Construction & Materials Outlook

February 17, 2010
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Current economic influences

• GDP, personal income improving; not jobs
• Rising vacancies for office, retail, hotel
• Muni bond market is working, but not bank lending
• State/local tax shortfalls → deeper spending cuts
• Stimulus (details: www.agc.org/stimulus)

Source: Author
Construction-related stimulus funding (~$135 bil.)

- $49 billion: $2 billion for airports and ports
- $18 billion: transit and rail
- up to $35 billion
- $30 billion: $5 billion for weatherization
- $7 billion for wireless and broadband
- $6 billion for energy grants
- $11 billion for electric grid
- $21 billion: $5 billion for Corps
- $7 billion for water and wastewater
- $6 billion for waste cleanup

Source: Author
Stimulus tax provisions affecting construction

- $8000 homebuyer tax credit, now extended to June ‘10
- “Build America” bonds
- Increased expensing – expired 12/31/09
- 5-year carryback of ‘08 (and ‘09) net operating losses
- Bonds for school construction, “recovery zones,” tribal areas, renewable energy, energy conservation
- Modified renewable energy, conservation credits
- 1-year delay (to 2012) in 3% withholding on gov. contracts

Source: Author
Stimulus timing, strings

- **Timing – road $ spent fast; other $ delayed due to:**
  - New programs had to be designed
  - Agencies didn’t have enough personnel
  - Buy American terms stopped use of funds

- **Other factors**
  - Davis-Bacon
  - Reporting requirements: jobs, executives’ pay
  - No E-Verify requirement or broad-based FAR
  - No project labor agreement mandate, but…
Economic impact of nonresidential construction

- **Jobs:** 28,500 per $1 billion
  - 1/3 direct, onsite construction
  - 1/6 indirect (quarries, mfg., services)
  - 1/2 “induced” by spending from higher earnings of construction, indirect workers and owners
- **GDP:** $3.4 billion
- **Personal Earnings:** $1.1 billion

Source: Prof. Stephen Fuller, George Mason University
Construction spending by segment, 1- & 12-month change
Billion $, seasonally adjusted annual rate (SAAR)

Dec.‘09: $903 billion, 1-month change: -1.2%, 12-month change: -10%

Source: Census Bureau
Single-family (SF) vs. multifamily (MF)

### Construction spending

<table>
<thead>
<tr>
<th>Year</th>
<th>SF</th>
<th>Improvements</th>
<th>MF</th>
</tr>
</thead>
<tbody>
<tr>
<td>vs. 11/09</td>
<td>1%</td>
<td>-6%</td>
<td>-4%</td>
</tr>
<tr>
<td>vs. 12/08</td>
<td>-18%</td>
<td>8%</td>
<td>-45%</td>
</tr>
</tbody>
</table>

### Building permits

<table>
<thead>
<tr>
<th>Year</th>
<th>SF</th>
<th>MF</th>
</tr>
</thead>
<tbody>
<tr>
<td>vs. 12/09</td>
<td>0%</td>
<td>-23%</td>
</tr>
<tr>
<td>vs. 1/09</td>
<td>48%</td>
<td>-40%</td>
</tr>
</tbody>
</table>

### Housing starts

<table>
<thead>
<tr>
<th>Year</th>
<th>SF</th>
<th>MF</th>
</tr>
</thead>
<tbody>
<tr>
<td>vs. 12/09</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>vs. 1/09</td>
<td>36%</td>
<td>-18%</td>
</tr>
</tbody>
</table>
Housing outlook

- **SF**: starts, permits should rise throughout ‘10
- **MF**: No improvement likely until ‘11
  - Rental demand hurt by job losses among would-be renters and by first-time homebuyer credit
  - Supply swelled by owners and banks who are trying to rent out houses and condos
  - Banks remain unwilling to lend to developers

Source: Author
## Nonres totals (billion $, SAAR), share, 1- & 12-month change

<table>
<thead>
<tr>
<th>Nonresidential</th>
<th>12/09 Total</th>
<th>Share</th>
<th>vs. 11/09</th>
<th>vs. 12/08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential</td>
<td>$634 billion</td>
<td>100%</td>
<td>- 1%</td>
<td>- 10%</td>
</tr>
<tr>
<td>Educational</td>
<td>96</td>
<td>15</td>
<td>0</td>
<td>- 6</td>
</tr>
<tr>
<td>Power</td>
<td>92</td>
<td>14</td>
<td>+ 3</td>
<td>+ 14</td>
</tr>
<tr>
<td>Highway and street</td>
<td>84</td>
<td>13</td>
<td>- 2</td>
<td>+ 4</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>63</td>
<td>10</td>
<td>- 5</td>
<td>- 11</td>
</tr>
<tr>
<td>Office</td>
<td>49</td>
<td>8</td>
<td>+ 2</td>
<td>- 26</td>
</tr>
<tr>
<td>Commercial</td>
<td>48</td>
<td>8</td>
<td>+ 1</td>
<td>- 35</td>
</tr>
<tr>
<td>Health care</td>
<td>45</td>
<td>7</td>
<td>+ 3</td>
<td>- 8</td>
</tr>
<tr>
<td>Transportation</td>
<td>35</td>
<td>6</td>
<td>- 2</td>
<td>+ 8</td>
</tr>
<tr>
<td>Sewage and waste disposal</td>
<td>25</td>
<td>4</td>
<td>- 3</td>
<td>- 4</td>
</tr>
<tr>
<td>Communication</td>
<td>20</td>
<td>3</td>
<td>+ 3</td>
<td>- 8</td>
</tr>
<tr>
<td>Lodging</td>
<td>17</td>
<td>3</td>
<td>- 8</td>
<td>- 46</td>
</tr>
</tbody>
</table>

**Other (amusement; water, public safety; conservation; religious): 9% of total**

Source: Census Bureau
Construction spending: industrial, heavy (billion $, SAAR)

- **Power (88% private)**
  - 1-month: 3.3%, 12-month: 13.5%

- **Mfg. (99% private)**
  - 1-month: -4.9%, 12-month: -10.5%

- **Communic. (99.8% priv.)**
  - 1-month: 3.4%, 12-month: -7.5%

- **Amuse/Rec. (37% priv.)**
  - 1-month: -3.0%, 12-month: -21.8%
Construction spending: public works (billion $, SAAR)

Highways (99.9% public)
1-month: -2.3%, 12-month: 3.7%

Sewage/waste (98% pub.)
1-month: -3.4%, 12-month: -3.5%

Transp. facilities (public)
1-month: -1.9%, 12-month: 17.7%

Water (98% public)
1-month: 7.7%, 12-month: -12.1%
Construction spending: developer-financed (billion $, SAAR)

Nonautomotive Retail
1-month: 1.9%, 12-month: -37.8%

Office (private)
1-month: 2.1%, 12-month: -35.2%

Warehouses
1-month: -9.7%, 12-month: -54.5%

Lodging (private)
1-month: -7.6%, 12-month: -46.3%
Construction spending: institutional (private + state/local)

Higher ed. (30% private)
1-month: 1.2%, 12-month: 1.2%

PreK-12 ed. (5% private)
1-month: 0.5%, 12-month: -10.8%

Hospitals (83% private)
1-month: 3.4%, 12-month: -9.8%

Public safety
1-month: 3.5%, 12-month: -2.8%
Producer price indexes, 1/08-12/09

Inputs to constr. Industries
1-month: 0.2%, 12-month: 0.4%

Highway & street construction
1-month: 0.2%, 12-month: 3.9%

Other heavy construction
1-month: 0.2%, 12-month: -0.1%

Nonresidential buildings
1-month: 0.2%, 12-month: 0.4%
Producer price indexes, 1/08-12/09

**No. 2 diesel fuel**
1-month: -5.0%, 12-month: 22.0%

**Steel mill products**
1-month: -1.3%, 12-month: -10.8%

**Copper & brass mill shapes**
1-month: 6.0%, 12-month: 42.3%

**Aluminum mill shapes**
1-month: 2.1%, 12-month: -7.5%
Producer price indexes, 1/08-12/09

Asphalt paving mixtures & blocks
1-month: 0.5%, 12-month: -9.2%

Concrete products
1-month: 0.3%, 12-month: -1.1%

Gypsum products
1-month: -1.5%, 12-month: -9.6%

Lumber and plywood
1-month: 2.0%, 12-month: 0.5%
Outlook for materials

- Industry depends on specific materials that:
  - are in demand worldwide
  - have erratic supply growth
  - are heavy, bulky or hard to transport
- Construction requires physical delivery
- Thus, industry is subject to price spurts, transport bottlenecks, fuel price swings
- Allow for 6 to 8% PPI increases esp. after 2010

Source: Author’s forecasts
Producer price index (PPI) for construction, 2004-09
12-month % change

Source: BLS
Construction employment falls, wage increases shrink

Const. as % of Total Nonfarm

Job Loss

23%

(1/09-1/10)

Jobs

4.3%

(1/10)

1-Mon. % Change in Employment

-3% -2% -1% 0% 1%

1-mo % change

J F M A M J J A S O N D J

Residential

Nonresidential

Unemployment Rate

24.7%

Jan '09

18.2%

Jan '10

Avg. Hourly Earnings in Construction

2008 2009 2010

12-mo % change

2% 3% 4% 5% 6%
### 12-month % change in construction employment

<table>
<thead>
<tr>
<th>States (incl. D.C.)</th>
<th>Metros</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Louisiana (-4%)</td>
<td>1. Harrisburg-Carlisle, PA (13%)</td>
</tr>
<tr>
<td>2. District of Columbia (-4%)</td>
<td>2. Springfield, OH (8%)</td>
</tr>
<tr>
<td>3. Oklahoma (-4%)</td>
<td>3. Columbus, IN (5%)</td>
</tr>
<tr>
<td>4. West Virginia (-4%)</td>
<td>4. Tulsa, OK (3%)</td>
</tr>
<tr>
<td></td>
<td>National Average (-14%)</td>
</tr>
<tr>
<td>49. Tennessee (-20%)</td>
<td>335. Santa Fe, NM (-29%)</td>
</tr>
<tr>
<td>50. Wyoming (-24%)</td>
<td>336. El Centro, CA (-36%)</td>
</tr>
<tr>
<td>51. Nevada (-28%)</td>
<td>337. Leominster-Fitchburg-Gardner, MA (-38%)</td>
</tr>
</tbody>
</table>

**Source:** BLS
Predictors of construction demand

Source: American Institute of Architects, BLS
Summary for 2009

• Nonres spending: -5% (up: power, mfg., highways, stimulus; down: developer-, state & local gov-funded)
• Res: -27% (SF up in 2d half, MF down all year)
• Total res + nonres (full year 09 vs. 08): -12%
• Materials costs (Dec. 09 vs. Dec. 08): 0%
• Labor costs (Dec. 09 vs. Dec. 08): +2%

Source: Author
Summary for 2010

• Nonres spending: 0 to -5% (more stimulus put in place, maybe gains in retail, higher ed, hospitals)
• Res: +5 to +10% (SF up, MF down all year)
• Total construction spending: -4% to +2%
• Materials costs: 0% to +8%
• Labor costs: +3% or less

Source: Author
AGC economic resources (email simonsonk@agc.org)

• The Data DIgest: weekly one-page email (sign up: www.agc.org/datadigest)

• PPI tables: emailed monthly

• State and metro data

• Stimulus info: www.agc.org/stimulus

• Webinars (Jan. 28, May 6)

• Feedback on stimulus, credit, costs