

## **COMPETENCY MODEL FOR BUILDING CIVIL ENGINEER (7244)**

The following competencies have been identified as those that best separate superior from satisfactory job performance in the class of **BUILDING CIVIL ENGINEER**. (Numbers refers to the order of competencies in the Competency Bank.

- 1. Reading Comprehension
- 3. Judgment and Decision Making
- 6. Attention to Detail
- 20. Job Knowledge
- 28. Supervision
- 34. Customer Service
- 45. Oral Communication
- 47. Written Communication

On the following pages are descriptions of each competency, including a definition, the level of the competency required for the class (*italicized, bolded, and underlined*), examples of behavioral indicators, and satisfactory and superior performance levels.

**1. READING COMPREHENSION** – Comprehends and correctly applies information presented in written form. Makes correct inferences; draws accurate conclusions.

Level of Competency Required by Job:

Level 1: Concrete, specific job-related information (work orders; instructions; material/equipment labels)

**Level 2: General information related to field of work and assignments; (articles in trade publications; technical/instructional manuals; memos; letters; e-mails; reports)**

Level 3: Abstract/complex information (highly technical articles/ reports in specialized area; legal or other regulatory material)

Examples of Behavioral Indicators:

- Follows written instructions correctly.
- Learns information presented in writing.
- Identifies relevant written information.
- Interprets written legal regulatory material accurately.

Performance Levels:

Satisfactory

Reads instructions correctly. Learns from manual and other printed material.

Superior

Learns from manual and may answer others' questions. Explains information presented in written form to others.

**3. JUDGMENT AND DECISION MAKING** – Accurately assesses situations, seeks new information if necessary, and applies all available information to reach sound conclusions/formulate effective response.

Level of Competency Required by Job:

Level 1: Training and guidelines needed to respond to immediate situations within very specific function are provided (or supervisor available to assist).

**Level 2: General information and guidance to assist in responding to a variety of situations across a range of circumstances are provided.**

Level 3: Little guidance available for responding to a wide range of complex situations with far-reaching and/or enduring consequences.

Examples of Behavioral Indicators:

- Effectively responds to atypical situations.
- Asks questions or otherwise obtains additional relevant information to make a decision.
- Formulates a decision and necessary actions based on available facts.
- Correctly infers appropriate response based on information provided and existing policies, personal experience, and/or consultation with others.
- Discusses conclusions/possible responses with others before taking action as necessary.
- Considers impact of decisions on all affected parties.

Performance Levels:

Satisfactory

Correctly assesses routine and unusual situations and reaches appropriate conclusions for actions needed. Obtains additional information and/or consults with others as necessary.

Superior

Evaluates new situations accurately to establish an appropriate response or plan of action. Recognizes the impact on all affected parties, as well as the possible ramifications and/or repercussions of setting a precedent.

**6. ATTENTION TO DETAIL** – Extremely careful in addressing all aspects of each work assignment in order to produce “completed staff work” and/or avoid any negative outcomes.

Level of Competency Required by Job:

Level 1: Ensure all aspects of work assignment are completed as directed.

**Level 2: Verify that each aspect of work assignment is properly completed; make logical inference regarding additional activities that may need to be performed to produce “completed staff work.”**

Level 3: Include evaluation of final work/work product in its accomplishment; make adjustments as possible to improve.

Examples of Behavioral Indicators:

- Carefully checks all aspects of work for completion and accuracy before submitting.
- Identifies errors (for example, typo’s, computations, measurements, application of laws/rules/policies) and corrects them prior to submitting.
- Cross-checks work against available resources.
- Sets up a means of checks and balances to ensure work accuracy.
- Considers changes in final work product to ensure usability by recipient.
- Completes all revisions upon request.

Performance Levels:

Satisfactory

Ensures that each task accomplished represents “completed staff work.” No remaining details/ inconsistencies for others to address.

Superior

All aspects of each task completed are verified to be correct. Identifies any foreseeable consequences of work that may need to be addressed and does so.

**20. JOB KNOWLEDGE** – Knows information required to perform a specific job. Includes both widely available courses of study (for example, chemistry, human resources management, graphic arts) and City-specific information (parking regulation and ticketing practices; purchasing procedures; provisions of the City Charter).

Level of Competency Required by Job:

Level 1: Knowledge is concrete, factual, and/or procedural and may be defined by the organization. Situations in which it is applied are quite consistent.

**Level 2: Knowledge is substantive and may be defined by an external trade, field, or profession. Situations in which it is applied vary and, as such, require breadth and depth of understanding.**

Level 3: Knowledge is abstract, conceptual, and/or complex and may be supported by a well-defined academic discipline or authoritative sources (e.g., laws, ordinances, government guidelines/regulations/codes). Situations in which it is applied may vary greatly or be novel.

Examples of Behavioral Indicators:

- Performs work correctly/avoids technical (job content related) errors.
- Answers technical questions about work accurately.
- Asks few technical questions about the performance of routine work activities.
- Offers advice (“coaching”) to new employees regarding their work.
- Develops training programs for other employees.
- Sought out as a source of information by others.

Performance Levels:

Satisfactory

Sufficient job knowledge to perform work correctly independently. Answers technical questions about work correctly.

Superior

Expertise in technical job information sufficient to serve as a resource to others. May develop training manuals/ programs and/or give internal and/or external presentations related to work.

## Job Knowledge Areas

1. Knowledge of the types of soils and their ~~its~~ characteristics, such as shear strength, plasticity, and moisture, sufficient to understand the content of the soil reports ~~for during~~ the review of ~~the~~ building and foundation systems.
2. Knowledge of loading conditions on structures, including: dead loads, live loads, impact loads, wind loads, seismic loads, earth loads, and hydrostatic loads, sufficient to analyze the structure for the most critical loading combinations.
3. Knowledge of structural analysis procedures, including linear static procedures and linear dynamic procedures, sufficient to determine forces and stresses in a structure.
4. Knowledge of the methods ~~of for~~ determining shear, moments, stresses, and deflections ~~for of~~ structural elements, such as identifying the element and applying the proper formula, sufficient to determine the adequacy of each structural element ~~of the structure~~.
5. Knowledge of the characteristics of structural and architectural materials, including such as concrete, structural steel, aluminum, masonry, and wood, ~~(including plywood and mass laminated materials)~~, sufficient to determine if the ~~know the characteristics of each different~~ type of material is appropriate for the structure being reviewed ~~when reviewing the structure~~.
6. Knowledge of structural and architectural drafting symbols and conventions, such as elevation symbols, section symbols, scale symbol, shield wall symbols, detail symbols, and conversion of scales, sufficient to read and interpret plans.
7. Knowledge of state and local laws, codes, and regulations pertaining to the design and construction of various types of structures, including: Los Angeles Municipal Code, Appendix A1 of Los Angeles Existing Building Code, ~~and the~~ Los Angeles Green Building Code, State of California Building Code provisions related to energy conservation insulation, windows, and disabled handicapped accessibility, City planning and zoning codes and ordinances, environmental laws and regulations, and local laws regulating disabled access and seismic safety requirements, sufficient to check ~~the~~ plans and ensure they meet the appropriate for compliance with such laws, codes, and regulations, ~~and/or to~~ explain them to staff and the public.
8. Knowledge of California Division of Occupational Safety and Health (Cal/OSHA) permit requirements for structures and excavations sufficient to provide guidelines and refer ~~ensure contractors to~~ obtain the required-necessary ~~required~~ permits required to perform the needed job.
9. ~~Knowledge of new legislation and regulations pertaining to the construction of buildings and structures other than what is included in the building code, sufficient to be aware of them and apply the new legislation or regulations to a project.~~
10. ~~Knowledge of the procedures for locating specific City and State laws, ordinances, codes, and regulations relating to matters such as the design and~~

**Commented [1]:** Minor changes to this one – please make sure the changes are fine

**Commented [2R1]:** SEAs agreed with changes

**Commented [3]:** No need for colon

**Commented [4]:** Should this be structural analysis procedures?

**Commented [5R4]:** Yes changes to procedures

**Commented [6]:** These don't seem like examples of methods...they seem more like structural elements...so I guess my question is do they need to know the methods or the elements?

**Commented [7]:** Please note changes here...let's discuss

**Commented [8]:** Based on the way this was positioned in the sentence these seem like examples of wood, is that right?

I removed parentheses because it's unnecessary when we can just write it like this.

**Commented [9]:** Do you have examples of symbols and conventions they need to know?

**Commented [10]:** Remember that we don't use semicolons, as they can be replaced with commas

**Commented [11]:** Spell out Cal/Osha

**Commented [12]:** Examples of permits?

**Commented [13]:** What do you mean by provide guidelines? IS it provide guidelines to contracts? IF so, isn't that repetitive with "refer contractors"

**Commented [14]:** Revised to simplify what was trying to be said...is this right?

**Commented [R15]:** Is there a reason this was "or" before?

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**Commented [R16]:** What do you mean by this?

**Commented [R17]:** What would be the procedures for locating this info? Isn't it just referring to the appropriate codes/reference material? Is this a true knowledge area? Also, let's eliminate the semi-colons

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~~construction of buildings and other structures; planning, zoning, and land use; and environmental concerns, sufficient to identify the appropriate information.~~

Commented [R18]: Remove these for now – pending verification with SEAs

**28. SUPERVISION** – Ability to assume direct responsibility for all aspects of the performance of a work group, which requires knowledge and/or ability in the areas of:

- Planning and goal setting
- Creating a safe and positive work environment
- Establishing standards and training employees
- Motivating employees and teambuilding
- Performance Management (assigning, monitoring, facilitating, reviewing and evaluating work, and providing feedback)
- Supporting and developing employees through delegation and participation
- Taking disciplinary action including progressive discipline
- Provisions of employees' MOU's and handling grievances
- Legal requirements including EEO, ADA, FLSA, FMLA, and Workers' Compensation provisions
- Civil Service Commission Rules and Policies related to the management of employees
- Administrative Code provisions related to the management of employees
- Budget processes sufficient to request and justify expenditures in a correct and timely manner

Level of Competency Required by Job:

**Level 1: Supervises small workgroup of employees performing the same or highly related work.**

Level 2: Supervises a larger workgroup of employees performing various types of work.

Level 3: Supervises employees including provision of coaching and advice to subordinate supervisors.

Examples of Behavioral Indicators:

- Plans, assigns, and monitors work progress.
- Trains employees to do work.
- Evaluates work and gives positive and negative feedback.
- Displays knowledge of legal requirements including applicable Federal and State laws, Administrative Code provisions, Civil Service Commission Rules and Policies, and MOU provisions.

Performance Levels:

Satisfactory

Proficiency in supervision sufficient to supervise a workgroup in terms of task

orientation, interpersonal concerns, and personnel administration.

Superior

Proficiency in supervision sufficient to serve as a resource to others and/or represent department position in a public forum.



**34. CUSTOMER SERVICE** – Interacts with recipients of services (internal or external customers) in a way that provides accurate, timely, and effective information and service.

Level of Competency Required by Job:

**Level 1: Interact with customers in person, over the telephone, or through e-mail (and/or other electronic media) in order to provide information or assistance. Listen to customer concerns; explain/reconcile information and provide alternatives if possible; facilitate resolution by making referral and/or following-up as necessary.**

Level 2: Promotes positive customer service. Serves as a model of providing exemplary customer service.

Level 3: Develop customer-oriented procedures; identifies changes in procedures to enhance customer service and ensures they are implemented.

Examples of Behavioral Indicators:

- Carefully listens to (or reads) customer statement of the issue.
- Provides direct, informative, accurate responses to customer.
- Suggests options if available.
- Maintains a positive attitude in the face of customer complaint or frustration.
- Remains focused on the issue presented by the customer and directs the customer back to the issue if necessary.
- Asks the customer if their concerns have been fully addressed.
- Ensures organizational policies and practices are customer-focused.
- Ensures all employees recognize their responsibility for customer service and are properly trained for it.

Performance Levels:

Satisfactory

Displays knowledge as well as courtesy and patience when interacting with customers. Ensures customers' issue is correctly identified and remains focused on it until it is resolved.

Superior

Seeks further information or advice to resolve difficult issues. Solicits feedback on the effectiveness of service. Makes suggestions for improving service and facilitates changes needed to implement.

**45. ORAL COMMUNICATION** – Communicates orally in a clear, concise, and effective manner.

Level of Competency Required by Job:

Level 1: Exchange specific, job-related information orally with others in the immediate work environment or via telephone and/or radio.

**Level 2: Obtain/provide/present general and/or job-specific information orally to a variety of others in various situations.**

Level 3: Obtain/provide/present a diverse array of information orally at varying levels of complexity to a wide range of others across many different situations and circumstances.

Examples of Behavioral Indicators:

- Audience clearly understands the intended message.
- Rarely must repeat information in response to questions.
- Refrains from use of unnecessary words, phrases, or jargon.
- Provides a level of detail appropriate to the situation (avoids too much or too little detail).
- Speaks at a level appropriate to the audience in terms of terminology, sentence structure, and simplicity/complexity of ideas expressed.
- Uses words with precision (vocabulary) to convey exact information.

Performance Levels:

Satisfactory

Speaks clearly and audibly, providing the appropriate information and level of detail. Typically conveys the message on the first attempt. Answers questions accurately and directly.

Superior

Speech is direct and to the point. Speaks convincingly and with authority when appropriate. Maintains sensitivity to the audience while providing thorough information with the appropriate level of detail through the use of precise language.

**47. WRITTEN COMMUNICATION** – Communicates effectively in writing.

Level of Competency Required by Job:

- Level 1: Write notes/e-mails. Completes forms with some open-ended responses (sentences).
- Level 2: Write letters, articles/reports, and/or detailed descriptions of activities/occurrences.
- Level 3: Write lengthy reports, instruction manuals, in-depth analyses/reviews of complex issues and/or articles for publication. Reviews the written work of others.

Examples of Behavioral Indicators:

- Writing includes the necessary information to convey the intended message.
- Sufficiently few errors in spelling, punctuation, grammar to not interfere with the intended message or distract the reader.
- Little editing or re-writing needed to produce a final product.
- Composes materials efficiently.
- Information is presented in a well organized manner.
- Tone and degree of formality are appropriate to the purpose and audience.

Performance Levels:

Satisfactory

Writes material that clearly communicates the necessary information; needs little editing.

Superior

Precisely uses words and organizes information in a way that enhances presentation of the message. Virtually no editing needed.