1. What best describes your firm:

- Specialty or subcontractor: 54%
- General contractor/construction manager: 21%
- Supplier/service provider: 18%
- Architect/engineer/designer: 5%
- Owner/developer: 0%
- Other: 3%

2. Does your firm employ union workers, or is your firm primarily open shop?

- We are exclusively open shop: 79%
- We are primarily an open shop contractor, but occasionally employ union workers: 13%
- We employ union workers for most of our projects: 8%
- We employ union workers for all of our projects: 0%
- We are exclusively an open shop: 13%

3. Estimate the total dollar amount of work your firm performed in 2017.

- $10 million or less: 43%
- $10.1 million-$50 million: 32%
- $50.1 million-$100 million: 11%
- $100.1 million-$500 million: 8%
- Over $500 million: 5%

4. How many total employees does your firm employ at all of its locations?

- 1-19: 21%
- 20-99: 44%
- 100-499: 23%
- 500 or more: 13%
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>59%</td>
<td>11%</td>
<td>30%</td>
<td>48%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>37%</td>
<td>0%</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>Public Building</td>
<td>40%</td>
<td>5%</td>
<td>55%</td>
<td>35%</td>
</tr>
<tr>
<td>Private Office</td>
<td>44%</td>
<td>12%</td>
<td>44%</td>
<td>32%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>35%</td>
<td>4%</td>
<td>61%</td>
<td>30%</td>
</tr>
<tr>
<td>K-12 School</td>
<td>42%</td>
<td>13%</td>
<td>46%</td>
<td>29%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>25%</td>
<td>0%</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Multifamily Residential</td>
<td>33%</td>
<td>10%</td>
<td>57%</td>
<td>24%</td>
</tr>
<tr>
<td>Highway</td>
<td>35%</td>
<td>13%</td>
<td>52%</td>
<td>22%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>29%</td>
<td>10%</td>
<td>62%</td>
<td>19%</td>
</tr>
<tr>
<td>Hospital</td>
<td>24%</td>
<td>10%</td>
<td>67%</td>
<td>14%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>10%</td>
<td>10%</td>
<td>81%</td>
<td>0%</td>
</tr>
<tr>
<td>Water/Sewer</td>
<td>11%</td>
<td>17%</td>
<td>72%</td>
<td>-6%</td>
</tr>
<tr>
<td>Power</td>
<td>6%</td>
<td>12%</td>
<td>82%</td>
<td>-6%</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>20%</td>
</tr>
<tr>
<td>11-25</td>
<td>17%</td>
</tr>
<tr>
<td>1-10</td>
<td>43%</td>
</tr>
<tr>
<td>No change</td>
<td>17%</td>
</tr>
<tr>
<td>Decrease</td>
<td>3%</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>7%</td>
</tr>
<tr>
<td>11-25</td>
<td>40%</td>
</tr>
<tr>
<td>1-10</td>
<td>37%</td>
</tr>
<tr>
<td>No change</td>
<td>17%</td>
</tr>
<tr>
<td>Decrease</td>
<td>0%</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: 52%
- having a hard time filling some salaried positions, but no trouble filling craft worker positions: 21%
- having a hard time filling some craft worker positions, but no trouble filling salaried positions: 7%
- having no trouble filling any positions: 10%
- not doing any hiring: 0%
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: 0%
- Become easier: 7%
- Become harder: 20%
- Continue to be hard: 53%
- Unsure: 20%

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

- Increased base pay: 57%
- Paid more overtime: 23%
- Provided incentives/bonuses: 47%
- Increased contributions and/or improve employee benefits: 30%
- No, but we are considering increases in pay and/or benefits in the near future: 3%
- No, and we are not considering increases in pay and/or benefits: 7%
- Unsure: 17%
- We did not seek to hire any salaried/hourly craft professionals in 2017: 0%

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

- Increase: 67%
- Decrease: 0%
- Stay the same: 33%
- Unsure: 0%
12. Which of the following issues is the biggest concern to your firm out of the following list?

- Worker shortages: 56%
- Increased competition for projects: 55%
- Growth in federal regulations: 43%
- Lack of public non-infrastructure work: 33%
- Safety: 25%
- Rising subcontractor costs: 20%
- Worker quality: 9%
- Rising direct labor costs (pay, benefits, employer taxes): 4%
- Growth in state and local regulations: 0%
- Internal company process inefficiencies: 0%
- Lack of infrastructure investments: 0%
- Not enough private sector work: 0%
- Relations with external process inefficiencies (such as collaboration with owners, subs and/or vendors): 0%
- Rising indirect labor costs (recruitment, training): 0%
- Rising materials costs: 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
  - Major: 57%
  - Minor: 32%
  - No challenge: 11%
- Lack of cooperation from federal agencies or regulators
  - Major: 43%
  - Minor: 39%
  - No challenge: 18%
- Low quality of available safety and health training
  - Major: 41%
  - Minor: 56%
  - No challenge: 4%
- Poor subcontractor safety and health performance
  - Major: 54%
  - Minor: 31%
  - No challenge: 15%
14. What change do you expect in 2018 in the number of your firm’s projects that involve Building Information Modeling (BIM)?

- Increase: 22%
- Stay the same (+/-10%): 33%
- Decrease: 0%
- We do not expect to use BIM on any projects in 2018: 26%
- Unsure: 19%

15. What is your firm using BIM for?

- Constructability input into the design process: 73%
- Clash detection: 67%
- Visually communicate project scope to clients: 47%
- Design of 3D model: 27%
- Scheduling and workforce planning: 27%
- 3D model-based takeoff for cost estimating: 13%
- Safety (identify safety issues, safety by design, safety training, etc.): 7%

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

- Yes: 27%
- No: 42%
- Unsure: 31%

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

- Design-build: 52%
- Design-assist: 44%
- Public-private partnerships: 26%
- Integrated project delivery (IPD): 19%
- None: 22%
- Unsure: 15%
18. Does your firm use any of the following to collaborate with project partners?

- File-sharing sites such as Dropbox: 71%
- BIM: 36%
- Online project collaboration software: 29%
- Home-grown project website: 11%
- None: 18%
- Unsure: 11%

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

- Payroll: 41%
- Accounts payable automation: 18%
- Accounts receivable payment automation: 9%
- Inventory: 9%
- Prequalification: 9%
- Lien waiver processing: 5%
- Subcontractor insurance processing: 14%
- Backup and disaster recovery: 50%
- Network management: 32%
- Desktop (light maintenance): 23%
- Voice over IP (phone service over the internet): 27%
- Our firm doesn't currently outsource or plan to outsource: 23%
20. Approximately what percent of your firm’s gross annual revenue is spent on IT?

Less than 1%: 30%
1 to 1.9%: 30%
2 to 2.9%: 4%
3% or more: 11%

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

Increase: 30%
Decrease: 7%
Stay the same: 48%
Unsure: 15%

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>12%</td>
<td>88%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Building Information Modeling</td>
<td>24%</td>
<td>52%</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Client relationship management software</td>
<td>36%</td>
<td>55%</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Document management software</td>
<td>12%</td>
<td>76%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Estimating software</td>
<td>32%</td>
<td>60%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Fleet tracking/management software</td>
<td>19%</td>
<td>57%</td>
<td>0%</td>
<td>24%</td>
</tr>
<tr>
<td>Human resources software</td>
<td>14%</td>
<td>67%</td>
<td>0%</td>
<td>19%</td>
</tr>
<tr>
<td>Payroll software</td>
<td>4%</td>
<td>83%</td>
<td>4%</td>
<td>8%</td>
</tr>
<tr>
<td>Prequalification software</td>
<td>11%</td>
<td>58%</td>
<td>0%</td>
<td>32%</td>
</tr>
<tr>
<td>Project collaboration software</td>
<td>25%</td>
<td>50%</td>
<td>0%</td>
<td>25%</td>
</tr>
<tr>
<td>Project management software</td>
<td>23%</td>
<td>64%</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>Scheduling software</td>
<td>21%</td>
<td>63%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Service management software</td>
<td>10%</td>
<td>65%</td>
<td>0%</td>
<td>25%</td>
</tr>
<tr>
<td>Subcontractor bid management/ITB software</td>
<td>10%</td>
<td>55%</td>
<td>5%</td>
<td>30%</td>
</tr>
</tbody>
</table>

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

Very comfortable: 41%
Moderately comfortable: 33%
Not comfortable: 15%
No opinion: 11%
24. How does your firm plan to use mobile software technology?

- Access to customer and job information from the field: 68%
- Sharing of drawings, photos, and documents: 64%
- Daily field reports: 60%
- Employee time tracking and approval: 60%
- Access to job cost and project reports from the field: 52%
- Scheduling: 52%
- Submittals and commitments: 44%
- Building Information Modeling: 36%
- Equipment tracking: 36%
- GPS tracking (e.g., fleet tracking): 36%
- Punch lists: 36%
- RFI/issue tracking: 36%
- Change management: 28%
- Processing service work orders in the field: 20%
- Estimating: 12%
- Material acceptance at the job site: 12%
- Inventory tracking: 8%
- Processing payments in the field: 0%
- 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: 45%
- Hybrid cloud: our software and data is on a private network but can be securely accessed with a web browser: 45%
- SaaS: we use software-as-a-service (SaaS) applications that are fully cloud-based: 5%
- Currently use: 0%
26. Does your firm currently have a mobile security plan in place?

- Yes: 28%
- No: 36%
- Unsure: 36%

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

- Yes: 48%
- No: 28%
- No, but plan to do so in 2018: 8%
- Unsure: 16%

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

- Keeping company data secure from hackers: 46%
- Employee resistance to technology: 42%
- Time needed to implement and train on new technology: 42%
- Communication between field and office: 38%
- Integration between software used inside of our company: 38%
- Connectivity to remote job sites: 29%
- Keeping hardware current: 21%
- Integration with software used by project partners outside our company: 13%
- Keeping software current: 13%
- Management resistance to technology: 13%
- Outdated company software and systems: 4%
- None: 0%