A demographic survey of Minnesota Building Officials conducted by the Minnesota Construction Codes and Licensing Division (CCLD) in cooperation with the Association of Minnesota Building Officials (AMBO)

Where possible, results are compared to a national survey of U.S. code officials conducted by the International Code Council (ICC) and the National Institute of Building Sciences (NIBS)
### Minnesota Building Officials and municipalities
(as of Dec. 17, 2014)

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities</td>
<td>852</td>
</tr>
<tr>
<td>Townships</td>
<td>1,790</td>
</tr>
<tr>
<td>Counties</td>
<td>87</td>
</tr>
<tr>
<td>Units of Government</td>
<td>506</td>
</tr>
<tr>
<td>Designated Building Officials</td>
<td>219</td>
</tr>
</tbody>
</table>

*506 units of government administer the State Building Code*

219 Designated Building Officials administer the code for 506 units of government

### Certification Count

- **Certified Building Officials**: 555
- **Certified Building Officials (Limited)**: 145
- **Accessibility Specialists**: 42

**742 Minnesota certifications**

*The State Building Code is administered in a total of 22 Minnesota counties*
Introduction

There is growing concern within many sectors of the building construction industry that an insufficient number of new participants will enter the building construction workforce. In addition to the lack of available skilled tradespersons, this includes building code enforcement professionals to serve the regulatory segment of the industry.

Meanwhile, the municipal building official’s role and responsibilities continue to expand. This extends from an increasing number of complex regulations in the model codes to the mounting pressures for local government to do more with less. Compounding the situation is many of the most experienced building officials who have adapted and found a way to juggle these challenges are nearing retirement in record number. These sentiments are expressed frequently among building officials as more of them retire from the profession. This survey of Minnesota Building Officials was conducted to see if this was true.

Minnesota’s Construction Codes and Licensing Division (CCLD) and the Association of Minnesota Building Officials (AMBO) conducted a state-wide survey of Minnesota Certified Building Officials, those specifically employed in the municipal building regulatory process, to understand the current state of the industry, pathways for entering the career and the long-term outlook of the profession.

The survey was conducted from Nov. 17 through Dec. 1, 2014, with 346 responses (62 percent). CCLD sent surveys to known e-mail addresses of Minnesota Certified Building Officials (and Limited). In addition, the survey was forwarded to the membership of various Minnesota Chapters of the International Code Council (ICC).

The data collected is presented here in graph form and then compared, when possible, to recent data obtained from a similar national survey conducted by ICC and the National Institute of Building Sciences. Our hope is this is the first step in the process to identify and validate the most pressing challenges that face Minnesota Building Officials and then find solutions to those challenges. We also hope this will serve as a basis for future outreach efforts designed to develop the skills and increase the number of participants who enter Minnesota’s building code enforcement workforce.

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Figure 1

Current role in building regulation

- Minnesota Certified Building Official (Designated by municipality): 49.1%
- Minnesota Certified Building Official (Employed by municipality yet not designated): 42.2%
- Minnesota Certified Building Official Limited (Designated by municipality): 8.7%

Figure 2

Work location

- Twin Cities Metro: 61.3%
- Greater Minnesota: 38.8%

Figure 3

Primary level of work

- Municipality (city, county, township): 93.1%
- State (including U of M): 6.9%

Figure 4

How hired

- Hired directly: 93.6%
- Hired by a third-party provider: 6.4%
**Figure 5**

Size of Minnesota communities served

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1,000</td>
<td>2.3%</td>
</tr>
<tr>
<td>1,000 to 2,499</td>
<td>2.9%</td>
</tr>
<tr>
<td>2,500 to 4,999</td>
<td>8.4%</td>
</tr>
<tr>
<td>5,000 to 9,999</td>
<td>10.1%</td>
</tr>
<tr>
<td>10,000 to 24,999</td>
<td>22.8%</td>
</tr>
<tr>
<td>25,000 to 49,999</td>
<td>15.9%</td>
</tr>
<tr>
<td>50,000 to 99,999</td>
<td>19.9%</td>
</tr>
<tr>
<td>100,000 to 149,999</td>
<td>3.5%</td>
</tr>
<tr>
<td>150,000 and greater</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

**Figure 6**

Size of U.S. communities served

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25,000</td>
<td>31.2%</td>
</tr>
<tr>
<td>25,000 to 74,999</td>
<td>28.4%</td>
</tr>
<tr>
<td>75,000 to 149,000</td>
<td>14.1%</td>
</tr>
<tr>
<td>150,000 to 249,000</td>
<td>7.8%</td>
</tr>
<tr>
<td>250,000 to 499,000</td>
<td>6.9%</td>
</tr>
<tr>
<td>500,000 to 749,999</td>
<td>2.4%</td>
</tr>
<tr>
<td>750,000 to 999,999</td>
<td>2.2%</td>
</tr>
<tr>
<td>1,000,000 to 2,999,999</td>
<td>3.7%</td>
</tr>
<tr>
<td>3,000,000 to 4,999,999</td>
<td>0.9%</td>
</tr>
<tr>
<td>5,000,000 to 9,999,999</td>
<td>0.9%</td>
</tr>
<tr>
<td>10,000,000 or more</td>
<td>1.6%</td>
</tr>
</tbody>
</table>
Those completing a Minnesota technical or vocational school program

Educational experience

Figure 7

Those completing a community college or associate’s degree

Figure 8

Those completing a four-year college or bachelor’s degree

Figure 9
Figure 10

Those completing a four year college or bachelor’s degree program

<table>
<thead>
<tr>
<th>Field</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration or management</td>
<td>13.8%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Architecture</td>
<td>15.5%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Engineering</td>
<td>30.0%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Construction management</td>
<td>11.0%</td>
<td>14.4%</td>
</tr>
<tr>
<td>Business</td>
<td>16.5%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Other</td>
<td>47.7%</td>
<td>7.4%</td>
</tr>
</tbody>
</table>

Figure 11

Those completing a masters or PhD

<table>
<thead>
<tr>
<th>Field</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>13.0%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Engineering</td>
<td>27.0%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Business</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Administration or management</td>
<td>14.0%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Other</td>
<td>65.2%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>
Figure 12
First paying job in career path

- Trades person
  - Minnesota: 34.4%
  - U.S.: 46.6%
- Code inspector/plan reviewer/code administrator
  - Minnesota: 44.4%
  - U.S.: 23.7%
- Construction/project manager
  - Minnesota: 14.7%
  - U.S.: 12.3%
- Product sales/development
  - Minnesota: 1.4%
  - U.S.: 4.0%
- Architect/engineer
  - Minnesota: 13.4%
  - U.S.: 5.0%

Figure 13
Age entering the building code enforcement profession

- 20 to 29
  - Minnesota: 20.5%
  - U.S.: 22.4%
- 30 to 39
  - Minnesota: 39.0%
  - U.S.: 35.0%
- 40 to 49
  - Minnesota: 32.1%
  - U.S.: 28.1%
- 50 to 59
  - Minnesota: 12.9%
  - U.S.: 7.2%
- 60 and up
  - Minnesota: 1.2%
  - U.S.: 1.7%
Figure 14

Factors that led to pursuing career in building code enforcement

<table>
<thead>
<tr>
<th>Factor</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working in construction environment</td>
<td>62.1%</td>
<td>16.4%</td>
</tr>
<tr>
<td>Salary or benefits</td>
<td>25.4%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Respect for the profession</td>
<td>21.7%</td>
<td>35.9%</td>
</tr>
<tr>
<td>Friend or family or colleague suggestion</td>
<td>22.0%</td>
<td>25.1%</td>
</tr>
<tr>
<td>Interactions with code officials</td>
<td>21.7%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Job security</td>
<td>29.5%</td>
<td>29.5%</td>
</tr>
</tbody>
</table>

Figure 15

Years in building code enforcement

<table>
<thead>
<tr>
<th>Years</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>8.1%</td>
<td>9.9%</td>
</tr>
<tr>
<td>5 to 15 years</td>
<td>40.8%</td>
<td>42.5%</td>
</tr>
<tr>
<td>16 to 25 years</td>
<td>31.5%</td>
<td>30.8%</td>
</tr>
<tr>
<td>26 to 35 years</td>
<td>17.9%</td>
<td>14.9%</td>
</tr>
<tr>
<td>36 years or more</td>
<td>1.7%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>
Figure 16

Number of staff in building department

<table>
<thead>
<tr>
<th>Number of Staff</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 4</td>
<td>53.5%</td>
<td>33.2%</td>
</tr>
<tr>
<td>5 to 9</td>
<td>15.0%</td>
<td>23.9%</td>
</tr>
<tr>
<td>10 to 14</td>
<td>11.0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>15 to 24</td>
<td>6.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>25 or more</td>
<td>13.9%</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

Figure 17

Number of staff performing plan review or inspection (Minnesota)

- 6 or more: 31%
- 1: 23%
- 2: 26%
- 3 to 5: 20%
Figure 18

Number of previous construction or code enforcement jobs before becoming the Designated Building Official (Minnesota)

- 1 to 3 jobs: 86%
- 4 to 6 jobs: 11%
- 7 or more jobs: 3%

Figure 19

Current salaries

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $25,000/yr</td>
<td>5.2%</td>
<td>3.9%</td>
</tr>
<tr>
<td>$25,000 to $49,999/yr</td>
<td>8.1%</td>
<td>11%</td>
</tr>
<tr>
<td>$50,000 to $74,999/yr</td>
<td>50.1%</td>
<td>41.3%</td>
</tr>
<tr>
<td>$75,000 to $99,999/yr</td>
<td>30.4%</td>
<td>21.2%</td>
</tr>
<tr>
<td>$100,000 to $124,999/yr</td>
<td>4.3%</td>
<td>7.7%</td>
</tr>
<tr>
<td>$125,000 or more</td>
<td>1.5%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>
Figure 20
Your age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Minnesota</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 24</td>
<td>0.3%</td>
<td>0.1%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>3.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>12.3%</td>
<td>13.3%</td>
</tr>
<tr>
<td>45 to 54</td>
<td>28.8%</td>
<td>26.6%</td>
</tr>
<tr>
<td>55 to 64</td>
<td>45.6%</td>
<td>50.0%</td>
</tr>
<tr>
<td>65 or older</td>
<td>6.4%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Figure 21
Plans to leave the building code enforcement profession (Minnesota)

<table>
<thead>
<tr>
<th>Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 years</td>
<td>11.9%</td>
</tr>
<tr>
<td>2 to 5 years</td>
<td>26.0%</td>
</tr>
<tr>
<td>6 to 10 years</td>
<td>26.0%</td>
</tr>
<tr>
<td>11 to 24 years</td>
<td>26.9%</td>
</tr>
<tr>
<td>25 years or more</td>
<td>9.3%</td>
</tr>
</tbody>
</table>

Figure 22
Plans to leave the building code enforcement profession (U.S.)

<table>
<thead>
<tr>
<th>Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>31.0%</td>
</tr>
<tr>
<td>5 to 15 years</td>
<td>51.0%</td>
</tr>
<tr>
<td>16 to 25 years</td>
<td>14.0%</td>
</tr>
<tr>
<td>26 to 36 years</td>
<td>4.0%</td>
</tr>
</tbody>
</table>
Advice for a prospective candidate who is interested in becoming a building code enforcement professional:

- Study the code: 18.0%
- Construction industry experience: 13.0%
- Learn good people skills: 9.0%
- Find an internship: 8.0%
- Get a college education: 6.0%
- Get certified: 4.0%
- Rewarding career: 3.0%
- Must have "thick skin": 3.0%
- Don't get a "big head": 3.0%
- Start early/young: 3.0%
- Find another career: 2.0%
- Other: 28.0%

Would you recommend this career field to others?
- Yes: 85%
- No: 15%

What you like most about your career in building code enforcement:

- Helping contractors and homeowners: 34.2%
- Other: 23.8%
- Variety of work: 13.5%
- Working in the construction industry: 12.8%
- Protecting the public: 10.7%
- Challenging: 5.0%
Figure 26

Top three challenges facing the building code enforcement industry in Minnesota

- Finding qualified staff: 50.6%
- Complexity of code: 37.6%
- Pending retirements: 31.2%
- Career-field prep training and education: 29.2%
- Pay: 28.9%
- Statewide code enforcement: 27.2%
- Not enough staff: 26.6%
- Competing municipal responsibilities: 17.6%
- Other: 15.6%
- Available continuing education programs: 15.3%
- Too many code requirements: 13.6%
Figure 27

Top factors challenging the building code enforcement industry in Minnesota

**Qualified staff**
- Finding qualified staff: 50.6%
- Pending retirements: 31.2%
- Career-field prep training and education: 29.2%

**Code**
- Complexity of code: 37.6%
- Too many code requirements: 13.6%

**Municipality**
- Pay: 28.9%
- Not enough staff: 26.6%
- Competing municipal responsibilities: 17.6%
Profile of the typical Minnesota Building Official

- The “typical” Minnesota Building Official is male, between the ages of 55 and 64, has been in building code enforcement between five and 15 years, and plans to retire within the next 10 years (although many within the next five years).

- First paying job was in building code enforcement as their chosen career while in their 30’s, entered this field to be part of the construction industry, and had one to three previous construction or code-enforcement jobs before becoming a Designated Building Official for a municipality.

- Although most do not have a trade license, they do have one or more other professional licenses or certifications.

- This [Designated] Building Official is employed by a local unit of government in the Twin Cities having a population of between 10,000 and 25,000, makes between $50,000 and $75,000, and works in a building department having between one and four staff members.

- This building official would recommend to others the career field of building code enforcement.

- Their best advice for a prospective candidate who is interested in becoming a building code professional is to “study the code” and get some “construction industry experience.”

- What they like most about their career in building code enforcement is “helping contractors and homeowners.”
Please complete the survey below if you are a Minnesota Certified Building Official who is employed by or works on behalf of a Minnesota municipality.

* 1. What is your current role in building regulation?
   - Minnesota Certified Building Official (Designated by Municipality)
   - Minnesota Certified Building Official Limited (Designated by Municipality)
   - Minnesota Certified Building Official (Employed by municipality but not Designated)

* 2. What is your age?
   - 18 to 24
   - 25 to 34
   - 35 to 44
   - 45 to 54
   - 55 to 64
   - 65 or older

* 3. What is your gender?
   - Female
   - Male

* 4. Do you work in the Twin Cities metro or Greater Minnesota?
   - Twin Cities metro
   - Greater Minnesota

* 5. Do you work primarily at the state or local level?
   - State (including U of M)
   - Municipality (city, county, township)
* 6. What is your current salary?

- Less than $25,000/year
- $25,000 to $49,999/year
- $50,000 to $74,999/year
- $75,000 to $99,999/year
- $100,000 to $124,999/year
- $125,000 or more

* 7. Please indicate your highest level of educational experience.

- Some high school
- Graduated high school
- Technical or vocational school
- Community college or associate’s degree
- 4-year college or bachelor’s degree
- Advanced degree or masters, PhD, etc.

* 8. What technical or vocational school program did you complete?

- HVAC
- Electrical
- Plumbing
- Carpentry
- N/A
- Other (please specify)

* 9. What community college or associate’s degree did you complete?

- Construction management
- Architectural technology
- Engineering technology
- Building inspection technology
- N/A
* 10. What four-year college or bachelor's degree program did you complete?

- Architecture
- Engineering
- Construction management
- Business
- Administration or management
- N/A
- Other (please specify)

* 11. What advanced degree or masters, PhD, etc. did you complete?

- Architecture
- Engineering
- Business
- Administration or management
- N/A
- Other (please specify)

* 12. Upon completion of the education above, what was your first job in this career path?

- Tradesperson
- Architect or engineer
- Construction or project manager
- Code inspector, plan reviewer or code administrator
- Product sales or development
- N/A
- Other (please specify)
* 13. Do you have a trade license?
   - Yes
   - No

14. Please indicate what trade licenses you have.

* 15. Do you possess other professional licenses or certifications?
   - Yes
   - No

16. Please indicate other professional licenses or certifications you have.

* 17. How many years have you been a building code enforcement professional?
   - Less than 5 years
   - 5 to 15 years
   - 16 to 25 years
   - 26 to 35 years
   - 36 years or more

* 18. At what age did you become a building code enforcement professional?
   - 20 to 29 years old
   - 30 to 39 years old
   - 40 to 49 years old
   - 50 to 59 years old
   - 60 and up

* 19. How many construction or code-enforcement jobs did you have before becoming the Designated Building Official for a municipality?
   - 1 to 3 different positions
20. **What factors led you to pursue a job as a building code enforcement professional?**

- [ ] Salary or benefits
- [ ] Job security
- [ ] Respect for the profession
- [ ] Friend or family or colleague suggestion
- [ ] Interactions with code officials
- [ ] Working in construction environment
- [ ] Other (please specify)

21. **What size community do you currently serve?**

- [ ] Less than 1,000
- [ ] 1000 to 2,499
- [ ] 2,500 to 4,999
- [ ] 5,000 to 9,999
- [ ] 10,000 to 24,999
- [ ] 25,000 to 49,999
- [ ] 50,000 to 99,999
- [ ] 100,000 to 149,999
- [ ] 150,000 and greater

22. **Are you hired directly by the municipality you serve or are you a third-party provider?**

- [ ] Hired directly
- [ ] Hired by a third-party provider
* 23. How many staff are employed in administering the state building code on behalf of your municipality?

- 1
- 2
- 3 to 4
- 5 to 9
- 10 to 14
- 15 to 24
- 25 or more

* 24. How many staff members actually perform plan review or inspection on behalf of your municipality?

- 1
- 2
- 3 to 5
- 6 or more

* 25. When do you plan on leaving the building code enforcement profession either due to retirement or to pursue an alternative career?

- Less than 2 years
- 2 to 5 years
- 6 to 10 years
- 11 to 24 years
- 25 years or more

* 26. What do you believe are the top three challenges facing the building code enforcement industry in Minnesota? (check only 3)

- Finding qualified staff
- Not enough staff
- Too many code requirements
- Complexity of code
25. When do you plan on leaving the building code enforcement profession either due to retirement or to pursue an alternative career?
- Less than 2 years
- 2 to 5 years
- 6 to 10 years
- 11 to 24 years
- 25 years or more

26. What do you believe are the top three challenges facing the building code enforcement industry in Minnesota? (check only 3)
- Finding qualified staff
- Not enough staff
- Too many code requirements
- Complexity of code
- Competing municipal responsibilities
- Pay
- Available continuing education programs
- Career-field prep training and education
- Pending retirements
- Statewide code enforcement
- Other (please specify)

27. What do you like most about your career in building code enforcement?

28. Would you recommend this career field to others?
- Yes
- No

Why?

29. What advice would you give a prospective candidate who is interested in becoming a building code enforcement professional?

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