



# ADVANTAGES OF STEEL IN NON-LOAD BEARING WALLS

<b>FAST</b>	<i>Installs in ½ the time! Pre-punched for wiring.</i>	<b>SAFETY</b>	<i>100% Non-combustible.</i>
<b>EASY</b>	<i>Lightweight studs snap and lock into place quickly with easy clean up – No saw dust! Easy to transport and handle.</i>	<b>ECONOMICAL</b>	<i>One of the most economical ways to frame your basement.</i>
<b>DURABLE</b>	<i>Will not rot, support mould, or feed insects and vermin.</i>	<b>SOUND</b>	<i>Better room-to-room sound control.</i>
<b>QUALITY</b>	<i>Consistent dimensions, manufactured precision in every piece.</i>	<b>ENVIRONMENTALLY FRIENDLY</b>	<i>100% recyclable.</i>
<b>WALLS STAY STRAIGHT</b>	<i>No warping, shrinking, twisting or nail pops!</i>	<b>POLLUTION CONTROL</b>	<i>Steel resists mould spores that can lead to chronic illness.</i>

- No pesticides or toxins are required to protect steel framing from termites or vermin.
- No emissions from resins, adhesives or chemicals normally used for wood construction occurs with steel.
- In 2003, the Asthma Society of Canada recognized that steel framing, made with certified steel, is part of a healthy indoor air environment.

## ESTIMATION GUIDE



Bailey Steel Studs are basically the same dimensionally as wood studs.

Measure your project and make a drawing (floor plan) with dimensions showing walls, ceiling joists, window bulkheads, columns, stairwells, beams, doorways, electrical outlets and switches. Your material supplier can assist you with code requirements, material estimating and ordering.

### Steel Stud Application

Bailey Studs are "C" shaped channels installed vertically, usually 16 inches on centre. Flanges securely grab screws and factory made holes simplify installation of wiring and piping services. Use 3 5/8" or 2 1/2" studs for wall framing and 1 5/8" studs for framing around columns and bulkheads.

### Steel Stud Quantity

Allow one (1) piece of stud for every lineal foot of wall. This covers typical studs plus extras required at corners and doors. Please refer to door and window manufacturer's installation instructions for rough opening sizes.

### Steel Track Application

Bailey Tracks are "U" shaped channels installed to ceilings and floor to hold studs in place. Tracks may also be used to make door and window headers and sills. Bailey tracks feature snug fit for studs and continuous stiffening ribs along their flanges, for added strength.

### Steel Track Quantity

Allow (2) lineal feet of track for every lineal foot of wall plus 10% extra for cuts. Allow extra track for each door header, window header and window sill.

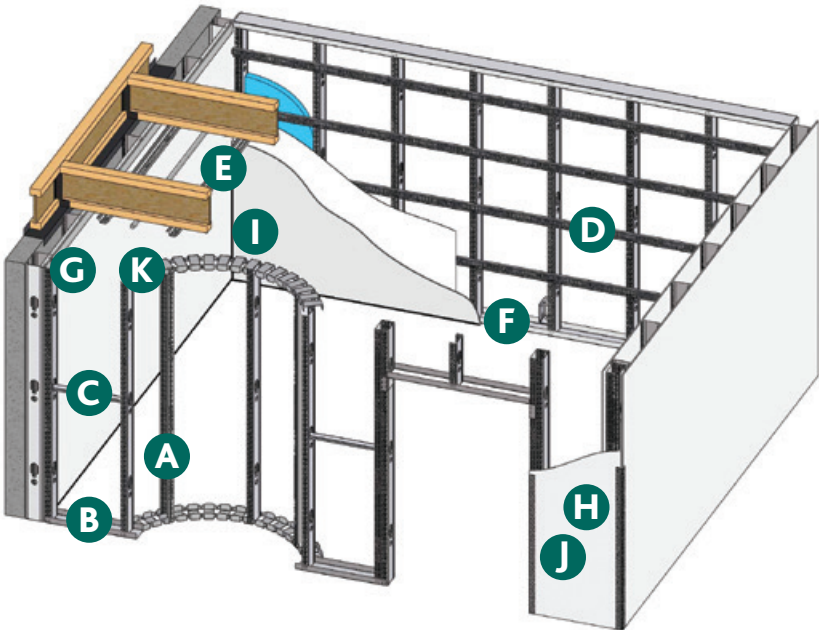
**GYPSUM DRYWALL BOARD** is typically 4 foot x 8 foot with longer panels available. Allow one (1) panel for every 4 foot length of 8 foot high wall plus 5% to 10% extra. Please refer to suppliers' recommendations.

**DRYWALL TAPE AND JOINT COMPOUND** usage for 40 feet of 8 foot high wall is approximately 100 feet (30 meters) of tape and 44 lbs. (20 kg) of compound. Please refer to suppliers' recommendations.

**TOOLS REQUIRED** for framing include a tape measure, sheet metal snips, plumb-bob, level, square, reversible screw gun or drill and C-clamps. Additional tools required for drywall include a utility knife, joint finishing knives, drywall hole saw, and a square.

FASTENERS		Application	Quantity
	1 1/4" Drywall Screw	Ceiling Track to Joists Floor Track to Wood Floor Gypsum Board to Wall Framing Gypsum Board to Ceiling Framing Corner Bead to Gypsum Board	30 to 40 screws required per 4' x 8' gypsum board
	Concrete Fastener OR Nail Drive Anchor	Floor Track to Concrete Floor	1 every 2 ft. + 10%
	9/16" Waffer Head Framing Screw OR 7/16" Pan Head Framing Screw	Track to Stud	4 per stud or 2 per stud against exterior walls
	Trim Head Screw	Casing and Base Trim to Studs and Tracks	1 per ft

## FRAMING A BASEMENT?



**A** NON LOAD BEARING STEEL STUD

1 5/8", 2 1/2", 3 5/8", 6"

**B** NON LOAD BEARING STEEL TRACK

1 5/8", 2 1/2", 3 5/8", 6"

**C** 1 1/2" CHANNEL 12'

NOTE: Bridging channel must be used in conjunction with BX wiring.

**D** D-1007 RESILIENT CHANNEL 12'

**E** D-1001 FURRING CHANNEL 12'

**F** GROMMETS & ELECTRICAL BOX

CSA APPROVED

**G** D-700 ANGLE

1" X 2" X 10' - 90°

**H** D-100 1 1/4" CORNERBEAD

7", 8", 9", 10", 12' - 90° OR 130°

**I** D-400 "J" TRIM

1/2" OR 5/8" X 10'

**J** D-200 "L" TRIM ANGLE

1/2" OR 5/8" X 10'

**K** U FLEX TRACK

2 1/2" OR 3 5/8" X 8'





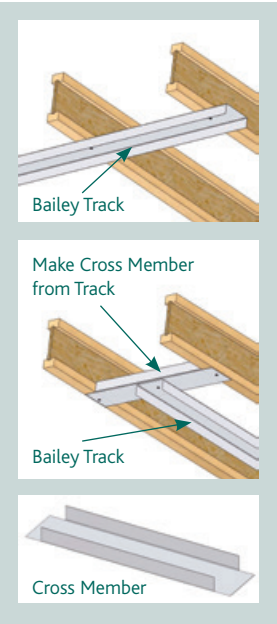
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## INSTALLATION STEPS

**SAFETY FIRST:** STEEL EDGES CAN BE SHARP, SO PLEASE BE CAREFUL. ALWAYS FOLLOW GOOD SAFETY PRACTICES INCLUDING WEARING WORK GLOVES AND SAFETY GLASSES. CONSULT WITH MATERIAL SUPPLIER ON CODE REQUIREMENTS.

### Preparation

**LOCATE WALL PARTITIONS** according to your drawing and mark positions of track at floor and ceiling. Check alignment with a plumb bob. Omit bottom tracks at door openings. Before working on existing basement walls ensure they are dry. Cover all concrete walls with tarpaper.



### Installing Track

**INSTALL TRACK AT CEILING** by measuring and cutting to length then securing to ceiling joists with 1 1/4" screws. Where track runs parallel to and between ceiling joists, make a cross member from a track piece and install between joists every 24 inches and fasten ceiling track to them.

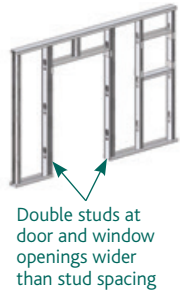
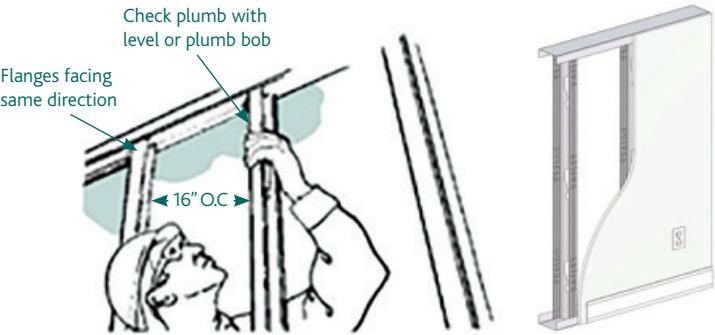
**INSTALL TRACK AT FLOOR** by measuring and cutting to length and secure to floor every 24 inches and 2 inches from cut ends. Please see the important details section for the how-to's of installing inside corners, outside corners, and an intersection.

Make sure that there is a 1/4" space between the tracks and concrete wall and the bottom and top tracks are aligned.

### Building the Walls

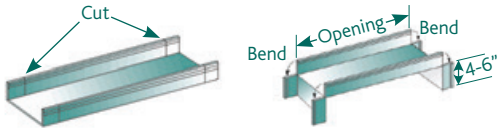
**INSTALL THE STUDS** by trimming the studs 1/2" shorter than the distance between the top and bottom tracks to allow for movement of the structure above. Spacing studs 16 inches on centre ensuring all flanges face the same direction. Twist studs into tracks for friction fit and using a level make sure they are straight. Connect studs to tracks using framing screws. For partition walls that need strengthening use reinforcing channel (See Picture C on front).

Please see the important details section for the how to's of installing inside corners, outside corners, and an intersection.



### Framing Door & Window Openings

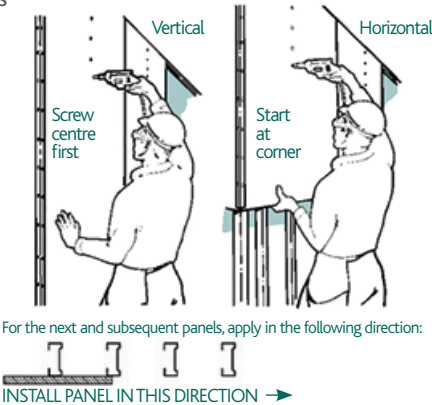
ON EITHER SIDE OF THE DOORWAY EDGE, place two studs face to face (See important details for two versions). Cut track the width of the opening and allow 6-8" extra to attach as header to the studs. Cut and bend pieces of track as shown to make header and sill members. Reinforce the header with center stud and secure to stud with screws.



### Install Drywall Panels

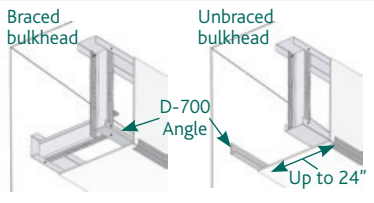
**INSTALL DRYWALL WALL PANELS** to manufacturer's recommendations. Typically start at a corner or intersection. Cut panels 3/8" less than the measurement from the floor to the underside of the joists (or existing ceiling). Position panels either vertically or horizontally, whichever gives fewer joints. Locate joints over studs. Avoid joints on both sides of the same studs. Avoid joints directly above or below openings for doors and windows.

At floor, support the panel at its centre on a 3/8" shim. Advance panels in the direction shown and keep panels plumb. Secure panels to studs with drywall screws. Drive screws until panel is tight against framing and screw is just below board surface without breaking the face paper.

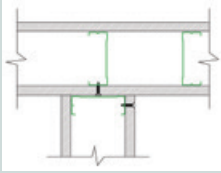


### Bulkheads

**CREATE A MINI-FRAMED WALL** to box in ductwork and columns. Attach 1" x 2" D-700 angle against wall section under ductwork for underside drywall to be fastened to. Fasten as required.

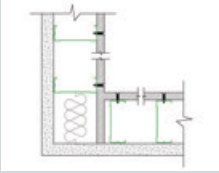


## IMPORTANT DETAILS



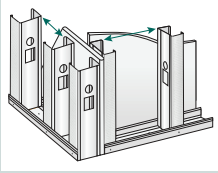
### INTERSECTION

- Install track on the floor and ceiling. Leave 1/2" or 5/8" gap for drywall to run through.
- Place the intersecting stud centred with adjoining stud and secure with a drywall screw (as shown).



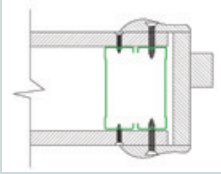
### INSIDE CORNER

- Install tracks on the floors and ceilings 90° to each other leaving 1/2" or 5/8" gap for drywall to run through.
- Form right angle with studs to create inside corner.



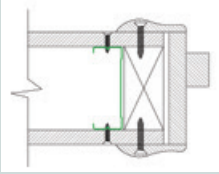
### OUTSIDE CORNER

- Install tracks on the floors and ceilings perpendicular to each other.
- Three studs are required to complete an outside corner.
- Place one stud at outside edge of track intersection and two on either side of inside intersection.



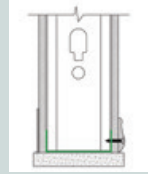
### DOOR FRAME A

- Install double steel studs at the door frame.
- Ensure studs are facing each other as shown above.
- Secure each stud using drywall screws.



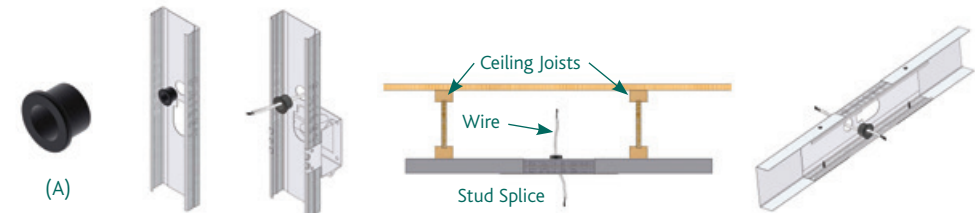
### DOOR FRAME B

- Install frame using one wood and one steel stud as shown.
- Butt steel stud against wood stud and fasten both to drywall.



### TRIM

- Fasten trim to base of wall with trimhead screws.
- Construction adhesive can also be applied to the back of trim prior to fastening.

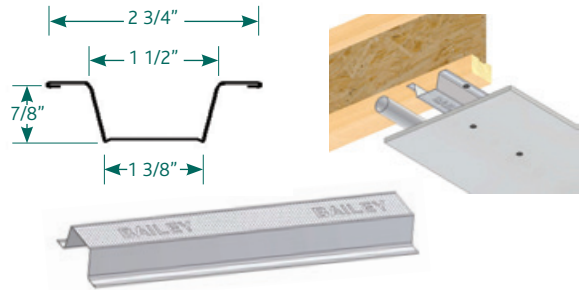


### Electrical Details

**INSTALL CSA APPROVED** grommets, electrical boxes and stand-offs. Plastic grommets (A) are installed into pre-punched holes in studs to allow for non-metallic sheathed wiring to run through to electrical outlets.

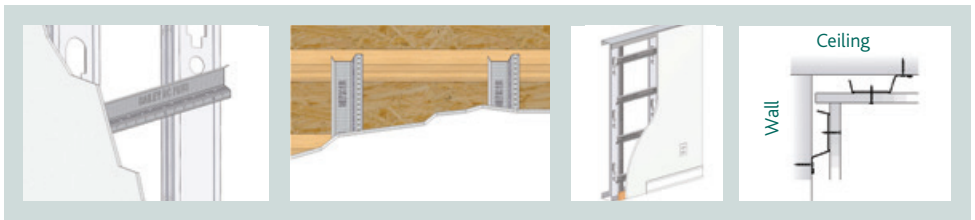
### Levelling Ceilings

**INSTALL BAILEY D-1001 FURRING CHANNELS** where desired. Ideal for furring out and around exposed services. Install perpendicular to joist in rows spaced 16" or 24" on centre and within 6" of perimeter.



### Quieter living at no extra cost!

**INSTALL BAILEY RC PLUS RESILIENT CHANNEL** to improve the reduction of room to room sound transmission obtaining a STC 51 or greater. Install RC Plus perpendicular to framing in rows spaced 16" or 24" on centre and within 6" of perimeters. Install to one side of wall framing and to underside of ceiling joists. Seal openings to prevent sound leaks. Ensure that screws used to attach gypsum panels to resilient channels do not touch the framing.



### Installing Metal Trims

**D-100 1 1/4" DRYWALL CORNER BEAD** 90° & 130° protects the outside corners. Allow one 8' piece per corner. Press corner bead firmly onto the board surface and secure with drywall screws through the small holes along the edge of the bead. Fasten on alternate sides every 6". Ensure fastener head is driven in below the nose of the corner bead.

**D-200 DRYWALL L TRIM** protects the edge of drywall panels when butting up to concrete or other materials and at door and window openings when moulding is not being used. Available for both 1/2" and 5/8" drywall. Attach with drywall screws and finish with joint compound.

**D-400 METAL J TRIM** provides edge protection at door and window openings and where drywall butts against concrete or other surfaces. Finish by painting.

**D-700 ANGLE FRAMING TRIM** is an optional component used in framing around ductwork and columns.



### Installing Paper Trims

**PAPER-FACED METAL DRYWALL BEADS AND TRIMS** is an alternative to metal trims. Installation is comparable to that of metal trims except no mechanical fasteners are required. Quickly installed by embedding into standard drywall joint and compound.

