2018 Construction Outlook Survey Results
California Results

Total Responses: 81. Responses varied for some questions. Percentages are based on responses to each question and may not sum to 100 due to rounding.

1. What best describes your firm:
   - General contractor/construction manager: 51%
   - Specialty or subcontractor: 28%
   - Supplier/service provider: 9%
   - Architect/engineer/designer: 6%
   - Owner/developer: 0%
   - Other: 6%

2. Does your firm employ union workers, or is your firm primarily open shop?
   - We employ union workers for all of our projects: 36%
   - We employ union workers for most of our projects: 23%
   - We are primarily an open shop contractor, but occasionally employ union workers: 19%
   - We are exclusively open shop: 22%

3. Estimate the total dollar amount of work your firm performed in 2017.
   - $10 million or less: 25%
   - $10.1 million-$50 million: 19%
   - $50.1 million-$100 million: 16%
   - $100.1 million-$500 million: 21%
   - Over $500 million: 19%

4. How many total employees does your firm employ at all of its locations?
   - 1-19: 13%
   - 20-99: 25%
   - 100-499: 31%
   - 500 or more: 31%
5. Compared to 2017, do you expect the available dollar volume of projects you compete for in 2018 to be:

<table>
<thead>
<tr>
<th>Market</th>
<th>Higher</th>
<th>Lower</th>
<th>Same</th>
<th>Net*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All projects</td>
<td>67%</td>
<td>7%</td>
<td>26%</td>
<td>60%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>64%</td>
<td>7%</td>
<td>30%</td>
<td>57%</td>
</tr>
<tr>
<td>Highway</td>
<td>50%</td>
<td>8%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Public Building</td>
<td>50%</td>
<td>8%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Water/Sewer</td>
<td>44%</td>
<td>12%</td>
<td>44%</td>
<td>33%</td>
</tr>
<tr>
<td>Private Office</td>
<td>40%</td>
<td>15%</td>
<td>45%</td>
<td>26%</td>
</tr>
<tr>
<td>Power</td>
<td>31%</td>
<td>8%</td>
<td>62%</td>
<td>23%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>29%</td>
<td>6%</td>
<td>65%</td>
<td>23%</td>
</tr>
<tr>
<td>K-12 School</td>
<td>34%</td>
<td>13%</td>
<td>53%</td>
<td>21%</td>
</tr>
<tr>
<td>Multifamily Residential</td>
<td>37%</td>
<td>16%</td>
<td>47%</td>
<td>21%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>28%</td>
<td>18%</td>
<td>55%</td>
<td>10%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>25%</td>
<td>18%</td>
<td>56%</td>
<td>7%</td>
</tr>
<tr>
<td>Hospital</td>
<td>24%</td>
<td>22%</td>
<td>54%</td>
<td>2%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>48%</td>
<td>7%</td>
<td>45%</td>
<td>-4%</td>
</tr>
</tbody>
</table>

*Net equals difference between number of “Higher” and “Lower” responses as percent of total.

6. What numerical change do you expect in your headcount in 2018?

<table>
<thead>
<tr>
<th>Change</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 25</td>
<td>33%</td>
</tr>
<tr>
<td>11-25</td>
<td>25%</td>
</tr>
<tr>
<td>1-10</td>
<td>20%</td>
</tr>
<tr>
<td>No change</td>
<td>16%</td>
</tr>
<tr>
<td>Decrease</td>
<td>6%</td>
</tr>
</tbody>
</table>

7. What percentage change do you expect in your headcount in 2018?

<table>
<thead>
<tr>
<th>Change</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 25</td>
<td>4%</td>
</tr>
<tr>
<td>11-25%</td>
<td>31%</td>
</tr>
<tr>
<td>1-10%</td>
<td>46%</td>
</tr>
<tr>
<td>No change</td>
<td>18%</td>
</tr>
<tr>
<td>Decrease</td>
<td>1%</td>
</tr>
</tbody>
</table>

8. How would you describe your firm’s current conditions for filling key salaried positions (project manager/supervisor, estimator, etc.) and hourly craft positions (carpenter, laborer, equipment operator, etc.)? My firm is:

- having a hard time filling both salaried and craft worker positions | 62%
- having a hard time filling some salaried positions, but no trouble filling craft worker positions | 9%
- having a hard time filling some craft worker positions, but no trouble filling salaried positions | 12%
- having no trouble filling any positions | 11%
- not doing any hiring | 6%
9. Do you expect any changes in the availability of salaried/hourly craft construction professionals over the coming 12 months? Finding and hiring qualified construction professionals will:

- Continue to be easy: 3%
- Become easier: 1%
- Become harder: 31%
- Continue to be hard: 57%
- Unsure: 7%

10. Did your firm increase pay or benefits in 2017 to retain or recruit salaried/hourly craft professionals?

- Increased base pay: 60%
- Paid more overtime: 21%
- Provided incentives/bonuses: 25%
- Increased contributions and/or improve employee benefits: 24%
- No, but we are considering increases in pay and/or benefits in the near future: 16%
- No, and we are not considering increases in pay and/or benefits: 4%
- Unsure: 4%
- We did not seek to hire any salaried/hourly craft professionals in 2017: 4%

11. Compared to 2017, how will your firm’s 2018 investment in training and development change?

- Increase: 63%
- Decrease: 0%
- Stay the same: 35%
- Unsure: 1%
12. Which of the following issues is the biggest concern to your firm out of the following list?

- Growth in state and local regulations: 43%
- Worker shortages: 35%
- Growth in federal regulations: 33%
- Increased competition for projects: 31%
- Worker quality: 28%
- Safety: 27%
- Rising direct labor costs (pay, benefits, employer taxes): 21%
- Lack of infrastructure investments: 19%
- Rising subcontractor costs: 14%
- Relations with external process inefficiencies (such as collaboration with owners, subs and/or vendors): 7%
- Internal company process inefficiencies: 6%
- Rising materials costs: 5%
- Lack of public non-infrastructure work: 0%
- Not enough private sector work: 0%
- Rising indirect labor costs (recruitment, training): 0%
- Subcontractor defaults: 0%

13. What challenges, if any, do you see regarding the safety and health of your firm’s workers?

- Inexperienced skilled labor/workforce shortage: 57%
- Lack of cooperation from federal agencies or regulators: 42%
- Low quality of available safety and health training: 33%
- Poor subcontractor safety and health performance: 41%
14. What change do you expect in 2018 in the number of your firm’s projects that involve Building Information Modeling (BIM)?

- Increase: 16%
- Stay the same (+/-10%): 41%
- Decrease: 0%
- We do not expect to use BIM on any projects in 2018: 28%
- Unsure: 16%

15. What is your firm using BIM for?

- Clash detection: 53%
- Constructability input into the design process: 51%
- Visually communicate project scope to clients: 42%
- 3D model-based takeoff for cost estimating: 40%
- Design of 3D model: 40%
- Scheduling and workforce planning: 37%
- Safety (identify safety issues, safety by design, safety training, etc.): 23%

16. Does your firm utilize lean construction principles on its projects and/or in its operation?

- Yes: 55%
- No: 22%
- Unsure: 23%

17. Does your firm use any of the following collaborative project delivery methods?

- Design-build: 65%
- Design-assist: 43%
- Public-private partnerships: 31%
- Integrated project delivery (IPD): 18%
- None: 25%
- Unsure: 5%
18. Does your firm use any of the following to collaborate with project partners?

- File-sharing sites such as Dropbox: 72%
- Online project collaboration software: 53%
- BIM: 31%
- Home-grown project website: 16%
- None: 16%
- Unsure: 9%

19. What business of IT functions does your firm outsource or plan to outsource to a technology provider?

- Accounts payable automation: 6% (2% currently outsource, 4% plan to outsource)
- Accounts receiveable payment automation: 0% (0% currently outsource, 0% plan to outsource)
- Inventory: 2% (0% currently outsource, 2% plan to outsource)
- Lien waiver processing: 15% (0% currently outsource, 15% plan to outsource)
- Payroll: 15% (0% currently outsource, 15% plan to outsource)
- Prequalification: 6% (2% currently outsource, 4% plan to outsource)
- Subcontractor insurance processing: 8% (2% currently outsource, 6% plan to outsource)
- Backup and disaster recovery: 28% (0% currently outsource, 28% plan to outsource)
- Desktop (light maintenance): 15% (0% currently outsource, 15% plan to outsource)
- Network management: 30% (0% currently outsource, 30% plan to outsource)
- Voice over IP (phone service over the internet): 25% (0% currently outsource, 25% plan to outsource)
- Our firm doesn't currently outsource or plan to outsource: 34% (2% currently outsource, 32% plan to outsource)
20. Approximately what percent of your firm’s gross annual revenue is spent on IT?

- Less than 1%: 49%
- 1 to 1.9%: 16%
- 2 to 2.9%: 5%
- 3% or more: 11%

21. Compared to 2017, how will your firm’s 2018 investment in IT change?

- Increase: 48%
- Decrease: 2%
- Stay the same: 43%
- Unsure: 8%

22. Compared to 2017, how will your firm’s 2018 investment in the following technologies change?

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Increase</th>
<th>Stay the same</th>
<th>Decrease</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting software</td>
<td>15%</td>
<td>84%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Building Information Modeling</td>
<td>23%</td>
<td>54%</td>
<td>0%</td>
<td>23%</td>
</tr>
<tr>
<td>Client relationship management software</td>
<td>18%</td>
<td>70%</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>Document management software</td>
<td>18%</td>
<td>78%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Estimating software</td>
<td>20%</td>
<td>77%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Fleet tracking/management software</td>
<td>22%</td>
<td>68%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>Human resources software</td>
<td>15%</td>
<td>70%</td>
<td>2%</td>
<td>13%</td>
</tr>
<tr>
<td>Payroll software</td>
<td>7%</td>
<td>89%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Prequalification software</td>
<td>7%</td>
<td>84%</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Project collaboration software</td>
<td>17%</td>
<td>69%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>Project management software</td>
<td>25%</td>
<td>70%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Scheduling software</td>
<td>23%</td>
<td>70%</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Service management software</td>
<td>9%</td>
<td>72%</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td>Subcontractor bid management/ITB software</td>
<td>7%</td>
<td>78%</td>
<td>0%</td>
<td>16%</td>
</tr>
</tbody>
</table>

23. How comfortable is your firm with moving its data to the cloud?

- Very comfortable: 26%
- Moderately comfortable: 46%
- Not comfortable: 21%
- No opinion: 7%
24. How does your firm plan to use mobile software technology?

- Daily field reports: 72%
- Employee time tracking and approval: 64%
- Access to customer and job information from the field: 62%
- Access to job cost and project reports from the field: 59%
- Scheduling: 53%
- Sharing of drawings, photos, and documents: 53%
- Equipment tracking: 48%
- RFI/issue tracking: 43%
- Punch lists: 41%
- Submittals and commitments: 38%
- Change management: 31%
- Estimating: 31%
- GPS tracking (e.g., fleet tracking): 31%
- Building Information Modeling: 24%
- Inventory tracking: 21%
- Material acceptance at the job site: 19%
- Processing payments in the field: 12%
- Processing service work orders in the field: 12%
- No plan to use mobile technology software: 0%

25. Which of the following cloud service models does your firm plan to use?

- Cloud hosting: we outsource our servers and networking components to a cloud service provider’s data center: 37%
- Hybrid cloud: our software and data is on a private network but can be securely accessed with a web browser: 58%
- SaaS: we use software-as-a-service (SaaS) applications that are fully cloud-based: 12%
26. Does your firm currently have a mobile security plan in place?

- Yes: 50%
- No: 32%
- Unsure: 18%

27. Does your firm currently have a formal IT plan that support your business objectives?

- Yes: 62%
- No: 33%
- No, but plan to do so in 2018: 3%
- Unsure: 2%

28. What are your firm's biggest IT challenges?

- Keeping company data secure from hackers: 46%
- Communication between field and office: 44%
- Time needed to implement and train on new technology: 44%
- Connectivity to remote job sites: 41%
- Keeping software current: 37%
- Employee resistance to technology: 36%
- Integration between software used inside of our company: 31%
- Keeping hardware current: 27%
- Integration with software used by project partners outside our company: 19%
- Outdated company software and systems: 19%
- Management resistance to technology: 8%
- None: 3%