

CHAPTER 3: CIRCULATION ELEMENT

Introduction

The Circulation Element is second only to the Land Use Element in terms of importance to the community. It has a significant impact on the residents of Firebaugh because it delineates the routes by which people will travel within and through Firebaugh. The Element also identifies the different types of circulation routes in the community, such as roadways, bikepaths and railroads. Other modes of transportation are also addressed, such as pedestrian (walking), and air travel.

Section 65302 (b) of the State Government Code indicates that the Circulation Element must identify the general location, dimensions and physical characteristics of existing and proposed major thoroughfares, transportation routes and transportation-related utilities and facilities.

The Courts have indicated that not only must circulation improvements be consistent with the General Plan (Friends of "B" Street et al. v. City of Hayward, et al., 106 Cal. App. 3d 988 {1980}), there must be a correlation between the circulation and land use elements. Generally, correlation is achieved by using the same population and land use projections for each element.

The Firebaugh Circulation Element is composed of four sections. They are:

- 1) Existing conditions;
- 2) circulation map;
- 3) circulation goals, policies and action programs; and
- 4) roadway cross-section designs.

Section 65302 (b) of the State Government Code indicates that the Circulation Element must identify the general location, dimensions and physical characteristics of existing and proposed major thoroughfares, transportation routes and transportation-related utilities and facilities.

Existing Conditions

In addition to the information contained in this chapter, additional circulation information is also provided in Part 2 (Community Profile”), of the General Plan.

Early Circulation System

Firebaugh’s original road system was based on a grid pattern that was laid out parallel and perpendicular to the railroad. The original townsite features a grid running between 13th Street on the south and the Poso Canal on the north, the railroad on the west and the channel of the San Joaquin River to the east.

The early streets had rights-of-way of 80 feet and alleys that were 20 feet wide. Each block generally measured 400 feet by 300 feet.

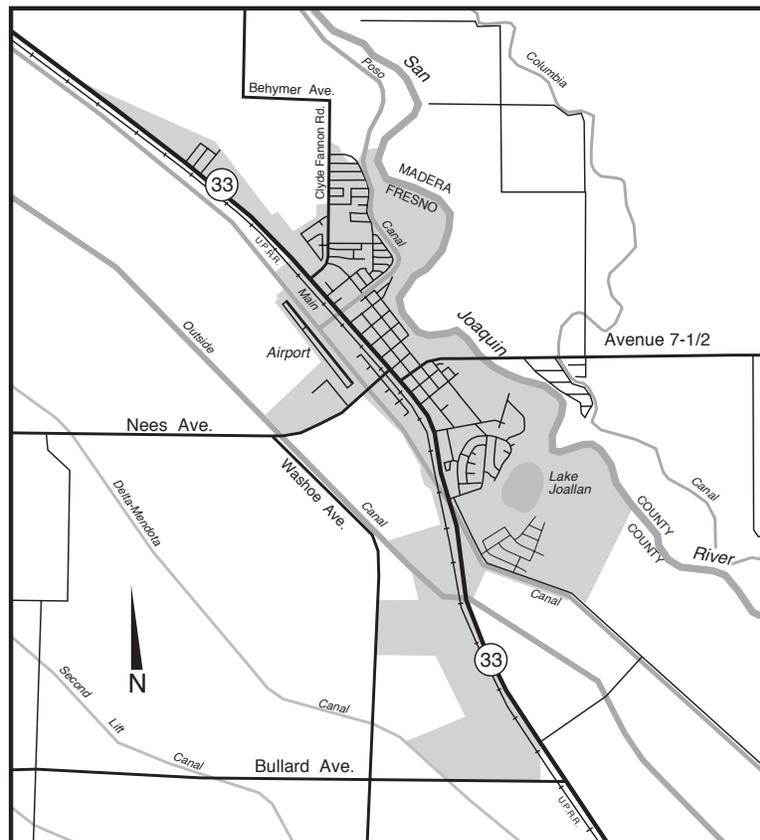
Present Circulation System

Since the early 1900s, a system of roadways has been constructed in the Firebaugh area that falls into one of the following categories - arterials, collectors, local streets and alleys. A profile of major roadways in the community is as follows:

Highway 33 (“N” Street) is the major roadway in the Firebaugh area. This state highway provides access south and east to Mendota and Interstate 5 to the south. To the northwest the highway passes through the City of Dos Palos and north to Highway 152, east of the City of Los Banos.

Within much of the City limits Highway 33 features two travel lanes and a parking lane in each direction along with a landscaped median divider, curbs, gutters and sidewalks. North and south of the four lane section the highway tapers to one lane in each direction along with gravel shoulders. New development along the highway will be required to improve the road to its ultimate design

Map 3-1
Existing Street System



– four lanes, median divider, curbs, gutters, sidewalks, parkways and shade trees.

Two other roadways are classified as “Arterials” in Firebaugh:

- Nees Avenue intersects Highway 33 in the center of the community and proceeds west out of city limits and connects to Interstate 5, about 18 miles west of Firebaugh. This roadway generally features one travel lane and a parking lane in each direction.
- 13th Street connects to Highway 33 one block south of Nees Avenue and proceeds east across the San Joaquin River into Madera County, where it becomes Avenue 7-1/2. This roadway generally features one travel lane and a parking lane in each direction. Taken together, Nees Avenue and 13th Street combine to form an east-west regional route through the City.



Other major roadways are classified as “Collector” streets. Major east/west collectors in Firebaugh include:

- Bullard Avenue
- Morris Kyle Drive
- Saipan Street
- Behymer Avenue

Major north/south Collector roadways include:

- Washoe Avenue
- O Street
- P Street
- Clyde Fannon Road
- Lyon Avenue
- P Street

Local Roadways

Local roadways provide for internal traffic movement within residential neighborhoods. Adjacent property has direct access to these types of roadways. Local roadways typically contain two travel lanes and two parking lanes.

Alleys

Alleys provide rear access to residential dwellings in older neighborhoods and to commercial buildings in the downtown area. Typically, many alleys contain above- (electricity and CATV) and below-ground utilities (sewer and water lines). They also serve as a route for trash pickup.

Firebaugh has an extensive alley system – primarily in the central downtown area. Most of the alleys are 20 feet wide and are unpaved.

Railroads

Firebaugh is traversed by the Fresno-Los Banos branch of the Union Pacific Railroad. The railroad parallels (and is west of) Highway 33. The railroad currently has light volumes of traffic (one to two trains per day) primarily carrying agricultural goods. There is only one street crossing of the railroad in Firebaugh – at Nees Avenue. This single crossing is a concern, particularly from an emergency response perspective. If a train were stopped on the tracks, emergency vehicles would have to find some other way to cross the railroad in the event of an emergency.

Public Transportation

The Fresno County Rural Transit Agency (FCRTA) generally provides transit services Monday through Friday during regular business hours to the elderly, disabled, low-income, and general public within each of the thirteen rural incorporated cities of Fresno County, including Firebaugh.

Firebaugh Transit (operated by FCRTA) provides multiple scheduled round trip inter-city service through Firebaugh, Mendota and Kerman to the Fresno-Clovis Metropolitan Area (FCMA). The service operates between the hours of 7:45 AM and 5:45 PM Monday through Friday.

Air Service

Firebaugh Municipal Airport is a general aviation airport owned and operated by the City of Firebaugh. The airport features one runway that is about 60 feet wide and 3,100 feet long. This facility is used primarily by agricultural



spraying (crop duster) services and also houses several private aircraft. There is no airline service to the airport.

Airline service is available at Fresno-Yosemite International Airport (FYI), located in Fresno, about 40 miles east of the city. FYI provides regularly scheduled passenger and freight service and it furnishes private and company aircraft hangars and tie-downs.

Bike Paths and Trails

Formal bike paths and pedestrian trails in Firebaugh are limited to the existing 3/4 mile long trail along the San Joaquin River, north and south of the 13th Street Bridge. This trail also has an on-street spur that runs along the south side of 9th Street between the Q Street (adjacent to the river) and O Street (to the plaza at West Hills College). Other than that, most streets have four foot wide sidewalks for pedestrians. Residents of the community have expressed their desire for more pedestrian facilities in Firebaugh.



Aircraft parked at Firebaugh Airport

**CIRCULATION GOALS, OBJECTIVES
AND ACTION PLANS**

Circulation goals express general community values as they relate to travel, traffic safety, mobility and funding for maintenance, construction and reconstruction. Some of the goals listed below are the product of previously approved general plan elements. Other goals were fashioned by Firebaugh's general plan committee, Planning Commission and City Council.

Circulation goals, objectives and action plans are organized under topical issues, including:

- Traffic
- Arterials
- Collectors
- Local streets and lanes
- Intersections
- Truck Traffic
- Parking
- Bike Paths and Pedestrian Pathways
- School Routes
- Transit
- Traffic Calming
- Airport
- Railroad

CIRCULATION MAP

Map 3-2 delineates the different types of roadways and routes of other types of transportation in the Firebaugh planning area. This map designates existing circulation features and also the routes of proposed future circulation facilities, particularly streets, bike paths and trails.

ISSUE ONE: Traffic

Even if a roadway is operating at a Level of Service (LOS) A, which means that traffic flows freely along the street with little or no congestion, people may still complain that there is too much traffic on the street - especially if it is their neighborhood street. While it is difficult to improve on a roadway that has a LOS of A, the city can embrace goals that will minimize traffic impacts on the community.

Goals, Objectives, Action Plans

- I. Ensure that streets in Firebaugh are not congested.**
- II. Ensure that traffic on Firebaugh's streets operates in an efficient and safe manner.**
- III. Provide for long-term financing for street construction and maintenance.**
 1. A level of service C will be the desirable minimum service level in Firebaugh at which arterial and collector segments will operate. A level of service of B will be the desirable minimum service level in Firebaugh at which intersections will operate.
 - a. The City will program into its 5-year capital budget street improvements that will ensure the specified LOS is not exceeded in the city limits. Funds for these street improvement projects will come from gas tax and transportation funds.

Time Frame: Annually

Responsibility: City Manager, City Engineer

- b. The City shall maintain and revise as necessary its traffic impact fee for new development in Firebaugh. This fee shall be consistent with the requirements of the State Mitigation Fee Act.

Time Frame: Ongoing



Responsibility: City Engineer

- 2. Land use projects which generate large amounts of traffic shall be precluded from channeling traffic onto local roadways.
 - a. The Planning Department shall recommend denial of discretionary land use projects to the Planning Commission and City Council that are inconsistent with this policy.

Time Frame: Ongoing, project-by-project
Responsibility: City Planner

- 3. Ensure that development projects contribute a fair share of funds toward capital circulation improvements.
 - a. The City shall require a traffic study for projects that generate at least 100 trips during the peak hour. The City Engineer may also require a study where deemed appropriate for other projects. Projects shall contribute their fair share of mitigation funds or facilities, based on findings of the study.

Time Frame: Ongoing, as development occurs
Responsibility: City Engineer, City Planner

- 4. All street improvement projects, including widening, closing, or constructing new roadways, will be reviewed by the Planning and Engineering Departments to confirm that the project is consistent with the Circulation Element.
 - a. The Planning and Engineering Departments will review development projects to determine consistency with the Circulation Element during site plan, subdivision or other project review.

Time Frame: Ongoing

What is "Level of Service"?

Level of Service "LOS" is a method for rating how well traffic flows on a given roadway. The system uses an alphabetical rating system from "A" (best conditions) to "E" (worst conditions).

Separate LOS ratings are typically given for road segments and also for intersections. Ratings are further refined depending on number of lanes (for street segments) and the presence of signals versus stop signs for intersections.

For example, an arterial roadway with four lanes will have a much higher capacity than will a collector street with only two lanes.

Similarly, an intersection with a traffic signal will typically have a higher capacity than will the same intersection with only stop signs.

Responsibility: City Engineer, City Planner

- b. Many streets in Firebaugh suffer from pavement that has not stood up to wear and tear and poor soil conditions over time. The City shall endeavor to replace worn pavement in these locations.

Time Frame: Replace or repair an average of one block of substandard paving per year

Responsibility: Public Works Director, City Engineer,

- 5. Coordinate with other local agencies on transportation issues.

- a. Refer projects that may impact State Route 33 to Caltrans for review and comments

Time Frame: Ongoing

Responsibility: City Planner

- b. Coordinate transportation improvements with Fresno County, the Fresno County Council of Governments and the Fresno County Regional Transportation Plan (RTP).

Time Frame: Ongoing

Responsibility: City Engineer

ISSUE TWO: Arterials

Firebaugh has three roadways that are designated arterials:

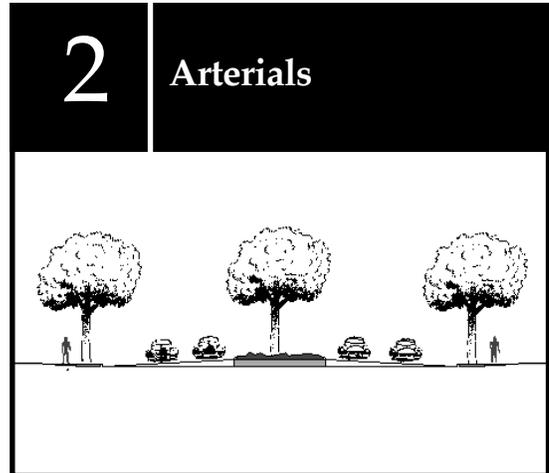
- Highway 33;
- Nees Avenue; and
- 13th Street (which transitions to Avenue 7-1/2 in Madera County).

Arterial roadways carry the greatest amount of traffic in Firebaugh. These roadways carry traffic that may be traveling at a high rate of speed and they may carry a significant amount of truck traffic, which makes these roadways noisy. Because of these characteristics, the design, location and types of land uses developed adjacent to these roadways must be carefully planned.

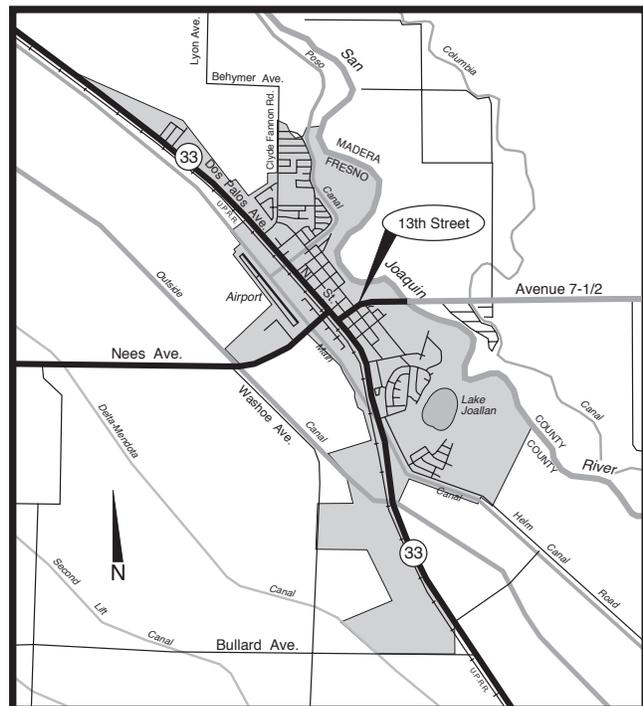
Most persons in Firebaugh will travel on an arterial at least once a day. Travel efficiency on these roadways is important for two reasons: (1) congested traffic conditions cause the traveler to be late to their destination and (2) congestion creates greater amounts of air pollution, already a significant environmental problem in the Valley. Traffic that moves smoothly and efficiently along an arterial minimizes these two problems.

Goals, Objectives, Policies

- I. Provide an arterial road system that conveys traffic in an efficient and safe manner.
- II. Arterials should be visually pleasing, and designed to accommodate other modes of transportation, such as bicycles and pedestrians.
 1. Arterial roadways will be constructed consistent, where possible, with the street cross-section illustration contained in Figure 3-1. The City recognizes it is not always possible to attain the street design standards shown in Figure 3-1, because of existing development or other constraints along portions of the roadway.
 - a. The City's standard



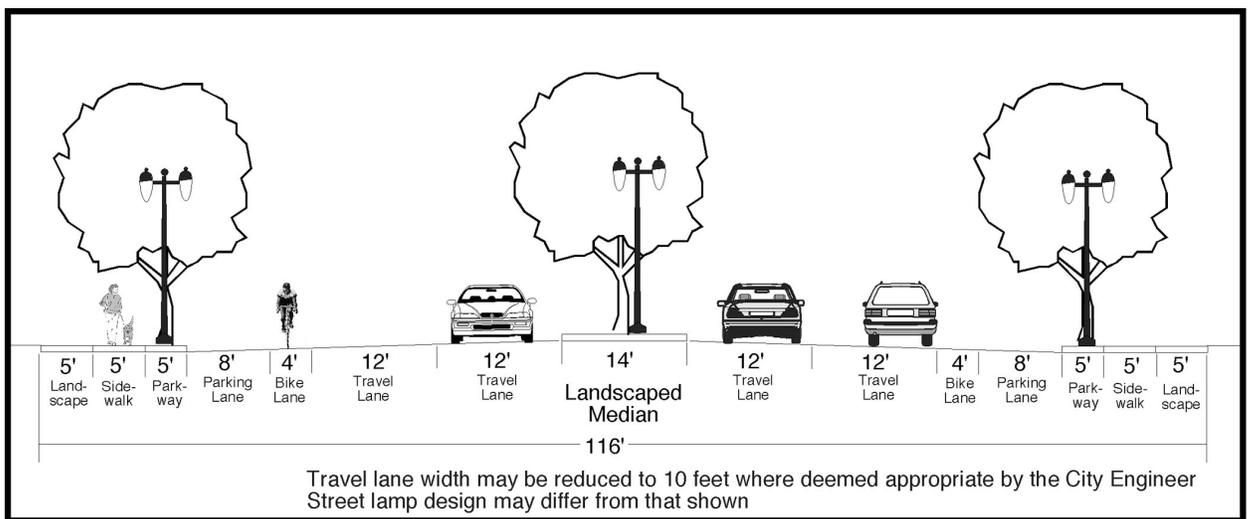
Map 3-3
Arterial Roads



specifications manual shall be revised to show the street cross section that is illustrated in Figure 3-1. Until that time, the design standards in Figure 3-1 shall be utilized.

Time Frame: Within six months of adoption of the General Plan
 Responsibility: City Engineer

Figure 3-1
 Arterial Road Design Standard



3. Left turn lanes should be constructed on arterials where they intersect with other arterials or collectors.
 - a. The City Engineer and Public Works Department will coordinate to ensure that left turn lanes are installed as development occurs. For already-developed neighborhoods, the City's circulation impact fee should be set to fund installation of left turn lanes.

Time Frame: Construct left turn lanes in established areas within five years. Review and amend impact fees within three years of adoption of the General Plan
 Responsibility: City Engineer

4. Driveways that intersect with arterials should be kept to a minimum and, if possible, should be reduced or eliminated when development occurs along an arterial roadway.
 - a. Through the site plan review process, the Planning and Engineering Departments will discourage development designs that create this condition.

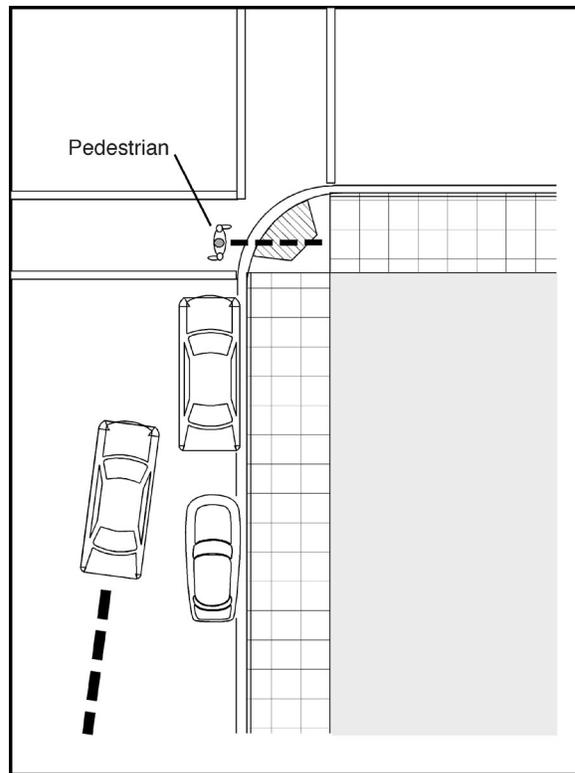
Time Frame: Ongoing
 Responsibility: City Planner and City Engineer

5. Curbing at the intersections of arterial and collector streets should be painted red at least 50 feet in all directions from the corner curb radius in order to provide sufficient sight-line for traffic pulling into the intersection and to ensure the safety of pedestrians (see Figure 3-2).

- a. The Public Works Department will ensure that curbing is properly painted.

Time Frame: Within three years of adoption of the General Plan
 Responsibility: Public Works Director

Figure 3-2
 Corner Sight Visibility



ISSUE THREE: Collector Streets

The following Collector streets are designated by the Circulation Element:

- Morris Kyle Road
- Saipan Street
- Clyde Fannon Road
- P Street extending from 13th Street to Clyde Fannon Road
- Q Street, between 13th Street and Saipan Street
- 8th Street
- Behymer Avenue
- Douglas Avenue
- Lyon Avenue
- Bullard Avenue
- Washoe Avenue
- Helm Canal Road

In addition, several collector roadways are designated in future growth areas on the north and south side of the community.

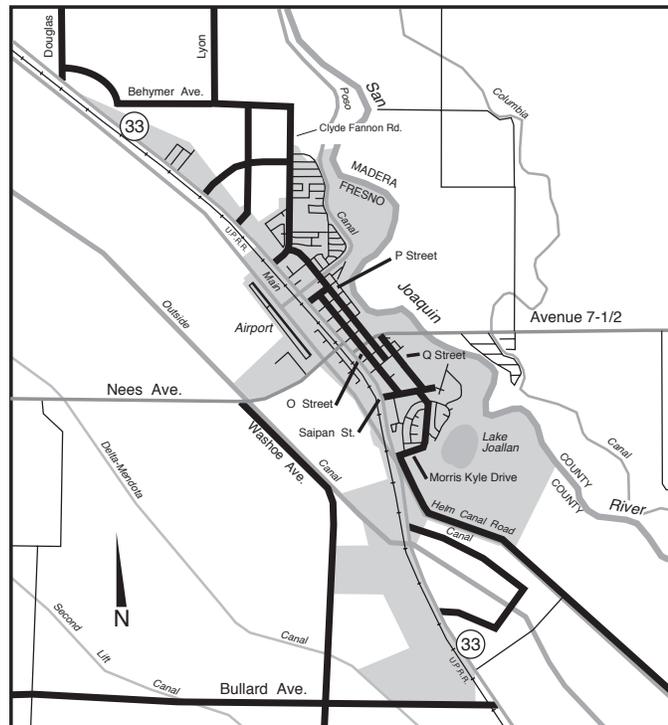


Next to arterials, collectors carry the greatest amount of traffic in a city. Unlike arterials, collectors usually traverse residential neighborhoods. It is this type of roadway that drains traffic from a neighborhood and conveys it towards other collector or arterial roadways. Because collectors pass through neighborhoods, their effectiveness to channel traffic can be diminished by the design of land uses adjacent to the roadway. If these uses are designed so that they haphazardly funnel traffic onto the collector, the efficiency of the collector may be reduced.

Collectors that accommodate truck traffic must be located where they will not have an adverse impact on existing neighborhoods and yet be able to conduct truck traffic effectively.

Collectors, due to their location, can impact a residential neighborhood. The volume of traffic, the level of noise and a collector's appearance can influence adjacent neighborhoods. It is important to properly plan and design these roadways so that they are an asset to the community and not a detraction.

Map 3-4
 Collector Streets



Goals, Objectives, Policies

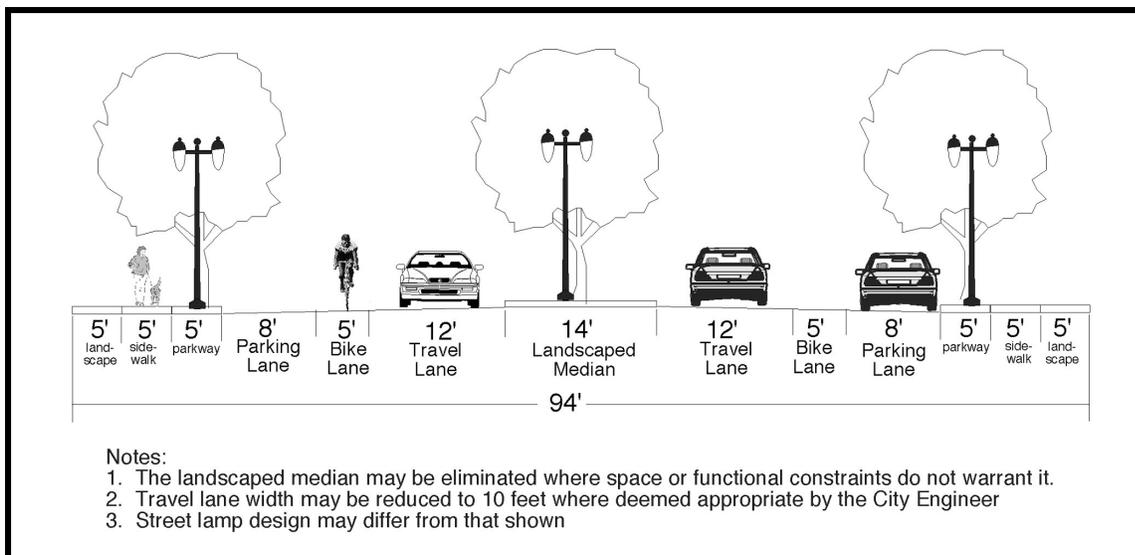
I. Provide efficient and safe circulation access to all parts of Firebaugh.

1. Collector roadways will be constructed consistent with street cross-section illustrations contained in Figure 3-3 of the Circulation Element. Flexibility may be provided to allow for the installation of landscaped median dividers, where warranted. The City recognizes it is not always possible to attain the street design standards contained in Figure 3-3, because of existing development or other constraints along portions of the roadway.
 - a. The City’s standard specifications manual shall be revised to show street cross section that are illustrated in Figure 3-3. Until that time, the design standards in Figure 3-3 shall be utilized.

Time Frame: Within six months of adoption of the General Plan

Responsibility: City Engineer

Figure 3-3
Collector Street Design Standard



- 2. Driveways that intersect with collectors should be kept to a minimum and, if possible, should be reduced when development occurs along this type of roadway.
 - a. Through the site plan review process, the Planning and Engineering Departments will discourage development designs that create this condition.

Time Frame: Ongoing
Responsibility: City Planner and City Engineer

- 3. Left turn lanes should be constructed on collectors where they intersect with arterials or other collectors.
 - a. Through the site plan review process, the Planning and Engineering Departments will require this design feature.

Time Frame: Ongoing
Responsibility: City Planner and City Engineer

- 4. Curbing at the intersections of arterial and collector streets should be painted red at least 50 feet in all directions from the corner curb radius in order to provide sufficient sight-line for traffic pulling into the intersection.
 - a. The Public Works Department will identify which curbs at the aforementioned intersections should be red-curbed.

Time Frame: Within three years of adoption of the General Plan
Responsibility: Public Works Director

Figure 3-4
Collector Streets



The vision for future collector streets in Firebaugh: shady, with bike lanes.

ISSUE FOUR: Local Streets and Lanes

Local streets (sometimes referred to as “Residential Streets”) are perhaps the most important roadways in a community. These are the streets that most people live on. They form the nucleus of the neighborhood. Well-designed, local streets can be an asset to the neighborhood. Poorly-designed and situated local streets can become a nuisance, and worse, a safety hazard.

Local Street Design

Recent studies have suggested that current street design standards may be creating dangerous streets. Wide residential streets tend to encourage higher speeds, making streets less safe. Properly-designed, narrower streets cause drivers to slow down.

In addition, current design standards do not require street trees. Research indicates that heavily-shaded streets further cause drivers to slow down. In addition, shaded streets generate much less heat, thereby helping to cool the neighborhood. Shaded pavement also tends to last longer. Finally, studies have shown that well-maintained shady streets have higher property values.

Traffic on local streets can also be made safer through shorter block lengths – less than 600 feet in length. Studies have found that long blocks tend to cause motorists to drive faster to reach the next intersection.

Subdivision Street Patterns

Most new subdivisions are designed with circuitous street patterns featuring numerous dead-end roads with cul-de-sacs. The purpose of these designs is to reduce through-traffic (which in turn, theoretically reduces noise and improves safety). While well-intentioned, these designs usually result in circuitous travel patterns that concentrate traffic onto certain entry/exit streets within individual subdivisions.

The end result are neighborhoods where residents are required to use the automobile to make all of their trips around a community. Walking and cycling become frustratingly inconvenient.

Older neighborhoods in the original parts of cities were designed almost exclusively using a grid (or modified

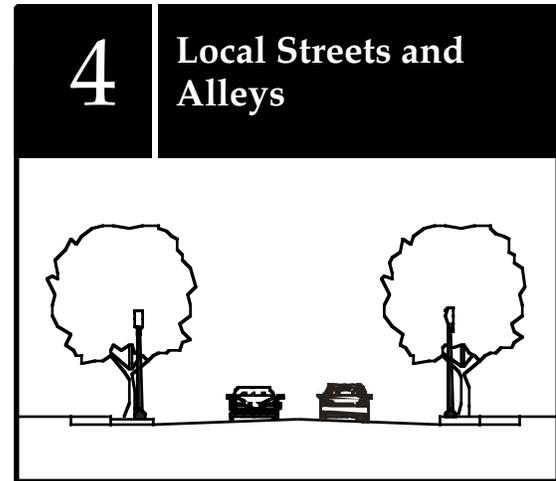


Figure 4-5: *A Tale of Two Streets...*



Current street design standards (shown above) result in wide, unshaded (hot) streets where traffic is likely to speed. Proposed standards (below) create shady, cool, narrower streets where traffic respects the neighborhood.



grid) pattern. Dead-end cul-de-sac patterns and walled subdivisions were almost unknown in city design until the 1950's.

Properly designed, subdivisions designed with a better-connected roadway pattern can improve circulation by providing a variety of routes for motorists, pedestrians and bicycles. If the connectivity is fine enough, automobile traffic is diffused so that individual streets are not over-impacted by traffic. A well-connected street pattern also gives emergency responders multiple routes to gain access to a site.

Requiring narrower, tree-lined streets can work to further slow vehicle speeds. In fact, all of these design techniques must “go together”. Other mechanisms such as shorter block lengths, roundabouts and stop signs can further tame neighborhood traffic.

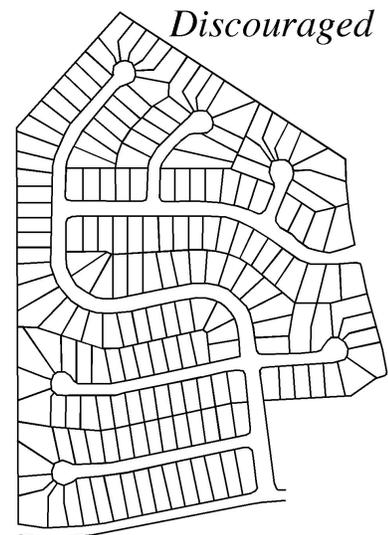
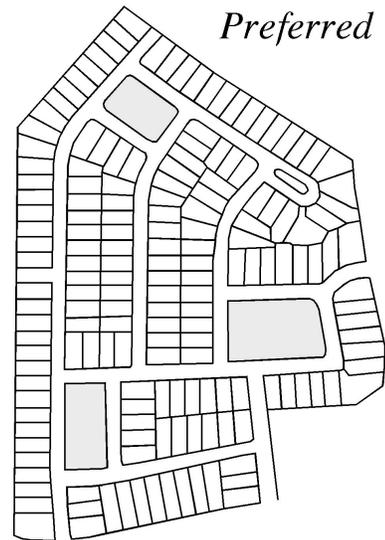
Goals, Objectives, Action Plans

- I. **Revise local street standards to ensure residential streets are safe and effective.**
- II. **Require subdivision designs that utilize highly connected street patterns, limiting cul-de-sacs to situations only where necessary.**
 1. Design standards for Local Streets are shown in Figure 3-7. Blocks shorter than 600 feet may utilize narrower streets, with a right of way of 56 feet and 32 feet of pavement. Except where approved by the City Engineer, no block shall exceed 800 feet in length.
 - a. The City's standard specifications manual shall be revised to show street cross section that are illustrated in Figure 3-7. Until that time, the design standards in Figure 3-7 shall be utilized.

Time Frame: Within six months of adoption of the General Plan

Responsibility: City Engineer

Figure 3-6
Subdivision Street Connectivity



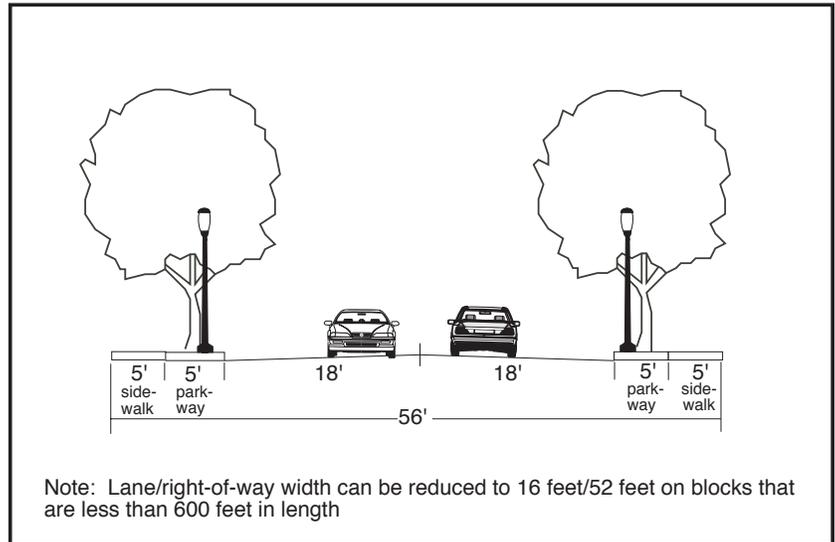
Subdivisions should be designed with a high degree of street connectivity. This makes walking and cycling more feasible, reduces air pollution and fuel consumption, and improves the ability of police and fire vehicles to respond to emergencies.

2. Subdivisions shall be designed to maximize connectivity, favoring grid street patterns over dis-connected, cul-de-sac “heavy” street patterns. The use of cul-de-sacs shall be kept to a minimum unless needed to allow more efficient utilization of oddly-shaped or “leftover” portions of a site. These design goals are expressed in the following design standards
 - a. Subdivisions shall be designed to maximize connectivity between the subdivision and surrounding developments.

Time Frame: Ongoing, during project review

Responsibility: City Planner and City Engineer

Figure 3-7
 Local Street Design Standard



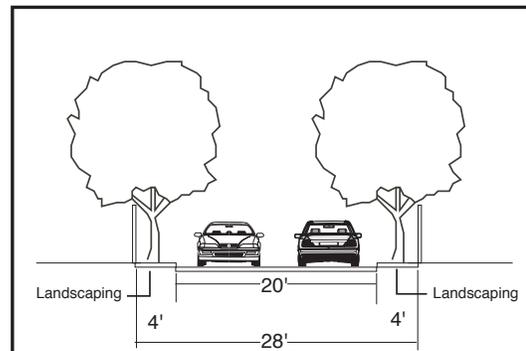
3. Lanes (also called “alleys”) shall be permitted within new residential subdivisions, consistent with the design standards shown in Figure 3-8, and a requirement that lanes be maintained by City landscape and lighting district. Lanes shall have a right-of-way of 28 feet and a paved width of 20 feet. A concrete vee gutter (for drainage) is required in the middle of the alley. The non-paved portion of the right-of-way shall be landscaped and provided with irrigation, to be maintained by the landscape and lighting district. Garbage pickup shall not be permitted in new lanes.

- a. The City’s standard specifications manual shall be revised to show street cross section that are illustrated in Figure 3-8. Until that time, the design standards in Figure 3-8 shall be utilized.

Time Frame: Within six months of adoption of the General Plan

Responsibility: City Engineer

Figure 3-8
 Lane Design Standard



ISSUE FIVE: Intersections

Circulation at busy roadway intersections can be improved with a variety of methods. Signallization is an effective, but very expensive way to improve traffic flow. Simpler methods like adding turn lanes or stop signs can work well in a small community like Firebaugh.

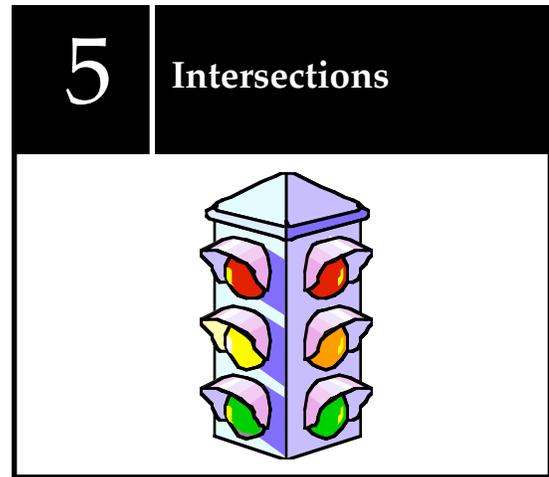
Another way of controlling intersections is the modern roundabout. For hundreds of years Europe and Mexico have used roundabouts to control traffic at intersecting streets. Modern roundabouts are now being used in a number of American communities, as an effective way to control traffic at intersections. In addition, the interior portion of the roundabout can be designed to include a visual feature, like landscaping, trees or even a fountain or statue. The City should consider the use of roundabouts, particularly at the intersection of local streets within new development.

Goals, Objectives, Action Plans

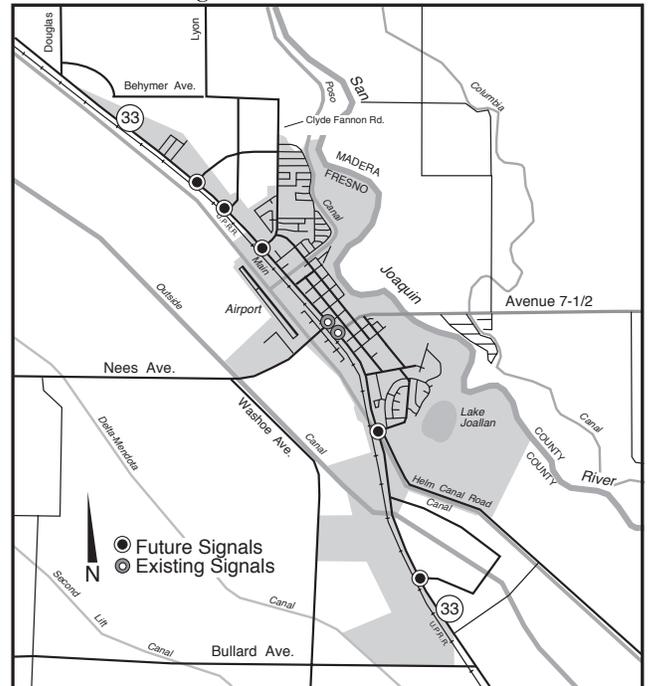
I. Ensure that busy intersections are properly designed, thereby ensuring safe and effective traffic maneuvers.

1. The City should endeavor the follow the following guidelines in the establishment or improvement of future intersections.
 - a. Future signalized intersections along Highway 33 should be at least one-half mile apart.
 - b. Future non-signalized intersections along Highway 33 should be spaced at ¼ mile intervals from a signalized intersection or other non-signalized intersections.
 - c. Driveways along areas of Highway 33 where the speed limit is 35 mph should be spaced at least 260 feet apart.
 - d. Driveways along aras of Highway 33 where the speed limit is 45 mph should be spaced at least 340 feet apart.

Time Frame: Ongoing
Responsibility: City Engineer



Map 3-5
*Existing and Future
Signalized Intersections*



II. Seek innovative methods of controlling traffic at busy intersections within the Firebaugh planning area.

1. The City shall maintain its development impact fee that finances the proper design of intersections.
 - a. The City will periodically update the impact fee and ensure that it is consistent with the Circulation Element map and the State Mitigation Fee Act (legislation that requires a nexus, or connection, between the fee being required and the improvement to be installed).

Time Frame: Ongoing
Responsibility: City Engineer

- b. Map 3-5 shows existing and future signalized intersections in Firebaugh. The City shall monitor intersections to determine when signal installation is warranted.

Time Frame: Ongoing
Responsibility: City Engineer

- c. The City will periodically review the levels of service ratings at major intersections in Firebaugh to determine when improvements should be installed.

Time Frame: Ongoing
Responsibility: Public Works Director

2. The City should consider allowing roundabouts within new development.
 - a. The Engineering and Planning Departments will prepare a design standard for roundabouts.

Time Frame: Within two years
Responsibility: City Engineer and City Planner

Firebaugh's first roundabout has been approved as part of the El Sendero Ranch project

Figure 3-9
Roundabout Example



Photo example of a modern roundabout.

- b. The City shall seek public input in regards to the interior treatment of the roundabouts.

Time Frame: During project review
Responsibility: City Engineer, City Planner

ISSUE SIX: Truck Traffic & Industrial Streets

Truck traffic can adversely affect a community and specifically residential neighborhoods because of the noise and vibrations they generate. Further, heavy trucks can damage local roadways because of their weight. However, trucks are an essential ingredient for the local economy in terms of employment and movement of goods and products. In Firebaugh, the local economy would collapse if packing houses, cold storage plants and other non-agricultural industries could not receive trucks at their locations.

The parking of trucks is a particularly challenging issue. Firebaugh has a number of residents who drive trucks but have no place to park them – except along major roadways, such as Highway 33. The community has voiced concerns about the negative appearance of numerous large trucks parked along the highway and would like to seek a more attractive solution for this issue.

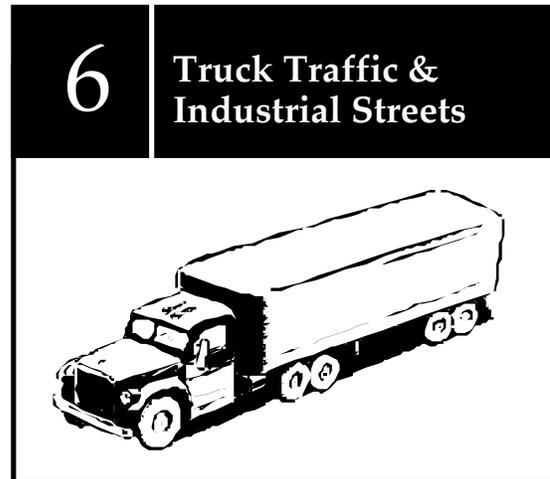
The Circulation Element also establishes an “Industrial Street” design standard. Streets incorporating this standard are intended to be constructed to serve future development in Firebaugh’s Industrial zones.

Goals, Objectives, Action Plans

- I. Establish truck routes through Firebaugh that are safe and not disruptive to residential neighborhoods, schools and businesses.**
- II. Facilitate the movement of truck traffic through and around Firebaugh.**
 1. Identify truck routes on the Firebaugh Circulation Element map.
 2. Prohibit through-truck traffic on streets that are not identified as truck routes.
 - a. The Public Works Department shall install truck route signage.

Time Frame: Within one year
Responsibility: Public Works Director

- b. The Police Department should remain vigilant for



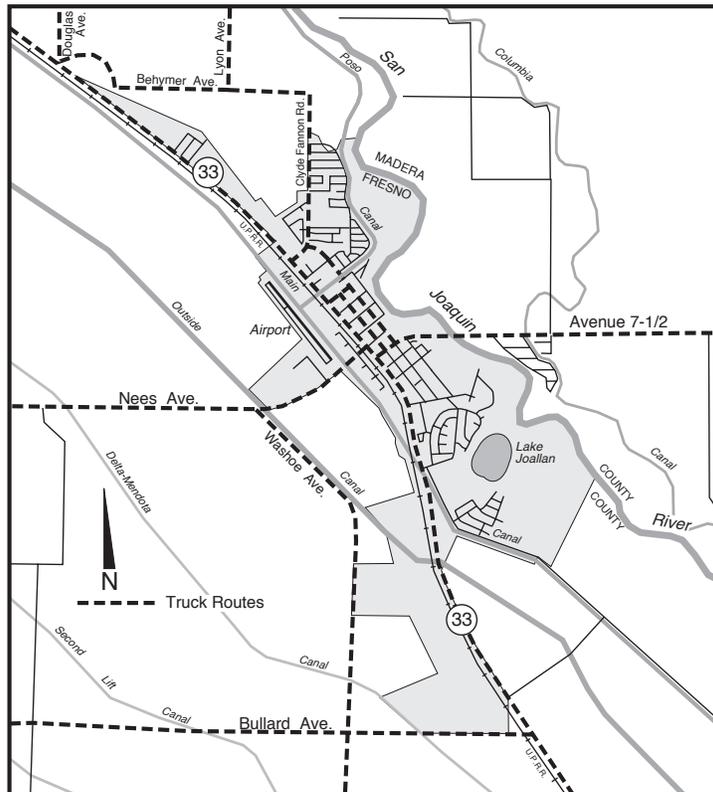
the presence of trucks
using streets that are not
designated truck routes

Time Frame: Ongoing
Responsibility: Police Chief

- 3. Construct a truck parking facility
 - a. The City Manager and Public Works Director should secure a site and funding to construct a truck parking area that is attractively landscaped and screened and provided with lighting and is secure.

Time Frame: Within seven years
Responsibility: City Manager, City Engineer

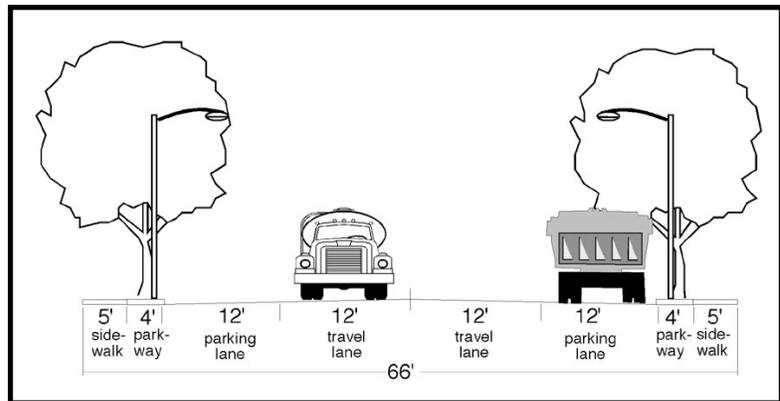
Map 3-6
Truck Routes



4. “Industrial Streets” as shown on Map 3-2 shall be designed with the standard shown in Figure 3-10.
 - a. The City’s standard specifications manual shall be revised to show street cross section that are illustrated in Figure 3-10. Until that time, the design standards in Figure 3-10 shall be utilized.

Time Frame: Within six months of adoption of the General Plan
 Responsibility: City Engineer

Figure 3-10
 Industrial Street Design Standard



ISSUE SEVEN: Parking

The success of commercial businesses is often dependent upon parking. Parking must be in close proximity to the business, it must be safe, and should well designed - good lighting, wide stalls, shaded, and easy access.

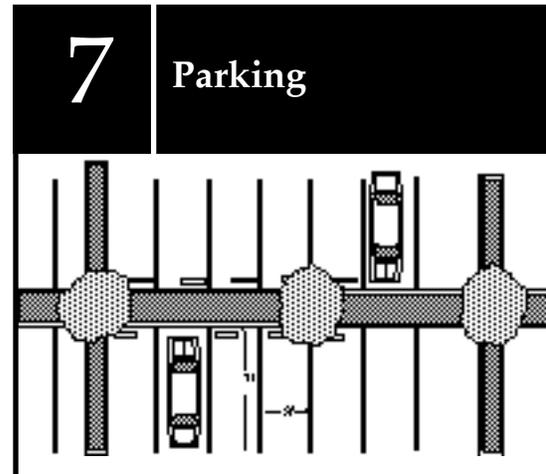
For other uses, such as public facilities, churches, apartments and industries, adequate on-site parking is important so as to ensure that surrounding land uses are not adversely impacted by persons parking their vehicles in front of other establishments or residences.

At the same time, project must be designed so that parking does not visually dominate or degrade the site.

Goals, Objectives, Action Plans

- I. **Provide adequate public parking in the downtown.**
- II. **Ensure that adequate off-street parking is provided by new development.**
- III. **Encourage the joint use of parking lots. Certain types of businesses closely located can share a single parking lot. For instance, an office open during the day may be able to share a common parking lot with a restaurant open only during the evening. In that way, less land is needed to be devoted to parking and overall expenses to operate businesses can be reduced.**
- IV. **Design parking lots that are safe, visually pleasing and convenient.**
 1. Off-street parking for new developments in the downtown shall be located to the rear of buildings (or to the side of buildings, where they can be adequately screened).
 - a. The to-be-prepared Design Guidelines shall illustrate properly designed downtown parking lots.

Time Frame: Within three years
Responsibility: City Planner



- 2. Parking lots for new uses shall include landscaping, proper lighting and shall be properly designed to insure maneuverability of vehicles and pedestrians.

- a. Through the site plan review process, the Planning and Engineering Departments will ensure that the design of new parking lots contain these features.

Time Frame: Ongoing, as development occurs
 Responsibility: City Engineer and City Planner

- b. The Zoning Ordinance shall be amended to include parking lot design standards, including a requirement for 40 percent tree shading within a ten-year time frame. Rows of parking stalls shall be interrupted with tree planters.

Time Frame: Within two years
 Responsibility: City Planner

- c. Pedestrian pathways through parking lots shall be clearly delineated using improvements such as landscaping, lighting, arbors and special pavement material, such as textured/colored concrete. The Design Guidelines shall illustrate these types of amenities.

Time Frame: Within three years
 Responsibility: City Planner

- 3. Parking lots adjacent to streets should be separated by a low wall or berm, which is landscaped on both sides.

- a. The Design Guidelines shall illustrate this type of design strategy.

Time Frame: Within two years
 Responsibility: City Engineer

*Figure 3-10
 Parking Lot Arbor*



Example of a parking lot walkway and arbor. This type of feature is suitable for larger parking lots and improves the appearance of parking lots by “breaking up” the otherwise large expanse of paving. The arbor provides shade for shoppers walking to and from stores.

4. New parking lots along Highway 33 should be designed so that the parking lot does not occupy the entire frontage of the site, as illustrated in Figure 3-11.

- a. Through the site plan review process, the Planning Department will insure that the design of new parking lots will be consistent with this policy.

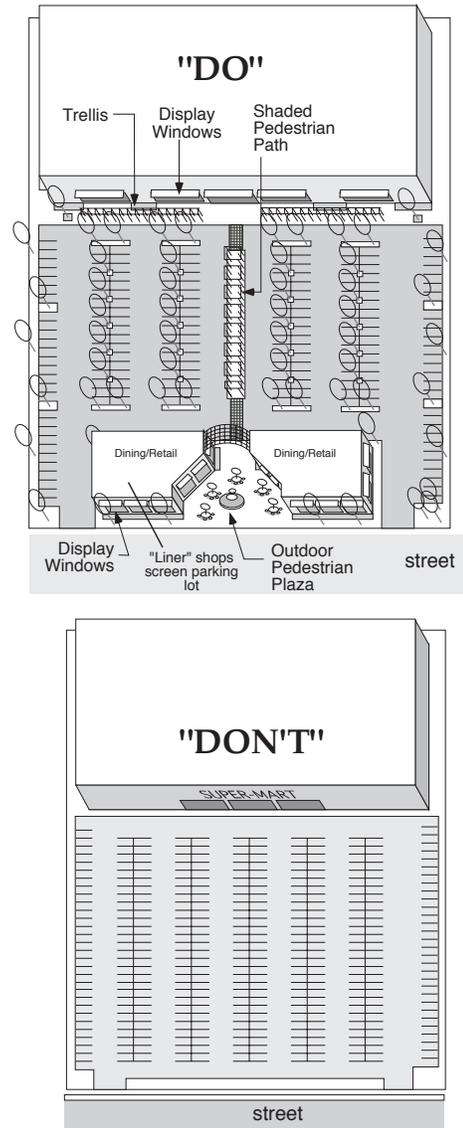
Time Frame: Ongoing
 Responsibility: City Planner

5. The City and/or the Firebaugh Redevelopment Agency should consider the purchase of land in the downtown for use as a public parking lot.

- a. The City Manager shall monitor parcels available for sale for the purpose of constructing public parking lots. Parking lots should be constructed on “interior” lots, not on corner lots.

Time Frame: Ongoing
 Responsibility: City Manager

Figure 3-11
 Commercial/Parking Site Design



Regardless of their size, new commercial developments along Highway 33 should be designed to avoid the appearance of buildings set behind parking lots. Careful site design, incorporating the placement of buildings, landscaping, trellises and walkways can achieve the desired effect.

ISSUE EIGHT: Bikepaths and Pedestrian Pathways

Bicycling and walking are important forms of transportation. In a small community like Firebaugh, bicycling or walking can provide a realistic way to make meaningful trips around the community. For example, the downtown is easily reached by a relatively short bicycle ride, and by walking for many neighborhoods.

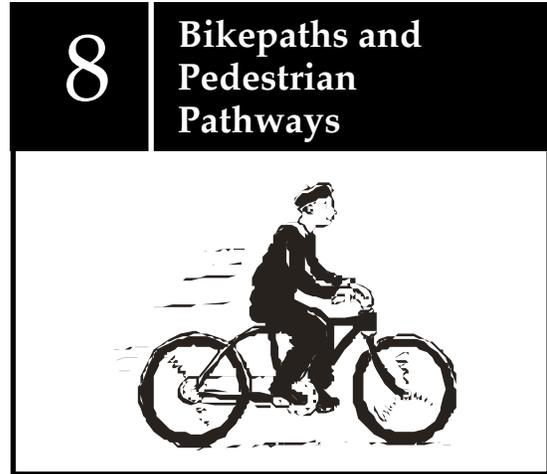
When added to the local bike and pedestrian traffic generated by school-aged children, it is important to properly locate and design Firebaugh's bikepath and trail system.

By encouraging residents to walk in Firebaugh, personal contact is promoted. This interaction makes for a more close-knit community in addition to promoting a more healthy lifestyle.

The way new subdivisions and commercial developments are designed and laid out is critical to making walking and cycling feasible. Subdivisions with numerous cul-de-sacs and perimeter walls that enclose streets can make walking and cycling less feasible, because residents must walk or cycle longer distances to get to their destination. When this happens, people tend to prefer to use their automobiles. This situation can be reversed by requiring a highly connected pattern of streets in new development. Walking and cycling can be further encouraged by requiring street trees for shade.

Firebaugh has the advantage of having the San Joaquin River along the east side of the City. This waterway presents the opportunity to create a pathway along the river for use by pedestrians, bicyclists and even persons who ride horses. The City has already constructed the first portion of a pathway along the river. Extending this pathway is of critical importance.

Finally, the numerous irrigation canals that traverse the City make Firebaugh a city of water. In the past, development has "turned its back" on these canals, making these waterways a neglected part of the community. Some valley cities have seized the opportunity to make irrigation canals a part of the City's open space and recreation system by requiring new development to "front onto" canals, with the installation of walking trails and landscaping paralleling canal banks. This Circulation Element proposes that future



development incorporate irrigation canals as open space features.

Goals, Objectives, Action Plans

I. Encourage residents to walk and ride bikes for good health as well as for environmental reasons.

1. Develop a trail and bike path plan for the City of Firebaugh.

a. The Circulation Element map designates bike routes and pedestrian trails in the planning area.

b. Require new development to install bike and pedestrian pathways that are designated on the Circulation Element Map, where the development abuts the route of the pathway. For other portions of pathways, apply for state and federal funds to finance the construction of the pathway system.

Time Frame: Ongoing
 Responsibility: City Planner, City Engineer, City Manager

c. Bikepaths will be constructed consistent with the bikepath cross-section illustrated in Figure 3-12.

Time Frame: Ongoing
 Responsibility: City Engineer

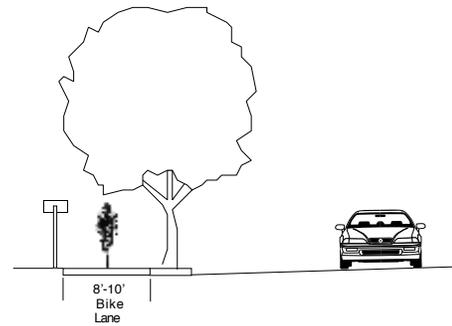
d. Provide signage for walking and bicycling paths.

Time Frame: Ongoing
 Responsibility: Public Works Director

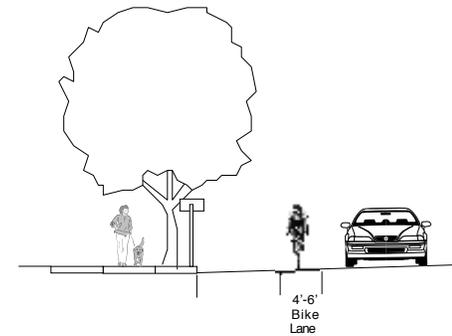
2. Work with the County of Fresno to ensure that Firebaugh’s trail and bike path plan is linked to the County’s regional bikeway network.

a. The City Administrator shall maintain contact with the County to ensure

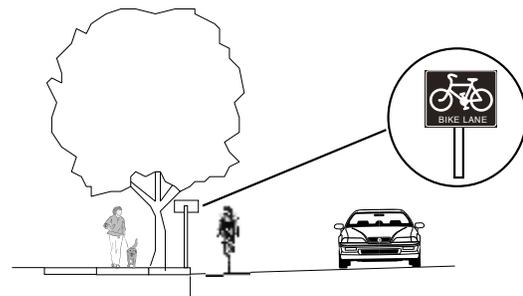
Figure 3-12
 Bike Lane Designs



Class 1: Separate from roadway



Class 2: Lanes painted on roadway



Class 3: Lane on roadway with signage only

consistency between City and County bike plans

Time Frame: Ongoing
 Responsibility: City Manager

3. Provide safe, attractive and convenient pedestrian access to all areas of the City, including between neighborhoods.

- a. Require new subdivisions to include pedestrian “paseos” at cul-de-sacs and elbows. This shall be incorporated into the Design Guidelines specified by the General Plan.

Time Frame: Ongoing, project-by-project
 Responsibility: City Planner, City Engineer

- b. Maintain and repair sidewalks to make them safe for pedestrians.

Time Frame: Repair an average of five blocks per year
 Responsibility: Public Works Director

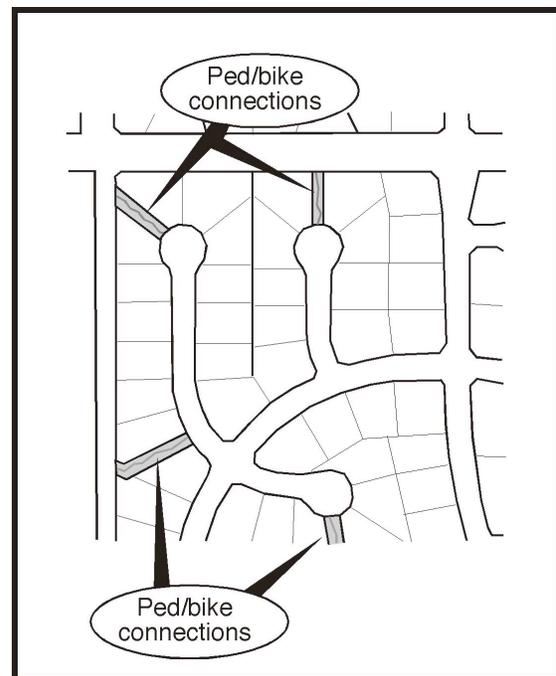
- c. Plant existing parkways that lack trees to make the walking experience more enjoyable.

Time Frame: Plant an average of three blocks per year
 Responsibility: Public Works Director, working with an organization such as the Urban Tree Foundation

4. Investigate the use of canal easements for walking paths.

- a. Work with Central California Irrigation District and the Planning Commission to devise a Waterway and Trails Master Plan. Until adopted, the City should use the design shown in Figure 3-14 as a

Figure 3-13
Pedestrian Paseo Concept

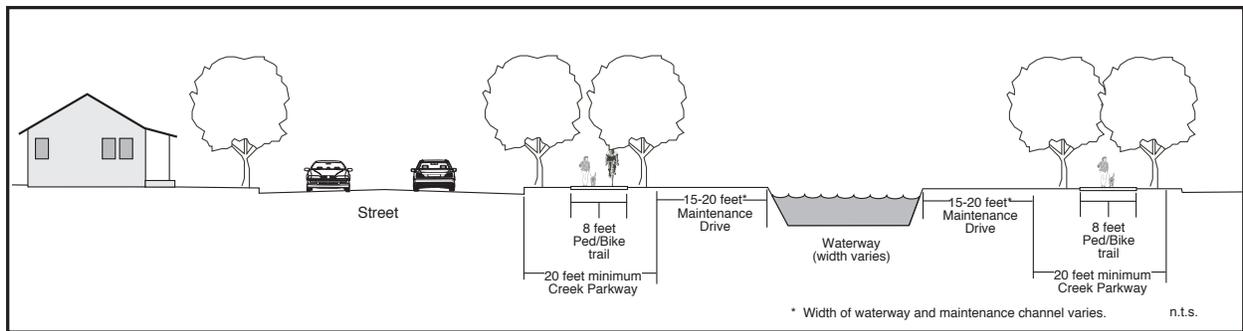


Where cul-de-sacs cannot be avoided, pedestrian “paseos” have been designed into this subdivision to provide greater pedestrian and bicycling connectivity.

guide for developing open space/trails
along canals.

Time Frame: As development occurs.
A waterway/trails master
plan should be completed
within three years
Responsibility: City Planner

Figure 3-14
*Waterway Parkway Design
Standard*



ISSUE NINE: School Routes

School-aged children walking or riding to school should be provided with a safe route to school. There are a number of roadways in Firebaugh that are used extensively by children traveling to and from school. Sidewalks should always be constructed along both sides of roadways leading to schools in Firebaugh, and special attention given to make sure that safe cross walks are in place at intersections and other appropriate locations.

Goals, Objectives, Action Plans**I. Ensure that children have safe walking and bicycling routes to school.**

1. Require new development to install sidewalks on both sides of the street.
 - a. The City Planner and City Engineer will ensure that sidewalks are installed as a requirement of development.

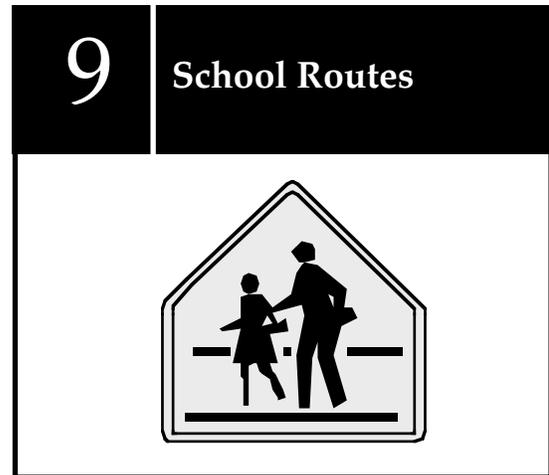
Time Frame: Ongoing
Responsibility: City Engineer, City Planner

2. Seek funding to establish sidewalks in existing neighborhoods that do not currently have them.
 - a. The City should seek grant monies to establish sidewalks in critical locations.

Time Frame: Ongoing
Responsibility: City Engineer

3. Coordinate with Firebaugh Las-Deltas Unified School District (FLDUSD) to establish sidewalks along their campuses.
 - a. The City Administrator will work with FLDUSD to ensure sidewalks are established around school campuses.

Time Frame: Ongoing
Responsibility: City Manager



ISSUE TEN: Transit

Alternative modes of transportation are important to different groups of people for different reasons. For low-income, handicapped or non-driving age persons, public transit may be the only means of travel. For a person who is concerned about polluting the air, riding a bus or bike may be their way of minimizing an impact on the environment.

Goals, Objectives, Action Plans

I. Promote alternative modes of transportation, by improving transit service and encouraging transit use.

1. Facilitate the provision of convenient, frequent, dependable and efficient transit for Firebaugh residents.
 - a. New developments adjacent to arterial or collector streets should include bus loading zones at appropriate locations. Loading zones should be shaded with shelters and/or shade trees. Consider designating marked loading zones in the downtown area.

Time Frame: Ongoing, as development occurs

Responsibility: City Engineer, City Planner

- b. Improve and expand transit line coverage and frequency throughout Firebaugh and to adjacent cities, with particular emphasis on service to the downtown, employment centers, and social services.

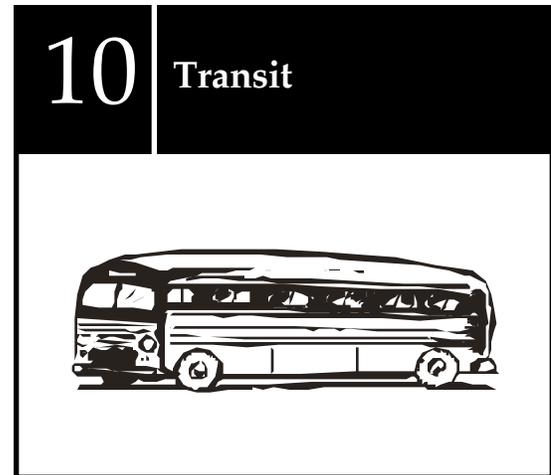
Time Frame: Ongoing

Responsibility: City Manager

- c. Conduct surveys of riders periodically to determine effectiveness of the system.

Time Frame: Every two years

Responsibility: City Manager



ISSUE ELEVEN: Traffic Calming, Landscaped Medians and Street Trees

Some of the great streets in the world are distinguished by landscaped medians or a boulevard of street trees. These features “soften” the appearance of the street, provide shade and cooling for pedestrians and provide a positive image. Studies have shown that lands along tree-shaded streets frequently enjoy higher property values.

Firebaugh has started on its own “great boulevard” with the landscaped median on Highway 33. Additional landscaping improvements are scheduled to be installed on this street in the near future. Over time this street will mature into a beautiful tree-shaded avenue. Highway 33 will hopefully be able to serve as a model for how to design and landscape other streets in Firebaugh.

I. Ensure that shade trees are provided along streets in Firebaugh.

1. New streets shall be constructed with tree-lined parkways and also tree lined medians where appropriate.
 - a. Street design standards are provided in Figure 3-1 through 3-5. Developers shall be responsible for installing streets that are consistent with this design.

Time Frame: Ongoing, as development occurs

Responsibility: City Planner, City Engineer

2. Allow and promote traffic calming measures, such as “bulb-outs”, pedestrian refuges, roundabouts and similar strategies.
 - a. The City Engineer shall review traffic calming strategies and promote these in existing and new neighborhoods.

Time Frame: Ongoing, as development occurs

Responsibility: City Planner, City Engineer



“Traffic Calming” has become a planning buzz-word in the last decade. Planners and engineers are aware of a number of design strategies that can be used to slow, or “calm” traffic while allowing traffic to flow.

3. Preclude the installation of additional speed bumps on streets in Firebaugh.
 - a. The City Engineer shall review traffic calming strategies and promote these in existing and new neighborhoods.

Time Frame: Ongoing, as development occurs

Responsibility: City Planner, City Engineer

4. Existing streets that lack street trees should be examined to determine whether it is feasible to plant street trees. Further, existing parkways that do not contain trees should be planted with trees.
 - a. The Public Works Director and City Planner shall conduct an analysis and provide a report to the City Council on this matter.

Time Frame: Within three years

Responsibility: Public Works Director

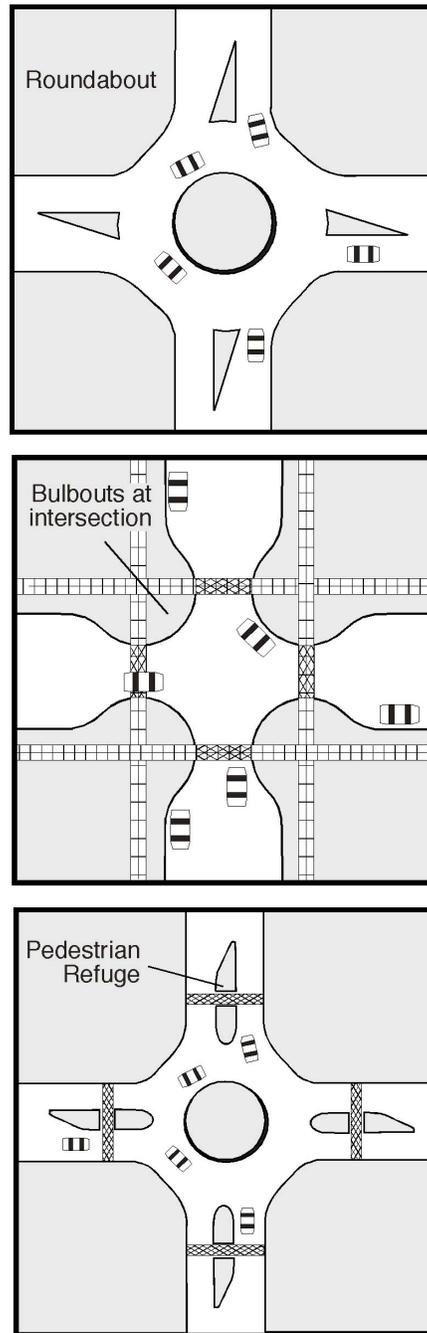
5. Overly wide streets in Firebaugh should be considered for a tree-lined median and/or tree-lined parkway.
 - a. Undertake an analysis to identify streets that could be retrofitted with a landscaped median. Also identify funding sources to provide for median construction and landscaping. Provide a report on this matter to the City Council.

Time Frame: Within seven years

Responsibility: City Engineer

6. The downtown area should be planted with street trees that provide shade, color and beauty.
 - a. The City Manager shall identify funding sources to plant new trees within sidewalks on downtown streets

Figure 3-15
 Traffic Calming Mechanisms



and replace trees that have been removed or which have died.

Time Frame: Within three years
Responsibility: City Manager

7. The Public Works Department shall ensure that its tree maintenance personnel practice sound and sensitive methods of tree pruning.

Time Frame: Within one year, the Department should contract with a qualified organization such as the Urban Tree Foundation to conduct tree trimming courses for City personnel
Responsibility: Public Works Director



A dense canopy of streets trees and a slightly-narrowed street can be an effective traffic calming “device” by causing motorists to drive more slowly down streets.

ISSUE TWELVE: Airport

Firebaugh owns and operates the Firebaugh Municipal Airport. Situated on approximately 24 acres, the airport features one runway approximately 3,100 feet long and 60 feet wide. The runway is lighted but has no control tower. Typical users include crop dusters and other private passenger craft.

The airport represents an important circulation feature of the City and also an economic tool. However, as a land use feature, the airport can be a poor neighbor, in terms of noise and safety concerns. In addition, the location of the airport prohibits any kind of residential expansion (and hampers commercial development) on the west side of the city. The General Plan Committee voiced its desire to see the City undertake an analysis of relocating the airport further to the west. This would reduce noise and aircraft accident exposure to the City and allow for greater residential development on the west side of the community. The City of Coalinga serves as a precedent, having relocated its airport away from the urban area in the early 1990's

I. Continue to maintain the airport to provide appropriate and adequate airport facilities

1. The Public Works and Engineering Departments shall continue to monitor conditions at the airport and identify and complete necessary maintenance and upgrades.
 - a. The Public Works Director shall present an annual report to the City Council on the condition of the airport and necessary capital improvements.

Time Frame: Annually
Responsibility: Public Works Director

II. Ensure that the airport is a good land use "neighbor".

1. Undertake a long-range study to consider relocating the airport away from the urban area of Firebaugh. The purpose of moving the airport is to reduce noise and aircraft



hazards and also remove a constraint to the development of urban uses in the western part of Firebaugh.

- a. The City Manager should identify funding and hire a consultant to analyze moving the airport.

Time Frame: Within five years

Responsibility: City Manager

ISSUE THIRTEEN: Railroad

The Fresno-Los Banos line of the San Joaquin Valley Railroad runs through Firebaugh, west of State Highway 33. This track provides for the transportation of primarily agricultural goods and commodities. Typically one freight train per day passes through Firebaugh. In this fashion, the rail line is an important economic asset to the community.

While the railroad offers an economic benefit, it functions as an impediment to growth in the community by restricting street crossings. This retards effective street circulation in the community because only one street (Nees Avenue) crosses the railroad in the central part of the community. In addition to constraining circulation, this raises an emergency access concern – if a train were stopped on the railroad, emergency vehicles may have to find another route to cross the tracks.

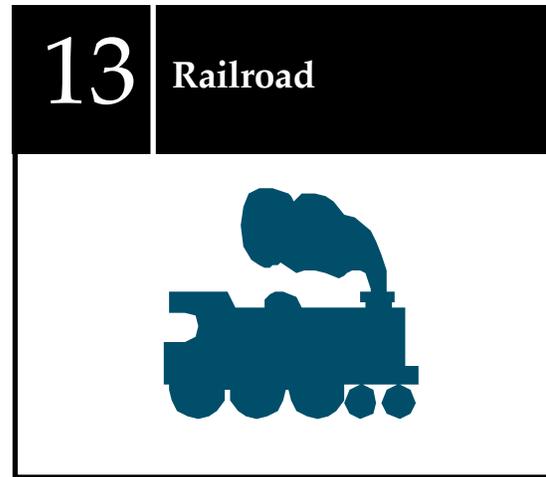
The railroad, combined with the airport and industrial areas, also precludes residential and commercial development to the west.

I. Work to ensure that the railroad plays an important role in Firebaugh’s economic development, while also addressing constraints the railroad presents in terms of circulation and community growth.

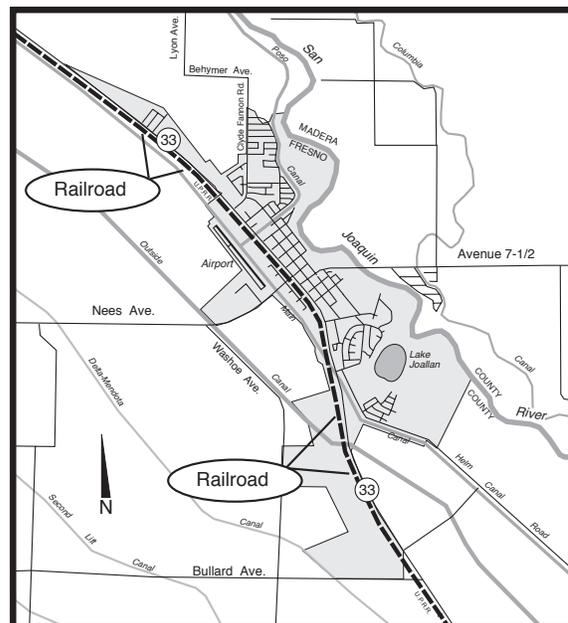
1. The City shall maintain a line of contact with the San Joaquin Valley Railroad to ensure the line is maintained in good condition.
 - a. The City Manager shall encourage the San Joaquin Valley Railroad to maintain and upgrade the railroad as it passes through Firebaugh

Time Frame: Ongoing
Responsibility: City Manager

- b. The City shall maintain cooperate and consult with the California Public Utilities Commission on issues affecting the railroad, railroad crossings and railroad safety.



Map 3-7
Railroad Alignment



Time Frame: Ongoing
Responsibility: City Manager

- c. The City Manager shall encourage the San Joaquin Valley Railroad to maintain and upgrade the railroad as it passes through Firebaugh

Time Frame: Ongoing
Responsibility: City

- 2. The City shall upgrade the railroad crossing at Nees Avenue.
 - a. The City Engineer shall identify funding sources to reconstruct the railroad crossing at Nees Avenue.

Time Frame: Within two years
Responsibility: City Engineer

- 3. The City shall seek to establish at least one additional street crossing of the railroad in the central Firebaugh area.
 - a. The City Planner and City Engineer shall identify an appropriate location for a street crossing and work to secure permission and funding for the crossing.

Time Frame: Within five years
Responsibility: City Planner, City Engineer

