Metro-Deck
Precast Concrete Framing System
**Metro-Deck Floor & Roof Systems**

Concrete framing systems have been utilized for decades in the commercial building market. The Metro-Deck precast/prestressed concrete framing system incorporates a floor and roof product that is based on proven engineering principles and applications.

The thin floor plate design offers all the benefits of commercially available concrete systems and much more. The wet cast floor and roof components are typically 8” to 16” deep and ten foot wide.

When the components are integrated with precast/prestressed columns, beams and load bearing walls the framing system can be competitive on projects of all sizes from mixed-use retail/condominium structures to multi-story office buildings and dormitories.

**Why Metro-Deck?**

- Thin floor plate design, minimal structural depth required for floor system
- Solid end: spanning large openings without the need for additional supporting structure
- Bottom surface: Steel form finish - ready for a variety of finishes
- Large openings are possible
- Wet cast product allows for cast-in embeds
- Fewer joints and less weight vs hollow core
- Speed of construction
- Competitive installed cost

![Minimal bearing requirements on beams or 8" walls](image1)

![Metro-Deck and inverted tee beam reduce fl oor Wet cast process allows for cast-in embed plates depth](image2)

Integral insulation improves R-value, STC rating and IIC rating (image shown in manufacturing)
**Sustainability Built-in**

A reduction in carbon footprint and lower embodied energy is possible by utilizing a more efficient product section – fewer materials means less weight, wider components and fewer truckloads/pieces to erect.

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**Comparison Chart: 8” Metro-Deck and 8” Hollowcore**

<table>
<thead>
<tr>
<th></th>
<th>Hollowcore</th>
<th>Metro-Deck</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid End</td>
<td>No</td>
<td>Yes</td>
<td>Solid end condition allows for hidden connection, welded-end diaphragm, and spanning openings with fewer supports</td>
</tr>
<tr>
<td>End Bearing</td>
<td>Continuous</td>
<td>Continuous or Spot Bearing</td>
<td>Metro-Deck has an integral beam which reduces continuous bearing by 80%</td>
</tr>
<tr>
<td>Accessible Chase</td>
<td>None</td>
<td>2' wide between solid ends</td>
<td>Remove insulation in the field as required</td>
</tr>
<tr>
<td>Field Penetrations</td>
<td>As Required</td>
<td>As Required</td>
<td>HC significantly limited with strand 4” to 6” o.c. vs Metro-Deck, strand varies 1’-6” to 2’-6” o.c.</td>
</tr>
<tr>
<td>Large Openings</td>
<td>Possible</td>
<td>Yes</td>
<td>Integral beams with Metro-Deck, HC requires other framing</td>
</tr>
<tr>
<td>Cast-In Embeds</td>
<td>As Required</td>
<td>Yes</td>
<td>The cost to accommodate special requirements is lower with Metro-Deck</td>
</tr>
<tr>
<td>Insulation</td>
<td>None</td>
<td>6” - 12” EPS</td>
<td>Improves R-value, STC rating &amp; IIC rating</td>
</tr>
<tr>
<td>Exposed Ceiling Finish</td>
<td>Yes</td>
<td>Yes</td>
<td>Production process provides steel form finish, joints 8’ to 13’-4” o.c.</td>
</tr>
<tr>
<td>Fire Rating</td>
<td>Yes</td>
<td>Yes</td>
<td>Fire rated with topping</td>
</tr>
<tr>
<td>Product Width</td>
<td>4’</td>
<td>8’, 10’, 12’, 13’-4”</td>
<td>Fewer joints &amp; faster erection</td>
</tr>
<tr>
<td>Weight &amp; Transportation</td>
<td>30% lighter/fewer loads</td>
<td>Lighter, more efficient cross section reduces shipping and installation, which equals less embodied energy</td>
<td></td>
</tr>
<tr>
<td>Erection</td>
<td>50%-70% fewer lifts</td>
<td>Up to 13’-4” wide components vs. 4’ wide</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>Economical</td>
<td>Competitive installed cost</td>
<td>Metro-Deck can contribute to a reduced carbon footprint, lower operational cost and a zero-waste site</td>
</tr>
</tbody>
</table>

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**Concrete framing system illustrates minimal floor depth**

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**Integral insulation improves R-value, STC rating and IIC rating (image shown in manufacturing)**

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**Concrete framing system illustrates minimal floor depth**
Metro-Deck
(includes 2” topping) Typical Span Lengths
8”* up to 36’
10” up to 36’
12” up to 42’
14” up to 46’
16” up to 50’