Saw	1
Shovels	3
Nail Punch	2
6" Hand Seam Brake	2
Ladders (Variable)	
4' Step Ladder	1
6' Step Ladder	2
8' Step Ladder	4
16' Extension Ladder	4
24' Extension Ladder	1 or 2
Little Giant Ladder	1
Electrical Items	
Power Cords	5 to 7
Splitters	2
GFCI Tester	1
Power Tools	
Reciprocating Saw (corded)	1
Circular Saw	1
Miter Saw	1
Cordless Drill	2
Electric Hammer Drill	2
Dewalt 6-Piece Kit	1
Batteries	2 per Dewalt Kit
Battery Chargers	2 per Dewalt Kit 1 for other tools
Pneumatic Palm Nailer	1
Air Compressor + Hose	1 each
Bits and Blades	
Circular Saw Blades	4 reg. / 1 plywood
Reciprocating Saw Blades	1 pkg
Hack Saw Blades	1 pkg
Utility Blades	1 pkg
Hook Blades	1 pkg
Multi Drill Bit Set	1 set
Spade Bit Set	1
Phillips Bit Set	1
Pump Jacks (variable)	

Pump Jacks	4
Pump Jack Poles	4
Pump Jack Brackets	8
24' Walk Boards	2
16' Walk Boards	1
Safety End Rail	4
Other Essentials	
Tool Drawers	4
Trash Can	1
Dust Pan + Push Broom	2 each
Pencils, Sharpies	5 ; 4
Rope + Bucket	50 ft : 1

Green Building

All Habitat homes will be built to the AWARE standards, published by Franklin County. These standards will make the homes more “green” and meet accessibility standards.

Excerpts from the AWARE Manual...

Cleaning and Waste Management

Construction site is to be in a clean and orderly condition throughout the construction process. All debris shall be placed in a dumpster at the end of each day. Clean interior spaces prior to the start of finish painting and the application of other finishes. At the conclusion of construction, the project shall be properly cleaned. This should include but not be limited to; cleaning the interior and exterior glass, surfaces exposed to view, remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surface areas, sweep and mop all tiled surfaces, etc. Replace filters of operating equipment. Clean equipment and fixtures to a sanitary condition. Clean exterior such as debris from roof, gutters, landscape areas, driveways and walks, etc. Remove all waste and surplus materials.

Disposal/Recycle

All cardboard generated by construction and all cardboard trash in the house shall be recycled to the local recycling plant. Disposing of cardboard in any other manner will result in a \$500.00 penalty assessed on the contractor per each occurrence. The penalty will be deducted from the contractors next invoice draw. Dispose of all trash, rubbish, and debris in a legal manner and send to a local recycling site.

Recycle Bins

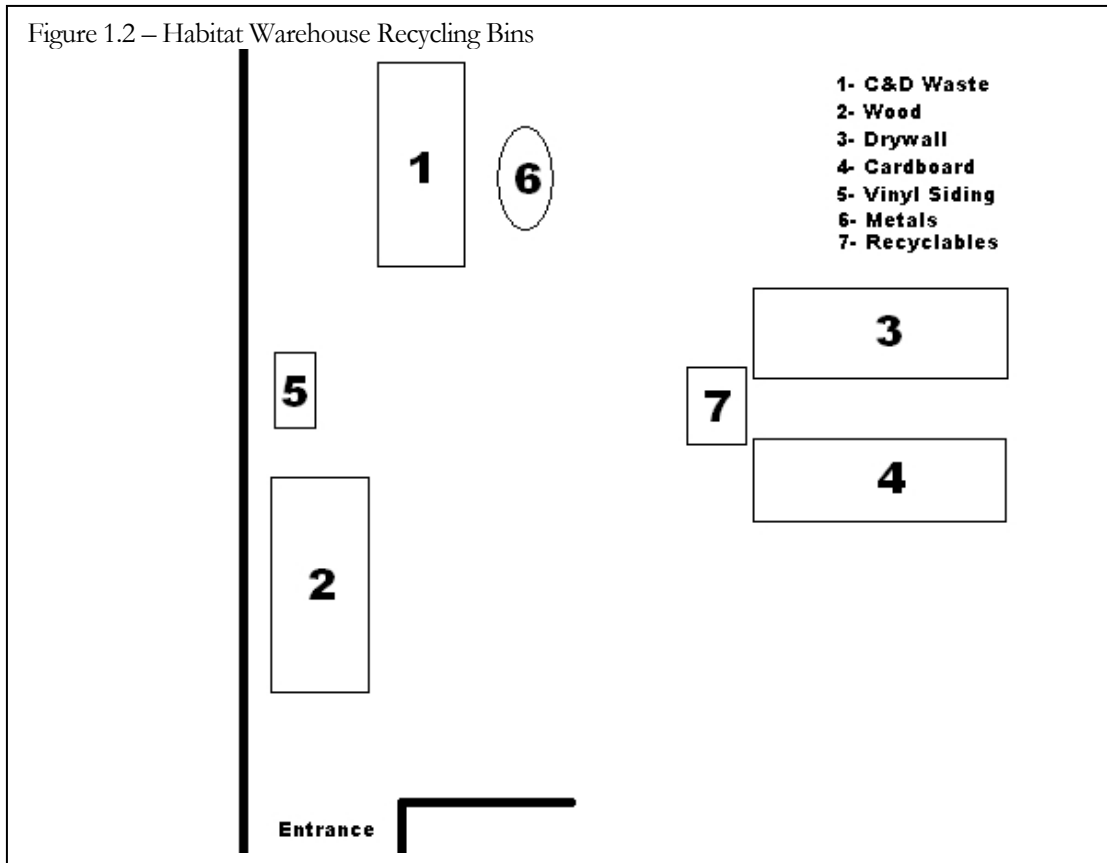
On every job site there will be recycling bins to assist with compliance with the AWARE standards. Volunteers should be instructed in their use and compliance must be stressed.

The Green Team will assist in the transportation of the materials to the recycling areas at the Habitat Warehouse. Any materials returned to the warehouse must go in the recycling bins. (See Figure 1.2).

Job-Site Waste Organization and Green Team Removal Procedures

- ✓ **Recyclables** Deliver to:
 - Sorted on site in garbage receptacles or in clear trash bags for pickup
 - Aluminum Cans
 - Paper
 - Plastic Bottles (glass is discouraged, but should be sorted from trash also)
- ✓ **Remaining Waste** Deliver to: Container 1
 - Collected in black trash bags for pickup
 - Any waste that cannot be recycled- food trash, plastic wrap, caulk tubes, etc.
- ✓ **Cardboard** Deliver to: Container 4
 - Consolidated for pick up
 - Indoor storage only
- ✓ **Concrete and Block** Deliver to: Container 1
 - Collected and piled for pickup
 - Convenient outdoor storage and collection point
 - Out of traffic lanes and work areas
 - Close to vehicle access
- ✓ **Wood** Deliver to: Container 2
 - Scrap lumber
 - Sorted for pickup
 - Convenient outdoor storage and collection point
 - Treated
 - Untreated
 - OSB and Plywood
- ✓ **Metals** Deliver to: Area 6
 - All metals
 - Consolidate for pick up
 - Convenient outdoor storage and collection point
- ✓ **Asphalt Shingles** Deliver to: Container 1
 - Consolidate for pickup
 - Convenient outdoor storage and collection point
- ✓ **Vinyl Siding** Deliver to: Container 5
 - Consolidate for pickup
 - Convenient outdoor storage and collection point
- ✓ **Drywall** Deliver to: Container 3, ReStore
 - Sorted by size for pickup
 - Full Sheets – separate for return to construction
 - Large Scrap – cut 4'x4' (or larger), separate for delivery to ReStore
 - Medium/small scrap – stack and consolidate for pickup
 - Indoor storage only, unless not possible

NOTE: All Waste and Recycling materials are to be transported via Habitat construction vehicles. This will happen periodically on an "AS NEEDED" basis by our Green Team volunteers.



Building Materials

Lumber & Wood Alternatives

As much as possible, the Contractor is to use recycled products, FSC- Certified Products, Reclaimed and Composite products with no added urea formaldehyde resins. These specifications include alternatives to reduce the amount of lumber used in the construction and include:

- **Building Material**
 - Use pre-cut or pre-assembled building systems or methods.
 - Use building materials that require no additional resources to complete application onsite.
 - Use recycled-content building materials.
 - Use materials from renewable resources or agricultural byproducts.
- **Oriented Strand Board (OSB)**
 - Use as an alternative to plywood for sheathing, flooring and roofing.
- **Wood I-Beam**
 - Use wood I-Beams as an alternative to 2X6's or 2X8's used for floor and roof joists.
- **Laminated Wood Fiber Products**
 - Gluelam, parlam, microlam, etc. are alternatives to large dimension lumber for trusses, beams and headers.
- **Certified Wood**

- Certified wood is used like conventional lumber for framing. This wood is certified by the Forest Stewardship Council that it has been monitored from forest to local supplier to insure that wood is harvested, milled, and delivered under environmentally, and socially responsible conditions. Look for the FSC-stamp for confirmation that the wood complies with the certification requirements set out by the Council.
- **Plastic Lumber**
 - This is made from recycled plastic products. It can be used as an alternative to wood in non-structural applications such as decking and fencing.

Paints and Adhesive

- All paints used shall be no/low VOC products.

Caulking and Sealants

- All caulking shall be a 25-year or better, paintable low VOC caulk.
- No silicone caulk is to be used on painted surfaces.
- All sealants are to be low or no volatile organic compound (VOC).
- All adhesives used shall comply with the following:
 - The volatile organic compound (VOC) content of adhesives, adhesive bonding primers or adhesive primers in this project shall not exceed the limits defined in Rule 1168 – “Adhesive and Sealant Applications,” amended 1 January 2005): South Coast Air Quality Management District (SCAQMD), State of California, www.aqmd.gov.
- Silicone Caulking – Apply silicone caulking to areas which are frequently exposed to moisture and will not be painted. For windows, install a bead of silicone caulk to the top and side nail flanges of each window before installing the window. For exterior doors, install a bead of silicone caulk to the backside of the brick mold before setting the door. No silicone on finished walls.
- Latex Caulking – Apply latex caulking to painted areas. For interior trim, apply a bead of latex caulk at the seam between the wall and the trim and at mitered or coped corners. For bathroom countertops, apply a bead of caulk at the seam between the countertops and side splashes and the wall.