

20

Utility Cutouts

Holes for utility lines (water, gas, etc.) are cut into the form wall with a saw. **These cutouts are made when the wall has been fully assembled.** Blockout is constructed by placing any sturdy material into the hole which matches the hole dimension. If Blockout is to be removed it should be done approximately 1 hour after concrete placement. (diagram 20-1)

PVC  
Blockout

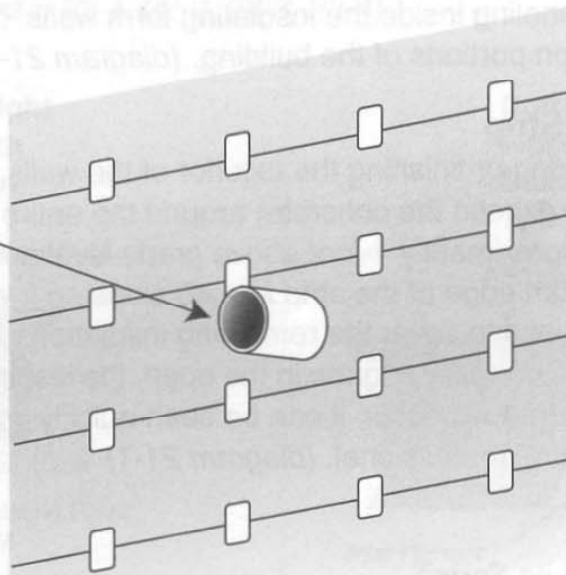


diagram 20-1

Large cutouts can be reinforced by attaching a 3/4-inch plywood collar around the blockout. Collar is anchored to the plastic tie pads using drywall screws. (diagram 20-2)

PVC  
Blockout

Reinforcing  
Plywood Collar

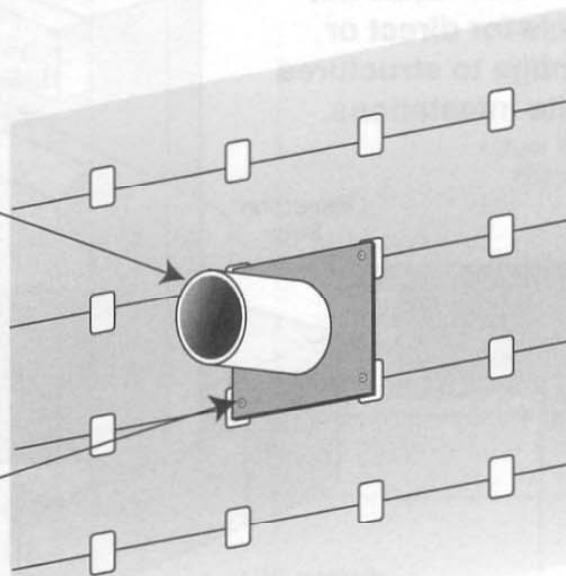


diagram 20-2

# 21 Termite Prevention

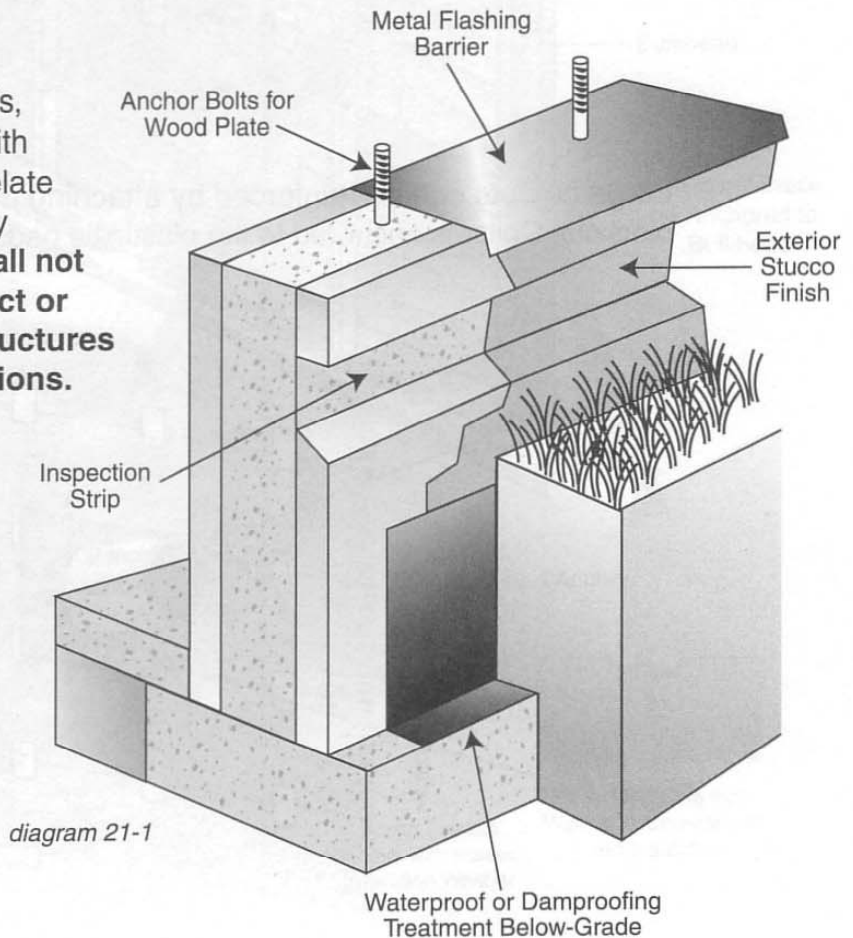
## Metal Flashing Barrier

A 20 to 22-gauge metal strip is placed at the top of the concrete wall before the wood sill plate is attached. This must be a continuous flashing with no gaps, at least 1-inch wider than the upper wood plate. Flashing should be galvanized or plated for exterior use with edges bent down, to shed moisture. This barrier will not prevent termites or ants from tunneling inside the insulating form walls, but should offer long-term protection for the wooden portions of the building. (diagram 21-1)

## Inspection Strip

Prior to covering or finishing the exterior of the walls, remove a continuous strip of insulation (to expose the concrete) around the entire perimeter of the structure. Strip should be approximately 1-foot above grade level and should be 6 to 8-inches wide. Trim the bottom edge of the strip at a 45° slope so it will shed moisture. Stucco finish can now be used to cover the remaining insulation and inspection strip. Since these insects do not normally migrate in the open, the inspection strip will deter their movement. If an infestation does occur, it can be seen quickly with an inspection by the homeowner or a pest control professional. (diagram 21-1)

When using Lite-Form® to build below-grade walls, installers must comply with building codes as they relate to potential infestation by termites. **Lite-Form® shall not be responsible for direct or indirect damage to structures due to termite infestations.**



## 22

### Floor Systems

A variety of flooring systems can be anchored to the finished form walls. This includes pre-engineered trusses, conventional trusses as well as pre-cast concrete floors. The examples below are typical installation procedures for a variety of situations. **Local building codes for anchoring specs, spacing of anchors, etc. must be followed for each project.** (diagram 22-1, 22-2, 22-3, 22-4)

**Concrete Lower Wall, Light Frame Construction with Top-Bearing Connection**

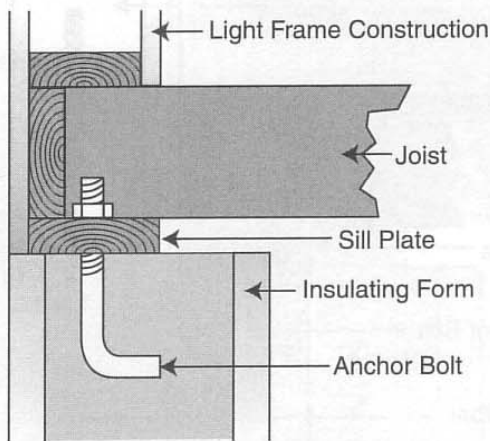


diagram 22-1

**Common Concrete Walls, Floor Ledger with Side-Bearing Connection**

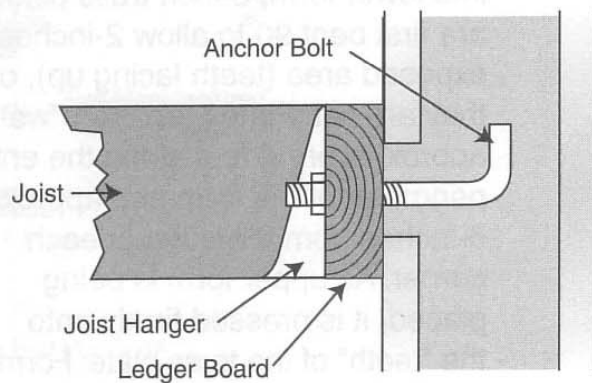


diagram 22-2

**Common Concrete Walls, Floor Ledger with Thru-Bolt Connection**

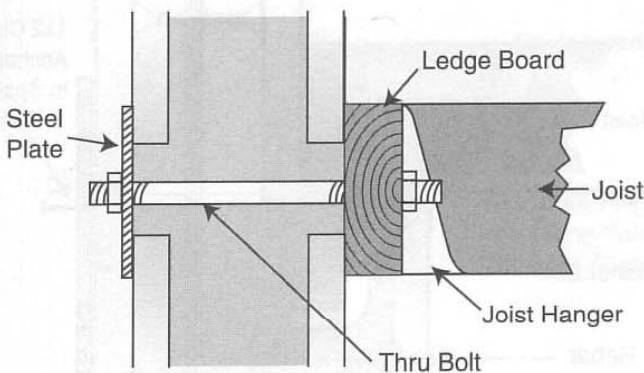


diagram 22-3

**Step Back Concrete Walls with Top-Bearing Connection**

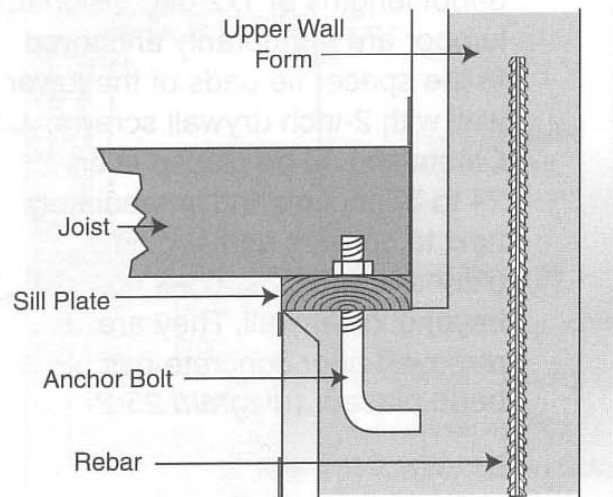


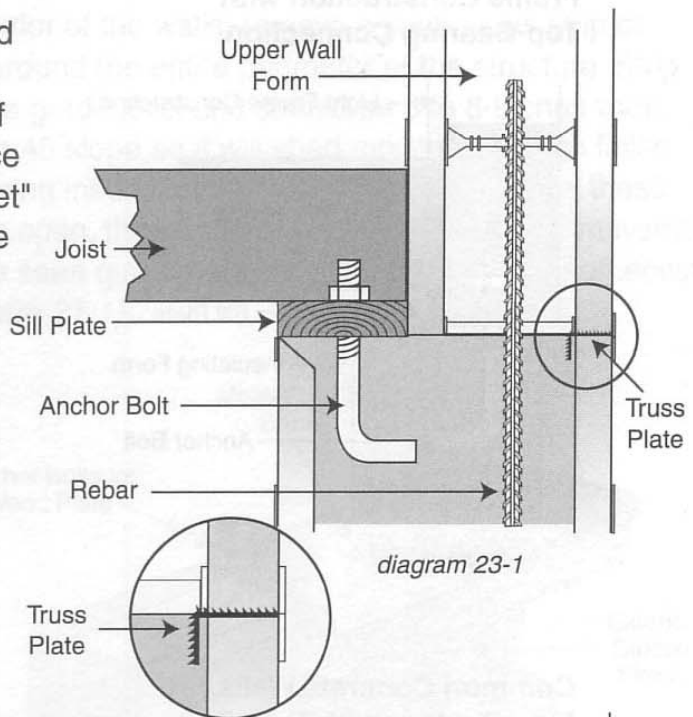
diagram 22-4

# 23 Attaching Lower Form to Upper Form

Multi-story concrete walls are constructed by assembling and pouring the forms, one story at a time. Vertical reinforcing steel is placed into the concrete of the lower form (spacing is dictated by local codes and conditions) so that it extends 12 to 18-inches into the cavity of the upper wall form. With the lower story completed, the floor system should be installed before the upper wall forms are put into place. Upper form walls can be secured to the lower form walls in two ways:

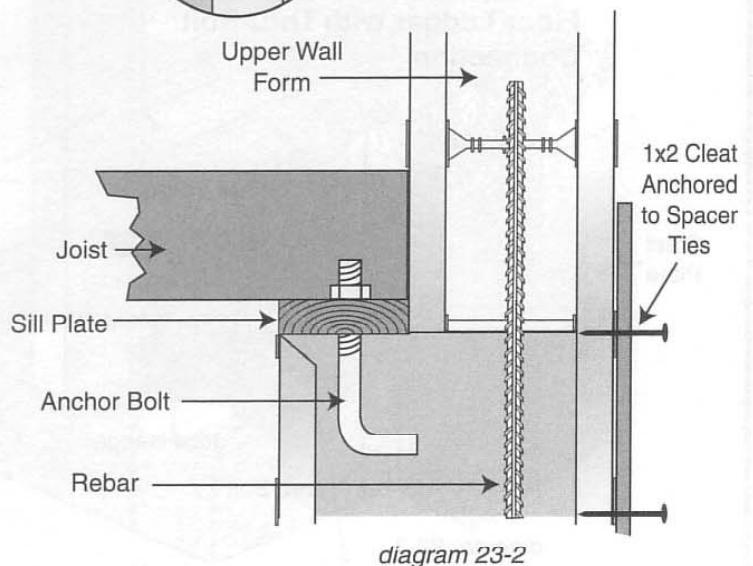
## Truss Plates

Immediately after concrete is placed into lower form, 3-inch truss plates are first bent 90° to allow 2-inches of exposed area (teeth facing up), once they are set. Plates are then "wet set" approx. every 4-feet along the entire perimeter of the form and approx. 6-inches from the edge of each corner. As upper form is being placed, it is pressed firmly onto the "teeth" of the truss plate. Forms should be braced immediately after placement onto lower form. (diagram 23-1)



## Exterior Cleats

3-foot lengths of 1x2 dimensional lumber are temporarily anchored to the spacer tie pads of the lower wall with 2-inch drywall screws. Cleats should be placed every 24 to 32-inches and immediately next to corners and should extend approx. 3-inches up, beyond lower wall. They are removed after concrete has been placed. (diagram 23-2)





## 24 Engineered Floor System

Detail as drawn is a general guide only and does not replace manufacturer's guidelines for application of their products or the prevailing construction codes for a particular region or project design. (diagram 24-1, 24-2)

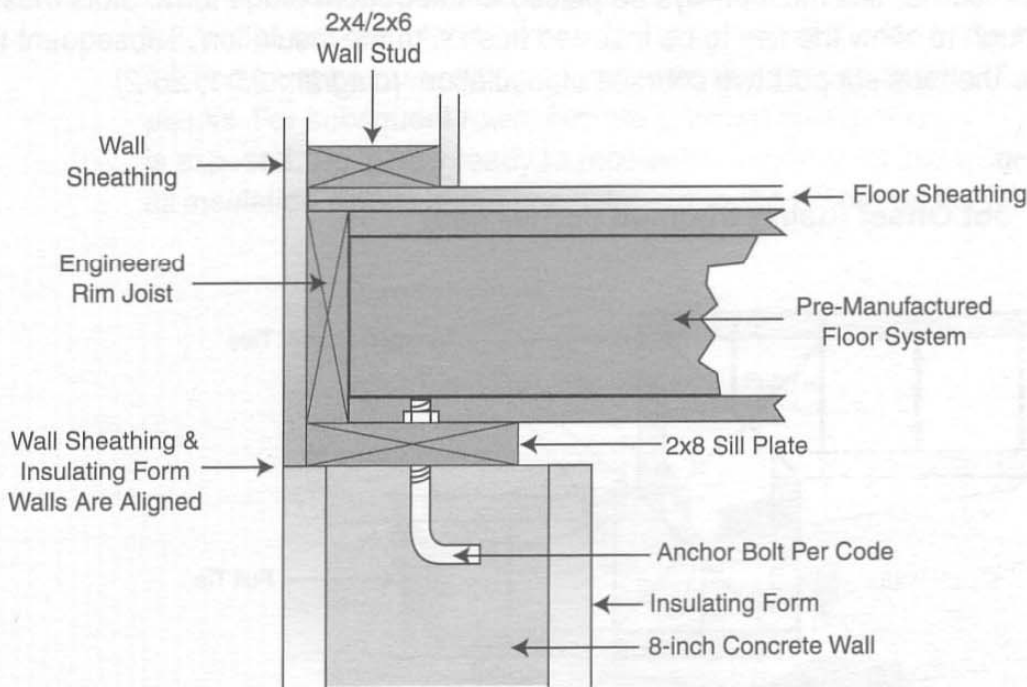


diagram 24-1

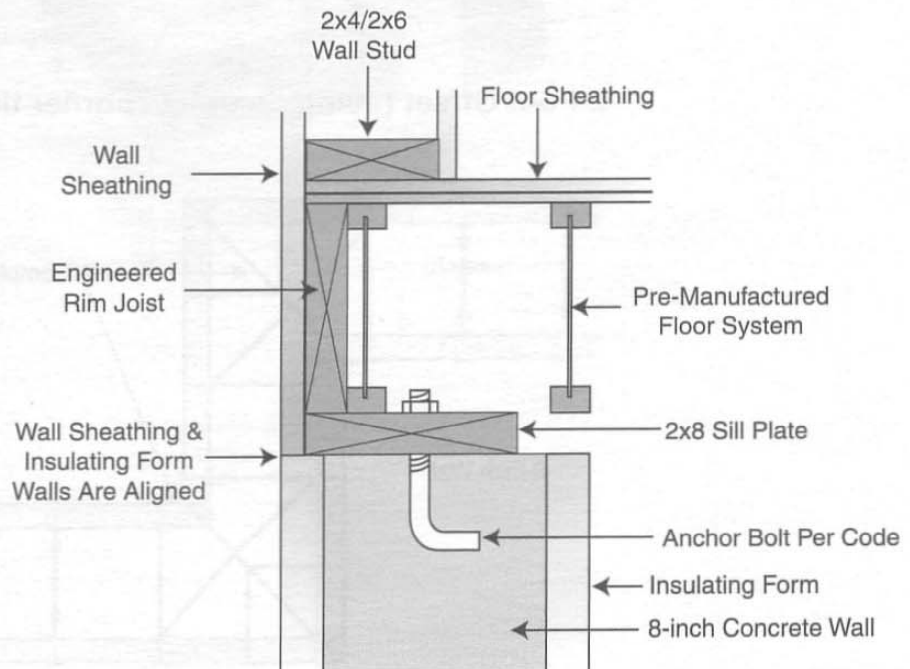


diagram 24-2

## 25

### 1-Foot & 2-Foot Offsets

Forms for offsets can be assembled with two standard corner ties. For 1-foot offsets, a portion of the corner tie is trimmed or cut off. As with standard corners, insulation planks must be trimmed and slots added, to accommodate the corner ties for each 8-inch course, up the wall. Trimming and slotting dimensions will vary and are determined by the concrete wall thickness. Corner ties must always be placed at the bottom of the form. Slots must be cut deep enough to allow the ties to be inserted flush with the insulation. Subsequent ties are placed so the tabs support two courses of insulation. (*diagram 25-1, 25-2*)

#### 1-Foot Offset (using trimmed corner ties)

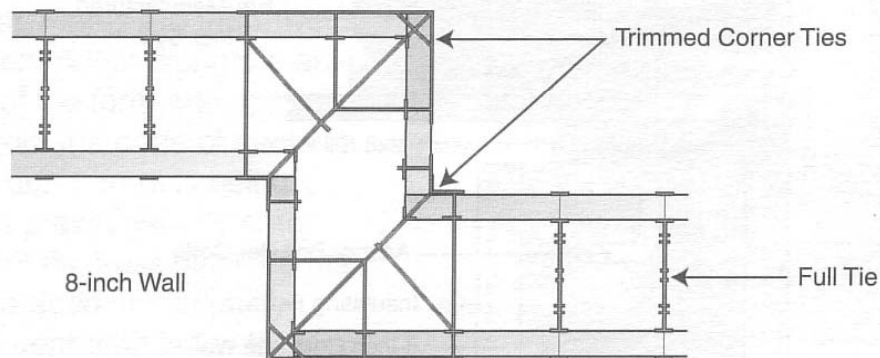


diagram 25-1

#### 2-Foot Offset (using complete corner ties)

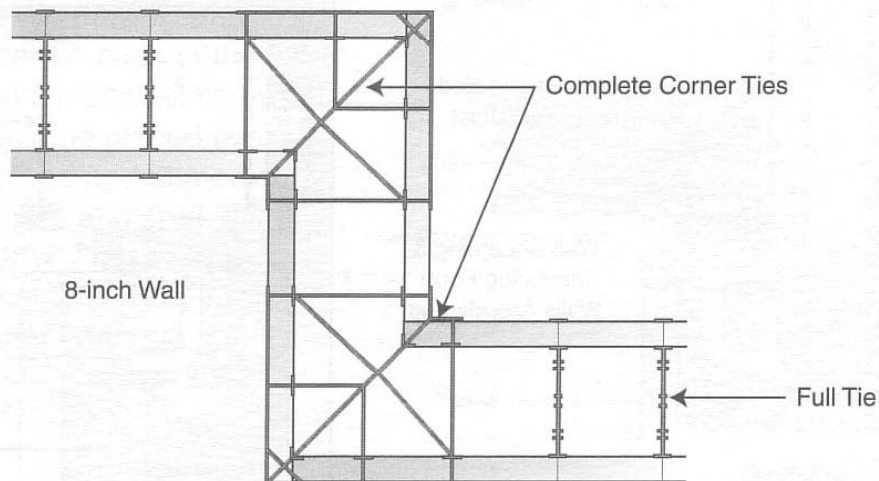


diagram 25-2

## 26

### Custom Corners

The hinge tie is used to form corners other than 90° or 45°. The center of the tie is flexible (hinged) so that it can accommodate nearly any corner angle. Typically, only one hinge tie is used at the outside of the corner with full ties being used on either side. Special slots must be cut to accommodate the hinge tie and full ties. It is important that the full ties be positioned as close as possible on either side of the hinge tie. This is necessary for proper support of the corner. At the bottom of the form, the hinge tie and supporting full ties must be pressed completely into the slots so that it is flush with the insulation planks. For subsequent rows, ties are pressed half-way into the planks so that top of tie is exposed. Tie is now ready to receive the next row of insulation planks. Before assembly, all insulation planks should be mitre-cut to the proper angle. (diagram 26-1)

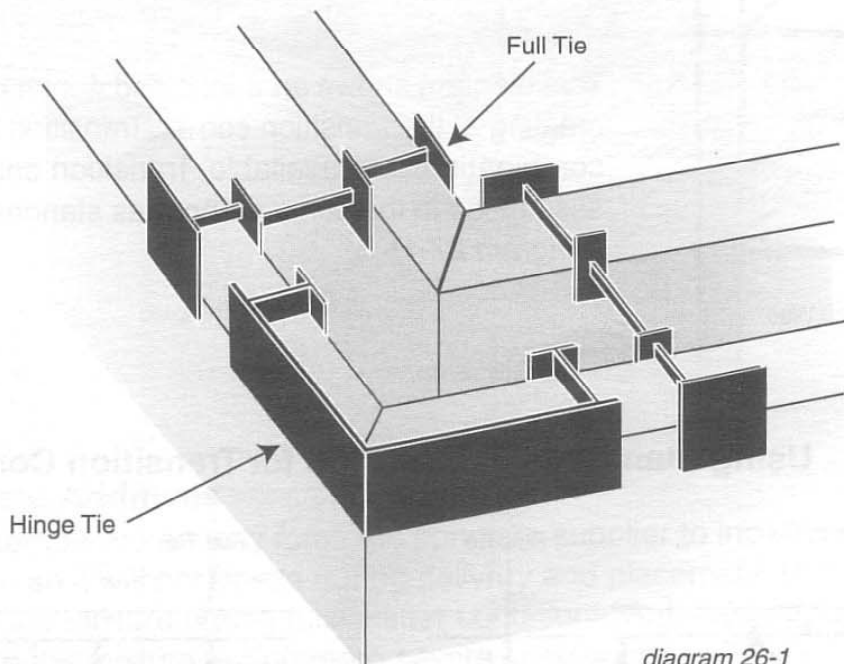


diagram 26-1