

# **CHAPTER 2 CIRCULATION**





VISION 2025 GENERAL PLAN DOWNEY, CALIFORNIA

## Downey Vision 2025 Chapter 2. Circulation Chapter

#### **ADOPTED 1-25-2005**

#### INTRODUCTION

The safe and efficient movement of people and goods through cities is provided by a circulation system ranging from sidewalks to roadways. As population and economic growth continues, cities have the challenge of improving the circulation system to deal with increased demands. The growth also impacts the infrastructure needed to provide utilities and other services needed for those who live, work, and visit the City.

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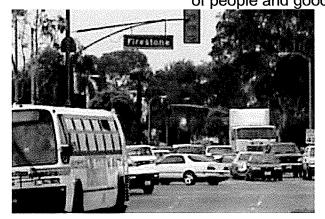
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### TRAFFIC CONGESTION

Issue 2.1. Traffic congestion impacts the community.

One of the most pressing concerns for those who live, work, and visit in Downey is traffic congestion. An adequate circulation network is necessary to provide for the movement of people and goods through and within the City. Downey's



circulation network primarily consists of roadways. The Downey Vision 2025 Circulation Plan categorizes roadways into classifications based on volume and purpose. Volume refers to the amount of existing and proposed amounts of vehicle trips the roadway can accommodate. Purpose refers to whether the roadway is designed to be used as a means to access adjacent properties and/or as a through route.

The following is a description of the classifications and the roadways within the City placed in the classification by the Downey Vision 2025 Circulation Plan.

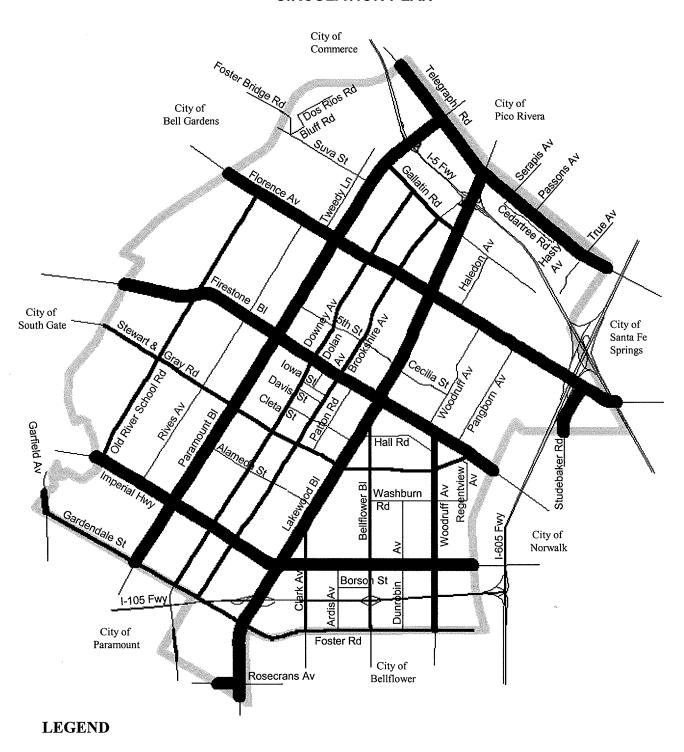
#### o Freeway.

Freeways are designed for through traffic traveling across the City. The main difference between freeways and other roadways is that there is no direct access to properties abutting freeways and access from cross-streets is restricted at specific points (onramps and off-ramps). Freeways form the basis of the regional transportation network and are therefore administered by federal and state transportation agencies. Freeway capacity is important to local communities since traffic congestion is worsened on arterial roads and other local streets when used as alternatives where freeways are not available.

The following are freeways within or near Downey:

- Santa Ana Freeway (Interstate 5)
- Glenn Anderson Freeway (Interstate 105)
- San Gabriel River Freeway (Interstate 605)
- Long Beach Freeway (Interstate 710), located one mile west of Downey western city limits

#### FIGURE 2.1-1 CIRCULATION PLAN



Major Arterial
Primary Arterial
Secondary Arterial
Collector

SCALE 1 INCH = 0.78 MILE



#### o Major Arterial.

Major arterials are designed to provide access to the freeway system. When freeways are not available, major arterials also serve as through routes for traffic crossing the City. In contrast to a freeway, adjacent properties may have driveway access onto the roadway. Access to adjacent properties should be limited wherever possible to minimize cross-traffic, which has an effect on congestion and accidents. Major arterials provide six travel lanes and a median divider. On-street parking should be prohibited to maximize roadway capacity. Single or double-left turn lanes should be provided at intersections.

The following roads in the City are considered major arterials:

- Telegraph Road
- Florence Avenue
- Firestone Boulevard
- Imperial Highway
- Paramount Boulevard
- Lakewood Boulevard
- Studebaker Road

#### Primary Arterial

Primary arterials are designed to provide access through parts of the City to major arterials. Access to adjacent properties is restricted to reduce congestion and accidents. Primary arterials provide four travel lanes, two in each direction, and a median, in addition to on-street parking lanes. Single-left turn lanes should be provided at intersections.

The following roads in Downey are considered primary arterials:

- Woodruff Avenue, south of Firestone Boulevard to City Limits.
- Garfield Avenue

#### Secondary Arterial

Secondary arterials are designed to provide access through parts of the City, but generally do not have the same capacity as major and primary arterials. Secondary arterials generally provide four travel lanes, two in each direction, in addition to parking lanes.

The following roads in Downey are considered secondary arterials:

- Old River School Road
- Downey Avenue
- Brookshire Avenue
- Foster Road/ Gardendale Street
- Clark Avenue
- Bellflower Boulevard

#### Collector

Collector streets are designed to provide access to arterial roads and the regional roadway network from local streets. Collector streets are not intended to be used as through routes to travel through the City, but rather, intended to collect traffic from local streets to be distributed at arterial roads. Typically, collectors provide, at most, one travel lane in each direction and curbside parking on both sides.

#### Local

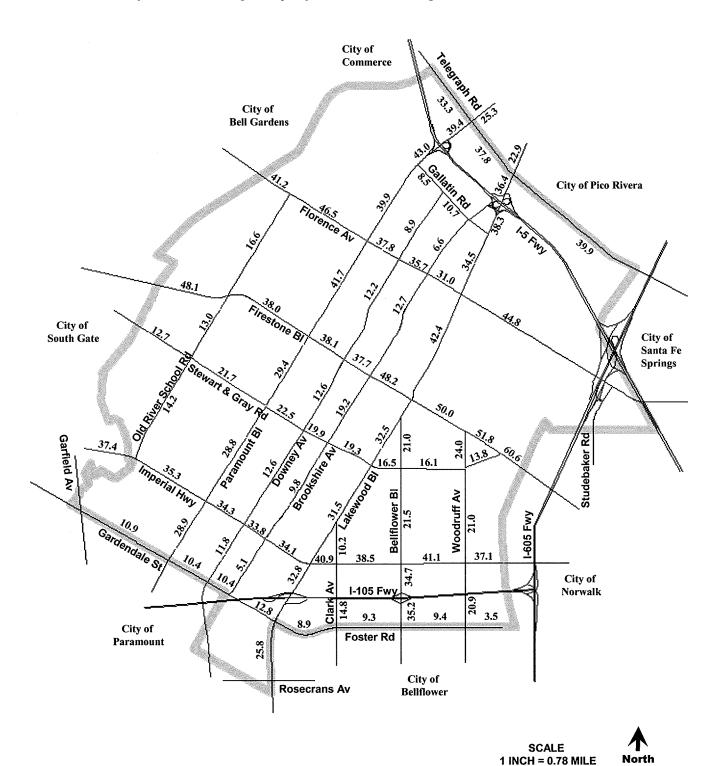
Local streets are designed to provide access to properties that front upon the street and for access to the adjacent neighborhood. Local streets are not intended to be used as through routes from one neighborhood to another neighborhood, and so are typically designed with narrow widths intended to slow traffic speeds. Most local streets provide, at most, one travel lane in each direction and curbside parking on both sides. The majority of streets in Downey are classified as local streets.

Traffic flow is measured both on a daily basis and during peak (commuter) hours. To determine the daily basis, the ADT (Average Daily Trips) is measured by counting the number of vehicles during a 24-hour period that travel pass a given mid-block point along a road segment and apply that figure to the corresponding road segment. For peak hour periods, the daily volumes are used to derive volume-to-capacity ratios for intersections to determine the level of service (LOS) for intersections. The LOS is used to represent the degree of traffic congestion and is used similar to a grading scale with "A" as best through "F" as worst.

Traffic congestion is expected to worsen due to increases in population and housing growth in the region which creates increased traffic that travels through the City, but necessarily generated by land uses within the City, in addition to traffic generated by land uses within the City. Based on projected traffic volumes, many intersections are expected to reach unacceptable LOS, defined as "E" or "F". Therefore, the general plan advances programs to reduce congestion to provide acceptable LOS, defined as "A", "B", "C" or "D".

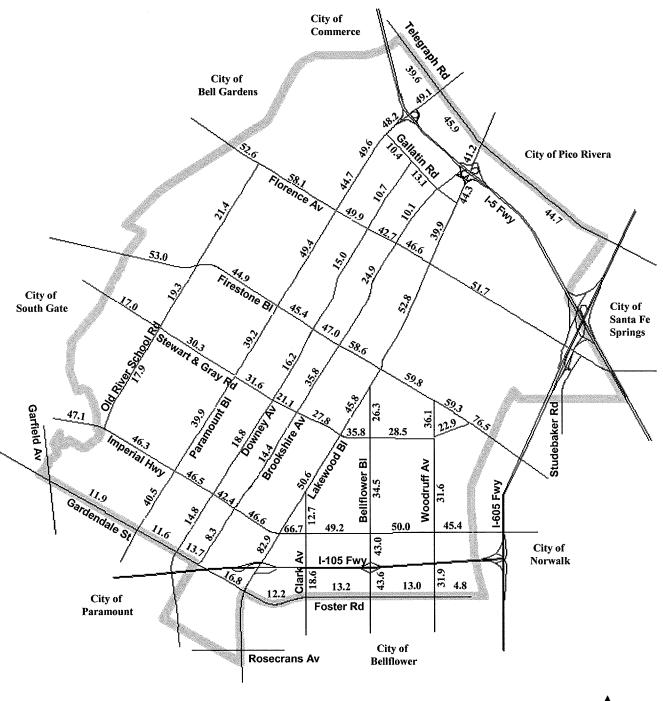
## FIGURE 2.1-2 EXISTING TRAFFIC VOLUMES

#### Numbers represented average daily trips for each road segment in thousands



## FIGURE 2-1.3 PROJECTED TRAFFIC VOLUMES

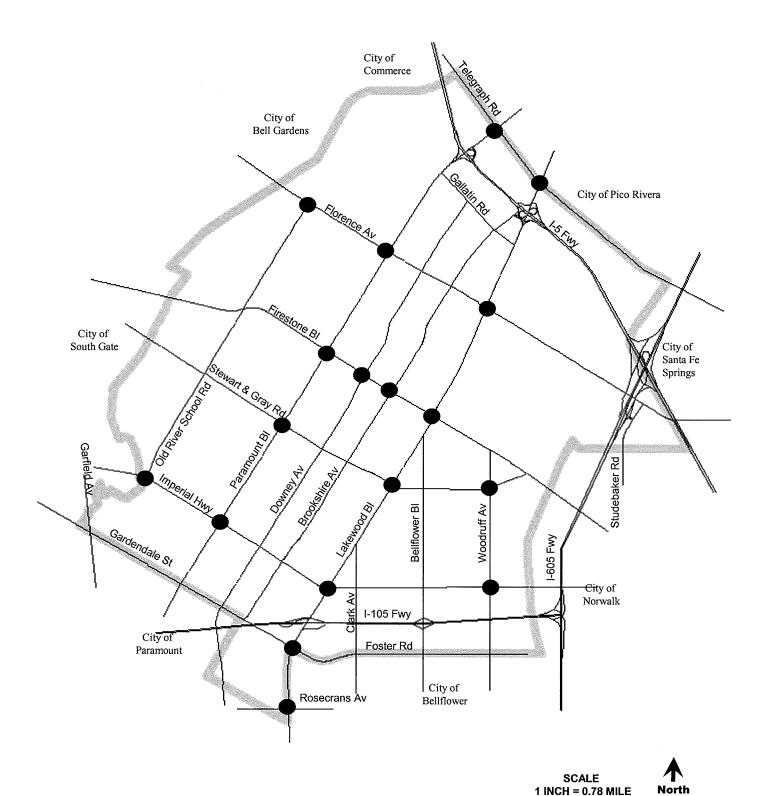
#### Numbers represented average daily trips for each road segment in thousands



SCALE 1 INCH = 0.78 MILE



FIGURE 2-1.4
INTERSECTIONS REQUIRING ROADWAY IMPROVEMENTS



The two primary methods to address traffic congestion are: (1) to increase the capacity of the existing system, or (2) to reduce demand.

The most obvious way of increasing roadway capacity is to add travel lanes so that a greater number of vehicles can travel through a road segment. Additional travel lanes may be added by either removing on-street parking on road segments where there is on-street parking, or by physically widening the width of streets to accommodate more travel lanes. Widening streets at intersection is more critical than at segments between intersections since cross-traffic restricts traffic flow and the need for turning movements (right turns and left turns) additionally creates queues on turning lanes that overflow and impede traffic flow. For this reason, additional roadway width may be required at intersections to create additional turning lanes to keep demand for left turns and right turns from impeding traffic flow.

In addition to physical improvements, strategies termed Transportation System Management (TSM) may be used to improve traffic flow with modifications in the operation of existing transportation facilities. This may include developing a signal system master plan to promote state-of-the-art intelligent transportation system (ITS) improvements to better service on-going traffic conditions.

FIGURE 2-1.5
TYPICAL ROADWAY RIGHT-OF-WAY WIDTHS

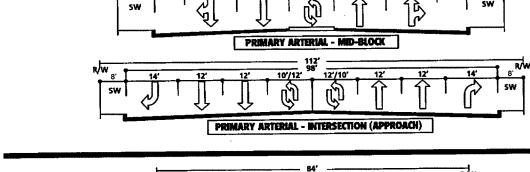
Roadway Type	Typical Street Width	Typical Right-of-Way	Number of Lanes
Major Arterial	90 feet	106-114 feet	6 lane divided
Primary Arterial	84 feet	104 feet	4 lane divided
Secondary Arterial	64 feet	84 feet	4 lane undivided
Collector	44 feet	60 feet	2 lane undivided

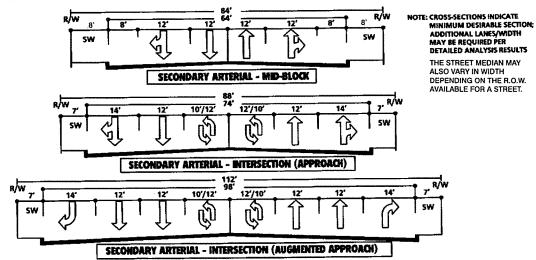
 Additional right-of-way required at major intersections and regional truck routes

TYPICAL ROADWAY RIGHT-OF-WAY CROSS SECTIONS 106' - 114' -R/W R/W 8'-12' SW SW MAJOR ARTERIAL - MID-BLOCK 114' - 122' 10'/12' 98' 17 12'/10' SW MAJOR ARTERIAL - INTERSECTION

**FIGURE 2-1.6** 

138' - 146' 10'/12' 122' 12 R/W 8'-12' 8'-12' 12'/10 12 SW MAJOR ARTERIAL - INTERSECTION (AUGMENTED APPROACH) R/W R/W PRIMARY ARTERIAL - MID-BLOCK R/W R/W 10/12 12'/10'





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#### Goals, Policies, and Programs

## Goal 2.1. Increase the capacity of the existing street system.

Policy 2.1.1 Maintain a street system that provides safe and efficient movement of people and goods.

- Program 2.1.1.1. Maintain intersections and street segments at acceptable service levels and not worsen those intersections and street segments currently operating at unacceptable levels.
- Program 2.1.1.2. Establish a street improvement master plan prioritizing areas to be included in annual updates of the capital improvement program.
- Program 2.1.1.3. Develop a signal system master plan to promote state-of-the-art intelligent transportation system (ITS) improvements to better service on-going traffic conditions.
- Program 2.1.1.4. Prohibit on-street parking on major, primary, and secondary streets to increase roadway capacity and improve safety
- Program 2.1.1.5. Widen street rights-of-ways as necessary and consistent with providing an adequate level of service.
- Program 2.1.1.6. Encourage appropriate turn lanes and other operational improvements at major arterial intersections identified as congested.
- Program 2.1.1.7. Review and implement applicable standards for parking of vehicles on public streets in the city.

Policy 2.1.2. Promote improvements in the street system through the development process.

 Program 2.1.2.1. Establish a development recovery fee program to require new developments and expansions of existing developments to pay the cost of circulation improvements.

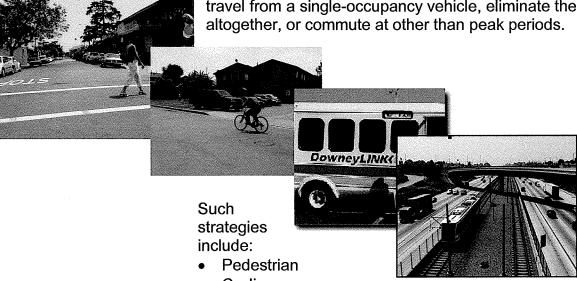
- Program 2.1.2.2. Ensure the mitigation of off-site traffic impacts by development projects to the maximum extent feasible, including the installation or upgrade of traffic signals at intersections and/or contribution of its fairshare towards mitigating impacts.
- Program 2.1.2.3. Reduce the number of driveway access points on streets.
- Program 2.1.2.4. Promote site designs, street patterns, and street signalization that discourage the use of local streets as through routes.
- Program 2.1.2.5. Discourage projects that generate high amounts of traffic onto local and collector streets.
- Program 2.1.1.6. Identify and concentrate land uses with high traffic generation near major transportation corridors and public transit facilities.

## TRAVEL ALTERNATIVES

Issue 2.2. There are a variety of methods to relieve traffic congestion.

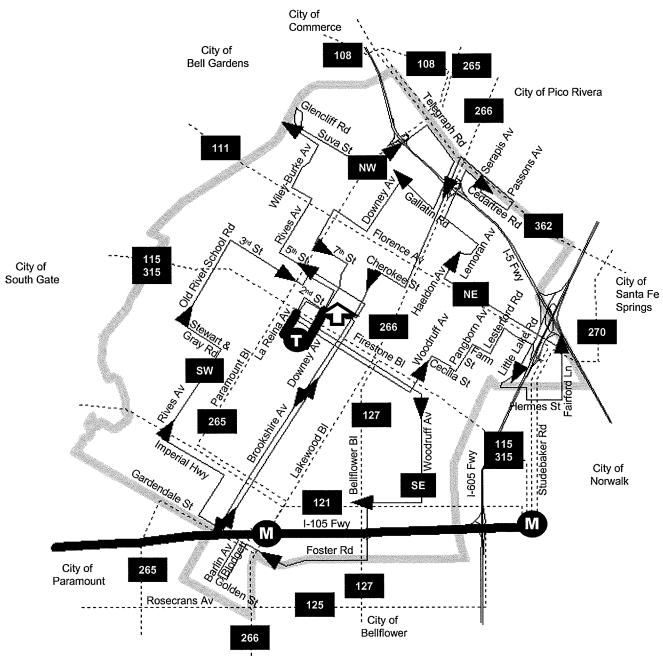
Although widening streets and otherwise increasing the capacity of a roadway network is the most obvious method to relieve traffic congestion, the city may be limited in its ability to continuing widen streets to address traffic congestion in the long term. A balanced strategy for relieving traffic congestion must include making more efficient use of the existing system without necessarily adding carrying capacity (e.g. additional travel lanes or widening). Transportation Demand Management (TDM) is a general term for strategies that focus on travel demand rather than road supply to address traffic needs.

Transportation Demand Management involves strategies encouraging individuals to either change their mode of travel from a single-occupancy vehicle, eliminate the trip altogether, or commute at other than peak periods.



- Cycling
- Intercity Bus Transit (MTA)
- IntraCity Bus Transit (Downey Link)
- Light Rail (Green Line MTA)
- Promoting Carpooling
- Alternative Work Schedules

FIGURE 2-5.1
MAP OF TRANSIT ROUTES



#### **LEGEND**

**Downey Link (IntraCity Transit)** 

0

**MTA Green Line Station** 

..... MTA Bus Lines

**Downey Transit Center** 

MTA Green Line (Light Rail)

合

**Downey City Hall/ Civic Center** 

SCALE 1 INCH = 0.78 MILE



#### Goals, Policies, and Programs

Goal 2.2. Promote the use of alternative modes of travel, other than single-occupant vehicles, to relieve traffic congestion.

Policy 2.2.1. Promote walking as an attractive alternative to vehicular transportation.

- Program 2.2.1.1. Promote site development design that is safe and convenient to pedestrians.
- Program 2.2.1.2. Provide sidewalks in new development and major remodeling consistent with the sidewalk Master Plan.
- Program 2.2.1.3. Promote street intersection design and signalization that are safe and convenient to pedestrians.

Policy 2.2.2. Promote bicycling as an attractive alternative to vehicular transportation.

- Program 2.2.2.1. Encourage the use of bicycling as a form of transportation for employment commuting and business purposes, in addition to recreational purposes.
- Program 2.2.2.2. Establish a bikeway master plan to link employment centers, recreational facilities, and bikeways along the Rio Hondo River, the San Gabriel River, Union Pacific Railroad Line, and those of neighboring communities via a network of bike routes, lanes, and paths.
- Program 2.2.2.3. Promote the provision of bicycle racks at retail service and other businesses for use by customers and employees.
- Program 2.2.2.4. Encourage the provision of showers, changing rooms, and bicycle storage areas at retail, office, industrial, and other businesses for use by employees.

Policy 2.2.3. Reduce the number and length of vehicle trips generated by land uses in Downey.

- Program 2.2.3.1. Promote the development of park-andride facilities.
- Program 2.2.3.2. Promote ridesharing through provision of information to the public.
- Program 2.2.3.3. Promote on-site child-care facilities at major employment centers.
- Program 2.2.3.4. Promote home-based businesses.
- Program 2.2.3.5. Encourage efforts to shift the time of day of trips away from peak commuter hours through the use of flex-time, staggered working hours, and other means.
- Program 2.2.3.6. Promote mixed commercial and residential use projects in proximity to employment centers.

Policy 2.2.4. Promote public transit as an attractive alternative to vehicular transportation.

- Program 2.2.4.1. Promote bus shelters and bus benches at key transit transfer stops.
- Program 2.2.4.2. Maintain the intracommunity transit service (DowneyLINK) at a minimal fare amount for users.
- Program 2.2.4.3. Maintain the intracommunity transit service (DowneyLINK) with fixed routes covering most sections of the City.
- Program 2.2.4.4. Evaluate providing a transit stop for the intracommunity transit service (DowneyLINK) at the Green Line Metro Rail Stations at Lakewood Boulevard & the I-105 Freeway and at Studebaker Road in the City of Norwalk to provide added convenience for transfer passengers to MTA routes.
- Program 2.2.4.5. Evaluate providing transit stops for the intracommunity transit service (DowneyLINK) at transit stops of intracommunity transit services of adjacent communities.

- Program 2.2.4.6. Promote and maintain the appearance, cleanliness, and maintenance of transit stops.
- Program 2.2.4.7. Coordinate and evaluate with MTA and other public transit authorities to assure their planning efforts will meet the changing and increasing public transit needs of the City, especially along Lakewood Bouelvard.
- Program 2.2.4.8. Encourage Downey business to provide employee information to public transit authorities to assist in their planning for public transit services.
- Program 2.2.4.9. Review projected development and redevelopment of land with public transit authorities to determine whether alterations to service will be required.

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## TRUCK TRAFFIC

Issue 2.3. Truck traffic has a negative impact on parts of the City.

Truck traffic has greater needs of the roadway network than passenger vehicles due to their greater weight and height. These greater needs result in disproportionately negative impacts associated with truck traffic, such as

- Increased wear and tear on road pavement.
- Excessive noise, vibration, dust, and visual blight.
- Traffic delays due to the slow turning movements of trucks at intersection, especially those where arterials do not meet at right (90-degree) angles.

In to order to prevent the use of streets not appropriate for truck traffic, the city has designated truck routes (see Map) for use by heavy trucks.



Truck turning movements are a major cause of traffic delays

Downey has especially high truck traffic due to its proximity to the major seaports of the Port of Los Angeles and the Port of Long Beach. The majority of exported goods delivered to the rest of the nation through the Los Angeles region travels through the southeast portion of Los Angeles County, appropriately termed the Gateway Cities subregion. To facilitate use of rail lines to accommodate container traffic carrying exported goods, the Alameda Corridor project was completed to upgrade and underground the major north-south rail line along Alameda

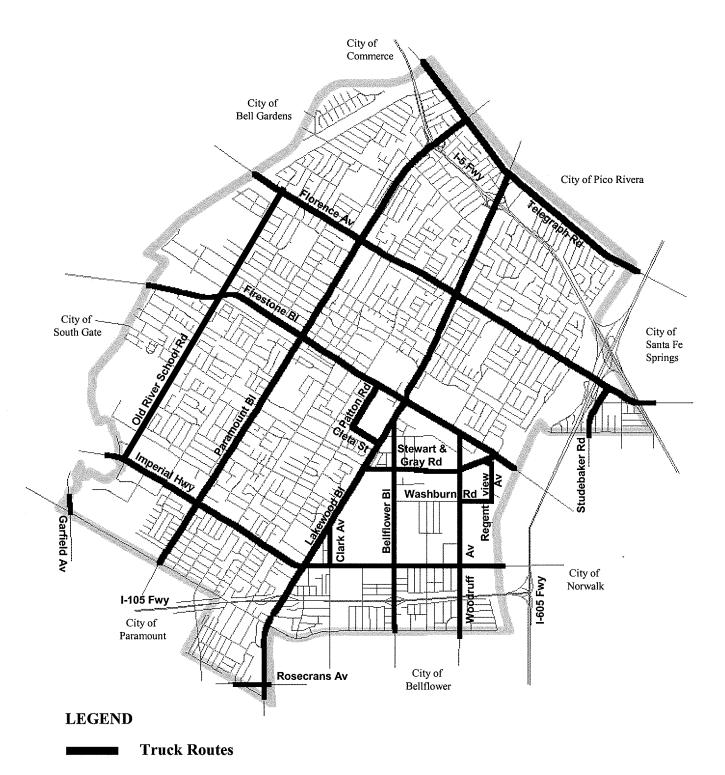
Avenue (located 4 miles to the west of the

city) leading to the ports.

Despite the construction of the Alameda Corridor, great increases in container traffic are expected to continue to be generated by the ports for years to come thereby increasing demands on the major north-south routes in the region, especially the I-710 Freeway located approximately 1 mile west of the western city limits. Due to the worsening congestion of the I-710 Freeway during off-peak hours as well as peak hours due to truck traffic, an alarming increase in truck traffic has occurred on local streets in City as trucks find north-south arterials, such as Lakewood Boulevard, alternatives to the I-710 Freeway. Due to this, it is vital to support the upgrade of major north-south truck routes to minimize these impacts onto local streets.

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## FIGURE 2-3.1 MAP OF TRUCK ROUTES



SCALE 1 INCH = 0.78 MILE



Additionally, the city's east-west routes are experiencing increasing levels of truck traffic due to spillover from the demand from the ports but also due to demand from land uses that generate high amounts of truck traffic. Examples of such uses, such as general warehouses, truck parking, truck company headquarters, and distribution centers. Although Downey is limited in restricting such land uses outside its borders in neighboring cities, the city has the option of requiring a conditional use permit or other discretionary process to allow determination of whether the use is appropriate within a particular area and if the use will benefit the community.

#### Goals, Policies, and Programs

#### Goal 2.3. Reduce adverse impacts from truck traffic.

Policy 2.3.1 Promote the safe and efficient movement of truck traffic through the City.

- Program 2.3.1.1. Enforce truck traffic to use designated truck routes in the City.
- Program 2.3.1.2. Co-ordinate with local, regional, and state agencies involved in mitigating truck traffic impacts in the region.
- Program 2.3.1.3. Widen street right-of-way to accommodate truck turning movements.
- Program 2.3.1.4. Promote efforts to encourage the use and extension of the railroad transportation corridors (including the Alameda Corridor) to relieve traffic on city streets.
- Program 2.3.1.5. Support truck mobility efforts to keep container truck traffic traveling through the region on freeways.

Policy 2.3.2. Minimize negative impacts associated with truck traffic.

Program 2.3.2.1. Discourage truck parking on public streets.

- Program 2.3.2.2. Maintain landscape islands on and/or adjacent to truck routes with mature specimen fully grown landscape screens to minimize noise, dust, and visual impacts.
- Program 2.3.2.3. Promote property development designs along truck routes that minimize noise, dust, and visual impacts through the use of berms, landscape screening, walls, and other design features.
- Program 2.3.2.4. Ensure that land uses generating high amounts of truck traffic provide compensation to the city for projected pavement wear of public streets.

Policy 2.3.3. Discourage land uses that generating high amounts of truck traffic.

- Program 2.3.3.1. Discourage land uses that attract high amounts of truck traffic without corresponding benefits to the community.
- Program 2.3.3.2. Provide discretionary approvals for land uses generating high amounts of truck traffic, including general warehouses, truck parking, truck company headquarters, and distribution centers.

## REGIONAL TRAFFIC

Issue 2.4. Much of Downey's traffic originates from outside the City.

The general plan addresses the amount of traffic generated by land uses located within the city's borders. The amount of traffic generated by land uses outside the city's borders impact Downey due to the amount of vehicle trips, termed through traffic, that originate and end outside Downey but still travel through the city en route to destinations. Much of the through traffic is accommodated by the regional freeway network and the function of the major arterials is primarily for access to freeways. Increasingly, major arterials are now being used as through routes due to heavy congestion on freeways.

For this reason, it is important to view the city's roadway network as part of a larger regional transportation network which focuses on freeways as the primary means for handling traffic through the region. Therefore, it is important to support proposed improvement projects to both the I-5



Freeway and the I-710 Freeway to accommodate through traffic and minimize the use of arterial roads and other city streets as alternatives for traffic traveling through the city. The City has joined other cities potentially impacted by the I-5 improvement project in forming the I-5 Joint Powers Authority (JPA) in expressing the need to minimize the impact on properties in proximity to the freeway right-ofway.

Improvements to the regional transportation network require coordination with other agencies towards improvement to the regional network. Improvements to the regional network will improve traffic flow on freeways and minimize the use of arterial roads and other city streets as alternative routes for trips across the City. Improvements should be consistent with the Regional Transportation Plan (RTP), prepared by the Southern California Association of Governments (SCAG).

The Congestion Management Plan (CMP) is a county-wide transportation plan prepared by the County Metropolitan

Transportation Authority (MTA). The CMP was created for the following purposes:

- To link land use, transportation, and air quality decisions.
- To make the most effective use of all transportation modes (highways, streets, and roads, rail,bus, demand management, bicycle and pedestrian travel) in managing congestion through the CMP process.
- To require local jurisdictions to examine the impacts of land use decisions on the regional transportation system and be responsible for mitigating these impacts.

As part of the CMP, Downey is required to monitor arterial congestion levels, and implement an adopted trip reduction ordinance and land use analysis program. In addition, the key component is the deficiency plan through which jurisdictions track development activity as "debits" and transportation improvements as "credits", and must maintain a positive balance of "credits" over "debits". There are three CMP-monitored intersections within or at Downey's borders: Lakewood Boulevard at Firestone Boulevard, Rosemead (Lakewood) Boulevard at Telegraph Road (at the north city limits with Pico Rivera), and Lakewood Boulevard at Rosecrans Avenue (at the south city limit with Bellflower). The City is required to monitor the first two intersections while the City of Bellflower monitors the third.

#### Goals, Policies, and Programs

## Goal 2.4. Reduce adverse impacts onto city streets from traffic traveling through the region.

Policy 2.4.1. Discourage the use of city streets as through routes for traffic traveling through the region.

- Program 2.4.1.1. Coordinate with CalTrans, MTA, SCAG, Gateway Cities COG and other agencies to promote multi-modal improvement strategies to improve the regional transportation network.
- Program 2.4.1.2. Coordinate with I-5 Joint Power Authority regarding increasing capacity of the I-5 Freeway in a method that minimizes impacts on private properties.

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- Program 2.4.1.3. Support efforts to upgrade the I-710 freeway to address and restrict container truck traffic.
- Program 2.4.1.4. Comply with provisions of the Congestion Management Plan, adopted by Los Angeles County.
- Program 2.4.1.5. Support regional efforts to develop high-speed trains and other modes of regional travel other than single-occupant vehicles.

## **PARKING**

Issue 2.5. There is a lack of parking in some parts of Downey.

Parking is sometimes considered an issue separate from traffic. However, parking is directly related to traffic since the lack of parking may increase traffic volumes or reduce roadway capacity. The lack of off-street parking creates demands for on-street parking, which may eliminate opportunities for travel lanes and reduce roadway capacity. Furthermore, the lack of off-street parking may cause vehicles to re-circulate streets in search of parking, which increases traffic volumes and congestion.



In various parts of the City, a shortage of off-street parking spaces exists due to demand created by land uses established before definitive parking standards were in place. This deficiency results in a spillover of parking demand onto adjacent properties and streets. Wherever possible, additional parking should be required when these uses are remodeled or upgraded.

new construction also need to be evaluated to better reflect vehicle ownership rates. The standard 2-car garage may not be adequate to meet the parking needs of the typical household. The parking issue is further complicated by the fact that cities are unable to mandate the parking of

For residential properties, the parking standards for

by the fact that cities are unable to mandate the parking of cars in garages. Instead, cars are parked on streets or on driveways. A related issue is recreational vehicles, boats, and other large vehicles, which due to larger size and height than standard vehicles, usually require oversized and overheight garages and excessive pavement beyond what is normally allowed.

For commercial and non-residential properties, the most effective method to address parking shortages are to promote walking, carpooling, cycling, transit and other means to reduce overall parking demand. However, parking is essential for many commercial land uses and the inconvenient and deficient parking may have a negative impact on the economic success of an area. The City presently owns and manages several public parking lots, mainly in the Downtown Area. In order to make the most

efficient use of the parking areas, the city should encourage some flexibility in regards to parking, including:

- Joint use parking
- Off-site parking
- Shared-use parking

#### Goals, Policies, and Programs

## Goal 2.5. Minimize the impacts from the lack of parking.

Policy 2.5.1 Provide for adequate parking supply to meet parking demands.

- Program 2.5.1.1. Periodically review the adequacy of parking standards in regards to vehicle ownership patterns and vehicle sizes.
- Program 2.5.1.2. Update standards for residential housing units to provide additional parking spaces and driveway areas that may also be used for parking of vehicles.
- Program 2.5.1.3. Balance the need for parking with not creating other secondary negative impacts.
- Program 2.5.1.4. Maximize off-street parking to minimize demands on on-street parking.
- Program 2.5.1.5. Minimize parking demand spillover effects onto adjacent streets and properties.
- Program 2.5.1.6. Promote joint use, shared, and off-site parking where appropriate.
- Program 2.5.1.7. Promote the consolidation of parking areas and driveways where possible.
- Program 2.5.1.8. Promote safe and efficient design for parking areas.
- Program 2.5.1.9. Provide adequate on-site loading areas so that parking areas are not impacted by loading activities.

## RAILROAD DELAYS

Issue 2.6. Traffic congestion is worsened by delays caused when trains cross at street crossings.

In addition to typical delays to traffic flow due to traffic congestion, there are occasional delays due to railroad crossings where the railroad crosses city streets at grade. There are three railroads that cross Downey: the Green Line MTA located in the median of the I-105 Freeway crosses streets below grade and does not pose delay issues. Two other lines, both owned and operated by Union Pacific, cross the city generally parallel to Firestone Boulevard and Garfield Avenue, respectively. There are 10 train crossings at public streets within Downey for the Firestone Boulevard railroad line and 2 train crossings at public streets within Downey for the Garfield Avenue railroad line. Each day. approximately 5 to 10 trains pass through Downey on each line. In addition to stopping traffic flow when trains cross, street traffic is also stopped when trains nearby are stalled or loading on spur lines thereby activating crossing signals further down the railroad. Recent upgrades to crossing signalization have addressed this concern.



Still, traffic delays may be addressed by providing grade separation at crossings. The grade separation may take several forms, such as placing the railroad beneath ground level so that the road is on a bridge, keeping the railroad at grade and place the road on overpass bridges, or keeping the railroad at grade and providing underpass tunnels for the road.

Although the regulation of railroad by local agencies is superceded by the Public Utilities

Commission, a state agency, grade separation should be advanced as important to improve public safety for residents.

**FIGURE 2-6.1** MAP OF RAILROAD CROSSINGS



At-Grade Railroad Crossing; Name of Street(s)

**Important Safety-Related Site** 

SCALE 1 INCH = 0.78 MILE



#### Goals, Policies, and Programs

## Goal 2.6. Eliminate traffic delays caused by railroad crossings.

Policy 2.6.1 Provide for the grade separation or abandonment of the Union Pacific Railroad Line, parallel to Firestone Boulevard.

- Program 2.6.1.1. Document traffic delays caused by railroad line crossings and/or faulty signals by quantifying cost of traffic delays by number of vehicle hours and life loss due to delay to paramedics getting across.
- Program 2.6.1.2. Evaluate the cost and feasibility of a grade separation of the railroad line.
- Program 2.6.1.3. Establish a development recovery fee program to require new developments and expansions of existing developments to contribute towards an eventual grade separation and other railroad-related improvements.

## INFRASTRUCTURE MAINTENANCE

Issue 2.7. The city's infrastructure is aging and is in need of upgrading.

In addition to providing a circulation network for the movement of people and goods, an infrastructure network is needed to provide the necessary utility services and communication needed to support the land uses within the city.

Adequate utilities, such as water, sewer, roads, energy, etc. are needed to maintain the operation and activities of existing residences, businesses, and other land uses, as well as to allow for expansion of existing use and the attraction of new ones. The City has a greater challenge in maintaining its infrastructure since, unlike other cities, much of the infrastructure was installed at the same time and is aging at the same time. Downey was predominately developed during the post-World War II housing boom in the 1950s and now, 50 years later, the infrastructure is in the need of upgrading.

Communication networks are different from other types of infrastructure due to the speed at which technology is advancing for phone, wireless communication, fiber-optics, digital cable, Internet, etc. To keep residents and businesses in Downey competitive in a changing market, the city recognizes the need to maintain and upgrade the infrastructure network.



Maintaining the city's infrastructure will require substantial amounts of funds. The Capital Improvement Program (CIP) will continue to be the primary means to prioritize projects and obtaining funding for infrastructure maintenance. However, the city needs to consider alternative funding sources other than taxes in order to continue to perform necessary infrastructure upgrades and maintenance. The city should examine a funding mechanism to charge service impact fees to those who directly benefit from the service.

One alternative funding source are assessment districts which assesses businesses or property owners a fee to maintain and upgrade infrastructure within a particular area. For example, the cost of maintaining street lighting is typically assessed to those properties that have street frontage that benefit from the street. In another example, demands for more parking in an area with increased business draw could be accommodated by a parking assessment district created to fund construction of new parking lots. Once the assessment district is established, developers of new projects would be assessed a fee based on the degree to which they would benefit from the new parking.

Another alternative source may be an impact fee charged to builders of proposed development or expansions to offset the cost of providing services to the development or expansion. Presently, the school district charges a school impact fee for residential additions over a certain size and residential subdivisions are charged a fee towards park upgrades (in lieu of providing land for a park). Presently, the city does not have a standard impact fee, but instead imposes conditions on projects on a case-by-case basis. In most cases, conditions to provide funds for improvements to offset impacts mainly address only those traffic-related and only when the project is large enough in scale to warrant improvements directly linked to a project, such as a street widening, improved signals, etc.

With the current approach, the needs for non-traffic related infrastructure (sewer, water, sidewalks, lighting) often are not addressed. Furthermore, most projects contribute no funds towards infrastructure since only projects are of a very large scale are addressed by the current approach. This has been found to be problematic since the impacts created by one large project could be surpassed by the cumulative impacts from a high quantity of small projects (which individually is considered insignificant by the current approach.) Impact fees would enable smaller projects to contribute their fair share towards maintaining and upgrading the infrastructure needed to support projects.

The preparation of master plans for each infrastructure system is a critical first step towards establishing impact fees. The master will list needed improvements, prioritize them, and establish the cost of implementing these improvements. Based on these costs, a unit cost may be derived, such as a certain fee amount based on the floor area square footage of a project, vehicle trip projected to be generated, or number of gallons of water needed for a project. The fee may be placed in funds specific to particular infrastructure systems or used in conjunction with other funds for improvements considered priorities.

#### Goals, Policies, and Programs

#### Goal 2.7. Maintain the city's infrastructure.

Policy 2.7.1. Provide adequate utility and communications infrastructure.

- Program 2.7.1.1. Promote upgrades and maintenance of utility and communication systems.
- Program 2.7.1.2. Promote the expansion of communication networks to meet the needs of city residents, businesses, and other land uses.

Policy 2.7.2. Obtain funding for necessary maintenance and upgrades to infrastructure.

- Program 2.7.2.1. Promote alternative funding sources for infrastructure maintenance and upgrades.
- Program 2.7.2.2. Develop master plans to identify needs, priorities, and cost for infrastructure maintenance and upgrades.
- Program 2.7.2.3. Continue to use the multiple- year Capital Improvements Program to address funding of infrastructure maintenance and upgrades.
- Program 2.7.2.4. Promote funding mechanisms, such as user fees, assessment districts, and impact fees, where service fees charged are based on the direct benefit derived from the services.

- Program 2.7.2.5.Ensure that future development contributes its fair share on mitigating its impact on public infrastructure.
- Program 2.7.2.6. Establish an impact recovery fee program so that new developments and expansions of existing developments share the cost of providing infrastructure maintenance and upgrades necessary for the development.