



2020 SURVEY TOPIC BRIEF

BY THE STRUCTURAL ENGINEERING ENGAGEMENT AND EQUITY COMMITTEE
OF THE NATIONAL COUNCIL OF STRUCTURAL ENGINEERS ASSOCIATIONS

RECRUITMENT & RETENTION

The 2020 SE3 Recruitment and Retention Brief explores the reasons and factors that drive individuals to leave the structural engineering profession. Building upon work from previous studies, the Committee sought to understand how often people actually consider leaving and which demographic groups are most at risk.

This brief also provides an overview of the common challenges that employers face with respect to employee recruitment. It summarizes findings associated with individual's perceptions of current challenges for the profession.

We recommend reading this topic brief in conjunction with the 2020 SE3 Demographics Brief which illustrates the composition of the 2020 SE3 survey respondents.

BRIEF HIGHLIGHTS

1. 55% of all survey respondents have considered leaving the profession at some point in their career.
2. Achieving better work-life balance and less stress were the most highly rated reasons given for considering leaving.
3. Discrimination and/or Harassment was not likely to contribute to a structural engineer's hypothetical consideration of leaving the profession. However, of the survey respondents who left the profession, over 75% cited discrimination and/or harassment as 'Very Much' a reason for doing so.
4. Survey respondents consistently reported that meeting compensation and/or benefit demands were a challenge when recruiting new candidates.
5. 30% of respondents felt the SE profession is more attractive than other STEM professions while 37% of respondents felt the SE profession is more rewarding than other STEM professions.

OVERALL CAREER SATISFACTION



75% of all respondents indicated satisfaction with their overall career in the structural engineering profession with 20% of all respondents indicating “Very Satisfied”.

Satisfaction with overall career varied significantly by race and gender. 78% of White Caucasian respondents reported satisfaction with their overall career, which was greater than all other racial groups. 57% of Asian respondents and 63% of Middle Eastern respondents reported overall career satisfaction. 77% of men reported overall career satisfaction, compared to 70% of women respondents.

Overall career satisfaction increased with increasing position level. 90% of Principals reported satisfaction compared to 63% of respondents at the Staff and Project Engineers position levels.

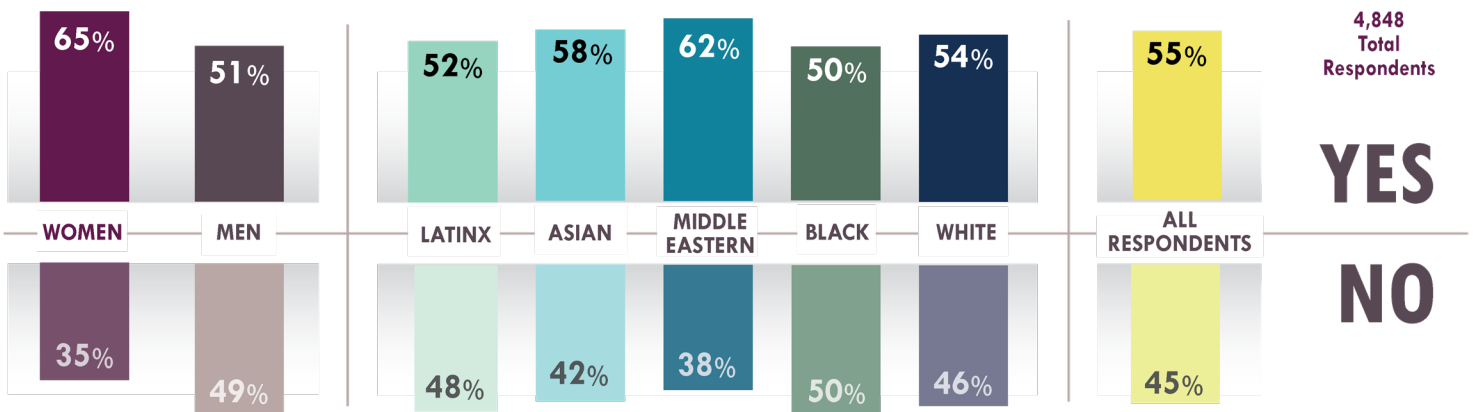
WHAT CHANGED?

Respondents of the 2020 SE3 Survey reported similar levels of overall satisfaction with their career as respondents to the 2018 SE3 Survey. 78% of 2018 respondents reported being satisfied with their career compared to 75% of respondents in 2020.

RETENTION

55% of all survey respondents have considered leaving the profession at some point in their careers. Women were much more likely than men to have considered leaving, (65% vs 51%). The response also varied by race, where certain racial groups were more likely to have considered leaving. 62% of Middle Eastern respondents and 58% of Asian respondents reported considering leaving, compared to 54% of White respondents. Black and LatinX respondents were less likely than White respondents to have considered leaving.

HAVE YOU CONSIDERED LEAVING THE PROFESSION?

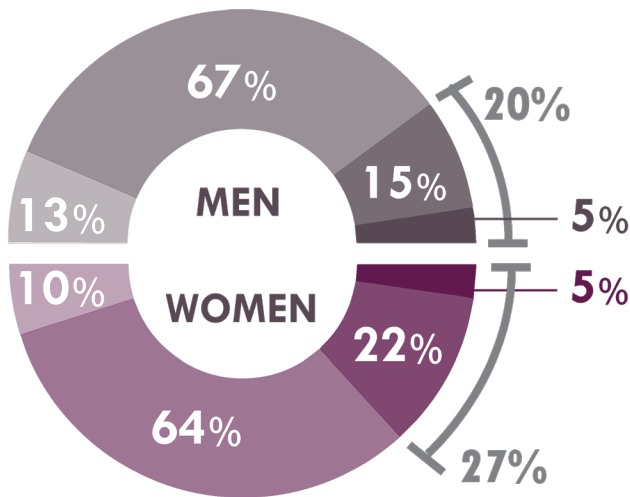
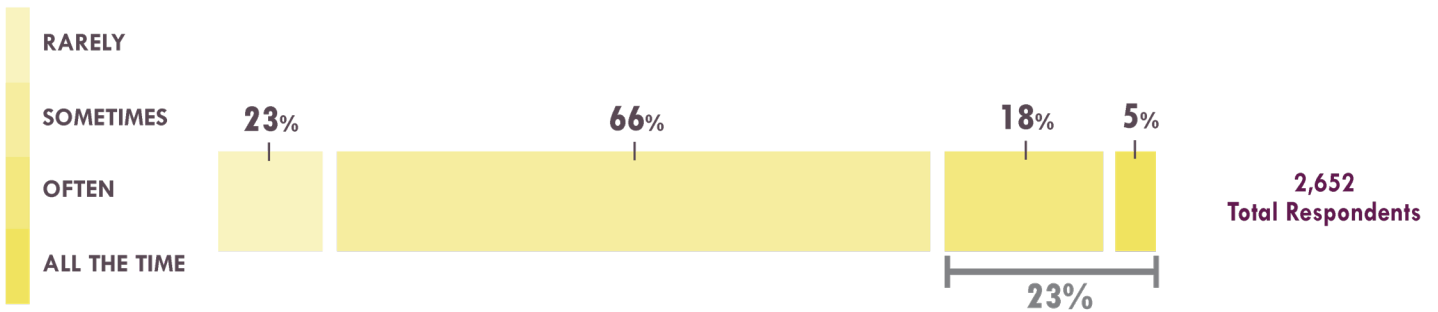


WHAT CHANGED?

Respondents to the 2020 SE3 Survey reported considering leaving the profession at similar levels as respondents to the 2018 SE3 Survey. 59% of all 2018 respondents reported having considered leaving the profession. The breakdown by gender was also similar between the two surveys - 68% of women and 55% of men reported having considered leaving in 2018.

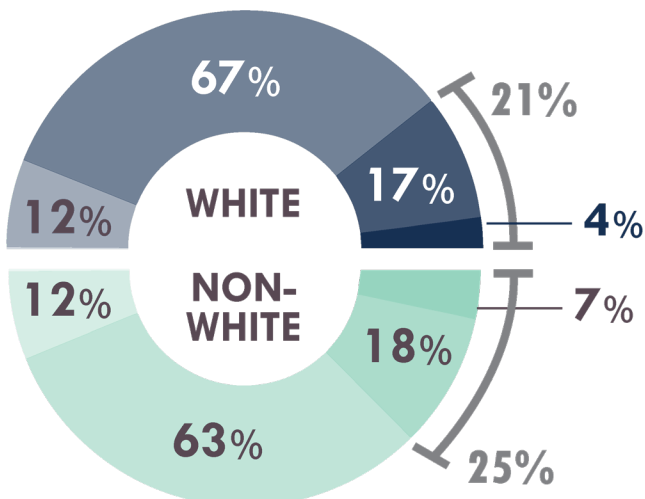
HOW FREQUENTLY HAVE YOU CONSIDERED LEAVING THE SE PROFESSION?

Respondents who had considered leaving the profession reported how frequently they had considered it. Of these respondents, 66% reported considering leaving sometimes and 23% of respondents reported often or all the time.



Frequency of consideration of leaving varied significantly by gender. Women tended to consider leaving more frequently than men. 27% of women respondents reported considering leaving often or all the time, compared to 20% of men.

The results also varied by race, though not as significantly. 21% of White respondents reported considering leaving often or all the time compared to 25% of Non-White respondents.

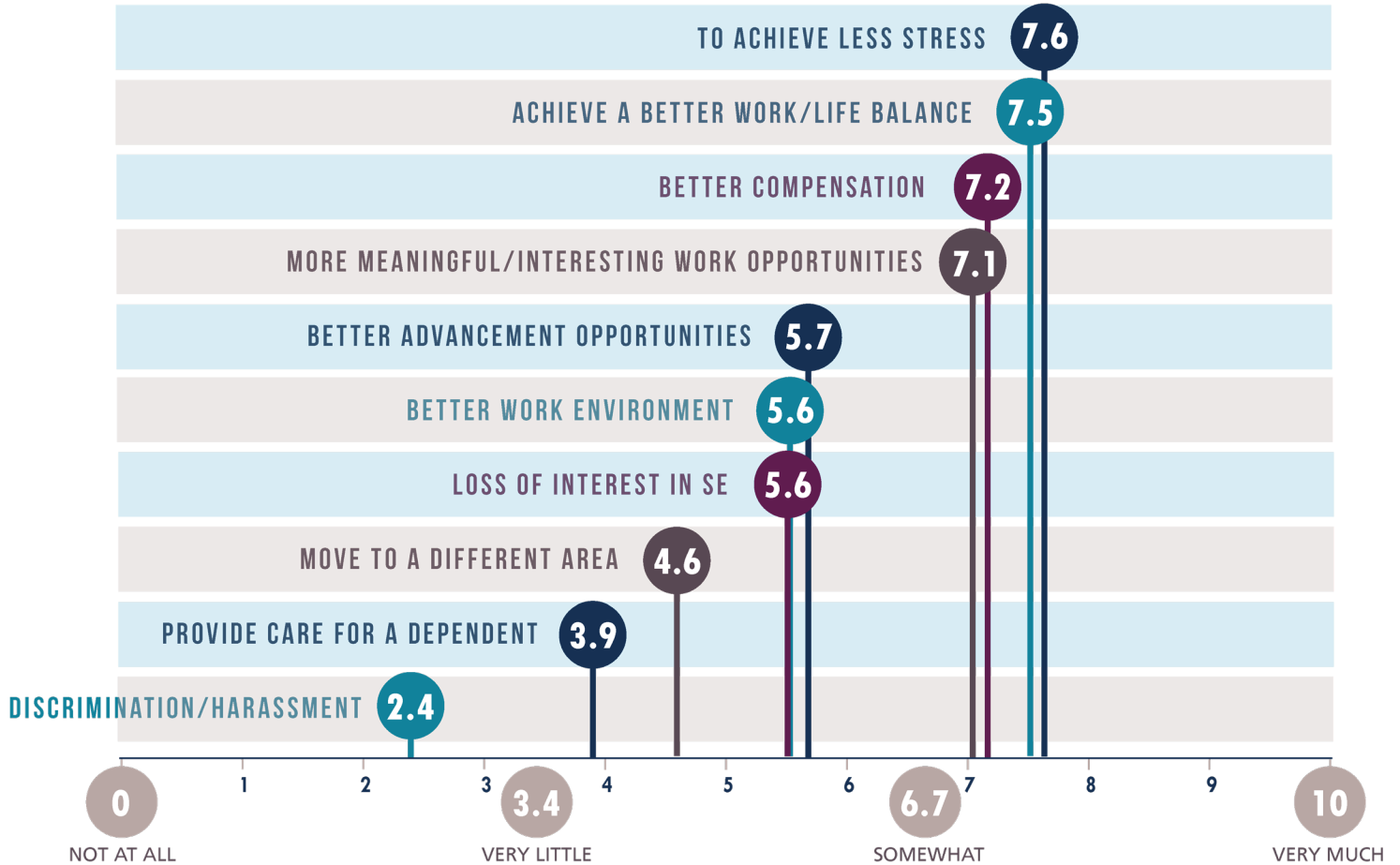


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REASONS TO CONSIDER LEAVING THE PROFESSION

The survey asked all respondents how much specific factors would contribute to a hypothetical decision to leave the profession. Respondents rated ten (10) factors 'Not at all', 'Very Little', 'Somewhat', and 'Very Much', with 'Not Applicable' as an option. The figure above shows the average rating for each factor. Less Stress and Better Work-Life Balance were the top two reasons selected, followed by Better Financial Compensation and Seeking More Meaningful/Interesting Work Opportunities.



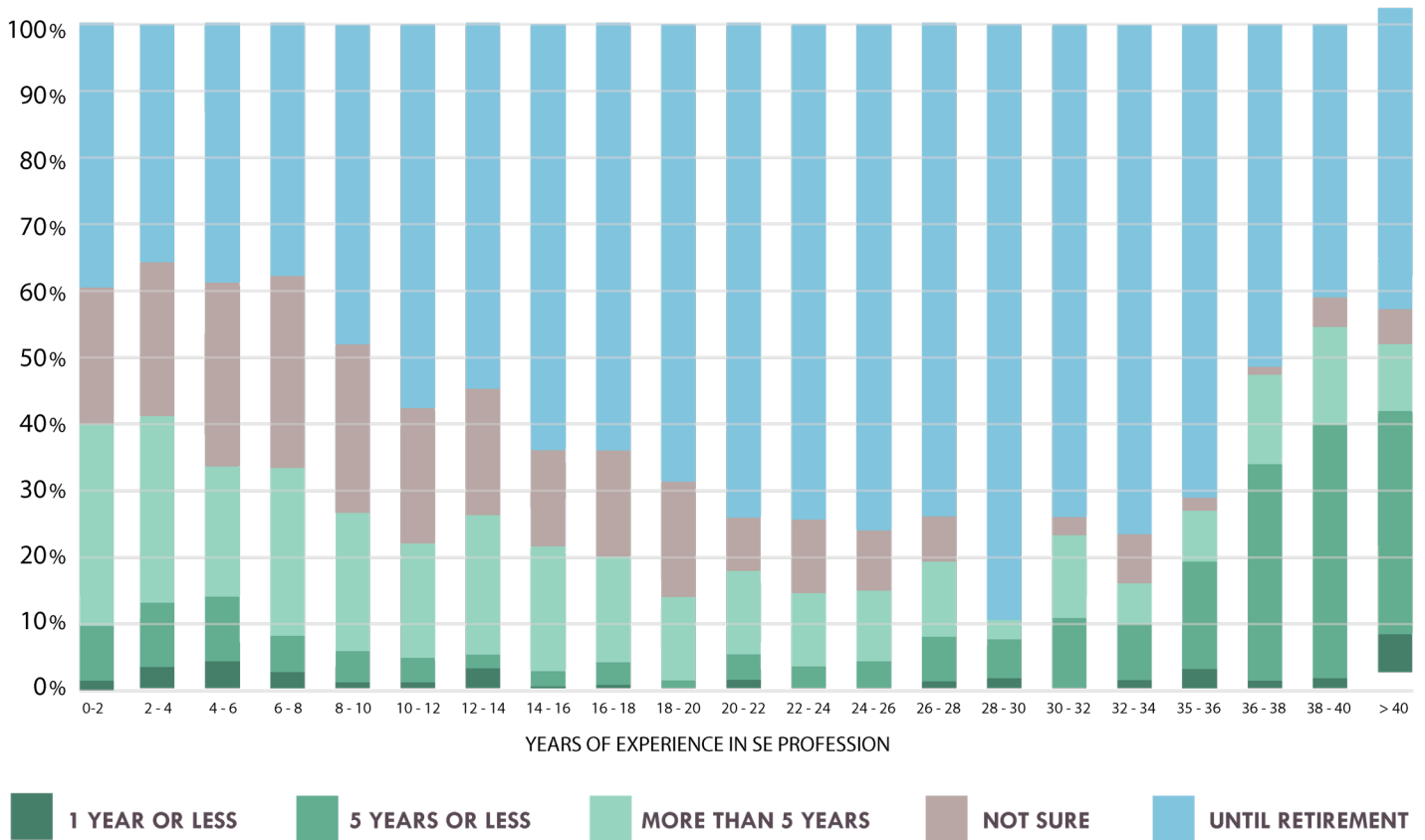
Respondents rated the same factors with respect to a potential decision to leave their current firm. The same four reasons were rated most highly although in a different order. Better Financial Compensation was the most highly rated reason to consider leaving their current firm, followed by Less Stress, Better Work-Life Balance, and More Meaningful/Interesting Work Opportunities.

Of the ten factors presented, Discrimination and/or Harassment was the least likely to contribute to a potential decision to leave. Approximately 60% of those currently working in the structural engineering profession said it was not at all a factor either in considering leaving the respondent's current firm or the profession in general. This is significantly different than the response of people who have actually left the profession. Of the survey respondents who actually left the profession (n=143), over 75% cited Discrimination and/or Harassment as very much a reason for doing so.

PLANS TO STAY IN THE SE PROFESSION

The survey also approached the topic of retention by asking the respondents about plans to stay, both in their current firm, and in the profession at large. Respondents selected from the following options: One year or less, Five years or less, More than five years, Not sure, or Until retirement. The figure below shows the percentage of respondents, by years of experience, who plan to stay in the profession for each response option. Note the ranges in years of experience are inclusive of the lower bound and exclusive of the upper bound.

PLANS TO STAY IN SE PROFESSION



Although many respondents have considered leaving the profession at some point in their career, the majority reported that they plan to stay until retirement. Across all years of experience very few respondents indicated they were planning to stay in the profession 1 year or less. As respondents' years of experience in the profession increased, they were also more likely to plan to stay until retirement. 36% of respondents with 2-4 years of experience plan to stay until retirement compared to 90% of respondents with 28-30 years of experience. There is a departure from this trend for respondents with more than 30 years of experience which is likely due to plans to actually retire from the profession within 5 years or less. As respondents' years of experience in the industry increases they also become more confident in their decision to stay. 29% of respondents with 6-8 years of experience are not sure how long they plan to stay compared to 3% of respondents with 28-30 years of experience.

WHAT CHANGED?

The 2018 SE3 survey identified three career “pinch points” – the points at which respondents were least likely to stay in the profession until retirement – occurring at Experience Years 2, 10, and 18. A similar trend was identified in the 2020 survey, with pinch points occurring at approximately 3-5, 11-13, and 19 years of experience.

PERCEPTIONS OF THE SE PROFESSION

RECRUITMENT CHALLENGES

In developing questions for the 2020 survey, the Committee sought to better understand challenges associated with recruiting new structural engineers into consulting firms. 39% of all respondents were involved in the recruitment of candidates at their current firm. Respondents with more years of experience were more likely to be involved in recruitment. 56% of respondents with 20 years or more of experience were involved compared to just 13% of respondents with less than 5 years of experience, and 24% of respondents with 5 to 9 years of experience.

#1 MEETING COMPENSATION/BENEFIT DEMANDS

#2 COMPETING WITH HIGH PROFILE FIRMS & PROJECTS

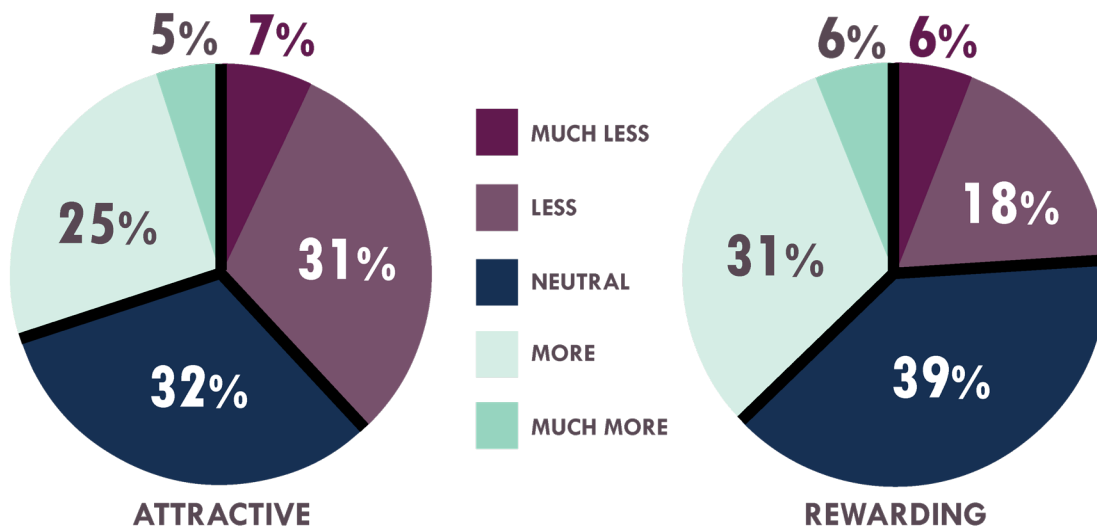
#3 COMPETING WITH REPUTABLE FIRMS KNOWN FOR INNOVATION

#4 ACCOMMODATING WORK FLEXIBILITY DEMANDS

#5 ADDRESSING CONCERNS OVER FIRM DIVERSITY

Respondents involved with recruitment were asked how often they encountered the five conditions shown in the figure above when recruiting candidates. More than half of the respondents reported that Meeting Compensation/Benefit Demands and Competing With Firms With an Established Reputation For High Profile Projects were “Sometimes”, “Often”, or “Always” a problem when recruiting new candidates. More than half of the respondents reported that the other three challenges were “Rarely” or “Never” a problem.

RESPONDENT PERCEPTIONS OF SE PROFESSION RELATIVE TO OTHER STEM PROFESSIONS



The 2020 SE3 survey asked respondents about perceptions of our profession relative to other STEM fields. Specifically, we asked whether respondents felt structural engineering was 1) more or less attractive and 2) more or less rewarding than other STEM professions based on a five-point scale – ranging from ‘Much Less’ to ‘Much More’.

The perceived attractiveness of the structural engineering profession compared to other STEM fields was almost evenly split between Less Attractive, Neutral, and More Attractive. 38% of respondents indicated they perceive the structural engineering profession to be less attractive than other STEM fields, while 30% perceive it as more attractive, and 32% were neutral. 37% of respondents indicated they perceive the structural engineering profession to be more rewarding, while 24% perceive it as less rewarding, and 49% were neutral. The perceived attractiveness of the profession varied between racial groups. LatinX, White Caucasian, and Middle Eastern respondents were more likely to believe the profession is more attractive while Black and Asian respondents perceived the profession to be notably less attractive.

CHALLENGES FOR THE FUTURE OF THE SE PROFESSION

New to the 2020 SE3 survey, respondents were asked to indicate the top two challenges they perceive to be facing the structural engineering profession. Overwhelmingly, respondents ranked Inadequate Financial Compensation and Retention Due to Stress and Burnout as the biggest challenges. In fact, Inadequate Financial Compensation was listed as the top challenge facing the profession by every single demographic assessed.

#1 INADEQUATE COMPENSATION

#2 RETENTION DUE TO STRESS/BURNOUT

#3 INSUFFICIENT NUMBER OF CANDIDATES

#4 LACK OF DIVERSITY

#5 EMERGING TECHNOLOGIES

#6 OTHER

KEY FINDING

Inadequate Financial Compensation was listed as the top challenge facing the profession by every single demographic – parsed by age, gender, racial identity, position level, respondents with dependents of all ages and those with no dependents; those who are, overall, satisfied with their career choice and those who are not; and those who reported having considered leaving the profession as well as those who never have.

The 2020 SE3 Recruitment and Retention Brief sheds light on the risk factors associated with retention in the structural engineering profession. Through this study, we gain a better understanding of which demographic groups are most at risk of leaving, how often individuals consider leaving the profession, and the potential reasons for considering leaving. The Committee also approached the question of retention from the perspective of how long individuals plan to stay, and reported the variation in response by years of experience, highlighting points in a career when individual may be less certain of their plans to stay.

This Brief reveals various general perceptions of the SE profession as observed by survey respondents including the challenges structural engineers encounter when recruiting into their firms and the biggest challenges facing the structural engineering profession. What challenges do structural engineers encounter when recruiting into their firms? Do structural engineers believe the profession is more or less attractive or rewarding compared to other STEM professions? And what are the biggest challenges facing the structural engineering profession? Together, we can work to improve the recruitment and retention in the profession by addressing the challenges identified in this study, and by engaging those individuals who are most at risk of leaving.

DISCUSSION QUESTIONS

1. Which factors do you think contribute most to non-white and/or female respondents being less satisfied with their overall career in structural engineering and more likely to consider leaving the profession?
2. The top three factors influencing survey respondents' consideration for leaving the profession are driven largely by external forces such as market demands, competition with other firms (for work and talent), client and industry expectations, or inherent to our role in protecting life safety. What strategies can business leaders and managers employ to reduce the impact of these factors on overall employee career satisfaction?
3. How can we bring awareness to and then address the fact that Discrimination and/or Harassment is a factor in retention in our profession?



The information contained in this report was gathered from an NCSEA sponsored survey administered online by the SE3 Committee in early 2020. While we believe the information presented in this document is an accurate, unbiased representation of the data received in the survey, the matters discussed are sometimes subject to differences in opinion or approach. As such, neither NCSEA nor its Board, committees, writers, editors, firms, or individuals who have contributed to this report make any warranty, expressed or implied, or assume any legal liability or responsibility for the use or reference to findings, conclusions, or recommendations expressed herein.

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