



2024

# National IT & Engineering Compensation Survey



The National Network for Local Workplace Solutions

# 2024 National IT & Engineering Compensation Survey

An Employer Associations of America (EAA) sponsored survey, coordinated by MRA – The Management Association in cooperation with employer associations nationwide.

*Published: September 2024*

*Next Publication: September 2025*

## CONFIDENTIAL SURVEY REPORT

This survey is provided with the understanding that the information will:

- Remain strictly confidential
- Be restricted to authorized personnel only
- Not be used in collective bargaining or grievance proceedings
- Protect, completely, organizational identity



*The National Network for Local Workplace Solutions*

## NATIONAL SURVEYS PRODUCED BY THE EAA INCLUDE:

- National Business Trends Survey
- National Executive Compensation Survey
- National IT & Engineering Compensation Survey
- National Policies & Practices
- National Benefits
- National Sales Compensation Survey
- National Wage & Salary Survey

© 2024 Employer Associations of America (EAA): All rights reserved. This survey is provided to the recipient to use as an **internal** compensation resource. Quotation from or reproduction of any part of the material contained in this survey, in any form or by any other means, without prior permission in writing from EAA or a survey cosponsor named herein is prohibited.

# 2024 National IT & Engineering Compensation Survey

## Table of Contents

### INTRODUCTION

Survey Information	11
Survey Design and Methodology	11
Survey Parameters	11
Using Survey Data	12
Definitions of Terms	12
Co-Sponsoring Associations	14
Executive Summary	16
Participant Demographics	19
Supplemental Questions	25

### COMPENSATION DATA

35-275

#### Applications Developer/Programmer

11211 Application Developer/Programmer I (Entry)	35
11212 Application Developer/Programmer II (Experienced)	36
11213 Application Developer/Programmer III (Advanced)	38
11214 Application Developer/Programmer IV (Principal)	40
11215 Application Developer/Programmer Manager	42
11217 Cloud Architect	43

#### Business Analyst

11111 Business Analyst I (Entry)	44
11112 Business Analyst II (Intermediate)	46
11113 Business Analyst III (Advanced)	48
11114 Business Analyst IV (Principal)	49
11121 ERP Business Analyst I (Entry)	50
11122 ERP Business Analyst II (Experienced)	51
11123 ERP Business Analyst III (Advanced)	52
11124 ERP Business Analyst IV (Principal)	53
11132 ERP Programming Analyst II (Experienced)	54
11133 ERP Programming Analyst III (Advanced)	55
11135 ERP Project/Programming Analyst Manager	56

#### Business Intelligence

11136 Business Intelligence Analyst	57
11137 Business Intelligence Developer	58
11138 Data Scientist	59

#### Chemical Engineering/Chemist

10112 Chemical Engineer II (Experienced)	60
10113 Chemical Engineer III (Senior)	61

# 2024 National IT & Engineering Compensation Survey

## Table of Contents

10121	Chemist I (Associate)	62
10122	Chemist II (Experienced)	63
10123	Chemist III (Senior)	64
<b>Civil and Environmental Engineering</b>		
10131	Civil Engineer I (Associate)	65
10132	Civil Engineer II (EIT)	66
10133	Civil Engineer III (PE)	67
10134	Civil Engineer IV (PE) (Principal)	69
10135	Civil Engineer V (PE) (Senior Principal)	70
10136	Civil Engineering Manager	71
10137	Environmental Engineer	72
10138	Environmental Technician	73
10139	Structural Engineer	74
<b>Database Administration</b>		
11158	CRM Administrator	75
11156	Data Governance Manager	76
11143	Data Security Analyst	77
11144	Data Security Manager	79
11157	Data Warehousing Administrator	80
11151	Database Administrator (multi-responsibility)	81
11150	Database Analyst I (Entry)	83
11152	Database Analyst II (Experienced)	84
11153	Database Analyst III (Advanced)	85
11154	Database Analyst IV (Principal)	86
11155	Database Supervisor	87
11159	Senior Data Security Analyst	88
<b>Design Engineering (R&amp;D)</b>		
10151	Design Engineer I (Associate)	89
10152	Design Engineer II (Experienced)	90
10153	Design Engineer III (Senior)	91
10154	Design Engineer IV (Principal)	92
10155	Design Engineer V (Senior Principal)	93
10161	Design Engineering Manager	94
10141	Design Engineering Technician I (Entry)	95
10142	Design Engineering Technician II (Experienced)	96
10143	Design Engineering Technician III (Advanced)	97

# 2024 National IT & Engineering Compensation Survey

## Table of Contents

11272	Engineering Laboratory Supervisor	98
10159	Engineering Project Manager (R&D)	99
11273	Engineering Technician (R&D)	100
11274	Engineering Technician (R&D) Senior	101
11275	Head Product/Development Engineer	102
11276	Head Research Engineer	103
11277	R&D (Research & Development) Engineer Senior	104
11278	R&D (Research & Development) Engineering Manager	105
11280	R&D (Research & Development) Project Engineer	106
11281	R&D (Research & Development) Project Engineer Senior	107
11282	Specifications & Standards Product Engineer	108
<b>Document</b>		
11283	Drafter, Design	109
11284	Drafter, Detail	110
11285	Drafter, Layout	111
10182	Drafting and Documentation Manager	112
10181	Drafting Supervisor	113
10171	Technical Writer I (Associate)	114
10172	Technical Writer II (Experienced)	115
10173	Technical Writer III (Senior)	116
<b>Electrical/Electronics Engineering</b>		
10191	Electrical/Electronics Engineer I (Associate)	117
10192	Electrical/Electronics Engineer II (Experienced)	118
10193	Electrical/Electronics Engineer III (Senior)	120
10194	Electrical/Electronics Engineer IV (Principal)	122
10195	Electrical/Electronics Engineer V (Senior Principal)	123
<b>Engineering Management</b>		
10305	Engineering Director	124
10301	Engineering Supervisor	126
11286	Industrial Engineering Manager	128
10311	Vice President of Engineering	129
<b>Generic Engineering</b>		
10201	Generic Engineer I (Associate)	131
10202	Generic Engineer II (Experienced)	132
10203	Generic Engineer III (Senior)	133
10204	Generic Engineer IV (Principal)	134
10205	Generic Engineer V (Senior Principal)	135

# 2024 National IT & Engineering Compensation Survey

## Table of Contents

### Human Resources Information Systems

11171	Human Resources Information Systems Analyst I	136
11172	Human Resources Information Systems Analyst II (Senior)	137
11173	Human Resources Information Systems Manager	138

### IT Management

11101	Chief Information Officer (CIO)	139
11103	IT Director	141
11109	IT Infrastructure Manager	143
11106	IT Manager (Multiple Locations)	145
11105	IT Manager (Single Location)	146
11108	IT Project Manager	148
43010	Management Information Systems Manager (Multi-Division)	150
43020	Management Information Systems Manager (Single Location)	151

### Maintenance/Facilities

11177	Computer Technician I (Entry)	152
11178	Computer Technician II (Experienced)	153
11179	Computer Technician III Advanced)	154
11288	Facilities/Maintenance Engineer	155
11289	Field Service Engineer	156
11290	Plant and Facilities Engineering Manager	157
11292	Plant Engineering Project Engineer	158

### Manufacturing/Process Engineering

10231	CNC Programmer I	159
10232	CNC Programmer II (Advanced)	160
10242	Continuous Improvement/Lean Coordinator	161
10269	Controls Engineer	162
11293	Engineering Specifications Technician	163
10211	Industrial Engineer I (Associate)	164
10212	Industrial Engineer II (Experienced)	165
10213	Industrial Engineer III (Senior)	166
10214	Industrial Engineer IV (Principal)	167
10243	Lean Enterprise Manager	168
10261	Manufacturing Engineering Manager	169
10251	Manufacturing/Process Engineer I (Associate)	171
10252	Manufacturing/Process Engineer II (Experienced)	173
10253	Manufacturing/Process Engineer III (Senior)	175

# 2024 National IT & Engineering Compensation Survey

## Table of Contents

10254	Manufacturing/Process Engineer IV (Principal)	176
10255	Manufacturing/Process Engineer V (Senior Principal)	177
10235	Methods & Process Technician I (Entry)	178
10236	Methods & Process Technician II (Experienced)	179
10237	Methods & Process Technician III (Advanced)	180
10262	Packaging Engineer	181
10268	PLC Programmer	182
11294	Product Engineer Senior	183
11295	Product Engineering Manager	184
11296	Product Engineering Project Engineer	185
11298	Tool and Machine Engineering Manager	186
11299	Tool and/or Machines Engineer	187
11300	Tool Design Engineer	188
<b>Mechanical Engineering</b>		
10221	Mechanical Engineer I (Associate)	189
10222	Mechanical Engineer II (Experienced)	190
10223	Mechanical Engineer III (Senior)	192
10224	Mechanical Engineer IV (Principal)	193
10225	Mechanical Engineer V (Senior Principal)	194
11301	Mechanical Engineering Technician	195
11302	Welding Engineer	196
10266	Field Service Technician	197
<b>Network</b>		
11189	LAN Administrator/Manager (Single Facility)	198
11190	LAN/WAN Administrator/Manager (Multiple Facilities)	199
11188	Network Administrator	200
11181	Network Engineer I (Entry)	202
11182	Network Engineer II (Experienced)	203
11183	Network Engineer III (Advanced)	205
11185	Systems Administrator	207
11187	Systems Administrator (Senior)	209
<b>Quality/Test Engineering</b>		
10271	Laboratory/Test Technician I (Entry)	211
10272	Laboratory/Test Technician II (Experienced)	212
10273	Laboratory/Test Technician III (Advanced)	213
11303	Quality Assurance Engineering Manager	214



# 2024 National IT & Engineering Compensation Survey

## Table of Contents

11304	Quality Control Engineer Senior	215
11305	Quality Control Engineering Supervisor	216
10275	Quality/Test Engineer I (Associate)	217
10276	Quality/Test Engineer II (Experienced)	218
10277	Quality/Test Engineer III (Senior)	219
10278	Quality/Test Engineer IV (Principal)	220
10279	Quality/Test Engineer V (Senior Principal)	221
11306	Safety Engineer	222
11307	Test Engineer	223
11308	Test Engineering Manager	224
<b>Sales/Applications Engineering</b>		
11309	Application and/or Sales Engineer	225
11310	Application and/or Sales Engineering Manager	226
11311	Application and/or Sales Engineering Supervisor	227
10281	Sales/Applications Engineer I (Associate)	228
10282	Sales/Applications Engineer II (Experienced)	229
10283	Sales/Applications Engineer III (Senior)	230
10284	Sales/Applications Engineer IV (Principal)	231
10285	Sales/Applications Engineer V (Senior Principal)	232
<b>Software Engineering</b>		
10291	Software Engineer I (Associate)	233
10292	Software Engineer II (Experienced)	234
10293	Software Engineer III (Senior)	236
10294	Software Engineer IV (Principal)	238
10295	Software Engineer V (Senior Principal)	239
10296	Software Quality Assurance Analyst	240
<b>Systems Analysis/Programming</b>		
11221	Application Programming Analyst I (Entry)	241
11222	Application Programming Analyst II (Experienced)	242
11223	Application Programming Analyst III (Advanced)	244
11224	Application Programming Analyst IV (Principal)	245
11225	Application Programming Analyst Manager	246
11226	Application Systems Analysis/Programming and Operating Systems Programming Manager	247
11312	Computer Programmer, Analyst	248
11313	Computer Programmer, Analyst (Senior)	249
11314	Systems Engineer	250



# 2024 National IT & Engineering Compensation Survey

## Systems Operations

11209	Computer Operations and Systems Programming Manager	251
11202	Computer Operations Manager	252
11201	Computer Operations Supervisor	253
11196	Computer Operator II (Experienced)	254
11197	Computer Operator III (Advanced)	255
11205	Systems Programmer I (Entry)	256
11206	Systems Programmer II (Experienced)	257
11207	Systems Programmer III (Advanced)	258
11208	Systems Programming Supervisor	259

## Telecommunication

11237	Telecommunications Programmer/Systems Analyst II (Experienced)	260
11232	Telecommunications Technician	261
11233	Telecommunications Technician Senior	262
11241	Telecommunications, Data and Voice Communications Manager	263

## User Support

11251	Help Desk I (Entry)	264
11252	Help Desk II (Experienced)	266
11253	Help Desk III (Advanced)	268
11255	Help Desk Manager	270
11262	PC Specialist	272
11263	Technical Support Analyst	274
11265	Technology Trainer	275

## APPENDIX

Participating Organizations	277
-----------------------------	-----

# **Section One: Survey Information**

# 2024 National IT & Engineering Compensation Survey

## SURVEY INFORMATION



**May 1, 2024**  
Data Effective



**September 2024**  
Data Published



**244**  
Jobs Surveyed



**1,176**  
Participating  
Companies



**16,830**  
Employee Rates  
Reported

## SURVEY DESIGN AND METHODOLOGY

The 2024 National IT & Engineering Compensation Survey report contains salary information reported by 1,176 organizations from across the United States, representing over 16,000 employees. Participants supplied base pay and incentive pay effective May 1, 2024, for each full-time employee matched to a survey job.

Survey and compensation professionals thoroughly reviewed all data received, using statistical data analysis to ensure quality. Participants were contacted to confirm data or resolve issues when necessary. All data was combined and reported so that data isn't identifiable by organization. If any single organization's data represented a predetermined percentage of the responses or greater, a dominance diffusion algorithm was applied to reduce the impact of that organization's data compared to others. This is noted in italics on each page where it has been applied.

To ensure confidentiality, data is reported only if there is a minimum of five participating organizations. All data is maintained and reported in accordance with the U.S. Department of Justice and Federal Trade Commission antitrust safety guidelines.

## SURVEY PARAMETERS

- Participants submitted data via an online questionnaire. To facilitate job matching, the questionnaire included position descriptions of each job surveyed. The descriptions are included at the top of the corresponding compensation data page.
- Some data was collected in other local surveys and submitted in its raw form to be included in this report. In all cases, data represents individual employee rates and has been aged to the survey effective date.
- Participants were able to report on multiple locations (subsidiaries/locations/divisions) throughout the U.S. and asked to provide the ZIP code of the location of the job for each employee reported. Any employee working remotely was to be reported in the organization's main location.
- Salary quartiles reflect the distribution of individual salaries reported for each job. Total compensation quartiles include all individual salaries and any reported incentives (e.g., bonuses, variable pay, etc.).
- Bonus data is reported as of the most recent completed fiscal/calendar year. Bonus was annualized for employees with less than one year of service.
- This survey was conducted by MRA - The Management Association in cooperation with employer associations nationwide (listed in the cosponsoring association section).
- Questions should be directed to the coordinating association MRA - The Management Association (surveys@mranet.org or 800.488.4845 ext. 3508), or your cosponsoring association.

# 2024 National IT & Engineering Compensation Survey

## USING SURVEY DATA

Deciding which data to use from a survey is often influenced by an organization’s compensation philosophy. A middle-market payer is likely to look at the market 50th percentile, while the market 75th percentile would be more useful for an organization with an aggressive pay strategy. Within a company, which statistic to use may vary by job as certain jobs may be more difficult to fill. A company may be willing to pay higher in the market for someone with a hard-to-find skill set. What about the average? The average may be helpful but can be influenced by unusually high or low rates in a data set, especially if the sample size is relatively small. If the average is significantly different from the market 50th percentile, that is an indication of extreme high or low values in the data set and generally a good reason to use the market 50th percentile in your evaluation for that job.

When reviewing market data and comparing from one year to the next, you may find a notable difference on a particular position. There are many reasons for this such as a change in the number of companies reporting data on that job, a change in the employees being reported as a match, or a change by some companies in the way merit increases or bonuses are awarded. It is good practice to double-check your matches and view another survey source, if possible, to confirm your data.

The effective date of pay rates reported in this survey is May 1, 2024. You may want to age your data to reflect rates as of the date you use for compensation planning. If you are using more than one survey and they all have different effective dates, you will need to apply a formula to the data points that you use and calculate a survey aging factor, for each survey, to bring all your data to the same point in time.

Data found in surveys should be just one of several considerations for decisions on compensation. Individual pay rates are influenced by many other factors including performance, scope of responsibilities, type of experience, and organizational philosophy. Even for broader decisions, such as merit or benefit budgets, consideration must be given to an organization’s specific labor market and local competition.

Surveys may be used, in advance of actual bargaining, to determine your organization’s positions and alternatives and as a reference during bargaining but should be removed from any actual bargaining sessions.

## DEFINITIONS OF TERMS

Term	Definition
# of Orgs.	Number of organizations matching the job
# of Emp.	Number of employee rates matching the job
Base Pay	Actual base compensation paid to an individual, not including any additional pay such as overtime, shift differentials, or premiums
Geographic Area	Summary by U.S. region & state
Industry	Summary of rates by industry
Metropolitan Statistical Area	Summary by metropolitan statistical area
Median	The middle point in the distribution of individual employee rates
N Value	Total number of companies providing a response

# 2024 National IT & Engineering Compensation Survey

## DEFINITIONS OF TERMS

Term	Definition
P25	(First Quartile) Value below which fall 25% of the values. Seventy-five percent of the values in the data set are greater than the 25th percentile value.
P75	(Third Quartile) Value below which fall 75% of the values. Twenty-five percent of the values in the data set are greater than the 75th percentile value.
Profit Status	Summary by profit status
Size of Organization	This is the local organization size where each employee resides, i.e., a branch size. (For remote employees, this is the size of the organization that they report to.) If there are more than five reporting organizations in a size category, the salary values are re-reported for each qualifying category.
Total Annual Gross Revenue	Total revenue (or gross receipts) is top-line revenue from all sources including the sale of goods or services, rents, interest, and other sources
Total Compensation	Sum of base pay and variable pay
Total Compensation, Un-wtd. Avg.	Simple average of each organization's average total compensation (base + bonus)
Total Compensation, Wtd. Avg.	Simple average of each employee's annual cash compensation (base + bonus)
Un-wtd. Avg.	Simple average based on number of companies reporting
Variable Pay	Pay, in addition to base pay, which is awarded upon the achievement of predetermined performance goals as defined in an organization's variable pay program
Variable Pay, Actual, # of Emp.	Number of employees receiving a bonus in the last annual cycle
Variable Pay, Actual, # of Orgs.	Number of organizations paying a bonus in the last annual cycle
Variable Pay, Actual, Wtd. Annual Avg.	Simple average of all employee bonuses paid (only if paid)
Variable Pay, Eligible # of Emp.	Number of employees eligible for a bonus
Variable Pay, Eligible # of Orgs.	Number of organizations indicating a job is eligible for a bonus
Variable Pay, Target	Amount of variable pay employee is eligible to receive at 100% of goal, expressed as a percent of base pay
Variable Pay, Target # of Orgs.	Number of organization with a bonus target
Variable Pay, Target # of Emp.	Number of employees with a bonus target
Variable Pay, Target Wtd. Avg. %	Weighted average target bonus at 100% of goal as a percent of base
Wtd. Avg.	Simple average based on number of employees reported

# 2024 National IT & Engineering Compensation Survey

## COSPONSORING ASSOCIATIONS



**AAIM Employers' Association**  
St. Louis, MO  
(314) 754-0174  
[www.aamea.org](http://www.aamea.org)

**Liz Redohl**  
[Liz.Redohl@aamea.org](mailto:Liz.Redohl@aamea.org)



**Associated Employers**  
Billings, MT  
(406) 248-6178  
[www.associatedemployers.org](http://www.associatedemployers.org)

**Ryan Callan**  
[ryan@aehr.org](mailto:ryan@aehr.org)



**Employers Association of the NorthEast**  
Agawam, MA  
(877) 662-6444  
[www.eane.org](http://www.eane.org)

**Meg Coursey**  
[mcoursey@eane.org](mailto:mcoursey@eane.org)



**Employers Council, Inc.**  
Denver, CO  
(303) 223-5344  
[www.employerscouncil.org](http://www.employerscouncil.org)

**Brianna Carter**  
[bcarter@employerscouncil.org](mailto:bcarter@employerscouncil.org)



**Hawaii Employers Council**  
Honolulu, HI  
(808) 440-8845  
[www.hecouncil.org](http://www.hecouncil.org)

**Dawn Mitchell**  
[dmitchell@hecouncil.org](mailto:dmitchell@hecouncil.org)



**MRA – The Management Association**  
Waukesha, WI  
(262) 696-3508  
[www.mranet.org](http://www.mranet.org)

**Melissa Wymer**  
[Surveys@mrnet.org](mailto:Surveys@mrnet.org)

## **Section Two: Executive Summary**



# 2024 National IT & Engineering Compensation Survey

## EXECUTIVE SUMMARY

Because of layoffs in the tech industry in recent years, more IT workers have been downsized and are looking for work. While a larger labor pool can help with talent acquisition, finding specific industry technical skills can also be challenging.

To help understand the market, several questions were asked surrounding pay, recruitment, and turnover. Use this data to help benchmark your compensation practices in this ever-changing market.

Participants' verbatim responses are also included to help provide a range of ideas that organizations are taking to stand out, a needed action for successfully hiring and retaining IT and engineering professionals.

## Retaining Employees

When an employee leaves, it can leave an organization wondering how to improve employee retention. Even though nearly half of organizations cited higher compensation as the top reason their technical employees voluntarily left, other retention tactics, besides increasing compensation, are being used. Across all employee groups, the top tactics that organizations are using to retain employees are:



**401(k) match (79 percent)**



**Competitive benefits (76 percent)**



**Supportive leadership (75 percent)**

Organizations have begun looking beyond base pay adjustments and offer benefits, incentives, and more. Creating a competitive and robust total rewards package can help with employee satisfaction, engagement, and level of commitment to an organization.

# 2024 National IT & Engineering Compensation Survey

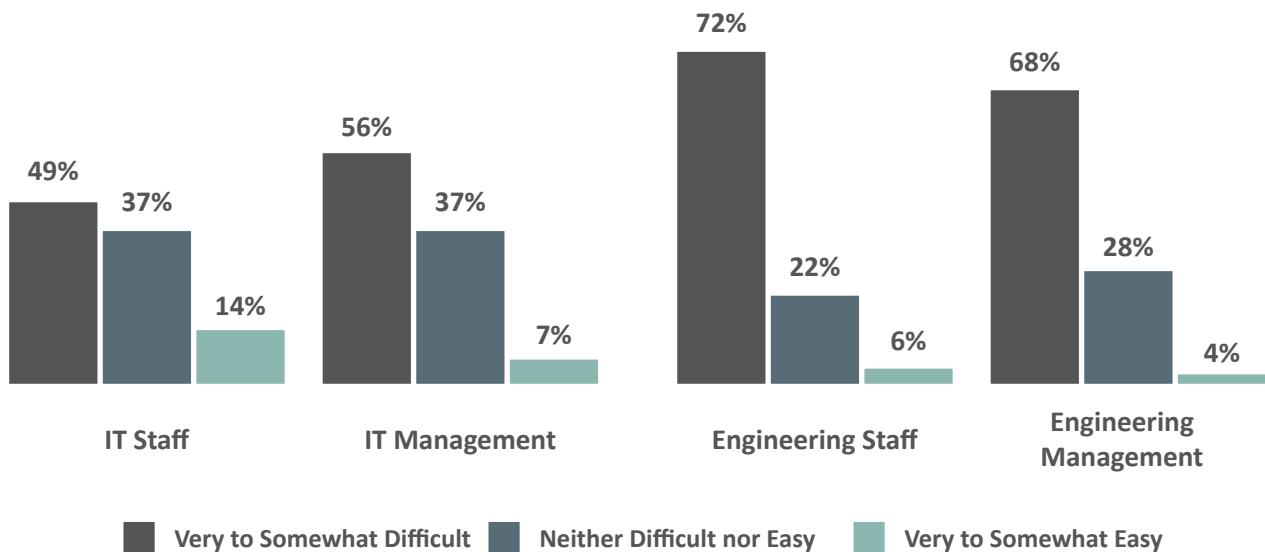
## EXECUTIVE SUMMARY

### Recruiting Employees

Recruiting for IT and engineering positions can present a series of distinctive challenges. With the need for skilled candidates, evolving skills for these fields, and the diverse knowledge required, securing the talent necessary can be a considerable feat. There are many ways to recruit and no right or wrong way to attract talent. It is up to an organization to use tactics that fit their culture, while remembering that finding and hiring top talent takes effort, time, and commitment.

Across all employee groups, 61 percent report it is very difficult to somewhat difficult to recruit. The engineering staff remains the most challenging to recruit, with 72 percent of organizations reporting that filling positions is very to somewhat difficult. This is followed by engineering management (68 percent).

### Employee Groups With Greatest Challenge to Recruit



# 2024 National IT & Engineering Compensation Survey

## EXECUTIVE SUMMARY

### Merit Increases

This year, organizations that provide increases across all employee groups reported an average increase of 4.3 percent. The highest increase is tied between IT Management, Engineering Staff, and Engineering Management positions at 4.0 percent each.

Keeping up with the market or finding ways to bolster employees beyond pay has been challenging for some employers. One of the most common solutions is variable or incentive pay. When looking at variable pay options organizations offer, the top are:

- Referral bonus
- Annual incentive plan
- Individual incentive/spot bonus
- Discretionary 401(k) or retirement contribution
- End of year/holiday bonus

### Trending Average Annual Merit/General Base Salary Increases – Excluding Zeros

