



## LISTING INFORMATION OF International Beams - IB Series Joists

SPEC ID: 21266

International Beams Inc.  
418 St. Dizier  
Montreal, QC, H2Y 3P8  
CANADA

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IB 400, IB 600, IB 800 and IB 900 I Joists are installed in place of conventional 2x10 and 2x12 joists using traditional framing tools and fasteners. With long lengths, I-joists are used in multiple span applications, thus reducing cutting, overlapping and material waste at the job site.

The wide flanges provide a larger gluing and nailing surface for floor and roof sheathing. These lightweight joists will not twist, warp, or shrink and are more uniform in their dimensions than solid lumber. IB 400, IB 600, IB 800 and IB 900 I Joists are available in lengths up to 52 feet.

IB 400, IB 600, IB 800 and IB 900 I Joists are available in depths ranging from 9-1/2 to 20 inches deep.

**RATINGS**

Standard	Rating	Design Number
ASTM E 119	1 hour	IB/WIJ 60-01
ASTM E 119	45 minutes	IBI/MWP 45-01
ASTM E 119	1 hour	IBI/MWP 60-01
ASTM E 119	1 hour	IBI/MWP 60-02
ASTM E 119	1 hour	IBI/MWP 60-03
ASTM E 119	1 hour	IBI/MWP 60-04
ASTM E 119	2 hours	IBI/MWP 120-01

<u>Attribute</u>	<u>Value</u>
CSI Code	06 17 00 Shop-Fabricated Structural Wood
Fire Resistance	2 Hour
Fire Resistance	1 Hour Fire Rating
Fire Resistance	45 Minute Fire Rated
Listed or Inspected	LISTED
Report Number	3152478; 3162000; 3128247; 3189627; 3180279
Criteria	ASTM E119 (2008a)
Intertek Services	Certification
Listing Section	PREFABRICATED JOISTS, COLUMNS & OPEN WEB TRUSSES
Listing Section	ROOF/CEILING, FLOOR/CEILING, BEAM & COLUMN ASSEMBLIES

## DRAWING INDEX

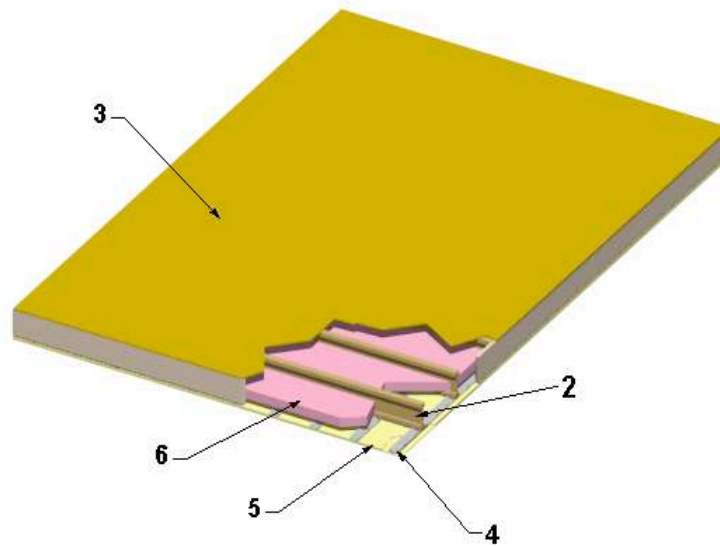
Design Listing IB WIJ 60-01  
Design Listing IBI MWP 120-01  
Design Listing IBI MWP 45-01  
Design Listing IBI MWP 60-01  
Design Listing IBI MWP 60-02  
Design Listing IBI MWP 60-03  
Design Listing IBI MWP 60-04

## Design Listing IB WIJ 60-01

06 10 00 Rough Carpentry  
 06 17 00 Shop Fabricated Structural Wood  
 06 17 33 Wood I Joists

**Design Number IB/WIJ 60-01**  
**Loaded Floor / Ceiling Assembly**  
**International Beams, Inc.**  
 IB600 OSB Web I Joist

**ASTM E119-08a**  
**Fire Resistance Rating – 1 hour**  
**Superimposed Load – 51 PSF**



1. TOPPING (Optional, *Not Shown*): Lightweight concrete, minimum density 110 pcf, minimum compressive strength 3000 psi or proprietary gypsum/cement/sand topping, minimum density 100 pcf, minimum compressive strength 1000 psi. Minimum topping thickness for lightweight concrete or proprietary gypsum/cement/sand topping is 3/4 inch with joists (Item 2) spacing 24 inches on center (o.c.).

2. CERTIFIED COMPANY: International Beams, Inc.

CERTIFIED PRODUCT: IB I Joist

CERTIFIED MODEL: IB600, IB800 or IB 900

WOOD JOISTS: Use minimum 14-inch, 1-1/2-inch x 2-1/2-inch flange, 3/8-inch thick OSB web I Joists spaced a maximum of 24 inches on-center. Fasten I Joists to rim board with 2-3/8-inch long by 0.113-inch smooth shank nails. Fasten 1 nail through the rim board into the end of each flange, and one on each side of the joist web into the bearing plate (Not Shown).

3. SUB-FLOORING: Use nominal 23/32-inch thick tongue and groove OSB subfloor sheathing. Apply a minimum 1/8-inch bead of adhesive with the

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 Project No: 3189627SAT-001 REV. 2



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**Design Listing IB WIJ 60-01 (page 2 of 2)**

06 10 00 Rough Carpentry

06 17 00 Shop Fabricated Structural Wood

06 17 33 Wood I Joists

following requirements along the top of all the joists and in the flooring grooves: meets ASTM D 3498 Standard Specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems, meets American Plywood Association specifications AFG-01 and tested and approved for HUD-FHA application per specification UMB No. 60. Secure OSB using 8d 2-1/2-inch common nails spaced 6-inches on-center around the perimeter and at the butted edges and 12-inches on center at interior members.

4. FURRING: Install  $\frac{1}{2}$ -inch deep nominal 25 GA galvanized steel single leg (RC-1) or minimum  $\frac{1}{2}$ -inch deep x 2-1/2-inch wide "hat shaped" (RC-2) channels spaced 16 inches on-center and applied perpendicular to the Wood Joists (Item 2). Secure furring channels to the bottom flange of each of the Wood Joists (Item 2) using minimum 1-1/4 inch long Type W screws. When required for length, overlap the channel a minimum 6-inches and secure using a 1-1/4-inch Type W screw.

5. GYPSUM BOARD: Install 2 layers of 1/2" proprietary Type X gypsum board UL-Classified (Type C) for application in fire-rated construction, installed with the long edge of the base layer perpendicular to the Furring Channel (Item 4), and the face layer sheets with butt joints offset. Attach gypsum board using one of the below methods. After gypsum board is attached, apply vinyl or casein, dry or premixed joint compound to the exposed face of gypsum wallboard in two coats to all exposed fastener heads and gypsum wallboard joints. Embed a minimum 2 inch wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum wallboard.

i. Attach base layer to Furring Channel (Item 4) using 1-inch Type S drywall screws spaced 12-inches on-center, 1-1/2-inch from the sides and 3/8-inch from butt joints. Attach face layer to the resilient channels (through the base layer) using 1-5/8-inch Type S drywall screws spaced

8-inches on-center, 1-1/2-inch from the sides. Install face layer with joints offset 24-inches from those of the base layer in 2 directions (at the sides and ends of the panels). Attach face layer to the base layer using 1-1/2-inch Type G laminating screws spaced 8-inches on-center at butt joints. Install screws just short of flush with the surface.

ii. Attach base layer of gypsum board to Furring Channel (Item 4) using minimum 1-1/4-inch Type S screws spaced 12-inches on-center, 1-1/2-inch from the sides and 3/8-inch from butt joints. Attach face layer to the resilient channels (through the base layer) using 1-5/8-inch Type S screws spaced 12-inches on-center, 1-1/2-inch from the sides. Install face layer with joints offset 24-inches from those of the base layer in 2 directions (at the sides and ends of the panels). Attach face layer to the base layer using 1-1/2-inch Type G laminating screws spaced 12-inches on-center at butt joints. Install screws just short of flush with the surface.

6. INSULATION: Use insulation with a thickness ranging from 3-1/2-inch thick (R13) to 9-1/2-inch thick (R30) unfaced glass fiber insulation batts conforming to ASTM C518. Install insulation using one of the below methods:

i. Use less than 6-1/4-inch thick insulation. When insulation is installed, insulation wire stays (Not Shown) are required and are to be spaced at a maximum of 12-inches on center perpendicular to the I-Joists in the plenum cavity.

ii. Use 6-1/4-inch thick insulation or greater. When insulation is installed, insulation wire stays are not required. Install insulation over the Furring (Item 4) and Gypsum Board (Item 5). Press-fit insulation between the bottom flanges of the Wood Joists (Item 2). Install insulation with ends butted over or between the Furring (Item 4).

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# Design Listing IBI MWP 120-01

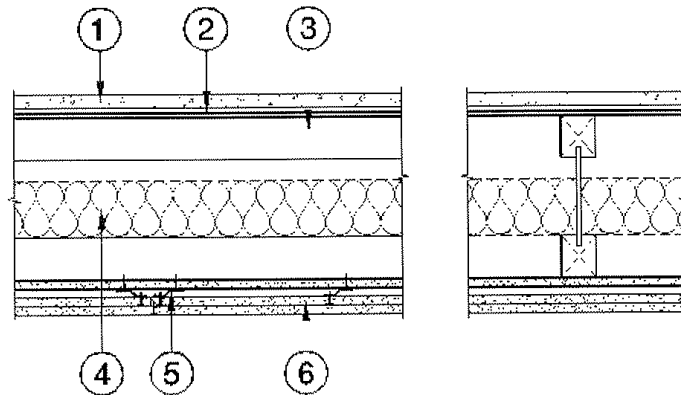


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**DESIGN NO. IBI/MWP 120-01**  
**ASSEMBLY RATING: 120 MINUTES**  
**FLOOR/CEILING ASSEMBLY**



- |    |   |
|----|---|
| 1. | <b>Topping (Optional):</b> Lightweight concrete or proprietary topping.   |
| 2. | <b>Sub-Flooring:</b> Minimum 5/8 in. plywood or oriented strandboard (OSB) when topping is used, and joist spacing is 20 in. or less, otherwise 23/32 in. thickness is required. Plywood installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.   |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2 in., installed at 24 in. on centers maximum.   |
| 4. | <b>Insulation (Optional):</b> Max. 6 in. fiberglass or rockwool batt insulation, friction fit between webs, and supported using wires every 16 in..   |
| 5. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel resilient channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with two 1-5/8 in. long Type S screws at each joist intersection.  |
| 6. | <b>Gypsum Board:</b> Three layers of 5/8 in. Type C gypsum wallboard. Base layer applied directly to joists, installed with long dimensions perpendicular to joists with end joints butted over joists and staggered 24 in. minimum. Base layer fastened with 1-5/8 in. Type S screws, spaced 12 in. on centers at the joints and in the field. Middle and Face layer installed over channels with long dimension perpendicular to resilient channels and edges, staggered 24 in. from base layer end joints. Middle layer fastened with 1 in. Type S screws located 12 in. on centers at the joints and in the field. Face layer fastened with 1-7/8 in. Type S screws are placed 8 in. on centers at joints and in the field. (Screw lengths are minimums). |

# Design Listing IBI MWP 45-01

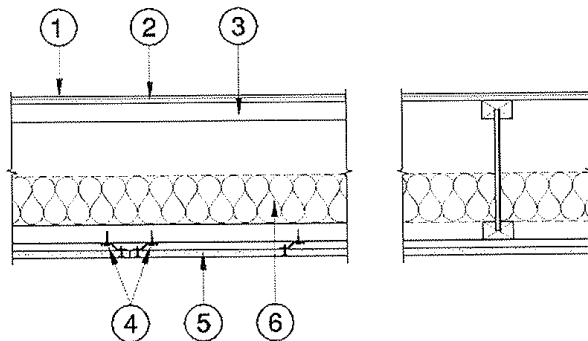


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DESIGN NO. IBI/MWP 45-01  
 ASSEMBLY RATING: 45 MINUTES  
 FLOOR/CEILING ASSEMBLY



- |    |  |
|----|--|
| 1. | <b>Topping (Optional):</b> Lightweight concrete or proprietary topping.  |
| 2. | <b>Sub-Flooring:</b> Minimum 5/8 in. plywood or oriented strandboard (OSB), when topping is used, and joist spacing is 20 in. or less, otherwise 3/4 in. thickness is required. Plywood installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.   |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2 in., installed at 24 in. on centers maximum.  |
| 4. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with 1-5/8 in. long Type W screws at each joist intersection. |
| 5. | <b>Gypsum Board:</b> One layer of 5/8 in. Type C gypsum wallboard installed perpendicular to channels with end joints staggered 48 in. Boards to be fastened to channels with minimum 1-1/8 in. Type S screws located 7 in. on center. Screws shall be minimum 1-1/2 in. from board edges and 3/4 in. from board ends. Gypsum wallboard shall be taped and filled. Screw heads shall be filled with gypsum joint compound.             |
| 6. | <b>Insulation:</b> Maximum 3 1/2 in. fiberglass batt insulation installed over joist flanges, or minimum 2 in. rock wool 2.5 PCF batt insulation, friction fit between joist flanges.  |
| 7. | <b>Wood Furring Strip (not shown):</b> Required when 2 in. rockwool insulation is not installed between joist flanges. Nominal 1 in. x 4 in. wood furring strip installed under each bottom flange, centered on flange, fastened with 1-1/4 in. Type W screws located 24 in. on centers.   |

# Design Listing IBI MWP 60-01

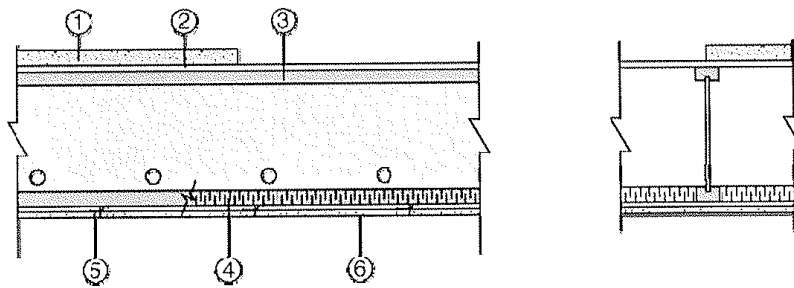


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DESIGN NO. IBI/MWP 60-01  
 ASSEMBLY RATING: 60 MINUTES  
 FLOOR/CEILING ASSEMBLY



- |    |  |
|----|--|
| 1. | <b>Topping (Optional):</b> Lightweight concrete or proprietary topping.  |
| 2. | <b>Sub-Flooring:</b> Minimum 5/8 in. plywood or oriented strandboard (OSB) when topping is used, and joist spacing is 20 in. or less, otherwise 3/4 in. thickness is required. Plywood installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.  |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2 in., installed at 24 in. on centers maximum.  |
| 4. | <b>Insulation:</b> Minimum 1-1/2 in. rock wool insulation, nominal 2.5 pcf density, friction fit between flanges.  |
| 5. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with 1-5/8 in. long Type W screws at each joist intersection. |
| 6. | <b>Gypsum Board:</b> One layer of 5/8 in. Type C gypsum wallboard installed perpendicular to channels with end joints staggered 48 in. Boards to be fastened to channels with minimum 1 1/8 in. Type S screws located 7 in. on center. Screws shall be minimum 1 1/2 in. from board edges and 3/4 in. from board ends. Gypsum wallboard shall be taped and filled. Screw heads shall be filled with gypsum joint compound.             |

# Design Listing IBI MWP 60-02

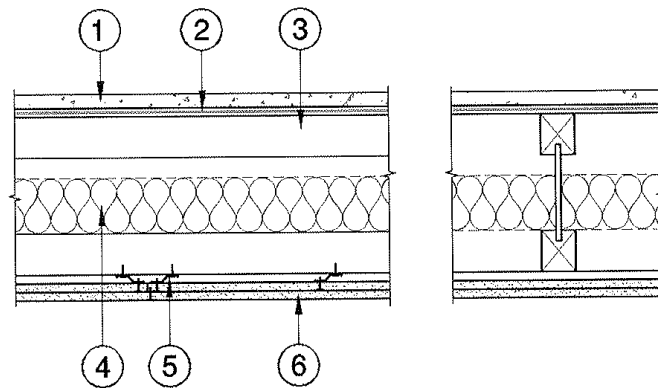


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DESIGN NO. IBI/MWP 60-02  
 ASSEMBLY RATING: 60 MINUTES  
 FLOOR/CEILING ASSEMBLY



- |    |   |
|----|---|
| 1. | <b>Topping (Optional):</b> Lightweight concrete or proprietary topping.   |
| 2. | <b>Sub-Flooring:</b> Minimum 5/8 in. plywood or oriented strandboard (OSB) when topping is used, and joist spacing is 20 in. or less, otherwise 3/4 in. thickness is required. Plywood installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.   |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2 in., installed at 24 in. on centers maximum.   |
| 4. | <b>Insulation (Optional):</b> Maximum 3 1/2 in. rockwool or fiberglass batt insulation, friction fit between flanges, except that when ceiling membrane is 5/8 in. Type C gypsum wallboard, the insulation thickness is not limited, but shall be friction fit between joist flanges and webs.  |
| 5. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with 1-5/8 in. long Type W screws at each joist intersection.  |
| 6. | <b>Gypsum Board:</b> Two layers of 1/2 in. Type X, or 5/8 in. Type C gypsum wallboard. Base layer to be installed with long dimensions perpendicular to supports with end joints butted over supports and staggered 24 in. minimum. 1-1/8 in. Type S screws are spaced 12 in. on centers at the joints and in the field. Face layer installed with long dimension perpendicular to supports and edges, staggered 24 in. from base layer end joints. 1-5/8 in. Type S screws are placed minimum 12 in. on centers on intermediate supports, 1-1/2 in. Type W screws 8 in. on centers at butt joints. |

# Design Listing IBI MWP 60-03

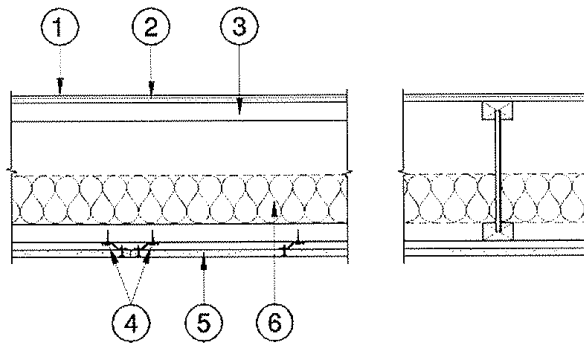


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DESIGN NO. IBI/MWP 60-03  
 ASSEMBLY RATING: 60 MINUTES  
 FLOOR/CEILING ASSEMBLY  
 FINISH RATING: 24 MINUTES



- |    |  |
|----|--|
| 1. | <b>Topping (Optional):</b> Lightweight concrete or proprietary topping.  |
| 2. | <b>Sub-Flooring:</b> Minimum 5/8 in. plywood or oriented strandboard (OSB) when topping is used, and joist spacing is 20 in. or less, otherwise 3/4 in. thickness is required. Plywood installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.  |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2", installed at 24 in. on centers maximum.   |
| 4. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with 1-5/8 in. long Type W screws at each joist intersection. |
| 5. | <b>Gypsum Board:</b> One layer of 5/8 in. Type C gypsum wallboard installed perpendicular to channels with end joints staggered 48 in. Boards to be fastened to channels with minimum 1-1/8 in. Type S screws located 7 in. on center. Screws shall be minimum 1-1/2 in. from board edges and 3/4 in. from board ends. Gypsum wallboard shall be taped and filled. Screw heads shall be filled with gypsum joint compound.             |
| 6. | <b>Insulation:</b> Minimum 2 in. thickness rock wool insulation, nominal 3.5 pcf density, friction fit between joist webs, resting on wood furring strips.   |
| 7. | <b>Wood Furring Strip (not shown):</b> Nominal 1 in. x 4 in. wood furring strip installed under each bottom flange, centered on flange, fastened with 1-1/4 in. Type W screws located 24 in. on centers.   |

# Design Listing IBI MWP 60-04

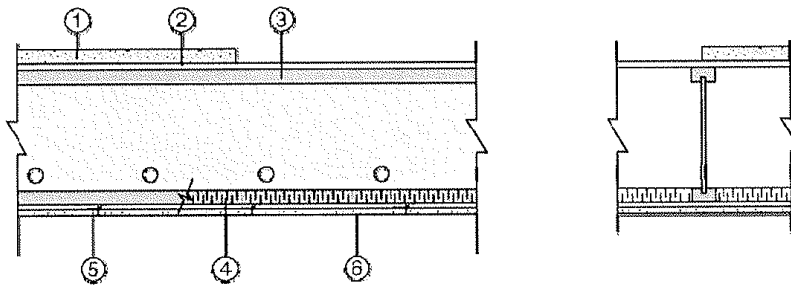


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DESIGN NO. IBI/MWP 60-04  
 ASSEMBLY RATING: 60 MINUTES  
 ROOF/CEILING ASSEMBLY



- |    |  |
|----|--|
| 1. | <b>Roof Covering System:</b> Insulation and roof covering materials intended for built-up covering which provides Class A, B, or C covering on combustible wood decks for fire resistant assemblies equivalent to this assembly.   |
| 2. | <b>Sheathing:</b> Minimum 1/2 in. square edge plywood or oriented strandboard (OSB). Sheathing installed perpendicular to joists, with end joints staggered, fastened in accordance with Code requirements.  |
| 3. | <b>Structural Members:</b> International Beams Inc. IB Series I-joists having a minimum depth of 9 1/2 in., installed at 24 in. on centers maximum.  |
| 4. | <b>Insulation:</b> Minimum 1-1/2 in. rock wool insulation, nominal 2.5 pcf density, friction fit between flanges.  |
| 5. | <b>Resilient Channels:</b> Minimum 25 gauge galvanized steel channels installed perpendicular to joists and spaced 16 in. on centers maximum. Additional channels required at gypsum wallboard end joints such that each board end rests on its own channel. These additional channels shall extend to the next joist on each side of the board edges. Channels fastened with 1-5/8 in. long Type W screws at each joist intersection. |
| 6. | <b>Gypsum Board:</b> One layer of 5/8 in. Type C gypsum wallboard installed perpendicular to channels with end joints staggered 48 in. Boards to be fastened to channels with minimum 1 1/8 in. Type S screws located 7 in. on center. Screws shall be minimum 1 1/2 in. from board edges and 3/4 in. from board ends. Gypsum wallboard shall be taped and filled. Screw heads shall be filled with gypsum joint compound.             |