

BUREAU OF ENGINEERING

PART E

STREET DESIGN

JULY 1986

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STREET DESIGN

GENERAL PROVISIONS

PURPOSE

The Bureau of Engineering Manual is published as a reference and training guide for all Bureau employees.

The Manual summarizes and outlines policy, practices and procedures that have been developed to increase the efficiency of bureau operations. Its purpose is to inform and instruct employees about the current standards in Bureau practice. The standards have been adopted to encourage uniformity in the work of division and district offices of the Bureau of Engineering. The various sections of the Manual as dated in the upper right hand corner of each page supersede all prior dated Standard Practice Instructions, Office Standards, Special Orders and other directives relating to material covered.

SCOPE

The Manual covers all phases of work in the Bureau. Elementary information available in standard engineering and public administration textbooks is not included. Graphs, office standards, and data applicable to City usage are included to assist in the solution of typical problems; however, it is not practical to cover all operations in great detail.

The Manual is a guide. It is not a substitute for professional experience. Sound judgment must be exercised in the application of Manual provisions to specific circumstances. For routine operations and procedures, the Manual instructions should be the standard. The contents do not preclude use of different methods when special or emergency conditions warrant and when proper authorization is obtained.

If a major deviation from the standard is necessary or desirable, the Engineer of Design should be informed by memorandum, so that it can be evaluated as a possible Manual change.

ORGANIZATION AND RESPONSIBILITY

The Manual will be published in sixteen parts. Each part will be a separate volume of related material. The Engineer of Design has the primary responsibility for coordination and preparation of the material or revisions to the Manual. The divisions designated below will, upon request, assist the

Engineer of Design in preparing text and illustrations for the Manual:

| PART | TITLE | ASSIGNED DIVISION |
|-------------|------------------------------------|--|
| | Management | Design Research and Standards |
| A | Administration | Administration |
| B | Office Guide | Administration |
| C | Operation and Control | Central District - One Stop, Project Management, Street Opening and Widening |
| D | Land Development | Street Opening and Widening |
| E | Street Design | Design Research and Standards |
| F | Sewer Design | Design Research and Standards |
| G | Storm Drain Design | Design Research and Standards |
| H | Structural Design | Structural Engineering |
| I | Drafting and Cartography | Street Opening and Widening |
| J | Survey | Survey |
| K | Real Estate | Real Estate |
| L | Architecture | Architectural |
| M | Construction | Construction |
| N | Geology and Soils | Construction Division |
| O | Systems Engineering | Systems Engineering |

REVISION

The Manual is revised as needed to keep it current and to include new or changed policy, data or methods

In general, revisions are implemented by issuance of a “Manual Revision Transmittal” accompanying revised sheets to be inserted in the Manual. Superseded sheets should be discarded.

The transmittals are numbered consecutively by parts and will indicate the scope of the revisions, any superseded Special Orders, and/or Memoranda and the reasons why changes are being made in the Manual.

In some cases Special Orders may be issued which supersede sections of the Manual and serve as interim instructions. In these cases, revisions to the Manual should be prepared as soon as possible after issuance of the Special Order.

Detailed instructions for Manual revisions will be included in Part C, Operations and Control.

FORMAT

1. The Manual is organized on the Closed Decimal System as illustrated in [Figure GP1](#).
2. The Manual and revisions are typed on sheets with headings illustrated by [Figure GP2](#). In general, each major division of a section (140, 230, 670) should start on a new page. When it is not appropriate to start on a new page, the heading of the next major division should start at least two inches below the preceding section to facilitate future revisions. Long, self-contained, secondary divisions (142, 234, 678) may start on a new page when appropriate.
3. Each part of the Manual consists of the following:
 - a. General Provisions - Identical for all parts.
 - b. Preface - A brief general statement of the scope of that part.
 - c. General Outline - A list of chapters by general subject matter, the Index and an appendices listing.
 - d. Table of Contents - A table immediately preceding each chapter and listing section numbers and topic headings.
 - e. List of Figures - A list when appropriate following the Table of Contents. Unless otherwise noted, the figures are inserted at the end of the text.
 - f. Index - Follows the last chapter for each part.
 - g. Appendix - As needed lengthy to incorporate for important references too lengthy to incorporate in the text.

DISTRIBUTION

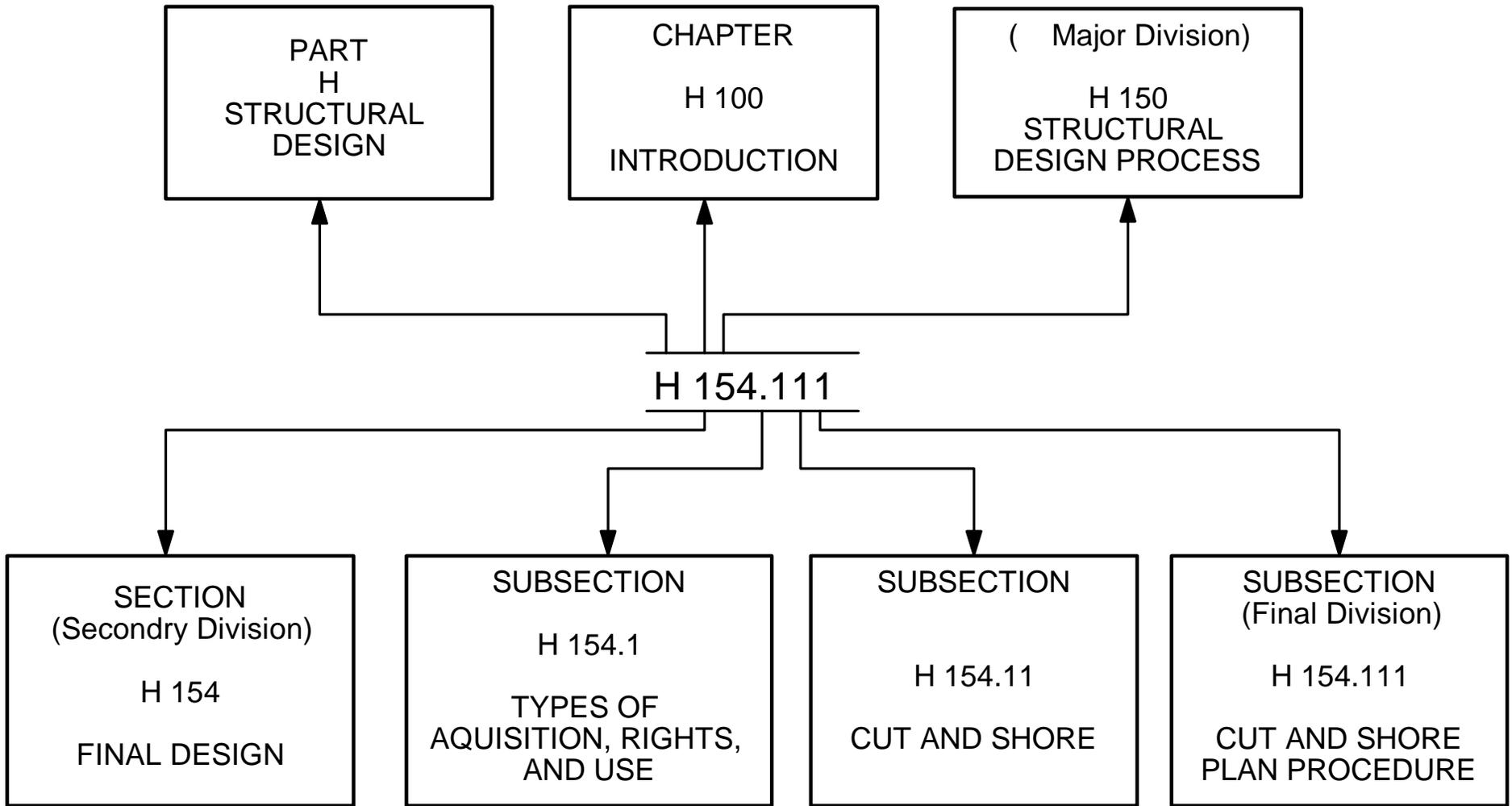
TO BUREAU OF ENGINEERING OFFICES

Each division and district office is assigned at least one complete copy of the Manual (16 parts). Additional parts as necessary are assigned to those offices with personnel who require them for frequent use.

Assignment and distribution of the Manual and its revisions is the responsibility of the Engineer of Design.

TO OTHER BUREAUS, DEPARTMENTS, AGENCIES AND INDIVIDUALS

The Manual is intended primarily for use by Bureau personnel. Because costs of reprinting are high, the supply of full size Manuals is limited and therefore restricted to Bureau personnel. However, the Manual is available on microfiche for sale at a nominal price by the Administration Division. Persons requiring full size copies are advised to purchase the Manual on microfiche and have it reproduced in full size by a private reproduction firm.



SAMPLE

FIGURE GP1

E 311 VOLUME

The specific types of traffic volume counts that are generally used by the street designer are as follows.

E 311.1 HOURLY TRAFFIC

The traffic pattern for most City streets shows considerable variation in traffic volume during different hours of the day (such as rush hour) and even a greater volume variation throughout the year. The most

DRH (in vehicles per hour) finds its greatest application in:

- a. Determining the magnitude of peak period.
- b. Evaluating capacity deficiencies.
- c. Establishing traffic controls, since volume is one of the warrants for the:
 1. Installation of signs, signals, and markings.
 2. Designation of through streets, one-way streets, unbalanced flow, and traffic routing.
 - (a) Prohibition of parking, stopping, and turning.
 - (b) Geometric design or redesign of streets and intersections.
 - (1) For example, a tabulation of traffic by direction of movement shows
 - (2) In contemplating the design of a highway and in determining its capacity, the DHV for one direction

DESIGN SPEEDS FOR CITY STREETS

| Class of Street | Design Speed |
|------------------|--------------|
| Major | 50 mph |
| Secondary | 40 " |
| Collector | 40 " |
| Local - Flat | 30 " |
| Local - Hillside | 25 " |

1" Margin

Table 313

(Line 60)

P R E F A C E

Part E of the Manual covers only the design of streets. It presents the design criteria, standards, policies, and procedures to the new engineer and provides a reference source for the experienced designer. Other office or processing operations related to street design are covered in other parts of the Manual. The City Engineer may revise or change policy and procedures if necessary.

Street design criteria and construction plans for State freeways and highways within the City are prepared by City forces for the State Department of Transportation (CALTRANS). Only cursory coverage is included in this Part of the Manual.

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E 100 GENERAL

Part E of the Manual covers the design of streets. It presents design criteria, standards, policies and procedures to the new designer and provides a reference source for the experienced designer. The contents are to be used as a guide and are not a substitute for professional experience. Sound judgment must be exercised in the application of these provisions and they do not preclude the use of different methods when special or emergency conditions warrant and when authorized by responsible supervision.

E 110 MANUAL REFERENCES AND SOURCES OF INFORMATION

The charts, tables, sketches, and discussions presented in this Part of the Manual are extracts from the references listed below and from the practices and policies of various offices in the Department of Public Works. It is suggested that the Designer become familiar with the original sources of information contained in these references, as well as with the contents of various sections of this Part of the Manual.

E 111 THE LOS ANGELES MUNICIPAL CODE

The Los Angeles Municipal Code contains all of the ordinances which regulate many of the City's operations. Copies of these individual ordinances are available in the City Clerk's office. Hereafter, the publication will be referred to as the "Municipal Code". Current sets are located in the Municipal Reference Library.

E 112 STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

The editions and supplements to the editions of the Standard Specifications for Public Works Construction are APWA-AGC publications which, when adopted by the Board of Public Works, become a legal basis for improvement project plan specifications and construction practices. Hereafter, they will be referred to as the "Standard Specifications." Copies are available from the Engineer of Design, Bureau of Engineering, or the publisher, Building News, Inc.

Each Edition and each Supplement to an Edition of the Standard Specifications is modified by an updated corresponding issue of [Standard Plan S-610](#), Notice to Contractors-Comprehensive.

E 113 STANDARD PLANS

Standard Plans are a series of numbered drawings showing the details, dimensions, and specifications of standard items used in the construction of public works. Individual copies are available from the Administration Division, Central Records (Vault) and the District Engineering offices of the Bureau of Engineering. Full sets may be obtained from the Engineer of Design.

E 114 RECORDS

Records of plans, profiles, surveys, district maps, and other miscellaneous information are available in the Central Records Section (Vault) of the Administration Division, Bureau of Engineering and also on microfilm in various Engineering offices. Other records are available in the Land Records Division of the City Clerk's office and in the Street Opening and Widening Division, Bureau of Engineering.

E 115 CALIFORNIA STATE STATUTES RELATING TO THE DEPARTMENT OF PUBLIC WORKS

The State of California Statutes Relating to the Department of Public Works is a reference book containing the statutes, codes, and enabling acts that permit public improvements in the State of California. The section pertaining to the State of California, Business and Transportation Agency, Department of Transportation, permits most of the public works improvements in the City of Los Angeles. It is issued by the Division of Contracts and Rights of Way. Directly related to this work is the California Streets and Highways Code, which gives in detail the various acts under which public works improvements are made

E 116 OTHER REFERENCE SOURCES

Other sources from which material may be obtained are:

a. AASHTO - American Association of State Highway and Transportation Officials:

1. A policy on Geometric Design of Rural Highways
2. Acquisition for Right of Way
3. A Policy on Arterial Highways in Urban Areas
4. Transportation Glossary

b. U.S. Department of Transportation

1. Highway Capacity Manual, Practical Applications of Research
2. Public Roads, a Journal of Highway Research
3. Your Guide to Programs of the Federal Highway Administration (published by the FHWA)

c. National Academy of Sciences, National Research Council, Highway Research Board:

1. Highway Capacity Manual
2. Channelization, the Design of Highway Intersections at Grade

d. Work Area Traffic Control Handbook (WATCH)

e. Highways and Freeways Plan - An Element of Plan of the City of Los Angeles

f. Zoning Maps of the City of Los Angeles

g. Bureau of Street Maintenance Manual of the City of Los Angeles

h. Bureau of Contract Administration Los Angeles

i. General Orders, Public Utilities California, State of California

j. State of California, Department of Real Estate, Reference Book. 1969 Edition

k. Bureau of Engineering Programs and Time Charges

l. Five-Year Capital Program, City of Los Angeles

m. Bureau of Engineering Special Orders and Memorandums

n. City guidelines - Implementation of CEQA

o. Caltrans Local Assistance Manual

E 120 DEFINITIONS

These key words and concepts pertain to Part E of the Manual.

A

ABANDONMENT - Cessation of the City's use of right of way or activity thereon with no intention to reclaim or use again for highway purposes. Officially; called "VACATION."

ABSTRACT OF TITLE - A document showing the condensed history of the titles to a particular piece of -property, containing portions of all conveyances or other pertinent instruments relating to the estate or interest in the property, and all liens, charges, encumbrances, and releases.

ACCESS RIGHTS - These are secondary property rights which entitle the owner access to the abutting streets.

ACQUISITION - The process of obtaining right of way. Sometimes called TAKING.

ACTUAL DAMAGES - As opposed to indirect damages; that is, the value of real property taken such as so many square feet of lot, parking area, etc.

ADVERSE POSSESSION - The act of an occupant of land in acquiring title against the real owner where possession has been actual, continuous, hostile, visible, notorious, exclusive and distinct for the statutory period.

The possession must be actual and exclusive; open and notorious. It must be continuous for the period required by statute. The time of possession of one adverse claimant may be added to that of successive adverse claimants, provided there is privity of estate as between such claimants (see PRESCRIPTIVE RIGHTS).

Alley - A narrow roadway behind buildings for the exclusive use of those buildings.

ANGLE OF TURN - The angle through which a vehicle travels in making a turn.

APPRAISAL - (1) An estimate and opinion of value; or (2) Usually a written statement of the market value as defined by the appraiser of an adequately described parcel of property as of a specific date.

APPROACH NOSE - An end on an island, or neutral area between roadways which faces approaching traffic.

ARTERIAL HIGHWAY - A general term denoting a highway primarily for through traffic, usually on a continuous route. This is termed as a major or secondary highway in the City of Los Angeles.

ASSESSMENT - (1) The valuation of property for taxation; also the value so assigned. (2) Nonrecurring charges levied against property to meet some specific purpose.

AT-GRADE INTERSECTION - An intersection where all roadways join or cross at the same level.

AUXILIARY LANE - The portion of the roadway adjoining the traveled way for parking, speed change, turning or other purposes supplemental to through traffic movement.

AVERAGE DAILY TRAFFIC - The average 24-hour volume is the total volume during a stated period divided by the number of days in that period. Unless otherwise stated, the period is 1 year. The term is commonly abbreviated ADT.

AVERAGE SPOT SPEED - The arithmetic mean of the speeds of all traffic or components thereof, at a specified point.

B

BACKFILL - Material used to replace, or the act of replacing material removed during construction; also, may denote material placed in excavations adjacent to structures, or the act of placing such material.

BASIC CAPACITY - The maximum number of passenger cars that could pass a given point on a lane or roadway during 1 hour under the most ideal roadway and traffic conditions that can be attained.

BELT HIGHWAY - An arterial highway for carrying traffic partially or entirely around an urban area or portion thereof. Also. called circumferential highway.

BIKE LANE - Part of a street or roadway designated and delineated for use of bicycle riders. Also, see **BIKEWAY**.

BIKE PATH - A separate roadway designated and delineated for use of bicycle riders. Also, see **BIKEWAY**.

BIKE ROUTE - A street identified as a bicycle facility by the standard **BIKE ROUTE** guide signing only. It is located in the traveled roadway with no special lane markings.

BIKEWAY - Part of a street or roadway or a separate roadway

designated and delineated for bicycle riders.

BORDER - The area between the curb face and the adjacent property line of a roadway. If there is no curb, this same area is known as the "shoulder" in suburban localities. Also, see **PARKWAY**.

C

CAPACITY, BASIC - See **BASIC CAPACITY**.

CAPACITY, DESIGN - See **DESIGN CAPACITY**.

CAPACITY, POSSIBLE - See **POSSIBLE CAPACITY**.

CATEGORICAL EXEMPTION - An exemption from the requirements of CEQA for certain listed types of projects previously determined to not have a significant effect on the environment by the Secretary for Resources and the City Council.

CEQA - California Environmental Quality Act.

CERTIFICATE OF TITLE - A document based on a title search stating that title or interest in property is vested in a designated person and showing outstanding liens, charges, or other encumbrances.

CHANNELIZED INTERSECTION - An at-grade intersection in which traffic is directed into definite paths by curbed islands, painted islands or special painted lanes.

CLOVERLEAF - A four-legged interchange with right turn loops replacing left turns and with outer connections for right turns; or two-way ramps for these turns. A full cloverleaf has ramps for two turning movements in each quadrant.

COLLECTOR STREET - A street that carries an accumulation of traffic between local streets and an arterial highway.

COMPOSITION OF TRAFFIC - The composition or character of traffic, made by field check, is the percentage of trucks to total traffic during the design hour.

CONDEMNATION - The process by which property is acquired for highway purposes through legal proceedings under power of eminent domain.

CONSENT TO ENTER - The right to enter property and to do specific work for an improvement project, and the form which makes it possible.

CONSEQUENTIAL DAMAGES - Loss in value of a parcel, no portion of which is acquired, resulting from a public works improvement.

CONSTRUCTION EASEMENT - A temporary right or interest in the land of another which entitles the holder to specified uses of the land, or the land itself during construction.

CONTRACT - An agreement between two or more persons, to do or refrain from doing a particular act.

CONTROL OF ACCESS - The condition where the right of owners or occupants of abutting land to access, light, air, or view in connection with a highway is fully or partially controlled by public authority. See **FULL CONTROL OF ACCESS** and **PARTIAL CONTROL OF ACCESS**.

CONVEYANCE - A written instrument by which a title, estate, or interest in property is transferred.

CORNER CUT - The portion of property taken off the property corner at an intersection of streets for the purpose of building a curb return.

CORNER INFLUENCE - The value effect of location at, or in proximity to, the intersection of two streets. The increment of value resulting from such location or proximity.

COST OF REPLACEMENT - (1) The cost that would be incurred in acquiring an equally desirable replacement property. (2) The cost of construction, on the basis of current prices, of a property having utility equivalent to the one under appraisal. It may or may not be a duplicate of the original property. (3) The cost of replacing unit parts of the structure to maintain it in the highest economic operating condition.

COST OF REPLACEMENT LESS DEPRECIATION - The cost of replacement new at current prices less a deduction for depreciation. The deduction for depreciation is the loss in value arising from physical, functional, and economic causes.

COST OF REPRODUCTION - The cost of constructing an exact duplicate or replica using materials of equivalent age and condition, and the same construction standards, design, layout, and quality of workmanship.

CROSS CONNECTION - A connecting roadway between two nearby and generally Parallel roadways.

CROSS SECTION - A view cutting through the roadway at right angles to the center line showing the relationship of the

various components of the roadway.

CUL-DE-SAC STREET - A local street open at one end only and with special provision for turning around at the closed end.

CURB LOADING ZONE - Roadway space adjacent to a curb and reserved for exclusive use of vehicles during loading or unloading of passengers or property.

D

DAMAGES - The value of real property, personal property, and/ or secondary rights lost as a result of a public works improvement or proceeding.

DEAD-END STREET - A local street open at one end only without special provision for turning around.

DEDICATION - (a) The setting apart by the owner and acceptance by the public of property for highway uses in accordance with statutory or common law requirements. To further amplify the definition of this term, the right or use of the property is usually acquired on a voluntary basis and compensation for such right or use may or may not be involved; (b) Commonly used for all of the right of way of a street even though some of the property may have been acquired by condemnation.

DEED - A duly attested written instrument, conveying real property or interest therein.

DEMOLITION - Controlled destruction and removal of public or private improvements including foundations, footings, and basements between limits specified on the plans and specifications. It may also include backfilling all voids per the Standard Specifications to the subgrade of the proposed improvement or to the grade of the existing surroundings.

DENSE GRADED AGGREGATE - A well-graded aggregate containing a relatively small percentage of voids.

DENSITY - The number of vehicles per mile on the traveled way at a given instant.

DEPRECIATION - A loss in value brought about by deterioration through ordinary wear and tear, action of the elements, or functional or economic obsolescence.

DESIGN CAPACITY - The number of vehicles that can pass over a given section of roadway in one direction during 1 hour under specified traffic conditions, operating at a specified

level of service. This definition, to replace "practical capacity," was adopted by the Highway Research Board in 1962.

DESIGN SPEED - A speed determined for design and correlation of the physical features of a highway that influence vehicle operation. It is the speed that can be maintained over a specified section of highway when conditions are so favorable that the design features of the highway govern.

DESIGN VEHICLE - A selected motor vehicle whose weight, dimensions, and operating characteristics are used to establish highway design controls to accommodate vehicles of a designated type.

DESIGN VOLUME - A volume determined for use in design, representing traffic expected to use the highway. Unless otherwise stated, it is an hourly volume.

DIAMOND INTERCHANGE - A four-legged interchange with a one-way ramp in each quadrant. All left turns are made directly on the minor highway.

DIRECT COMPENSATION - Payment for land or interest in land and improvements actually acquired for highway purposes. Sometimes called **DIRECT DAMAGES**.

DIRECT CONNECTION - A one-way turning roadway entering onto a highway which does not require a Stop.

DIRECT DAMAGES - See **DIRECT COMPENSATION**.

DIRECTIONAL INTERCHANGE - An interchange, generally having more than one highway grade separation, with direct connections for the major left turn movements.

DIVIDED HIGHWAY - A highway with separated roadways for opposing traffic.

E

EASEMENT - A right or interest in the land of another which entitles the holder thereof to some specific use, privilege, or benefit out of, under or over such land, or the land itself.

EMINENT DOMAIN - The right or power of the government to take property for public use with just compensation therefor.

ENCROACHMENT - A structural occupation of property without acquisition of title.

ENVIRONMENT - The totality of conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and of historic or aesthetic significance.

ENVIRONMENTAL IMPACT REPORT (EIR) - A concise statement setting forth the environmental effects and considerations pertaining to a project as specified in the California Environmental Quality Act.

ENVIRONMENTAL IMPACT STATEMENT (EIS) - Same as above except it conforms to National Environmental Policy Act.

ESTABLISHED STREET GRADE - Elevations of improvements shown on a City Engineer's plan; or established by City ordinance.

EXPRESSWAY - A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at intersections.

F

FEE SIMPLE - An absolute estate or ownership in property. Also, called FEE TITLE.

FEE TITLE - See FEE SIMPLE.

FIXED DELAY - Delay caused by traffic controls.

FIXED OBJECT - Anything attached to the ground in or near the roadway that may present a hazard to out of control vehicles.

FLARED INTERSECTION - An unchannelized intersection or a divided highway intersection without islands other than medians, where the traveled way of any intersection leg is widened or an auxiliary lane added.

FLEXIBLE PAVEMENT - A pavement structure which maintains intimate contact with and distributes loads to the subgrade and depends upon aggregate interlock, particle friction, and cohesion for stability.

FOUR-LEGGED INTERSECTION - An intersection with four legs; as where two highways cross.

FREEWAY - A toll free expressway with full control of access and without any crossings at grade.

FRONTAGE STREET - A local street auxiliary to and located on the side of an arterial highway for service to abutting property

and adjacent areas and for control of access. Also, known as FRONTAGE ROAD.

FULL CONTROL OF ACCESS - This means that the authority to control access is exercised to give preference to through traffic by providing access connections with selected public roads only, and by prohibiting crossings at grade and direct private driveway connections. See **CONTROL OF ACCESS** and **PARTIAL CONTROL OF ACCESS**.

FUTURE STREET - A proposed street on which the owner has given an **IRREVOCABLE OFFER TO DEDICATE** when the street is improved.

G

GENERAL BENEFIT - Advantage accruing from a given highway improvement to a community as a whole; applying to all property similarly situated.

GRADE SEPARATION - A crossing of two highways or a highway and a railroad, at different levels.

GRANT DEED - Conveys the fee title to the land.

GUARANTEE TITLE - A title, the validity of which is insured by an abstract, title, or indemnity company. Sometimes, called **INSURED TITLE**.

GUIDELINES - Los Angeles City Guidelines to the California Environmental Quality Act of 1970.

H

HEADWAY - The time interval between passages of consecutive vehicles moving in the same direction past a given point.

HIGHEST AND BEST USE - The most productive use, reasonable but not speculative or conjectural, to which property may be put in the near future.

HIGHWAY - A general term denoting a public way for purposes of vehicular travel, including, the entire area within the right of way. (Recommended usage: in urban areas - highway or street; in rural areas - highway or road.)

I

INDIRECT DAMAGES - See **SEVERANCE DAMAGES**.

INSURED TITLE - See **GUARANTEE TITLE**.

INTERCHANGE - A grade-separated intersection with one or more turning roadways for travel between intersection legs.

INTERCHANGE RAMP - A turning roadway at an interchange for travel between intersection legs.

INTERSECTION - The general area where two or more highways join or cross, within which are included the roadway and roadside facilities for traffic movements in that area.

INTERSECTION ANGLE - The angle between two intersection legs.

INTERSECTION ENTRANCE - That part of the intersection leg for traffic entering the intersection.

INTERSECTION EXIT - That part of an intersection leg for traffic leaving the intersection.

INTERSECTION LEG - Any one of the highways radiating from and forming part of an intersection. The common intersection of two highways crossing each other has four legs.

INVERSE CONDEMNATION - The principle under which a property owner may claim compensation for loss of value of its property as a result of highway improvement proceedings.

IRREVOCABLE OFFER TO DEDICATE - A recorded document offering to dedicate a street easement that is not needed now but may be at some future date.

ISLAND - A defined area between traffic lanes for control of vehicle movements or for pedestrian refuge. Within an intersection, a median or an outer separation is considered an island.

J

JUST COMPENSATION - A full and fair equivalent for the loss sustained by the owner as a result of the acquisition and/or devaluation of private property for or by public works improvements.

L

LEASE - A contract between an owner and a tenant setting forth conditions upon which tenant may occupy and use the property and the terms of the occupancy.

LEVEL OF SERVICE - The quality of service provided by a specified type of highway. The quality of service should be based

on the following factors: speed and travel time, traffic interruptions, freedom-to-maneuver, safety, driving comfort and convenience, and operational costs.

LICENSE - A personal and revocable permission or authority to enter upon or use the land of another for a particular purpose.

LOAD FACTOR - A ratio of the total number of green signal intervals that are fully utilized by traffic during the peak hour to the total number of green intervals for that intersection approach during the same period.

LOCAL ROAD - See LOCAL STREET.

LOCAL STREET - A street or road, primarily for access to residential, business, or other abutting property. Also, known as LOCAL ROAD.

M

MAJOR HIGHWAY - Same as MAJOR STREET, but in suburban areas.

MAJOR STREET - An arterial street usually with intersections at-grade and direct access to abutting property, on which geometric design and traffic control measures are used to expedite the safe movement of through traffic. Also known as MAJOR HIGHWAY.

MARKET VALUE - The highest price for which property can be sold on the open market by a willing seller to a willing purchaser with both exercising reasonable judgment.

MEDIAN - The portion of a divided highway separating the traveled ways for traffic in opposite directions.

MEDIAN TRAVERSABLE LANE - A speed-change lane within the median to accommodate left turning vehicles from either direction

MEDIAN OPENING - A gap in a median provided for crossing and turning traffic.

METES AND BOUNDS DESCRIPTION - A description of a parcel of land by reference to the courses (bearings i.e., the angles east or west of due north or due south) and distances (usually in feet or chains) of each line which forms its boundary, with one of the corners tied to an established point. If one part of the boundary is on a curve, this part is described by showing the number of degrees of the central angle subtended by the curve arc, the direction of curvature, the length of the radius, and the length along the curve.

MINIMUM TURNING PATH - The path of a designated point on a vehicle making its sharpest turn.

MINIMUM TURNING RADIUS - The radius of the minimum turning the outside of the outer front tire. (Vehicle manufacturers give minimum turning radius to the center line of turning radius of the outer front tire.)

MULTILEG INTERSECTION - An intersection with five or more legs.

N

NEGATIVE DECLARATION - A statement required by CEQA briefly setting forth the reasons why a project, although not otherwise exempt, will not have a significant effect on the environment and therefore does not require an Environmental Impact Report (EIR).

NEGOTIATION - The process by which property is sought to be acquired for highway purposes through discussion, conference, and final agreement upon the terms of a voluntary transfer of such property.

NEPA - National environmental Policy Act.

O

OPEN GRADED AGGREGATE - A well-graded aggregate containing little or no fines, with a large percentage of voids.

OPERATIONAL DELAY - Delay caused by interference between components of traffic.

OPTION - A written agreement granting a privilege to acquire property or interest therein at a fixed price within a specified period.

ORDER FOR POSSESSION - The right to occupy property for highway purposes, after preliminary steps for acquisition have been taken and before final settlement.

OUTER CONNECTION - A one-way turning roadway, primarily, for a right turn movement. It may include provision for a left turn at a terminal to accommodate another turning movement.

OUTER SEPARATION - The portion of an arterial highway between the traveled ways of a roadway for through traffic and a frontage street or road.

OVER-ALL TRAVEL SPEED - The speed over a specified section of

highway, being the distance divided by over-all travel time. The average for all traffic, or component thereof, is the summation of distances divided by the summation of over-all travel times.

OVER-ALL TRAVEL TIME - The time of travel, including stops and delays, except those off the traveled way.

OVERCROSSING - A grade separation where the highway passes over an intersecting highway.

OVERPASS - A grade separation where the highway passes over an intersecting railroad.

P

PARKING LANE - An auxiliary lane primarily for the parking of vehicles.

PARKWAY - (a) An arterial highway with full or partial control of access, usually located within a park or a ribbon of similar development; (b) The unpaved portion of the border between the front of the sidewalk and the curb; or (c) The unpaved portion of the border between the back of the sidewalk and the adjacent property line.

PARTIAL CONTROL OF ACCESS - This means that the authority to control access is exercised to give preference to through traffic to a degree that in addition to access connections with selected public road, there may be some crossings at

grade and some private driveway connections. See **CONTROL OF ACCESS** and **FULL CONTROL OF ACCESS**.

PARTIAL TAKING - The acquisition of a portion of a parcel of property.

PARTY WALL - A wall erected upon and over a line which separates two properties and in which the respective owners have common rights of use.

PASSENGER VEHICLE - Any motor vehicle, other than a motor truck or truck tractor, designed for carrying not more than ten persons (including the driver) and used or maintained for transportation of persons. The term **PASSENGER VEHICLE** includes a motor home.

PASSING SIGHT DISTANCE - The minimum sight distance that must be available to enable the driver of one vehicle to pass another vehicle safely and comfortably (10 MPH slower than design speed) without interfering with the speed of an oncoming

vehicle traveling at the design speed should it come into view after the overtaking maneuver is started.

PAVEMENT, FLEXIBLE - See FLEXIBLE PAVEMENT.

PAVEMENT, RIGID - See RIGID PAVEMENT.

PEAK-HOUR - The 1 hour period during which the most traffic is counted during a 24-hour day at one particular location.

PEAK-HOUR FACTOR - The peak-hour factor is a measure of consistency of demand. For intersections it is defined as the ratio between the number of vehicles counted during the peak-hour and four times the number of vehicles counted during the highest 15 consecutive minutes. A separate peak-hour factor must be computed for each approach leg to the intersection. The peak-hour factor reflects variations in peaking characteristics of approach roadways and provides a means of more accurately evaluating their operating characteristics.

PERMIT - A temporary, revocable, and nontransferable license which gives one permission to do something, without which one would be a trespasser.

PERSONAL PROPERTY - In a broad and general sense, everything that is subject to ownership, not coming under the denomination of real estate. A right or interest in things personal, or right or interest less than a freehold in realty, or any right or interest which one has in things movable.

POLICE POWER - The inherent right of a government to pass such legislation as may be necessary to protect the public health and safety and to promote the general welfare. The control by the State, under which public welfare is served and to which property rights are subject.

POSSIBLE CAPACITY - The maximum number of vehicles that could pass a given point on a lane or roadway during 1 hour under the prevailing roadway and traffic conditions.

PRESCRIPTIVE RIGHTS - An easement which may be created without formal documentation by permissive acts of the owner over a specified period of years (e.g.; repaving a sidewalk area located on private property and allowing the public to use the sidewalk without restriction, limitation, or other obstruction). See ADVERSE POSSESSION.

PRIVATE STREET - A street that has not been dedicated to the City.

PROPERTY, PERSONAL - See PERSONAL PROPERTY.

PROPERTY, REAL - See REAL PROPERTY.

Q

QUITCLAIM DEED - A deed (or interest of uncertain validity) conveying, without warranty, any title, interest, or claim which the grantor may have in the property conveyed.

R

RADIAL HIGHWAY - An arterial highway leading to or from an urban center.

REAL PROPERTY - Land, and generally whatever is erected or growing upon or affixed to that land.

REMAINDER - The portion of a parcel retained by the owner after a part of such parcel has been acquired.

REMNANT - A remainder of a property taking action, so small or irregular that it usually has little or no economic value to the owner.

REVERSION - The right to repossess and resume the full and sole use and proprietorship of real property which temporarily has been alienated by lease, easement or otherwise. The reversion right becomes effective at a stated time or under certain conditions such as the termination of a leasehold, etc., according to the terms of the controlling instrument.

RIGHT OF ACCESS - The right of ingress to a highway from abutting land and egress from a highway to abutting land. See CONTROL OF ACCESS.

RIGHT OF ENTRY - The right to enter and use property to do specific work or construction and the form which makes it possible.

RIGHT OF WAY - A general term denoting land, property or interest therein, usually in a strip acquired for or devoted to a Public Works projects.

RIGHT OF WAY APPRAISAL - A professional determination of the market value of property, including damages (if any), as of a specified date, resulting from an analysis of facts.

RIGHT OF WAY ESTIMATE - An approximation of the market value of property, including damages (if any), in advance of an

appraisal.

RIGID PAVEMENT - A pavement structure which distributes loads to the subgrade, having as one course a portland cement concrete slab of relatively high bending resistance.

RIPARIAN RIGHTS - The rights of a person owning land containing or bordering on a watercourse or other body of water in or to its banks, bed, or waters.

ROAD - See **HIGHWAY**.

ROADBED - The graded portion of a highway within the top and side slopes, upon which the base course, surface course, shoulders, and median are constructed.

ROADSIDE CONTROL - The public regulation of the roadside to improve highway safety, expedite the free flow of traffic, safeguard present and future highway investment, conserve abutting property values, or preserve the attractiveness of the landscape.

ROADWAY - The portion of a highway, including shoulders, for vehicular use. A divided highway has two or more roadways. In construction specifications, the portion of a highway within the limits of construction.

ROTARY INTERSECTION - A channeled intersection in which traffic moves counterclockwise on a one way roadway around a center island.

RUNNING SPEED - The speed over a specified section of highway, being the distance divided by the running time. The average for all traffic or component thereof, is the summation of distances divided by the summation of running times.

RUNNING TIME - The time the vehicle is in motion.

S

SECONDARY HIGHWAY - Same as **SECONDARY STREET** in suburban areas.

SECONDARY RIGHTS - In general these are the rights (other than to water and natural elements) above, on and below the surface of the land.

SECONDARY STREET - A lesser arterial street with intersections usually at-grade, with direct access to abutting property and on which geometric design and traffic control measures are used to expedite the safe movement of through traffic. Also known as a **SECONDARY HIGHWAY**.

SERVICE VOLUME - The maximum number of vehicles that can pass over a given section of a lane or roadway during a specified time period while operating conditions are maintained that correspond to the selected or specified level of service.

SETBACK LINE - A line marking the closest distance from the street right of way that buildings may be erected.

SEVERANCE DAMAGES - Loss in value of the remainder of a parcel resulting from an acquisition. Sometimes, called **INDIRECT DAMAGES**

SHOULDER - The area between the traveled roadway and the adjacent right of way limit line. It represents the same area as the **BORDER** where there is no curb at the edge of the traveled roadway.

SIDEWALK - The portion of the roadway primarily for the use of pedestrians.

SIGHT DISTANCE - The length of roadway visible to the driver of a passenger vehicle at any given point on the roadway when the view is unobstructed.

SIGHT LINE EASEMENT - An easement for maintaining or improving the **SIGHT DISTANCE**.

SIGNIFICANT EFFECT - A significant effect is a substantial adverse impact on the environment.

SKEW ANGLE - The supplement of the acute angle between two center lines which cross.

SLOPE EASEMENT - An easement for cuts and fills.

SPECIAL BENEFIT - Advantage accruing from a given improvement to a specific property and not to others generally.

SPEED - The rate of movement of a vehicle, generally expressed in miles per hour.

STOPPING SIGHT DISTANCE - The distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible.

STREET - See **HIGHWAY**.

SUBBASE - The layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.

SUBGRADE - The top surface of a roadbed upon which the pavement structure and shoulders are constructed.

T

"T" INTERSECTION - An intersection with three legs, having two legs in a straight line and the third leg intersecting at an angle between 75 degrees and 105 degrees.

TAKING - See ACQUISITION.

TEMPORARY CONSTRUCTION EASEMENT - See RIGHT OF ENTRY.

THIRTIETH HIGHEST HOURLY VOLUME - The hourly volume that is exceeded by 29 hourly volumes during a designated year. (Corresponding definitions apply to any other highest hourly volumes, as tenth, twentieth, etc.)

THREE-LEGGED INTERSECTION - An intersection with legs in three directions.

TITLE - The evidence of a person's right to property or the right itself.

TITLE SEARCH - An investigation of public records and documents to ascertain the history and present status of title to property, including ownership, liens, charges, encumbrances, and other interests.

TRAVELED WAY - The portion of the roadway for the movement of vehicles. exclusive of shoulders.

TRUCK COMBINATIONS - A truck tractor and a semitrailer, either with or without a full trailer, or a truck with one or more full trailers.

TURNING MOVEMENT - The traffic making a designated turn at an intersection.

TURNING PATH - The path of a designated point on a vehicle making a specified turn.

TURNING ROADWAY - A connecting roadway for traffic turning between two intersection legs.

TURNING TRACK WIDTH - The radial distance between the turning paths of the outside of the outer front tire and the outside of the rear tire which is nearest the center of the turn.

U

UNCHANNELIZED INTERSECTION - An at-grade intersection without painted islands, curbed islands or special painted lanes for directing traffic into definite paths.

UNDERCROSSING - A grade separation where the highway passes under an intersecting highway.

UNDERPASS - A grade separation where the highway passes under an intersecting railroad.

V

VACATION - See ABANDONMENT.

VOLUME - The number of vehicles passing a given point during a specified period of time.

W

WEAVING - The crossing of traffic streams moving in the same general direction, accomplished by merging and diverging.

WEAVING SECTION - A length of one-way roadway, designed to accommodate weaving, at one end of which one-way roadways merge and at the other end of which they separate.

WIDTH OF APPROACH - The total width of approach pavement of through traffic in one direction (not necessarily the number of traffic lanes). This width excludes any separate lanes reserved exclusively for right or left turns, either with or without separate signal phases.

WITHDRAWN FROM PUBLIC USE - A street removed from public use by the City Council, but not vacated. It may be returned to public use by Council action.

Y

"Y" INTERSECTION - A three-legged intersection having one of the intersecting legs approximating the prolongation of the direction of approach and the third leg intersecting this prolongation at an angle less than 75 degrees or greater than 105 degrees.

Z

ZONING - The division of an area into districts, and the public regulation of the character and intensity of use of the land and improvements thereon.

E 130 ABBREVIATIONS

The standard abbreviations commonly used by the Bureau of Engineering are listed in the Standard Specifications and in [Standard Plan S-610](#). A list of those used in this Part of the Manual, but not given in the Standard Specifications or S-610, follows. The list is in three parts: abbreviations of one or more words; abbreviations of the owners of utility pipes, conduits, rails, and rights of way; and abbreviations of active company appurtenances.

Since these abbreviations are not given in the "Standard Specifications for Public Works Construction," or [Standard Plan S-610](#), whenever these abbreviations are used on a set of plans, they must be defined on THAT set of plans.

E 131 WORD OR WORDS

| Abbreviations | Word or Words |
|----------------------|---|
| ACB | Asphalt concrete base |
| ADT | Average Daily Traffic |
| AFE | Authority for Expenditure |
| A'll | 1911 Assessment Act, Streets and Highways Code |
| APWA/AGC | American Public Works Association/ Associated General Contractor's Joint Cooperative Committee |
| Blvd. or Bl. | Boulevard |
| Board | Los Angeles Board of Public Works |
| Bur. | Bureau |
| C | Crown or Celsius |
| Caltrans | California Department of Transportation |
| CATV | Cable Television |
| CD | Council District |
| CE | City Engineer or County Engineer |
| CEQA | California Environmental Quality Act |
| CL or C/L | Center line |
| Cfs | Cubic feet per second |
| CIP | Capital Improvement Project |
| CMP | Corrugated metal pipe |
| Council | Los Angeles City Council |
| DHV | Design hour volume |
| Dist. | District |
| Div. | Division |
| D.M. | District map |

| Abbreviations | Word or Words |
|----------------------|--|
| DOT | (FEDERAL) Department of Transportation |
| EIR | Environmental Impact Report (CEQA) |
| EIS | Environmental Impact Statement (NEPA) |
| Elev. | Elevation |
| Est. | Estimate |
| EWL | Equivalent wheel load |
| Exist | Existing |
| FAP | Federal Aid Primary (Program) |
| FAS | Federal Aid Secondary (Program) |
| FAU | Federal Aid Urban (Program) |
| FHWA | Federal Highway Administration |
| Fps | Feet per second |
| Ft. | Foot or feet |
| Fwy. | Freeway |
| GE | Equivalent thickness of gravel (total) |
| GF | Gravel equivalent factor |
| Gr. Ch. | Grade change |
| Green Book | Standard Specification for Public Works Construction |
| H | High or height |
| ID | Improvement District or inside, diameter |
| Impr | Improvement |
| LADOT | Los Angeles City Department of Transportation |
| Lin. | Linear |
| MB | Map Book |
| MC | Middle of curve |
| MCR | Middle of curb return |
| Min | Minutes or minimum |
| Mun. Code | Los Angeles Municipal Code |
| NEPA | National Environmental Protection Act |
| OFF | Order For Possession |
| OI | Ordinance of Intention |
| OLC | Ornamental Lighting Conduit |
| PI | Permanent Improvement |
| Prod. | Produced |
| Proj. | Project |
| Prop. | Proposed or property |
| Psf | Pounds per square foot |
| Psi | Pounds per square inch |
| PUC | Public Utilities Commission |

| Abbreviations | Word or Words |
|----------------------|--|
| R | Radius or rate of grade (percent), |
| RD | Roof drain |
| Rdwy | Roadway |
| Ret. Wall | Retaining wall |
| S | Sight distance or slope |
| SD | Sewer District |
| Sec. | Seconds |
| Sect. | Section |
| SF | Safety factor |
| SMB | Select material base |
| SO | Special Order |
| Sq. | Square |
| St. Dr. | Storm Drain |
| S'41 | 1941 Ordinance of Improvements by Assessment |
| TH | Test hole |
| TI | Traffic index |
| V | Velocity of flow |
| WO | Work Order |
| WS | Wearing surface or water surface |
| WW | Wall-to-wall (out-to-out) |
| Yd. | Yard or yards |

E 132 OWNERS OF UTILITY PIPES, CONDUITS, RAILS AND RIGHTS OF WAY

| Abbreviations | Owners |
|----------------------|---|
| 6-Star | Six Star Cable TV |
| AOC | Amalgamated Oil Company |
| ARC, ARCO | Atlantic Richfield Company |
| Assoc. Oil | Associated Oil Company (Salt Lake Oil Co.) |
| ATCo | Associated Telephone Company |
| ATSF or AT&SF Ry. | Associated Telephone Company Atchison, Topeka & Santa Fe Railway Co |
| BPL | Bureau of Power and Light (DWPPS) |
| BWS | Bureau of Water Service (DWPWS) |
| Cons. W | Conservative Water Company |
| Cucm | Communicom CATV |
| DOM W | Dominguez Water Company |
| DWPPS | Dept. Water & Power Power System |
| DWPWS | Dept. Water & Power Water System |
| EGC | Economic Gas Company |
| FA | Los Angeles Dept. of General Services |
| F & S | Los Angeles Dept. of General Services |

Abbreviations

Owners

| | |
|-------------|--|
| Gen.Pet. | General Petroleum Corporation of California |
| Gen.Pipe | General Pipe Line Company |
| GOC | Getty Oil Company |
| G.T. | General Telephone |
| Ind. Fuel | Industrial Fuel Company |
| Inv. W. | Investment Water Company |
| JPC | Julian Petroleum Corporation |
| LACSD | Los Angeles County Sanitation District |
| LAFD | Los Angeles Dept. General Services |
| LAG | Los Angeles Gas Company (SCG) |
| LAG & E | Los Angeles Gas and Electric Company (SCG & DWPPS) |
| LAI & CSCo. | Los Angeles Ice and Cold Storage Company |
| LAMP | Los Angeles Midway Pipe Line Company |
| LA Ry | Los Angeles Railway (SCR TD) |
| LATL | Los Angeles Transit Lines (SCR TD) |
| LAWD | Los Angeles Water Department (DWPWS) |
| MO | Mobil Oil Corporation |
| M T A | Metropolitan Transit Authority (SCR TD) |
| MWD | Metropolitan Water District |
| NEPA | National Environmental Protection Agency |
| PAP | Pan American Petroleum Company (ARCO) |
| PCA | Portland Cement Association |
| PERy | Pacific Electric Railway Company (SCR TD) |
| PGC | Producers Gasoline Company (SCG) |
| PLC | Pacific Light Corporation |
| PMC | Petroleum Midway Company |
| PMO | Petroleum Midway |
| PPC | Phillips Petroleum Company |
| PT&CCo | Postal Telegraph and Cable Company (WUT) |
| PTT | Pacific Bell or Pacific Telesis |
| PUT | Los Angeles Dept. of General Services |
| Rich. Oil | Richfield Oil Corporation (ARCO) |
| SCE | Southern California Edison Co |
| SCG | Southern California Gas Co. |
| SCoG | Southern Counties Gas Co. (SCG) |
| SCR TD | Southern Calif. Rapid Transit Dist. |
| SCT | Southern California Telephone Company (PTT) |
| S CWC | Southern California Water Co |

| | |
|-----------------|--|
| SFC | Southern Fuel Company |
| SO or Shell Oil | Shell Oil Co. |
| SOG | Signal Oil and Gas Co. |
| SP | Southern Pacific Co. |
| SP Ry | Southern Pacific Railway Company |
| SPTC | Southern Pacific Transportation Co |
| Std. Oil or STO | Standard Oil Company |
| STG | Standard Gas Co. |
| TC | Theta Cable |
| TI | Texaco, Inc. |
| T S | Los Angeles Dept. of Transportation (traffic signal) |
| UHC | Union Hollywood Water Company (DWPWS) |
| UO | Union Oil Co. or Unocal |
| UPRR | Union Pacific Railroad |
| WGO | Western Gulf Oil Co. |
| WUT | Western Union Telegraph |

E 133 ACTIVE COMPANY APPURTENANCES

| Company Abbreviations | | City Abbreviation |
|------------------------------|--------------------------------------|--------------------------|
| | PACIFIC BELL | |
| TR | Transite duct (asbestos cement duct) | ACD |
| Bur Ca | Buried cable or conduit | BCa |
| Cem | Cement conduit | CD |
| B-Cem | Cement conduit (thin walled) | CD |
| FD | Fibre conduit | FC |
| C-Cem | Concrete cement | PCC |
| PLD | Plastic duct | PD |
| Ped Term | Pedestrian Terminal | PT |
| SP | Sewer Pipe | SS |
| D | Vitrified clay duct | TD |

DEPARTMENT OF WATER AND POWER - POWER SYSTEM

| | | |
|--------|-----------------|-----|
| TR | Transite | ACD |
| Bur Ca | Buried cable | BCa |
| CD | Fibre conduit | FC |
| ABS | Plastic conduit | PD |

NOTE: The abbreviations in the right-hand column are ones used by the street design divisions which differ from those used by the companies.

E 140 FUNDAMENTALS OF REAL PROPERTY FOR STREET DESIGN PURPOSES

E 141 BASIS OF RIGHTS

The principles of private and public land ownership and operation stem from such legal documents as the U.S. Constitution, State Constitutions and Codes, City Ordinances, court decisions, and other legal regulations. These regulations involve legal rights for both the public agency and the private property owner. They also delineate, in general, the individual or joint liability and responsibility that must be assumed as a consequence of acquisition and public use of property.

It must be recognized that a complex society engenders conflicting forms of rights which may require amendments. Court decisions made today may be appealed and previous decisions overruled. The discussion that follows is intended to give the current City practice.

The information presented in this section is written specifically for the Engineer in public works. The knowledge of the implications and consequences of the aforementioned rights and obligations is necessary in making many design decisions. The proper consideration of these rights, coupled with good engineering judgment, should help maintain good public relations and reduce project costs.

E 141.1 REAL AND PERSONAL PROPERTY

Real property consists of the ground or soil and everything attached to it, either natural objects such as trees (but not necessarily crops or minerals) or those made by man, such as houses, walls, etc. Personal property consists of belongings or fixtures not permanently attached, and those of a personal nature such as furniture, clothing, etc.

E 141.2 DIFFERENCES BETWEEN PROPERTIES

The designer should recognize the difference between real and personal property, as real property may have an effect on the choice of alternate routes, grades, and alignments.

The significant difference between real and personal property is reflected by the following example:

A restaurant whose purchase is required for a public improvement has counters, stools, cash registers, display racks, etc., attached to the building. If it can be shown that there was no intention of affixing these fixtures permanently, that their removal would cause little or no damage to the fixtures or the

building, and that they could readily be adapted for placement in other locations, it can be construed that the fixtures constitute personal property.

The City is not required to pay for the relocation of this type of personal property. There are certain types of personal property whose removal may have to be paid for by the City, but this need not be covered in this Part of the Manual.

Further discussion on related subjects will be found in E 145.

E 142 RIGHTS OF OWNER

Ownership of a piece of property gives the owner certain rights.

E 142.1 BUNDLE OF RIGHTS

The property owner having FEE TITLE (total ownership) to property has what is referred to as a "Bundle Of Rights" that is guaranteed for as long as the same state of ownership is maintained. This Bundle Of Rights may be divided into RIGHTS ABOVE THE SURFACE, RIGHTS BELOW THE SURFACE, and WATER RIGHTS which may be above or below the surface.

E 142.11 ABOVE THE SURFACE

THE RIGHTS ABOVE THE SURFACE include the surface and the air space above the surface. Having RIGHTS ABOVE THE SURFACE means that no one may trespass, encroach, or in any way damage or encumber the property without the consent of the property owner. Certain legal actions against the property by others such as involuntary liens for taxes or claims by adverse possession, etc., are exceptions.

Recent advances in technology have resulted in the public and private use of air-space above the surface. This use has clouded the heretofore accepted theory of ownership rights, which include an infinite distance above the surface. Present-day adjudication has not resolved this air-space issue beyond instituting certain regulations for the preservation of health and safety.

E 142.12 BELOW THE SURFACE

The owner of the surface usually also owns the soils and mineral deposits to the center of the earth and no underground encroachments are permitted. The surface owner, although having mineral rights, is subject to certain extralateral rights of adjacent property owners.

In the case of oil and natural gas which are special forms of mineral, there is no fixed or certain ownership until they are actually extracted from the soil. If science advances to the point where developments beneath the earth's crust become feasible, the same uncertainty may develop for the property owner's rights beneath the surface as has developed for the air-space above.

E 142.13 WATER RIGHTS

Classification of WATER RIGHTS:

- a. Riparian rights refer to the rights of owners whose property contains or abuts surface waters. These rights entitle the riparian owners to the use of these waters. The quantities that may be used are limited by the doctrine of reasonable beneficial use in accordance with the custom of the particular location.
- b. Appropriated rights generally apply to the nonriparian users who have appropriated the use of these waters either by prescriptive rights (adverse possession) or by prior use to that of the riparian owners. They too are limited by what is constituted as a reasonable beneficial use.
- c. Correlative rights generally pertain to the rights of the property owner of lands overlying a meandering, undefined, underground aquifer. Although each overlying owner is not governed by the laws of riparian rights, they are still limited to a reasonable use on their own land as well as to the diversion of these waters to nonoverlying lands.

Since a more comprehensive knowledge may be necessary to make intelligent design decisions, reference is made to Part G, Storm Drain Design, other appropriate texts and where deemed necessary, the opinion of the City Attorney's legal staff.

E 142.2 COMPENSATION FOR LOSS OF RIGHTS

No one may arbitrarily deprive a property owner of any of its property or accompanying rights. The legal means by which property and property rights may be acquired by the City, and the compensatory measures that must be taken, are covered in E 143 and E 145.

Inverse condemnation - [SEE E 120](#). This right of the property owner also has a special significance where the property owner wants to develop or improve its property. The City may not withhold or withdraw approval of the proposed development of property that is under imminent condemnation. The owner is

entitled to compensation for making any reasonable improvements. However, the owner is not entitled to any compensation for improvements made at any time after being served a notice of condemnation. Certain public utility improvements may be exceptions.

E 142.3 SECONDARY RIGHTS

In addition to the rights described in the preceding subsections, the property owner has certain others called "SECONDARY RIGHTS."

E 142.31 PRIOR RIGHTS

There are two parties whose rights must be considered in discussing PRIOR RIGHTS in an easement (see [E 144.23](#)):

- a. The fee title holder (property owner)
- b. The legal user of the easement.

The legal user of the easement is said to have established PRIOR RIGHTS. However, despite this PRIOR RIGHT the user of the easement may not change the nature of its use nor subordinate nor otherwise negotiate with others over its use without the consent of the holder of the underlying fee (property owner).

The significance of the rights of both of these parties may be illustrated by the following example:

A public utility company with an existing facility located in an easement finds that the City, in the widening of a street, must include the easement within the street right of way. It is also found that the facility must be relocated. Since the utility company has PRIOR RIGHTS, the City may have to purchase the rights of the utility company. The consideration involved is usually in the form of payment by the City for the utility relocation.

In addition, the City must negotiate for and purchase the rights or the underlying fee from the property owner. For further discussion on moving public utilities see [E 671.1](#), Public Improvements within the Street or Alley.

E 142.32 LIGHT AND AIR

It is often mistakenly assumed that the property owner, by common law in this State, is entitled to the right of uninterrupted flow of LIGHT OR AIR from adjoining land.

This is not so. However, this right or an easement for this purpose may be acquired from the adjoining property owner by grant, either express or implied. Consequently, the owner of adjoining land has the right to build in any manner, provided there is no malicious intent and that the zoning laws, building code, and other covenants are observed.

E 142.33 LATERAL AND SUBJACENT SUPPORT

Each adjoining owner is entitled to the right of lateral and subjacent support which the land receives from the abutting property. This is subject to the right of the adjacent owner to make reasonable excavations for construction or improvements as specified in the Civil and Municipal Codes.

E 142.34 PARTY WALLS

A PARTY WALL is a common dividing wall between two buildings used jointly by adjoining owners. This wall should be distinguished from a partition wall serving as a division fence, attached to just one property. When once established as a PARTY WALL, its use becomes a right of each adjacent owner and may be in the form of an expressed or implied easement. A change or modification of this right may not be made without the consent of both adjoining owners.

E 143 RIGHTS OF CITY

The State has granted the City the power of EMINENT DOMAIN for purposes of CONDEMNATION. This power is the legal means by which the City may acquire private property for public use. The basic requirements for invoking the use of EMINENT DOMAIN procedures are:

- a. It must be shown that the property to be acquired is for public use, interest, convenience, or necessity; and
- b. The property owner must be adequately compensated by the City for this acquisition.

For the purposes of this Manual, it will be assumed that all Public Works projects are considered to be for the public's use, and as such meet the requirements that permit the use of EMINENT DOMAIN procedures.

E 144 CITY'S USE OF PROPERTY

In order to live up to its responsibility toward the public, it is often necessary for the City to make use of private property. This section deals with the City's use of such

property and the methods by which the property or the right to use it is acquired by the City.

E 144.1 PUBLIC USE

The City is charged with the responsibility of making improvements for the public use. Some types of projects that are normally considered for public use are the acquisition of right of way to provide improvements such as public streets and alleys, sewers, storm drains, bridges, etc., and also, public recreation and park areas, reservoirs, public buildings, etc.

In order to make these improvements, the City may need to acquire either the underlying fee title for the property or a lesser degree of interest, such as an easement or right of entry on a temporary or permanent basis.

The Engineer should recognize that slight variations in the City's requirements can affect the design and project completion time as well as the right of way and total project costs. In this regard, the Designer should not be indiscriminate or arbitrary in requesting right of way. For example, the Designer should consider the fact that by acquiring a few less feet of right of way and thereby leaving existing private improvements intact, the total project cost could be reduced considerably. On the other hand, acquiring a few more feet of right of way may permit the use of a milder slope which may increase the initial project cost but may considerably reduce future maintenance costs. Using this type of broader approach in the design of all projects should ultimately result in an overall benefit to the City and the taxpayer.

E 144.2 TYPES OF ACQUISITION, RIGHTS AND USE

There are various methods by which the City may acquire the use of property, such as dedication, condemnation, adverse possession, grant, and exchange. The Street Designer generally will be concerned only with dedication and condemnation.

E 144.21 RIGHT OF ENTRY (UNRECORDED)

It is not always necessary to record a formal document where the use of private property is to be temporary and where no material changes are to be made. For most surveys, route reconnaissance or soil tests, it is customary for the Real Estate Division of the Bureau Engineering to get consent from the property owner in advance by obtaining a RIGHT OF ENTRY.

E 144.22 TEMPORARY RIGHT OF ENTRY AND RIGHT OF ENTRY (TITLE TRANSFER)

TEMPORARY RIGHT OF ENTRY is the recorded document by which the owner of private property grants to the City temporary permission to enter, use and/or change its property. The termination date, location, and proposed use of the property must be specified.

A TEMPORARY RIGHT OF ENTRY is customarily employed where minor construction is required (e.g., moving a fence, reconstructing a portion of a private driveway, etc.) and where the liability and maintenance responsibility will revert to the property owner. When the term "RIGHT OF ENTRY" is used, it should be followed by the desired specific use or right.

RIGHT OF ENTRY (TITLE TRANSFER) is employed when it is necessary that construction commence prior to close of the title transfer. In emergencies during construction the Engineer may negotiate a RIGHT OF ENTRY. However, if the owner wants other than the standard agreement promises, these promises must be approved by the Council to be binding. Such negotiations shall be conducted by the Real Estate Division.

Most RIGHT OF ENTRY agreements generally contain provisions to terminate the rights when construction is completed. TEMPORARY RIGHT OF ENTRY agreements end when a Notice Of Termination of Temporary Easements is filed by the Division Engineer of the Street Opening and Widening Division of the Bureau of Engineering (within 90 days after the Board's acceptance of the project).

E 144.23 EASEMENTS

For definition, see [E 120](#). An EASEMENT is a permanent RIGHT OF ENTRY. EASEMENTS are generally used for complex or extensive construction projects for permanent public use which will be maintained by the City.

In case the new construction is of a type which will not require City maintenance (e.g., rock faces) a RIGHT OF ENTRY should be negotiated instead of an EASEMENT. In fact its use is preferable to that of an EASEMENT as the acquisition of easements consumes more time and money.

Due to the nature, complexity, and permanence of some improvements such as guardrails, certain types of side slopes, retaining walls, storm drains, etc., it would not be expected that the property owner should be responsible for maintenance. Therefore the City, through acquisition of an EASEMENT, may

legally have access to and use of the property for maintenance and operation of these facilities.

The easements most frequently encountered by the Street Designer are STREET EASEMENTS and CONSTRUCTION EASEMENTS.

E 144.231 STREET EASEMENTS

Generally, a STREET EASEMENT is a strip of property acquired and controlled by the City on a permanent basis for use as a public street. The word "dedication", commonly used to refer to such an easement, is often a misnomer since a dedication is merely one of the voluntary means by which an EASEMENT has been acquired. The term "dedication" would be incorrect for example, if a STREET EASEMENT has been acquired through condemnation proceedings. A STREET EASEMENT may be acquired for construction purposes. However, its main purpose is for the accommodation of vehicular and/or pedestrian traffic. Such an EASEMENT is normally required where new streets are to be located or where existing streets are to be widened or realigned.

An IRREVOCABLE OFFER TO DEDICATE for future street widening or extension is often included as part of a subdivision. If this kind of EASEMENT is not used by the City after 25 years of existence, it expires and the property owner may apply for its relinquishment. In the meantime the property owner may use the property for nonpermanent purposes with permission.

E 144.232 CONSTRUCTION EASEMENTS (TEMPORARY RIGHT OF ENTRY)

EASEMENTS for construction purposes are usually labeled for the type of improvement involved, (i.e., retaining walls, etc.).

CONSTRUCTION EASEMENTS should not be used for purposes which are incidental to construction, such as storage of vehicles, materials and equipment. As previously indicated, RIGHTS OF ENTRY are sufficient for minor construction purposes. The indiscriminate use of CONSTRUCTION EASEMENTS when RIGHT OF ENTRY use is indicated may result in unnecessary delays and extra paper work.

E 144.233 SLOPE EASEMENTS (TEMPORARY RIGHT OF ENTRY)

Easements for slope purposes are acquired for the use of private property for purposes of sloping the ground, changing the contours or other grading operations.

On minor sloping operations the resulting maintenance is neither significant nor critical. A TEMPORARY RIGHT OF ENTRY should be sufficient. After construction the property owner assumes the

responsibility for maintenance.

SLOPE EASEMENTS that require extensive maintenance may remain the responsibility of the City and are usually permanent in nature.

The conditions that would normally indicate City maintenance are:

- a. Slopes that are very steep or of questionable geological formation or soil which is subject to slides or slippage.
- b. Where extensive erosion control is necessary and the installation, operation, and maintenance of sprinkler systems on planted slopes are expected.
- c. Slopes that are very high and need drainage ditches whose drainage structures require periodic checking and maintenance. (For example drainage structures in steep slopes abutting major and secondary highways, freeways, grade separations, or any slopes or structures not readily or reasonably accessible to the property owner.)

E 145 PROCEDURES OF ACQUISITION

This section is intended to acquaint the Engineer with some of the functions of the City in connection with the acquisition of private property for public use. The acquisition itself will be conducted by the Real Estate Division of the Bureau of Engineering. Included are some of the details of procedural rights under EMINENT DOMAIN, methods of acquisition, appraisals, and compensation.

E 145.1 METHODS

The City's acquisition and/or use of private property is effected by two basic methods. The more common method, DEDICATION, is on a voluntary basis where the property owner either donates (grants) the property concerned without charge, or voluntarily sells the property to the City. The other method, CONDEMNATION, is involuntary and requires a court order.

There are other methods by which property may be acquired but which may or may not be directly concerned with a public improvement (e.g., adverse possession, escheat, default in tax payments, etc.).

In the acquisition of property by the City, the method by which the property is obtained is affected by the extent of ownership and rights desired, ranging from a fee simple estate, which

is the largest estate known to law, to a RIGHT OF ENTRY. The degree of interest is based on the purpose to which the property is put, as well as on the duration of these rights. Where appropriate, the ultimate plan of property disposition or reversion of interest is also a consideration.

E 145.11 DEDICATION

STREET EASEMENT dedications are acquired through voluntary action. The most frequent methods of dedication

are specified in the Municipal Code under various ordinances

and subdivision laws. These regulations make it mandatory to provide street easements:

- a. For access rights to newly subdivided property.
- b. To bring secondary or major street widths up to standard dimensions when:
 1. Taking out a building permit for a multiple dwelling.
 2. Changing the zoning to a less restrictive zoning (i.e., R1 to R3).

E 145.12 NEGOTIATION

The most common form of voluntary sale of property to the City by the property owner is accomplished by NEGOTIATION through the Real Estate Division of the Bureau of Engineering.

Compensation may be either in money or in a combination of money and certain repairs, replacements, or other forms of compensation mutually agreeable to the City and the property owner.

E 145.13 CONDEMNATION

Where the owner refuses to accept the City's offer, and the completion of Public Works projects should not be delayed, the City will usually resort to condemnation procedures under "EMINANT DOMAIN".

CONDEMNATION procedures are cumbersome. For this reason their use should be avoided where possible. However, if negotiations fail, the City files a complaint with the courts requesting CONDEMNATION of the property. At the same time a sum of money equaling the appraised value of the property to be taken is deposited with the court.

Having received the case the court considers the following questions:

- a. Is the condemning party entitled to exercise the power of EMINENT DOMAIN?
- b. Is the property in question to be for public use?
- c. Is the taking of the property necessary?
- d. Is the condemnation just?
- e. Is the evidence submitted more in favor of the plaintiff (City) than the defendant (property owner)?
- f. What is the value of the property?

A prior assumption is made in this Manual that Public Works projects properly meet the requirements set forth under EMINENT DOMAIN. It is also assumed for the purposes of this Manual, that the courts will rule in favor of the City on all counts.

E 145.131 ORDER FOR POSSESSION

The time required for condemnation proceedings is uncertain. In order to permit the construction of the proposed improvement prior to the judgment, a provision in the Code of Civil Procedures states that the City may take immediate possession and use of any right of way required for a certain public use, whether the fee title thereof or an EASEMENT therefor be sought. This provision is commonly known as an ORDER FOR POSSESSION. The public use is limited to land to be used for reservoirs, waterways, utility lines, or street right of way purposes. Street right of way is used for the construction of public streets and alleys, sewers, storm drains, bridges, and their appurtenant structures.

NOTE - An ORDER FOR POSSESSION may be issued but the final construction clearance cannot be given until all displaces have been successfully relocated and usually the structure demolished.

An ORDER FOR POSSESSION having been obtained and cleared for construction, the land is then legally available for the Contractor to proceed. In cases where existing buildings or other improvements interfere with construction, the City may either issue a purchase order or include as part of the contract the remodeling or demolition of the building.

Since the timing and the proper sequence of steps of condemnation procedure are extremely important, a more detailed treatment of the subject is presented in Parts C, Operations and Control and K, Real Estate of the Manual.

E 145.2 APPRAISALS OF PROPERTY

The APPRAISAL OF PROPERTY is a determination of the fair market value and is the responsibility of the Real Estate Division of the Bureau of Engineering. However, knowledge of some of the basic appraisal principles should enable the Designer to make a more realistic overall approach in preliminary design studies.

Prior to discussing appraisal methods, two terms must be defined: MARKET VALUE and HIGHEST AND BEST USE OF THE LAND.

The MARKET VALUE of property is generally defined as the price agreed upon between a seller and a buyer, both knowing the true value of the property, the seller willing but not obligated to sell, and the buyer willing but not obligated to buy. The other term indicates that the value of the property is not limited to the present use of the property. It is generally based on the best profitable, legal, and reasonable use to which the land can be adapted.

E 145.21 VALUE OF PROPERTY

Three basic methods of appraising property are COMPARABLE SALES, REPRODUCTION COSTS, and CAPITALIZED COSTS. All three methods are reliable when properly applied and many appraisers use one or all three as a check. Experience and good judgment are necessary regardless of which method is used. A brief explanation of these appraisal methods is presented here.

a. **COMPARABLE SALES:** This method compares sales of similar property in a given vicinity within a reasonable time prior to condemnation or other acquisition activity. The main disadvantage of this method is that no two properties are identical. Other disadvantages are that recent comparable sales are not always available and some factor must be used to bring the prices of older sales up-to-date or the sales are so recent that they reflect the effects of condemnation activity in the area.

b. **REPRODUCTION COSTS:** This method evaluates the cost of reproducing the existing improvements. It is most applicable where existing improvements are proper, adequate, and reasonably adapted to a particular area. Depreciation or obsolescence of the improvements must also be taken into consideration.

Where a building has little or no market value, the value of the land is determined and the cost of building reproduction, less depreciation is added to arrive at a total

figure. In the acquisition of this type of property, the payment can amount to little more than the value of the land.

c. **CAPITALIZED COSTS:** This method is used for the purpose of determining the value of income property. It is based on the estimate of the capital amount of investment required to yield a net income at a reasonable rate of interest for a given piece of property.

For example, an apartment house produces \$12,000 gross annual income. From this amount the annual taxes, maintenance, depreciation and other operating expenses are subtracted leaving a net annual income of \$7,800. The net income is then divided by the interest rate (as determined by what the prudent man would be willing to pay) which in this case will be assumed to be 8 percent. The \$7,800 divided by the 8 percent equals \$97,500.

Therefore, it is assumed that \$97,500 would have to be invested to produce an annual net income of \$7,800 and the building appraised worth is \$97,500.

E 145.22 SEVERANCE DAMAGES

The discussion up to this point covers the evaluation or appraisal of the acquisition or use of a parcel in its entirety. Most street widening projects require only **PARTIAL PARCEL ACQUISITION**. In addition to the taking of part of the property, there may be **SEVERANCE DAMAGES** to the property remaining in the owner's possession. This is the loss of value sustained by the remaining parcel. The owner is entitled to compensation for this loss as well as payment for the square-footage taken. If the estimate of damages resulting from restrictions of rights and use or from partial acquisition is so extensive as to almost equal the market value of the entire parcel, it may be more expedient to acquire the entire parcel.

E 146 PROCEDURES OF RELINQUISHMENT

Relinquishment of property or property use, refers to property acquired for public use on a permanent basis such as a street or alley easement where after a lapsed period of time either the City or the owners of the abutting property find it expedient to close the street to public use.

There are two methods by which the use of public streets is either relinquished or restricted. These are termed "ABANDONMENT" and "VACATION " and "WITHDRAWAL FROM PUBLIC USE."

E 146.1 ABANDONMENT/VACATION

To abandon/vacate a public street, the City or the owners of the abutting property usually make a request for vacation when the street no longer serves a public use. An example would be the realignment of a highway in which a strip of land used as part of the existing highway is no longer needed for the new alignment. Other vacations may take place where a redevelopment project changes the existing street pattern and the existing streets are no longer needed.

Upon conclusion of vacation proceedings, control of the vacated property returns to the owners of the underlying fee, subject to any easements retained.

E 146.2 WITHDRAWAL FROM PUBLIC USE

This differs from VACATION or ABANDONMENT in that streets are generally withdrawn from public use at the request of the Bureau of Street Maintenance and with the approval of the City Council. A withdrawal is usually requested for streets that are prohibitively expensive to maintain, in poor condition or hazardous to use, or when it is unlikely that the street will be improved to acceptable City standards in the near future. Examples are streets in slide or subsidence areas, or hillside streets that are narrow, winding and steep. Such streets are usually posted with a sign saying "WITHDRAWN FROM PUBLIC USE" and a statement to the effect that persons using the street do so at their own risk. Barricades may be used except where owners of abutting property require continued access. Street right of way withdrawn from public use in this manner continues to be owned by the City. The street may be reopened at any time by Council action. WITHDRAWAL FROM PUBLIC USE should not be confused with the temporary barricading of streets during construction, which requires an order from the Board of Public Works.

In specialized areas, property owners have joined together making a common request for WITHDRAWAL FROM PUBLIC USE for security purposes. They accept the maintenance responsibility and may gate the entrance.

E 146.21 VACATION REQUIREMENTS

For the purpose of this Part of the Manual only, some of the more pertinent requirements for effecting a VACATION will be described. To become more fully acquainted with the many procedural details involved, refer to the Los Angeles Municipal Code (LAMC), the Streets and Highways Code and Part D, Land Development.

In most cases in order for the street or alley to be vacated all of the owners of the abutting property must approve or agree to the VACATION. Property owners not having reversionary rights must also agree and sign a waiver holding the City harmless (see [E 146.22](#)). Where 100 percent agreement is not achieved, under extenuating or justifiable circumstances the City will proceed with the VACATION. However, a bond is posted (paid for by the property owners requesting the VACATION) to protect the City from any possible damage suits that may arise from dissenting property owners as a result of the proposed VACATION.

In addition to the approval of the property owners, the consent of the City Council and other public agencies must be obtained. The Council establishes the VACATION conditions to be met which could include most of the following:

- a. The closing of the street must not interfere with the Specific General Plan or the logical development of the area. This is checked by the Planning Department.
- b. The closing must not interfere with the traffic pattern or create a hazardous traffic condition. This is checked by the City Department of Transportation.
- c. The denial of access to emergency vehicles must not jeopardize the safety of nearby residents. This is checked by the Fire and Police Departments.
- d. The closing must not hamper the operation or installation of necessary facilities of the various public utilities. In some cases, a portion of the EASEMENT may have to be set aside or reserved.

When all the conditions are met, the Council approves and publishes the RESOLUTION TO VACATE, and the VACATION is completed. The owner may then use the vacated property for all of the customary private uses, with the exception of any rights retained in the resolution.

E 146.22 REVERSION

When a street easement is vacated, the property involved reverts to the holder of the underlying fee. This right to the abandoned property is called a "REVERSIONARY INTEREST." This means that if property is dedicated by the property owner for public use, the property owner has a REVERSIONARY INTEREST and is entitled to the use of this property upon completion of VACATION proceedings. Where the City has title, the abandoned right of way remains the property of the City.

Normally for tract subdivisions the ownership of the lots within the tract extends to the centerline of the street, and that portion reserved for street use reverts to the abutting property owner upon VACATION. Land subdivided by metes and bounds description may not necessarily use the center line of the street for the division of property and therefor a title search is usually necessary in order to determine the record title owner.

E 150 LEGAL LIABILITY AND MAINTENANCE RESPONSIBILITY

The property owner and the City assume responsibility for the maintenance of specific improvements lying within public dedications, private streets and easements. Either may be held liable for damages resulting from injuries incurred as a result of the negligent maintenance of improvements within the rights of way.

The information presented here is to acquaint the Designer with obligations in order to minimize liability claims or excessive maintenance costs.

For more specific details in the area of street maintenance and legal liability, refer to Bureau of Street Maintenance Manual and the City Attorney's Office.

E 151 CITY LIABILITY AND RESPONSIBILITY

Generally, responsibility for maintenance and legal liability go hand-in-hand. That is, if the City is responsible for maintenance of an area it is also legally liable within the same area. The City is primarily responsible for maintenance of existing street improvements and that portion of curb and sidewalk lying within the "curb returns" of the street and alley intersections (except for special types such as terrazzo, granite, tile, etc.). Refer to [FIGURE E 151](#).

E 151.1 BUREAU OF STREET MAINTENANCE

An outline of the general area of maintenance responsibilities for Street Maintenance Projects is:

a. Improved Streets:

1. Resurfacing - Replacing pavement in poor condition by removing the areas of insufficient thickness, scoring the high spots and high crown areas, and providing the entire area with a new pavement or smooth surface.
2. Reconstruction - Used where the crown surface is considerably higher than the standard crown section for the established street and where resurfacing alone would result in unsatisfactory drainage conditions, create excessively low curb faces, and make vehicle parking more difficult.
3. Gutter - In streets of rock and oil or asphalt concrete pavement having grades of 0.4 percent or less and in other locations where costs of gutter maintenance are

excessive, concrete gutters should be constructed.

b. Unimproved Streets:

On unimproved streets without an established grade and upon which private parties propose the application of oil, the Bureau of Street Maintenance might prepare the surface to the extent of smoothing by a grader where necessary. Those which have been previously oiled could have the potholes filled with bituminous materials. Grading and other maintenance work may be done on streets withdrawn from public use if necessary to provide access to abutting Property.

c. Improved Alleys:

Asphalt concrete and Portland cement concrete alleys will be given the same maintenance service as streets. Alleys improved with 2 inches or thicker plant-mix, with an established grade and a V-shaped cross-section, will be given the same maintenance services as streets with rock and oil surfacing. Alleys with oiled surface will have the potholes repaired if the surface is not entirely worn. and will be cleaned as needed.

d. Unimproved Alleys:

Dangerous potholes or rough conditions will be corrected by smoothing with a grader and cleaning will be done on request. Areas not specifically designated as the City's responsibility and which may be considered the responsibility of others (see the following section) may be repaired, corrected or temporarily maintained by the City at the City's expense under certain conditions. Refer to the City of Los Angeles, Bureau of Street Maintenance Manual for criteria and additional information.

E 152 PROPERTY OWNER LIABILITY AND RESPONSIBILITY

The property owner's maintenance responsibilities within the publicly dedicated area are generally confined to those portions extending from the edge of pavement to the property line and include curb, gutter and sidewalk. The property owner or the City may also be held liable, either singly or jointly, for private improvements extending into such an area where the existence or condition of the improvements causes accidents, injuries, damages, etc. (see [E 671](#), Interference of Existing Improvements). In the interest of all parties concerned, the City makes an inspection and can notify the property owner where the owner fails to take the initiative in correcting

undesirable conditions. This procedure may be followed only where the prime responsibility for maintenance lies with the property owner.

Under the California State Streets and Highways Code (see [E 115](#)), 1911 Act, Part 3, Chapters 22 and 27, the City is empowered to cite the property owner to make certain improvements or corrections to improvements. After a reasonable time has elapsed and the owner has taken no action, the Bureau of Street Maintenance is empowered to improve or correct the condition. The cost is then assessed directly against the property.

The applicability of Chapters 22 and 27 is briefly described in E 152.1 and E 152.2, respectively.

E 152.1 CHAPTER 22

Chapter 22 permits the City to serve a "NOTICE TO REPAIR" to the property owner where an unsafe condition or a condition which interferes with the public convenience exists on sidewalks, curbs, parkways, bulkheads, retaining walls or other works.

E 152.2 CHAPTER 27

Where sidewalks, gutters, pavement, driveways, curbs, storm drains, sewers and parkway trees have been constructed on more than 50 percent of the front footage between intersecting streets on one-side or more than 50 percent of the abutting footage of the full property width (property line-to-property line) of an alley, the owners fronting or abutting on the unimproved portions may be required by Council action to complete the improvement on the remaining portion of street or alley.

The owners may also implement the completion of the improvement by voluntary petition.

Where a certain sequence of construction steps is necessary, such as providing drainage or sewerage facilities or for the sake of uniformity of construction, the usual practice is for the Bureau of Street Maintenance to do the work and to assess those owners who are directly benefited.

E 153 OTHER RESPONSIBLE PARTIES

The City may also use the street right of way for purposes other than traffic. For example: transit companies may operate facilities under a franchise; private or public utilities upon being granted a permit, may install facilities or other uses over, under or on the public way; and private owners upon being

granted permit may have buildings with advertising signs , theater marquees or basement constructed. All such uses are subject to fees and specific conditions including relieving the City of liability and maintenance.