

CIRCULATION ELEMENT

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I. INTRODUCTION AND PURPOSE

The Circulation Element addresses the current and future needs of the community for transportation facilities which will provide for the efficient movement of persons and goods throughout the City. A major aspect of this element relates to the convenience of the transportation and circulation system. The efficient and safe movement of vehicular traffic throughout the City is one of the major purposes of the General Plan.

The Circulation Element shows, in map form, the location of existing and future streets, highways and alleys. Also depicted are other transportation facilities including the Imperial County Airport and rail facilities. The Circulation Element is compatible with the Land Use Element and compliments the Land Use Element by providing a circulation system capable of accommodating the traffic volumes produced by the various residential, commercial and industrial land uses.

A major 4 lane State highway, Highway 86, bisects the City in a north/south direction and provides a direct link southward to the City of El Centro and northward to Brawley. Even though State Highway 86 is located within the Imperial City limits, the City has no official control over this 4 lane expressway.

The State Department of Transportation, in addition to controlling the state highway right-of-ways, is also responsible for all maintenance of State Highway 86 within and outside the City limits. This benefits the City in that the City does not have to be concerned with maintenance of this major arterial. The intersection with the highest volume of traffic is the intersection of Barioni Boulevard and Highway 86. The intersection of Aten Road and Highway 86 also carries a considerable volume of traffic. However, both of these intersections have traffic signals with left hand turn

lanes and arrows. Because of the signals, the level of service at these intersections is LOS "C" or above. LOS "C" represents stable operation with a stopped delay per vehicle of between 15.1 and 25.0 seconds.

In addition to streets and highways, the Circulation Element is also concerned with other transportation facilities and services. Included among these other facilities are the Imperial County Airport, the Southern Pacific Railroad, public transportation, and bicycle route systems.

The Circulation Element and the Land Use Element must be compatible to ensure that adequate transportation facilities are provided to support the planned residential, commercial and industrial land uses. Streets and public access are the primary motivator in the determination of the density/intensity of development an area can accommodate. The location and size of the existing and planned street system in Imperial is one of the foremost determinants in measuring the community's ability to accommodate increased growth in the future.

II. EXISTING CONDITIONS

The circulation system in the City of Imperial is highly automobile oriented. The City's major north/south arterial system consists of State Highway 86 and Imperial Avenue. The major east/west arterials consist of Aten Road, Barioni Boulevard (Worthington Road) and Neckel Road. The existing and planned street system is depicted on the circulation map included in the General Plan. There are currently three signalized intersections in the City, which include the Intersections of Aten Road and Highway 86, Barioni Boulevard and Highway 86, and 15th Street and Highway 86.

III. GOALS, OBJECTIVES AND POLICIES

Circulation Goal

The circulation system should promote the safe, efficient movement of people, goods and vehicles, and protect and enhance the environmental quality of Imperial.

Land Use and Circulation

Objective No. 1

Land uses should be planned in conjunction with the circulation system so that they do not overburden the City's existing and/or planned circulation system.

Policy 1

- A. No land use should be approved that will increase the traffic on a planned or existing City street above the street's existing design capacity at service level "C" without adequate mitigation being provided such as additional traffic lanes or signalization.
- B. The City should monitor the impact of intra-and inter-city land use on circulation systems to ensure that the circulation system is not overburdened.
- C. Developers of new projects should be responsible for constructing necessary street improvements such as right hand or left hand turn lanes in order to maintain

an efficient flow of traffic.

Street Classifications

Objective No. 2

Streets shall be functionally classified according to the type and level of traffic they are designed to accommodate.

Policy 2

- A. The City shall require streets to meet the needs of the residents of the community without detracting from the rural/residential setting of Imperial.
- B. Developers shall be required to construct the appropriate type of street to serve the development project according to the typical street sections contained in this document.
- C. Major street classifications shall be according to the table outlined below:

Major Street Classifications

<u>Classification</u>	<u>Right-of-Way/ Paved Width</u>	<u>No. of Travel Lanes</u>
Freeway	300/226 Feet	4
Major Arterial	100/80 Feet	4
Secondary Arterial	80/50 Feet	2
Collector - Major		
- Residential	60/40 Feet	2
- Industrial	66/44 Feet	2

- D. Local Streets shall be further classified by the nature of the surrounding land uses in two classifications, urban and rural, as outlined in the table below:

Local Streets and Classifications

<u>Street Classification</u>	<u>Right-of-Way/ Paved Width</u>	<u>No. of Travel Lanes</u>
<u>Urban Streets</u> (2 du gross ac. or more)		
Local Collector (1200 vpd to 2400 vpd)	60/40 Feet	2
Local (up to 1200 vpd)	54/36 Feet	2
<u>Rural Streets</u> (less than 1 du/gross ac.)		
Local Collector (800 vpd to 2400 vpd)	60/38 Feet	2
Local (up to 800 vpd)	50/24 Feet	2

Note: vpd = vehicles per day (24 hour period)

- E. All streets within the City shall provide the following Level of Service (LOS) to ensure efficient movement of traffic within the City according to the table outlined below:

Level of Service (LOS) Criteria

<u>Street Classification</u>	<u>Target LOS</u>	<u>Target LOS (Peak Hour)</u>
Major Arterial	A	B
Secondary Arterial	A	B
Residential Collector	B	C
Local Collector	B	C

- F. All street intersections within the City shall provide the following Level of Service (LOS) to ensure efficient

movement of traffic within the City.

Intersection Level of Service Descriptions

Service Level Description	Volume-to-Capacity Ratio	Stopped Delay per Vehicle (seconds)
1. Free Flow	0.00 - 0.59	≤ 5.0
2. Stable Operation	0.60 - 0.69	5.1 - 15.0
3. Stable Operation	0.70 - 0.79	15.1 - 25.0
4. Approaching Unstable	0.80 - 0.89	25.1 - 40.0
5. Unstable Operation	0.90 - 0.99	40.1 - 60.0
6. Forced Flow	Not Applicable	> 60.0

- G. The various functional street classifications are described as follows:

Freeway

Freeways function to move large volumes of traffic expeditiously through an area or region with no stops and with limited access. Speed limits on freeways vary between 55 and 65 mph and no parking is allowed except in case of emergency. Freeways are designed with a minimum of 4 lanes, two travel lanes in each direction, and they may have three or four travel lanes in each direction.

Major Arterial

Major arterials function as traffic movers to expedite the movement of traffic through the City from one point to another. As such, the speed limit on major arterials is typically 45 mph, and these types of streets are designed with four lanes. Access onto major arterials should be controlled to limit the access points and therefore allow for the safe and uninterrupted flow of traffic. On street parking should be restricted. Residential lots should not have direct access onto major arterials.

Secondary Arterial

Secondary arterials function as traffic movers in the same manner as major arterials, except that they are designed with two lanes instead of four lanes and therefore carry a lower volume of traffic. The speed limit on secondary arterials is typically 35 mph. As with major arterials, access onto secondary arterials should be controlled to limit access points and therefore allow for the safe and uninterrupted flow of traffic. Residential lots should not have access directly onto secondary arterials and on street parking should be restricted.

Major Collector

Major Collector streets function to collect the traffic from several area developments and direct the traffic to an

arterial. These streets are typically two lanes and the speed limit is generally 30 mph. Access is not restricted and on street parking is allowed.

Local Collector

Local Collector streets function in much the same manner as major collectors, except that they collect the traffic from a smaller area, and the volume of traffic they carry is less. These streets are two lanes and access is not restricted. The speed limit is generally 30 mph and on street parking is allowed.

Local Streets

Local streets provide access directly to residences and serve a low volume of traffic. Access is not restricted and on street parking is allowed. Local streets connect directly to a collector or secondary arterial street. The speed limit on these streets is typically 25 mph.

Access

Objective 3

Access to major streets shall be limited to maintain capacity, efficiency and the safety of the traffic flow on the City's streets.

Policy 3

- A. Access to all major streets should be restricted to approved points of ingress and egress through the relinquishment of access rights to the City.
- B. Local streets should be used for access to major streets.
- C. Where access to a major street is considered absolutely necessary, access shall be limited to one point for 300 feet of frontage or one point per parcel, if the parcel has less than 300 feet of frontage.
- D. Combined access between adjacent properties shall be considered prior to allowing access to a major street to reduce the overall number and frequency of access points.
- E. Access points along major and secondary streets should be located a minimum of 100 feet from the end of the curb return on all City streets.
- F. Access points shall be coordinated with existing or planned access points on the opposite side of the street and with the breaks in medians.
- G. Residential subdivisions shall not be approved with lot access directly to a major or secondary arterial street.
- H. All residential lots shall have access directly to a local

or collector street.

- I. All commercial and industrial lots shall be served by an alley which meets City standards.
- J. Major shopping centers with 50,000 square feet of building area or more shall have direct access to a four lane major arterial.

Transportation Systems Management

Objective 4

The City should use state-of-the-art transportation system management planning programs to increase the efficiency on all of Imperial's street system, while reducing capital costs.

Policy 4

- A. The City shall encourage ride sharing in both the public and private sectors as a means of reducing overall traffic generation.
- B. The Circulation Plan should consider future park and ride facility locations.
- C. The City should work with Caltrans to examine and implement, if feasible, a signal timing plan along Highway 86 to improve traffic flow.

- D. The City should examine the problems associated with truck traffic on major, secondary and local streets to ascertain the need for improvements and for designation of truck routes.

Public Transportation

Objective 5

The City should develop a public transportation system that best serves the needs of the entire community.

Policy 5

- A. The City should develop a short-range transit plan to implement an efficient and useful public transportation system.
- B. The City should pay particular attention to the needs of transit dependent citizens in the community such as senior citizens, the handicapped, and low and moderate income residents.

Pedestrian Facilities

Objective 6

Pedestrian facilities shall be developed throughout the City to encourage walking as an alternative to the automobile.

Policy 6

- A. All urban standard streets shall have improved sidewalks on both sides of the street.
- B. Rural streets which lead to schools or bus stops should have improved sidewalks on one side of the street.

Local Streets

Objective 7

Local streets should be designed to discourage non-local traffic. Reasonable length cul-de-sacs are to help accomplish this objective.

Policy 7

- A. Local streets shall not be used to link arterial streets and create "short-cuts".
- B. Design features such as landscaped encroachments or medians may be used to inhibit general traffic in local areas.
- C. In the event that the traffic on local streets, particularly within a residential neighborhood, has or may exceed 5,000 vehicles per day as a result of a new development proposal, the City should require or commission a local traffic study to outline needed improvements to mitigate increased traffic levels.

- D. The City should explore the feasibility of closing some of the existing through streets in the developed portion of the City to reduce through traffic in residential areas.

Financing Improvements

Objective 8

The financing of improvements to the City circulation system made necessary by new development projects shall be borne by the developer, while the maintenance and improvement of the existing street system shall be borne by the City and its residents.

Policy 8

- A. The City shall determine and update, as necessary, the cost of improvements for maintenance of the City circulation system.
- B. The City shall adopt and implement appropriate ordinances that require development proposal applicants to pay appropriate fees for the improvement and maintenance of the City circulation system.
- C. The City should adopt and implement appropriate measures to defray the costs of improvements to the existing street system through the use of assessment district financing, grants and other sources of revenue.
- D. The City should develop and implement a five year

capital improvements plan for circulation system improvements.

CIRCULATION ELEMENT STREET CLASSIFICATIONS

<u>Link</u>	<u>Arterial</u>	<u>Segment</u>	<u>Master Planned Classification</u>
1.	State Highway 86	N City limits to S City limits	Freeway
2.	Worthington Road	W City limits to "B" Street	Major Arterial
3.	Worthington Road	"P" Street to E City limits	Major Arterial
4.	Barioni Blvd. (Main Street)	"B" Street to "P" Street	Major Arterial
5.	Aten Road	W City limits to E City limits	Major Arterial
6.	2nd Street	Airport to Clark Road	Secondary Arterial
7.	Austin Road	N City limits to S City limits	Secondary Arterial
8.	Neckel Road	W City limits to E City limits	Secondary Arterial
9.	Imperial Avenue	Highway 86 N to Highway 86 S	Secondary Arterial
10.	Clark Road	Neckel Road to Wall Road	Major Arterial
11.	"P" Street	Worthington Road to 1st Street	Secondary Arterial
12.	Murphy Road	W City limits to "B" Street	Secondary Arterial
13.	15th Street	Highway 86 to "M" Street	Secondary Arterial
14.	"M" Street	15th Street to 1st Street	Industrial Collector
15.	"N" Street	14th Street to 1st Street	Industrial Collector
16.	4th Street	"N" Street to "P" Street	Industrial Collector
17.	14th Street	"M" Street to "P" Street	Industrial Collector
18.	4th Street	"B" Street to "M" Street	Residential Collector
19.	10th Street	Frank Wright School to "K" St.	Residential Collector
20.	12th Street	"B" Street to "K" Street	Residential Collector
21.	20th Street	"B" Street to Imperial Avenue	Residential Collector
22.	"B" Street	4th Street to 20th Street	Residential Collector
23.	Belford Road	W City limits to "B" Street	Residential Collector
PROPOSED (FUTURE)			
24.	15th Street	"B" Street to Imperial Avenue	Secondary Arterial
25.	15th Street	"M" Street to "P" Street	Secondary Arterial
26.	"P" Street	N City limits to Worthington Rd.	Secondary Arterial
27.	"M" Street	1st Street to Aten Road	Industrial Collector
28.	"B" Street	N City limits to 20th Street	Residential Collector
29.	Bonta Street	Austin Road to "B" Street	Residential Collector
30.	Ralph Road	Dogwood Road to Highway 86	Major Arterial
31.	Larsen Road	Highway 86 to Austin Road	Secondary Arterial
32.	Dogwood Road	Aten Road to Harris Road	Major Arterial
33.	Harris Road	Dogwood Road to Highway 86	Secondary Arterial
34.	Cross Road	Aten Road to south limits of Sphere of Influence	Secondary Arterial
35.	Treshill Road	Dogwood to Austin Road	Secondary Arterial