

**COMPETENCY MODEL FOR  
TRANSPORTATION ENGINEER**

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

**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.

**4. 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 2: General information and guidance to assist in responding to a variety of situations across a range of circumstances are provided.

**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 repercussions of setting a precedent.

**5. ANALYTICAL ABILITY** – Identifies, obtains, and evaluates relevant information to establish relationships or patterns, cite causes, and reach logical conclusions.

Level of Competency Required by Job:

Level 3: Consider a multitude of diverse factors, their interrelationships, the perspectives of others, alternative courses of action and their likely Ramifications when evaluating information to reach a conclusion.

**Satisfactory**

Recognizes available relevant information, seeks additional information to consider, and reaches a conclusion. Provides sound, convincing justification for conclusions, citing relevant data and facts.

**Superior**

Uses a great deal of existing and obtained information and data to develop and evaluate alternatives and arrive at a final conclusion. Provides compelling arguments in support of conclusions.

**29. 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 3: Knowledge acquired through a prolonged external course of study and/or extensive training and experience within the City.

**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 channels of communication and of City practices and procedures for transmitting information between City Departments, the City Council, Mayor's Office and other government and private agencies.
2. Knowledge of other City departments and other governmental or intergovernmental agencies such as the Planning Department; Department of Public Works Bureaus of Engineering, Street Lighting, and Street Services; CalTrans; Los Angeles County Metropolitan Transportation Authority; County of Los Angeles; and governments of independent cities adjacent to the City of Los Angeles.
3. Knowledge of procedures for submitting budgets, special budget requests, requests for special City funding, and requests for grants or other special funding to the State and Federal governments and to private foundations or other agencies.
4. Knowledge of State, Federal, and other Transportation funding sources, grant application procedures, monitoring and reporting requirements sufficient to obtain and to use funds from these sources.
5. Knowledge of procedures for getting projects funded through the City's Capital Improvement Program or through other special funds.
6. Knowledge of conditions in which such factors as complexity of a situation and/or vulnerability of the City to legal action require a management level decision.
7. Knowledge of engineering economics sufficient to understand financial records, and to perform tasks such as doing cost-benefit analyses, preparing cost estimates for projects, or calculating liquated damages.
8. Knowledge of fundamental mathematics sufficient to make or check engineering design calculations.
9. Knowledge of probability and statistics sufficient either to critique reports prepared by consultants or other agencies or to plan data collection and analyses such as license plate surveys, before and after studies, or traffic forecast model validations and confirmations.
10. Knowledge of civil engineering sufficient to design or to check street or road construction plans.
11. Knowledge of electricity, electronic devices, and electric circuits sufficient to read and/or to check designs for traffic signal installations and synchronization.
12. Knowledge of common causes of traffic accidents and the effects of various factors such as pavement friction, width of street, speed, driver reaction time, or

pedestrian behavior sufficient to identify changes which (individually or combined) would decrease the probability of further accidents of the type under consideration such as installing traffic signals or warning signs, cutting away foliage, or installing other traffic control devices.

13. Knowledge of appropriate use of traffic control devices such as cross walks, striping (on streets), regulatory or warning signs and traffic signals.
14. Knowledge of traffic engineering principles and references relating to safety in the streets such as the Work Area Traffic Control Handbook, Manual of Uniform Traffic Control Devices, and the California Supplement.
15. Knowledge of general traffic engineering principles used in planning traffic flows and patterns on streets and highways and related problems such as planning for parking, and access from private property.
16. Knowledge of “human factors” influencing effectiveness of traffic engineering applications such as pedestrian behavior, color recognition, and pattern or shape recognition.
17. Knowledge of surface transportation modes in common use for intra-city transportation including automobiles, busses, commuter rail, trains, taxicabs, paratransit, carpools, vanpools, bicycles, pedestrian travel and of their advantages and disadvantages in various situations.
18. Knowledge of computer applications in transportation engineering such as traffic signal timing optimization programs, statistical analysis software, highway capacity analysis, spreadsheet software, and travel forecasting programs.
19. Knowledge of transportation planning quantitative methods such as travel demand forecast techniques, system capacity calculations, and trip reduction assessment sufficient to conduct long range transportation studies and to use in Environmental Impact Reports.
20. Knowledge of frequently used provisions of City and State laws, ordinances, codes, and regulations relating to operation of street and highway systems.
21. Knowledge of environmental laws such as National Environmental Protection Act, California Environmental Quality Act and state laws and regulations affecting design or use of streets and highways sufficient to comply with requirements such as those relating to air quality, noise pollution, or drainage.
22. Knowledge of land development approval process including the Subdivision Map Act, B permit process, and procedures of City Commissions and Committees sufficient to assure implementation of traffic mitigation measures.
23. Knowledge of traffic laws and regulations sufficient to recommend changes in laws applicable in a particular location such as speed zones, weight limits,

- preferential parking districts or to comment on or to recommend changes in City, or State laws.
24. Knowledge of processes used to accomplish provisions of cooperative agreements between the City and other governments and agencies such as the Freeway Agreement or agreements established by memoranda of understanding or funding agreements.
  25. Knowledge of City ordinances and regulations relating to selection of contractors.
  26. Knowledge of reference sources for locating specific City, State, and federal laws, ordinances, codes, and regulations relating to traffic control, street use, street construction, or environmental protection.
  27. Knowledge of procedures for responding to interrogatories, giving depositions, and giving testimony in court.
  28. Knowledge of safety principles and regulations such as OSHA, wearing hard hats or other protective gear when required and keeping work areas clean and clear.
  29. Knowledge of principles of supervision such as assigning, delegating, reviewing, and evaluating the work of subordinates.
  30. Knowledge of supervisory techniques as used to manage subordinates such as motivating, providing positive and negative feedback, demonstrating approachability, and instilling confidence in order to foster good working relationships.
  31. Knowledge of Equal Employment Opportunity as they relate to employment opportunities such as transfers, promotions, pay grade advancements, training, and future examinations in order to ensure that the information is disseminated in an equitable and timely manner and to comply with EEO legislation and City policies.
  32. Knowledge of MOU provisions as they relate to subordinate personnel sufficient to obtain and/or to provide information to subordinates on such matters as overtime work, grievance procedures, and salary.
  33. Knowledge of disciplinary steps, penalties, and procedures as set by Department policies, sufficient to discipline subordinates, to keep documentation, and to make decisions or recommendations to the Department Personnel Officer in accordance with departmental policy.

**42. INTERPERSONAL SKILLS** – Interacts effectively and courteously with others.

Level of Competency Required by Job:

Level 2: Interact across department lines and with appointed City officials, and/or members of the public, at times under adversarial circumstances, in a cordial, respectful manner.

**Satisfactory**

Behaves in a courteous, respectful, cooperative manner toward co-workers, other City employees, and members of the public.

**Superior**

Facilitates positive interpersonal relations within/among workgroups and toward members of the public. Adept at finding similarities and grounds for cooperation/mutual benefit.

**47. PROJECT MANAGEMENT** – Anticipates and plans for all aspects of a multi-faceted, discrete endeavor to ensure resources are available and actions are taken at proper times for successful completion.

Level of Competency Required by Job:

Level 2: Design, plan, coordinate, and manage large, multi-faceted projects involving employees from various segments of the organization representing different perspectives.

**Satisfactory**

Establishes acceptable project plan; assembles team with required skills; establishes personal responsibility/accountability. Ensures the necessary time and resources are available.

**Superior**

Designs efficient project plan to maximize benefits and minimize use of resources. Designates precise mix of people to best accomplish the project. Completes on time, with resources allocated.

**48. LEADERSHIP** – Influences others toward goal accomplishment.

Level of Competency Required by Job:

Level 1: Assume responsibility for operations or a situation when necessary. Direct the actions of others or otherwise ensure required actions are taken. Remain responsible until relieved or situation is resolved.

**Satisfactory**

Assumes responsibility for work of others when required or necessary. Ensures actions taken to achieve objectives, and evaluates results to determine any follow-up needed.

**Superior**

Articulates vision/states clear objectives and assigns responsibility/motivates others toward achievement. Monitors progress; gives feedback; evaluates results; ensures follow-up.

**49. SUPERVISION** – Direct responsibility for all aspects of the performance of a work group. Supervisors must:

- Establish Standards and Train Employees
- Assign, Monitor, Facilitate, Review and Evaluate Work
- Support and Develop Employees
- Take Disciplinary Action
- Demonstrate Responsibility and Proactive Leadership
- Demonstrate Fairness, Flexibility, and Approachability

Level of Competency Required by Job:

Level 2: Supervisor – organizes and plans work; reviews and evaluates work.

**Satisfactory**

Ensures that own work and work of others for which is responsible are properly completed in a timely manner.

**Superior**

Ensures that all responsibilities of the workgroup are fulfilled and that work produced is of high quality and completed in a timely manner.

