

CIRCULATION



IV. CIRCULATION PLAN: A BALANCED, MULTIMODAL APPROACH

The Railyard and its environs have long been a focal point for transportation in Santa Fe. At the turn of the last century, the site was a key interchange point between three railroads: the Atchison, Topeka & Santa Fe; the Denver & Rio Grande; and the Santa Fe Central. More recently, the area around the site evolved to become a point of convergence of several of the City’s most important arterial roadways, including Cerrillos Road, St. Francis Drive, Guadalupe Street and Paseo de Peralta.

In the future while the railroad and roadways will continue to exert a strong influence on the Railyard, the importance of other travel modes to access and circulate within the site will increase. Travel by foot, bicycle, bus, commuter rail, hotel shuttle, taxi and other “alternative” modes will become increasingly important. This trend will become stronger as the local community increasingly recognizes the importance of supporting and using alternative modes as a means of protecting and improving the quality of life of Santa Fe.

The Santa Fe City Council recognized the value of alternative travel modes when it adopted in 1997 the Community Plan and the Metropolitan Redevelopment Plan for the Railyard. The Community Plan, as a guiding principle, strongly calls for a multi-modal approach to transportation in the Railyard, with a suggested list of actions that includes retaining and encouraging rail service to the historic depot; accommodating future development of commuter rail service; encouraging the development of an intermodal transit center; developing a shuttle transit service from the Railyard to the Capitol and Plaza; providing pedestrian access to adjacent residential neighborhoods; and ameliorating street crossings for pedestrians by means of traffic-calming measures.

The intent of the Circulation Plan is to provide a wide range of convenient, comfortable and attractive travel choices for access to and circulation within the site. How people travel to, and within, a site will in many ways, determine how they perceive it, what activities will take place there, and how successful these activities will be. The Circulation Plan recognizes that a site dominated by automobiles will lack the appeal of a site which offers travel

choices to people, and which gives them an ability to circulate in a safe primarily pedestrian scale environment.

Specific circulation topics addressed in the Master Plan include:

- Pedestrian Access and Circulation
- Bicycle Access and Circulation
- Transit Service
- Intermodal Transfer Center
- Rail Service
- Parking
- Roadways
- Travel Demand Management
- Funding Opportunities

Circulation Plan Principles

- Transportation principles embodied in the Circulation Plan focus on developing an effective and efficient multi-modal circulation system; reducing the reliance on automobiles; supporting a pleasant traveler experience; minimizing cut-through vehicles, noise, air pollution and other traffic impacts on adjacent neighborhoods; and minimizing the fiscal burden of parking and other transportation-related infrastructure.
- *Multi-modal* - Railyard visitors, patrons and employees should be able to choose from a broad array of travel options to, from and within the site.
 - *Intermodal* - Travelers should be able to transfer easily between different travel modes serving the site.

Leadership Quality

To make the vision of the Railyard as a multi-modal site a reality, the most important component will be leadership.

Active, sustained, and planned leadership from every sector of the community is required.

The City cannot build enough parking or roads to meet all future or calculated parking demands without destroying the essential qualities of Santa Fe—its pedestrian nature, its narrow streets, its human scale.

Given that premise, leadership is needed to chart the future to use a multitude of creative and different ways to move people in, out and through the City.

Santa Fe is “the City Different.” It must determine how it can plan and invest wisely in its many transportation systems—walks, trails, transit, rail, and roads—to create a whole system that is so easy, cost effective and enjoyable to use that taking an automobile is the last, least desirable alternative.

Characteristics of Transportation Leadership

- Dream the future
- Build the community support team
- Learn the facts—be open to innovation
- Create a plan to achieve the future dream
- Stick with the plan and support it –fiscally and politically



- *Balance* – No one set of travel needs, preferences or possibilities should predominate.
- *Environmental Sustainability* – The transportation system should be designed to help protect the quality of life and natural environment in Santa Fe.
- *Connectivity and Continuity* – Circulation systems and services should take people where they want to go with as many alternative possible route combinations and options as practical.
- *Convenience and Comfort* – The transportation system should be easy to understand, easy to use, and offer an enjoyable travel experience.
- *Affordability* – The cost of providing transportation infrastructure (e.g., roadways and parking) should be minimized through strategic management of travel demand.
- *Safety and Security*. The transportation system should be designed to help ensure that the risk of accidents is low, and that travelers are free from threats to personal security.

Figure IV-1: Santa Fe Southern Rail Car at Depot



Figure IV-3: Wall Art in Pedestrian Underpass



Figure IV-5: Pedestrian Thoroughfare



Figure IV-7: Public Open Space



Figure IV-2: Separation of Travel Modes



Figure IV-4: Pedestrian and Bicycle Underpass Transition



Figure IV-6: Bicycling on Sidewalk



Figure IV-8: Existing Pedestrian Crossings on Guadalupe



PEDESTRIAN SYSTEM

The pedestrian system is the foundation of all circulation systems. The need for walking cannot be ignored even in the most auto-oriented areas. Walking is still required to get from the parking area to the buildings. In a mixed-use site such as the Railyard, planning for walking is a paramount consideration. The Master Plan recognizes the essential need for a well-designed and well-built system of pedestrian facilities in and around the Railyard.

Key Concepts

Interconnected and Continuous Network.

The walkway network provides direct connections between buildings and activity areas throughout the site. It is also designed to connect to the existing pedestrian network on adjacent streets and in surrounding neighborhoods. The network is a grid with the distances between major walks ranging from about 200 to 450 feet. The density of walks maximizes the route choices and opportunities for pedestrian travel within and through the site.

Hierarchy of Pedestrian Facilities.

A hierarchy of pathways gives structure to the pedestrian circulation system. The hierarchy aids way finding by enabling site visitors to orient themselves and form a mental map of the Railyard area. The hierarchy is as follows:

- *The Railyard Plaza.* The Railyard Plaza represents the “heart” of the walkway system. It provides an important gathering place on the site and serves as a destination. The Santa Fe Rail Trail begins there.

- *The Santa Fe Rail Trail.* The Santa Fe Rail Trail is the “spine” of the walkway network. The Rail Trail is to be a continuous, landscaped, safe, non-motorized, multiuse connection from one end of the site to the other. It connects with feeder trails to adjacent neighborhoods and other City trails.
- *Sidewalks on Streets.* The sidewalk is the basic distributed circulation system. Sidewalks on both sides of streets reduces the danger and discomfort associated with walking in a street or along the muddy or dusty edge of a roadway.

Connections

The success of all redevelopment projects hinges on good connections. Without connections, no site has much potential for active use. Mixed-use sites in particular thrive on good internal connections between on-site uses and on good external connections to adjacent neighborhoods and other parts of the city.

Clear visibility of buildings and places both from points on the site and from nearby areas improves access and circulation systems. Regardless of the mode of travel, people orient to their surroundings visually and make choices based on what they can see. Care is needed in working out sight lines and views to ensure that the site is highly “readable” both externally and internally. Site layout and building architecture strategically placed informs travelers and shapes their subconscious and conscious perceptions.

Strong physical connections are essential and are strengthened in direct proportion to the richness of travel choices. The more modes of access and circulation provided to and within the site, the stronger the site becomes as an activity center and as a destination. Not only should modal choice be maximized, but connections between modes should also be provided on site. In this manner, the site can serve as a hub for local circulation, thereby further increasing activity levels and viability as an activity center.

At the same time, good connections require good buffers. Buffering is needed to protect indoor and outdoor spaces from the detrimental effects of traffic, parking and bus transit. Care should also be taken that good access for cars does not turn the site into a bad neighbor for adjacent neighborhoods and uses. A key consideration in protecting nearby neighborhoods is avoiding auto dependence at the site and encouraging balanced access via many alternate travel modes.

Pedestrian Circulation Checklist

The Plan for Pedestrian Circulation in the Railyard is based on several design principles. The following is a checklist of the principles:

- Direct, convenient on-site walkway system connects to all doorways and access points on the site.
- The pedestrian system has a preferred connection spacing of 200 feet or less, with a maximum spacing of 450 feet.
- On-site sidewalk system connects to the off-site sidewalk system at safe, convenient points.
- Sight lines, views and orienting landmarks support visual way-finding.
- On-site sidewalk widths are adequate for social use.
- Pedestrian plazas create “places” that tie buildings and uses together.
- Continuous safely buffered sidewalks around and through large parking areas.
- No parking areas cross major site walkways or sidewalks.
- Needs of disabled and physically-challenged travelers are addressed.
- Sidewalks are buffered from streets by on-street parking or a landscaping strip.
- Intersections at driveways and streets have safe pedestrian crosswalks.
- Curb cuts and ramps are cut at 90° to the roadway with adequate width and landings.
- Canopies, awnings and arcades used to provide shelter from sun and rain.
- Way-finding information provided at key pedestrian intersections.
- Appropriate site furniture and lighting on walkways.



Connections With Surroundings.

Connections between the Railyard and surrounding neighborhoods and uses are crucial to the pedestrian system. Connections create opportunities for pedestrian access which can help reduce the traffic and parking impacts on neighboring areas.

- *Connect to and through the Railyard Park.* Once developed, the Railyard Park will be an important destination for residents and visitors to Santa Fe. The health and vitality of the park will be tied to the extent to which the park is designed to encourage

pedestrian traffic to and within it. It is critical that the walkway network to the Park, including connections to Guadalupe Street, the Railyard Plaza, the Alarid Neighborhood, the Rail Trail, the Whole Foods Market, and the Don Diego Neighborhood.

- *Access at Manhattan, and Alarid Streets.* Providing opportunities for residents in the surrounding neighborhoods to walk and bike to activities in the Railyard is important to ensure that the site serves these districts. Critical to this is closure of connections at Manhattan and Alarid Streets for motorized travel with provisions for

emergency vehicle use if necessary and improvements for pedestrian and bike access. Provisions shall be made to protect adjacent neighborhoods from “spillover” parking. Residential parking permits have proven effective in this goal.

- *Baca Area Connections.* Links are planned to connect the surrounding neighborhoods to the Baca walkway system and the Santa Fe Rail Trail.

Pedestrian-Friendly Crossings.

Safe pedestrian crossings of roadways are an essential building block for a safe pedestrian system.

- *Improve Safety at Intersections and Mid-block Crossings.* Several critical intersections around the Railyard should be improved to address pedestrian safety and comfort concerns. (See Figure IV-10). Improvements include signalization, reducing crossing distances, and special paving at crossings.
- *Traffic Calming on Guadalupe Street and Paseo de Peralta.* Serious safety and comfort concerns at pedestrian crossings on Guadalupe Street and Paseo de Peralta should be addressed by traffic-calming treatments, including on-street parallel parking, bulb-outs at intersections, median changes, signage, streetscaping, etcetera.
- *Crossing at St. Francis Drive.* For pedestrian and traffic safety, a grade separation for the Santa Fe Rail Trail at St. Francis Drive is recommended long-term. The City will need to coordinate with the State of New Mexico to design the crossing to complement any future changes to the St. Francis and Cerrillos intersection.

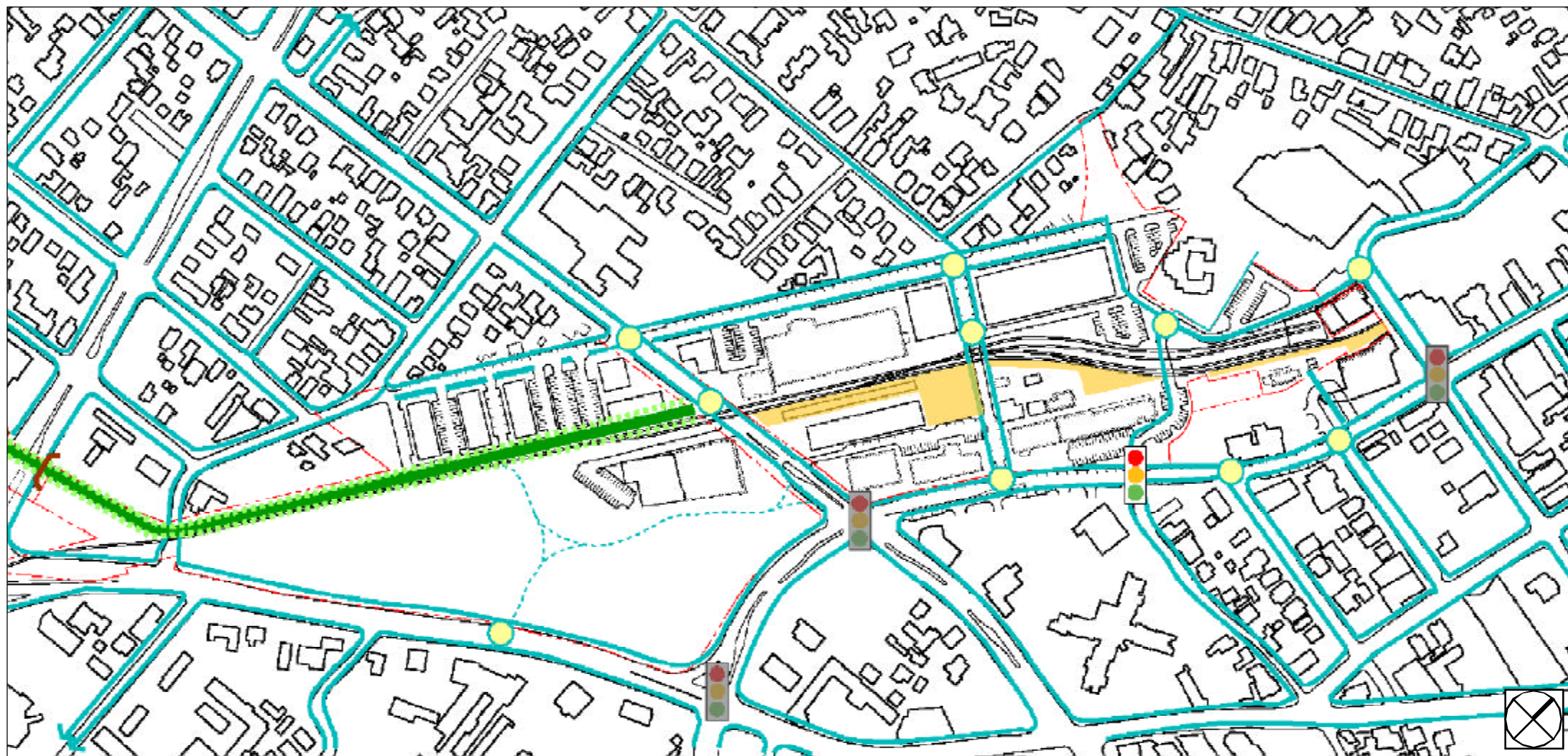









Figure IV-9: Pedestrian Access and Circulation

LEGEND

-  Proposed Critical Pedestrian Intersection (Signalized)
-  Existing Critical Pedestrian Intersection (Signalized)
-  Plaza/Alameda (Bicycle dismount zone)
-  Critical Pedestrian Intersection (Unsignalized)
-  Sidewalks
-  Trails
-  Santa Fe Rail Trail / Acequia Trail

BICYCLE CIRCULATION SYSTEM

Santa Fe’s mild climate and relatively flat topography make bicycling an excellent mode of travel for short-to-medium distance trips, including commuting, recreation, shopping, and running errands. Bicycling is a popular activity among both visitors and local residents. Cyclists can frequently be seen riding along roadways in the vicinity of the Railyard during all seasons. Developing a comprehensive system of bike-ways and other bicycle facilities in and around the Railyard can build on the already strong interest in this mode of travel, and help to promote the Railyard as an important local and regional travel destination.

Key Concepts

Interconnected bicycle routes.

The bikeways network is designed to take advantage of the street grid in the Railyard area to provide the most direct possible connections between the North Railyard, the Railyard Park, the Baca District, and surrounding neighborhoods. The network is also designed to connect seamlessly with other modes of travel, particularly the bus and walkway systems.

Remove barriers to safe bicyclist movement.

The success of the proposed bikeway network rests on addressing barriers to safe and easy bicycle movement. Specifically, the plan calls for system of multi-use bikeways on the Railyard site; improving striping, signage and other safety features on roadways in the Railyard area; upgrading intersections to enhance safety and reduce bicycle through-travel time; and grade-separation for the Santa Fe Rail Trail where it crosses St. Francis Drive.

Develop a hierarchy of bike facilities.

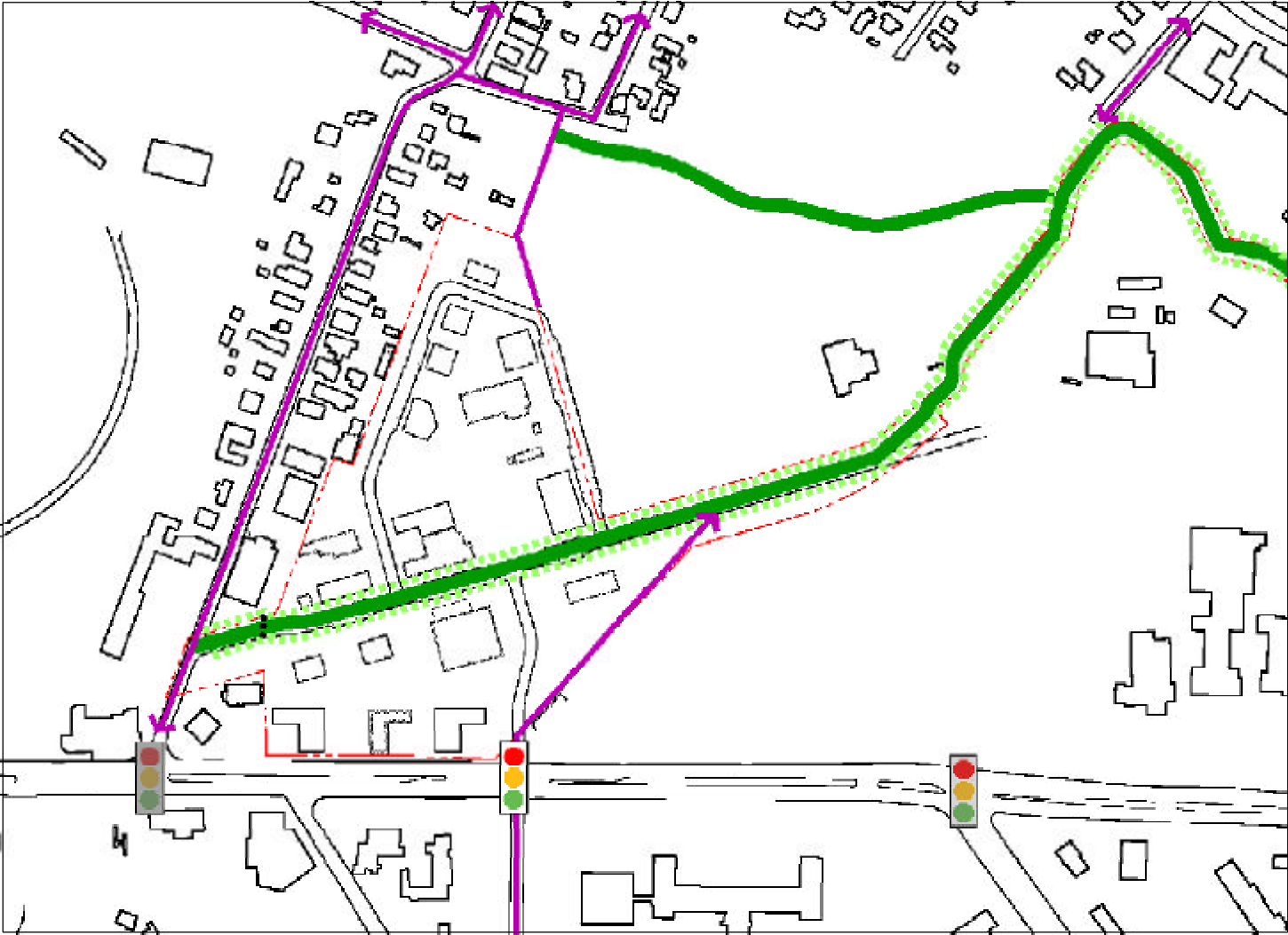
The proposed bikeway network applies a hierarchy to its facilities. The hierarchy serves the dual role of aiding wayfinding and addresses the diverse needs of cyclists with different skill levels. Novice and intermediate cyclists including families with children feel most safe on the routes that are completely separated from traffic, whereas experienced bike road commuters will feel more comfortable interacting with traffic on the streets.

Figure IV-10: Improved Pedestrian and Bicycle “Tabled” Crossing



Bicycle Circulation Checklist

- Direct, convenient routes that connect all portals on the site.
- Opportunities for connections into local and regional trail networks are fully realized.
- Connections to other transportation modes are fully realized.
- Consideration for variations in skill levels between different bicyclists.
- Treatments at intersections designed to break down barriers created by roadway traffic.
- Bicycle parking adjacent to the primary portals of all buildings on the site.
- On-site bicycle parking sites are identified at other locations convenient to destinations.
- Bicycle parking areas are visible and designed to offer security.
- Bike routes are signed and marked to help bicyclists find their way to and around the site.
- Bicycle/pedestrian conflicts are anticipated and reduced through careful design.
- Appropriate lighting and signage to aid in wayfinding and ensure safety.



- **Railyard Plaza.** The Plaza's role as terminus for the Rail Trail will make the plaza an important destination and layover point for bicyclists. For safety reasons bicyclists should be required to dismount when traveling through the Plaza to avoid conflicts with pedestrians.
- **Santa Fe Rail Trail.** The Santa Fe Rail Trail represents the "spine" of the multi-use pedestrian and bicycle system on site. The trail connects to the Santa Fe Southern Rail Trail to Lamy via a proposed path along Alta Vista Street. A grade separated crossing at St. Francis Drive is important for safe long term bicycle use of the Rail Trail.
- **Designated Bicycle Routes.** Streets or alleys designated as bicycle routes let bicyclists know that it is safe to use these routes as connections to facilities or destinations on and off site. Designated bicycle routes should have a low traffic volume; and posted speed limits, cross-sections, and signage appropriate for a bicycle route. See Figure IV-12 for the bicycle circulation plan.

Develop bicyclist support amenities.

Other important components are bicycle parking, lighting, signage, and other support elements. Bicycle parking should be easy to use and find and located adjacent to the primary entries of all buildings on the site. Lighting should be in scale with pedestrians and bicyclists, and free of spillover and glare. Signage should provide directions to important destinations, other routes, and to connections to other modes of transportation.

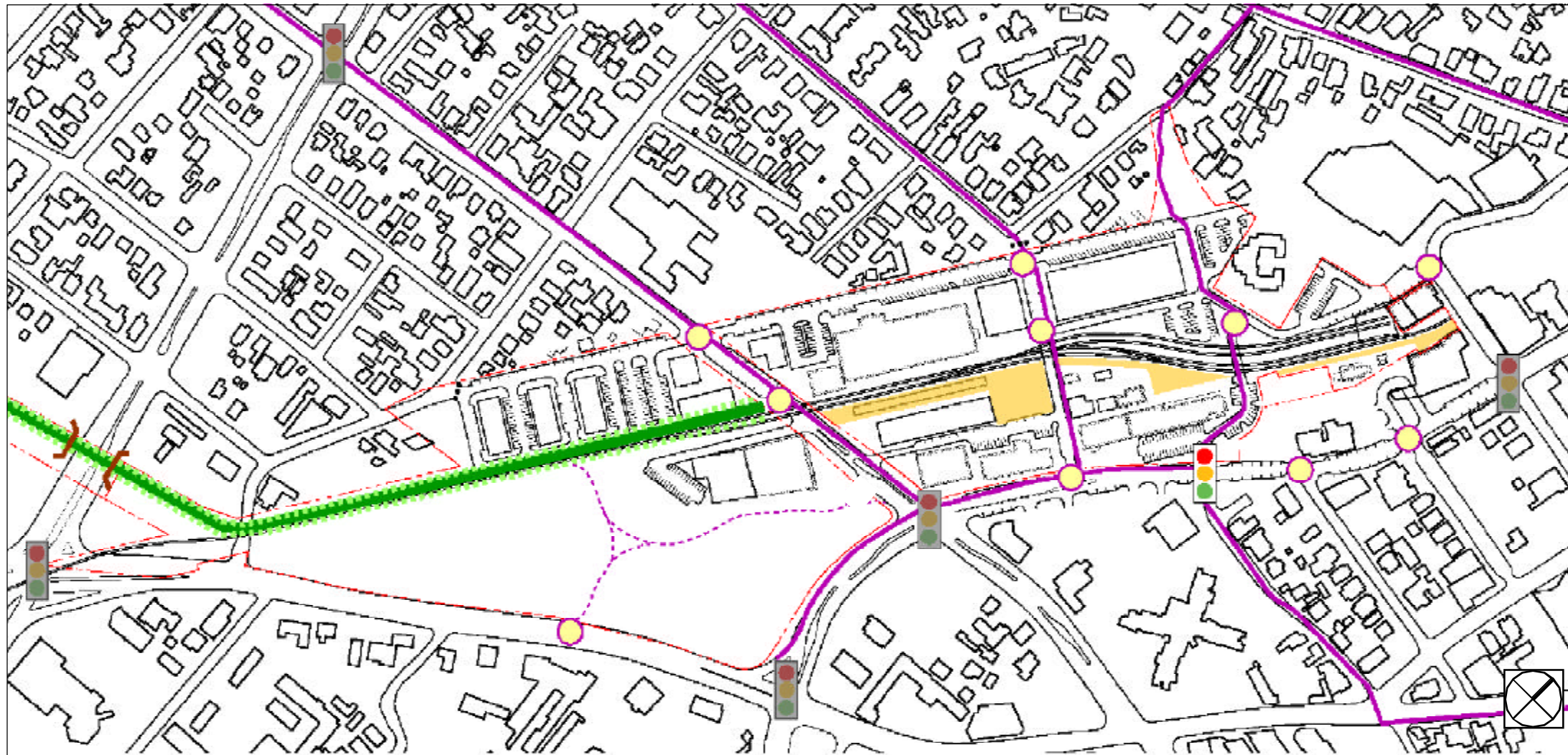









Figure IV-12: Bicycle Access and Circulation

LEGEND

-  Proposed Critical Pedestrian Intersection (Signalized)
-  Existing Critical Pedestrian Intersection (Signalized)
-  Plaza (Bicycle dismount zone)
-  Critical Pedestrian Intersection (Unsignalized)
-  Bike Route
-  Bike Trails
-  Santa Fe Rail Trail / Acequia Trail

TRANSIT

Providing high-quality transit service to the Railyard offers significant benefits to tenants, neighbors and the Santa Fe community at large. Benefits include minimizing the need for parking facilities, reducing traffic on area streets, improving air quality, and giving employees and visitors to the Railyard an affordable and sustainable means to get to the site.

In the context of the Master Plan, it is useful to think of “transit” in terms of a mix of different types of services. These include city buses, tour buses, hotel shuttles, taxis, and --perhaps in the future--commuter and/or light rail.

Land use, demographic, and other conditions in Santa Fe offer much untapped potential for increasing the use of transit. Given a good mix of transit services and infrastructure improvements, opportunities for realizing much higher rates of transit use are abundant. The overall form of the

city is generally compact and radial, with a dense network of narrow streets that give easy access for transit passengers to a large number of travel origins and destinations.

The existing Santa Fe Trails city bus system--while still in the early stages of its development--already offers a reasonably high level of service along several roadways in the city. Higher service roadways in the vicinity of the Railyard include Cerrillos Road, Agua Fria, Guadalupe Street, and Paseo de Peralta.

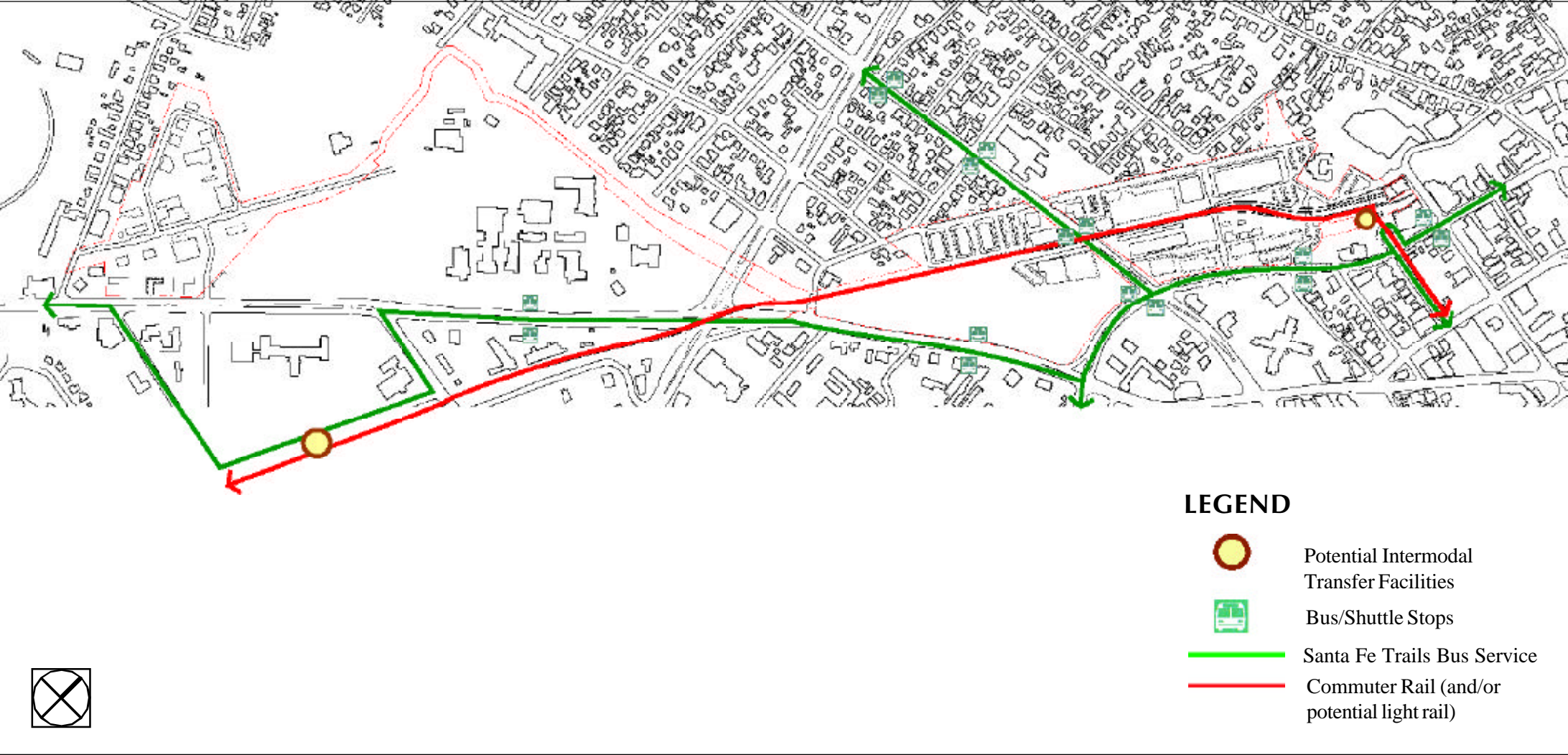
Transit Master Plan

The long-term vision for transit embodied in the Master Plan is to increase significantly over time the number of people arriving at the Railyard by bus and other transit modes – to perhaps as much as 12 to 15 percent of employees daily and up to half of visitors during large special events at the Railyard.

Transit Planning and Design Checklist

- Streets are designed to accommodate safe operations by local and regional buses.
- Bus stops are incorporated as an integral part of the site design.
- Bus stops have direct and convenient connections to the on-site pedestrian walkway system.
- Bus stops on streets with two-way bus service have bus stops in pairs linked by crosswalks.
- Bus stops include signage with route and schedule information, lighting, site furniture, bicycle parking, and shelters.
- Provision is made on-site for multiple bus routes to conveniently interconnect.
- Future commuter/ light rail transit alignment needs are incorporated into site master plan.
- Opportunities for park-and-ride or peripheral parking linked to transit are addressed in the plan.
- Provision is made for taxi access and passenger drop-off by private shuttle services.

Figure IV-13: Long-term Future Railyard Bus and Rail Circulation



Achieving this vision requires:

- The City to invest in high-quality transit.
- Railyard-area businesses to recognize the value of offering benefits such as transit passes to their employees.
- Employees who, by leaving the car at home, save money on gas, oil, tire wear, and other automotive operating costs.

- Business patrons and visitors to recognize the value of having choices for travel to the Railyard, particularly to attend special events.

On the following pages is a conceptual strategy for transit on the Railyard. The strategy has rough phases for near, intermediate, and long range improvements.

Figure IV-15: Cerrillos Road Bus Stop at Railyard Park



Figure IV-16: Santa Fe Trails Bus Route on Guadalupe Street



Characteristics of a High Quality Community Transit System





A high-quality transit system is:

- Well supported and funded by the community.
- Highly reliable.
- Convenient.
- Time-competitive with driving.
- Easy to understand.
- Easy to use.
- Readily accessible by foot and bicycle.
- Used by people of all abilities, ages and income levels.



Figure IV-14: Near and Mid-Term Bus and Rail Circulation, North Railyard Area

LEGEND

-  Bus/Shuttle Stops
-  Santa Fe Trails Bus Routes
-  Intercept Parking / Events Shuttle
-  Alternate Route Intercept Parking / Events Shuttle

Transit Improvement Strategy

Proposed improvements to the transit system are categorized in near-term, mid-term, and long-term time horizons.

- Near-term improvements are those that could take place almost immediately.
- Mid-term improvements are those that could take place within 2 to 5 years.
- Long-term improvements are those that could take place within perhaps 10 or 15 years.

Near-Term Transit Improvements

1. **Strategic redeployment of Santa Fe Trails bus routes to Guadalupe Street.** Current bus service to the Railyard includes a total of four routes: Route #1 operates in both directions along Agua Fria, using a combination of Guadalupe, Montezuma and Sandoval Streets for access to and from downtown; Route #3 runs in one direction only (i.e., eastbound) on Paseo de Peralta as far as Guadalupe, where it turns north to head toward downtown; Route #4 runs in both directions along Guadalupe/Don Diego; and Route #21/22/24 runs in both directions along most of Cerrillos, but splits at Manhattan to run northbound on Cerrillos and southbound on Sandoval into and from the downtown area.

From the perspective of providing effective service to the North Railyard and Guadalupe District, the deployment of transit resources in the current manner is not ideal. The fact that some routes use different streets for travel in opposite directions is confusing to most potential riders. The use of multiple streets also requires provision of several pairs of bus stops to serve the area, rather than only one or two. Some of the routes require excessive walking to get to bus stops for many Railyard/Guadalupe District employees and visitors.

A solution is to redeploy the existing transit routes to operate up and down Guadalupe Street only. Such redeployment will substantially increase the visibility and marketability of transit in the North Railyard/Guadalupe area; simplify the “structure” of transit routes, making them easier to understand; shorten walking distances to Railyard and Guadalupe District activity sites; and minimize the cost of providing bus stops by limiting their number to a few strategically located pairs.

2. **Restructuring of Paseo de Peralta bus route as a bidirectional service.** The current configuration of Route #3 as a one-direction loop serving Alameda Street westbound and Hickox/Paseo de Peralta eastbound is not an effective route. The configuration requires people who want to use the bus for travel between the west Alarid area and the Railyard site to spend just a few minutes traveling eastbound, but over 30 minutes traveling back. Redesigning this route as a bidirectional loop or a bidirectional out-and-back service would greatly increase its effectiveness.

3. **Modest improvements to bus stops in the Railyard area.** Easy-to-implement improvements to bus stops in the Railyard area include improved signage for better visibility (the current signs blend too easily with their background); addition of schedule and route information; and provision of benches. All stops should be cleaned and maintained regularly.

Mid-Term Transit Improvements

1. **Improved pedestrian connections to bus stops.** All transit passengers are ultimately pedestrians. Thus, the single most important requirement of the transit design for the Railyard is to implement the pedestrian system discussed in the Pedestrian Circulation section of this document. The ideal distance to bus stop = 0 feet (front door service). More practically, a standard is that at least half of travel destinations should be no more than 750-800 feet from a bus stop (= 3 minute walk), and 100 percent of travel destinations should be no more than 1300-1350 feet (= 5-6 minute walk). When measuring travel distances, it is important to consider routes that people actually use rather than theoretical “crow’s flight” paths.
2. **New “Capitol Connection” transit route.** This proposed route would provide regularly scheduled, “out-and-back” bus service to connect the South State Complex, the Railyard, the State Capitol, and the downtown Plaza at least every 15 minutes in both directions. Implementation would be most effective with development of an intercept parking facility to serve Railyard, State Capitol and downtown employees somewhere south of the St. Francis and Cerrillos intersection. The potential market for the service would include morning and evening commuters, employees traveling at lunchtime or running errands, bike-in/bus-out bicyclists, and visitors to the Railyard and downtown areas particularly during special events. The route should operate via Guadalupe Street as far north as Garfield, where it could turn east toward the State Capitol, then north to downtown on Don Gaspar. Collaboration between the State of New Mexico, private land owners and the City to develop intercept parking facilities in the South State Complex/Baca area and to develop a shuttle “pass through” route between Sandoval and Don Gaspar could greatly benefit all entities.
3. **Significant improvements to bus stops in the Railyard area.** Improvements should include providing passenger waiting pads and shelters, improved pedestrian access, bicycle parking, landscaping, updated signage, and concrete bus pads. Priority candidates for the improvements include bus stop pairs located just north of Guadalupe and Manhattan intersection, just south of Guadalupe and Paseo de Peralta intersection, just north and south of Cerrillos and Alta Vista intersection, just west of Whole Foods on Cerrillos across from the Railyard Park, and just west of the point where Paseo de Peralta crosses the railroad tracks. The improvements on Guadalupe Street and Paseo de Peralta could be timed to coincide with implementation of traffic-calming measures. The pair of stops on Paseo de Peralta should be designed to allow shared use by Santa Fe Trails and private transit services such as hotel shuttles and taxis and during special-events at the Railyard.
4. **Provision for special-events transit service.** Roadways in the North Railyard and Baca Area should be designed to accommodate re-routings of the “Capitol Connection” transit service through the site during special events.
5. **Implementation of an aggressive transit-marketing program.** An aggressive marketing program should be developed to encourage use of transit and other alternative modes in the North Railyard, Baca Area, South State Complex, and Guadalupe District. Such a program should be coordinated with similar programs developed for other areas in the city, such as downtown.



Long-Term Transit Improvements

1. Commuter or light rail service. Regularly scheduled commuter rail service has been proposed for operation on the Santa Fe Southern Railroad between the Eldorado Subdivision and the Railyard. To be successful, such service will require strong connections both to the pedestrian and bicycle pathway networks and to the bus stops on routes that serve the Railyard. The bus connections, in particular, will be essential for carrying people from the Railyard to downtown destinations in a time-competitive manner vis-à-vis driving. An alternative to a bus connection between the Railyard and downtown would be to develop the commuter rail service as a true light rail transit (“LRT”) system, which could potentially operate over city streets (e.g. Garfield, Don Gaspar, etc.) from the historic AT&SF depot northward.

2. Intermodal transfer facilities. At least two sites for intermodal transfer facilities have been proposed in or near the Railyard. The purpose of these facilities would be to provide centralized points of access to the transit system, and enable connections between different bus routes and between the bus and rail systems. The two potential sites are described in more detail in the section of this document entitled “Intermodal Transfer Facility”.

RAIL

The west was won by the railroads. The Santa Fe railyard and its historic depot still evoke the heady romance of those bygone days. Surprisingly throughout the West there are stirrings to re-establish old rail alignments. Cities and towns of all sizes and scales are re-examining rail as a critical potential component of regional transportation planning.

The vision for rail in the Railyard Master Plan is have it be a fundamental part of the operations and activities on the site. The intent is to design the site to allow for future rail potential as part of the multi-modal transportation opportunities at the Railyard. Santa Fe is already a leader in this effort to revitalize its rail capabilities. In the 1997 Community Plan, the City Council and the community identified the current rail user as the highest preferred use for the Railyard.

Four rail opportunities are available for consideration at the Santa Fe Railyard. Each of these rail opportunities presents unique challenges and design issues to consider in the Master Plan:

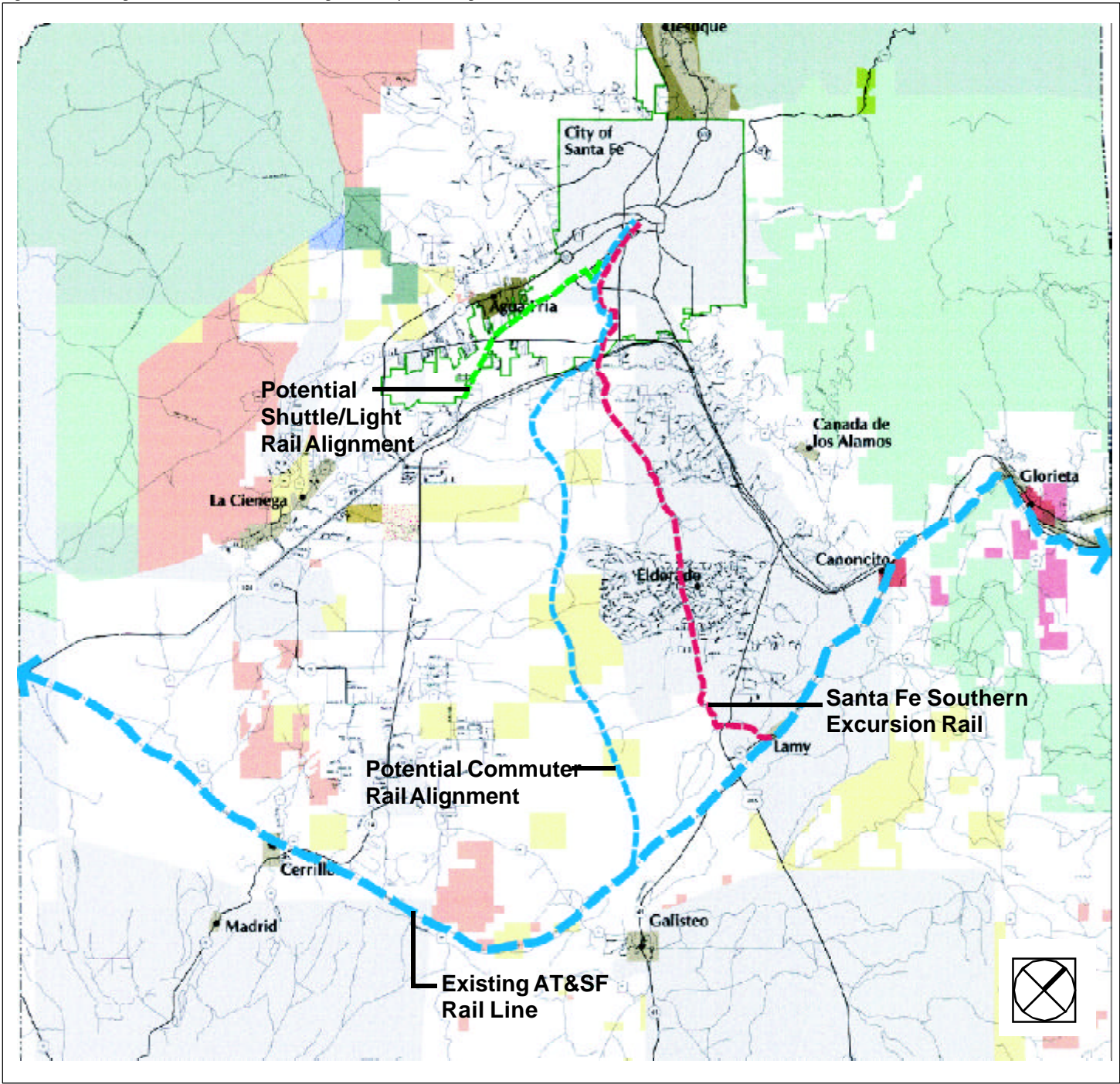
1. Light rail transit is a metropolitan electric railway system characterized by its ability to operate single or multi-car consists (trains) along exclusive rights-of-way at ground level, on aerial structures, in subways or in streets. It is able to board and discharge passengers at station platforms or at street, track, or car-floor levels and is normally powered by overhead electrical wires. The people who use this type of service are normally suburban commuters who travel from home to work or from station to station within an urban area. Trolley service sometimes uses light rail tracks, but only for short distances and mainly for tourist type service. With this service one would be able to travel in congested areas without the need to drive their car. The advantage of this mode is that it can be made unique to the Santa Fe area and may add an additional tourist attraction to the downtown business district. Substantial federal funding support would be needed to be identified and coordinated to design and build the system. Although a long term future opportunity, the Master Plan holds open options for its development and encourages light rail transit along the center of Cerrillos and St. Francis.

2. Commuter rail services operate over a standard railroad line under a wide variety of conditions. Under what is perhaps the most common arrangement, services are operated by a public agency over freight railroad lines, utilizing a trackage rights agreement. Increasingly, however, the rail line is acquired by the public agency, with any freight or intercity passenger service operated on trackage rights agreements. Commuter rail services are typically operated over routes of up to 40 - 50 miles from the city center although some run greater distances. Commuter rail systems that are operated purely for home-to-work commuter traffic, services may be confined to inbound trains during the morning peak period and outbound trains in the evening. This system would appeal to people that live in Albuquerque or El Dorado, and work in Santa Fe. Jointly, the City and County of Santa Fe have secured congressional support and funding to develop initial planning and right-of way purchase for a short haul commuter operation between the El Dorado subdivision and the Railyard site. The track between El Dorado and Santa Fe possibly can be upgraded with money that has been earmarked for these efforts.

3. Excursion trains are currently the primary rail service on the Railyard. People who normally use this type of service want the experience of riding a working train, an outing with the family, or to go sight-seeing. They often travel with small children, sometimes carrying backpacks, cameras and other belongings similar to intercity passenger rail service. Safety is a major priority. Most excursion trains function as a living history exhibit. Ground facilities and rolling equipment are usually kept clean and well maintained. This is the type of train service that Santa Fe Southern Railway is presently providing.

4. Freight service represents 97% of the United States railroad services. In Santa Fe, it moves beer, lumber, pipe, and Army equipment. In the future it could be grain, pumice, stone, and wood chips, etc. Nationally, freight car loading has increased greatly since the 1950s, but it is rarely located with passenger or transit facilities. Modern rail transportation, both through-freight and yard operations are separated and secured from the general public and are kept clean at all times. An open line of sight for the complete length of the train is most desirable for optimal switching safety. Currently, freight service makes up approximately 30 percent of the revenues of the Santa Fe Southern Railway.

Figure IV-18: Regional Rail Network, Existing and Proposed Alignments



RAIL: FREIGHT RELOCATION

Moving the freight and rail repair operations from the Railyard site is recommended in this Master Plan. Presently, the majority of freight services is for lumber suppliers and the Army National Guard. Freight transloading is as low as 10 cars per month and the existing railyard loading dock does not meet the physical requirements of the National Guard. As a result, it is used once or twice a year.

Both existing and future freight service would be better served if it were moved to a new location. Originally, the railyard site was a much more industrial and commercial site that required considerably more rail service. The site now incorporates residences, retail stores and restaurants which no longer rely on rail services to operate. Heavy vehicle access is difficult to get to the railyard as much of the surrounding road network is not designed for such vehicles. Accidents and injuries can be avoided by removing the freight operations from the railyard and would reduce concerns about excess tripping of crossing signals, locomotive horn noise, and train-vehicle accidents.

Heavy repair activities should also be moved off site. Last year, Santa Fe Southern Railway replaced one wheel set and did minor locomotive repairs in the Railyard. The total time used for both operations was less than one day. This indicates that these repairs might easily be done elsewhere.

Two alternative sites for freight and heavy car repairs are proposed. The first possible site is near the present Budweiser distributing facility spur adjacent to the St. Francis Drive and Zia Road intersection. The second is south of St. Francis Drive and the Interstate 25 interchange. Any site chosen should have easy access to truck and highway uses.

At a new off-site loading and repairs location, at least one spur track is necessary. The new spur track could combine an end ramp for the Army to unload equipment, a side ramp to unload boxcars and a flat area with two sides accessible to unload center beam cars. The proposed location could also be used to make heavy rail car rolling stock repairs and to store excess excursion, freight and commuter railroad equipment. Such a track should cost about 80-100 dollars a foot to construct--not including costs associated with site preparation, real estate, or the permit needed for construction.

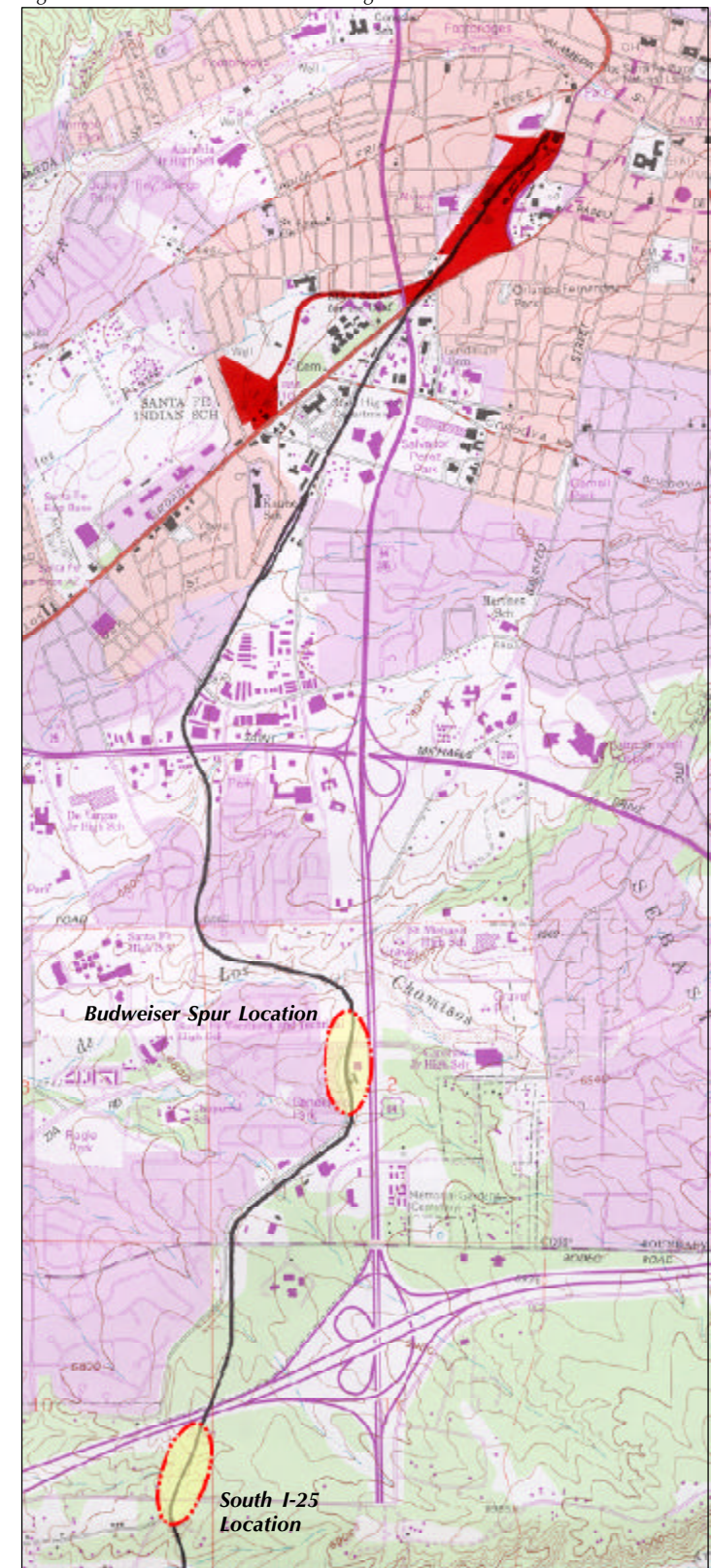
Available Financing

The Federal Railroad Administration has loan money for use by short-line railroads with government sponsored authorities. The Santa Fe Southern Railway with the City as land owner fit the borrower profile. Under TEA21 Railroad Improvement Financing, applicants must set up a meeting with FRA and submit the following items:

- A map, description of the technical aspects and amount of the request.
- Description of the economic impact of the project.
- Description of how the project will enhance safety.
- Description of amount and type of collateral offered as security.
- Current balance sheet.
- Environmental assessment or impact statement.

Additional supporting grants may be acquired from other federal agencies such as the Federal Transit Administration, the Department of Defense, or the Department of Commerce for economic development to accomplish the freight operations relocation and the Railyard on-site track reconfiguration that the freight removal allows.

Figure IV-19: Potential Areas for Freight Relocation



RAIL LINE REALIGNMENT

Realignment of the operational tracks in the North Railyard Area is recommended in this Master Plan. Current tracks for freight and train consist needs spread the operations of the railroad over most of the central open area of the north railyard. To reduce safety and operational conflicts with existing and proposed development at the Railyard, it is recommended that the operational tracks be realigned to be closer to the historic depot.

Although the rail realignment is important, it is just as important to maintain opportunities for future rail service changes. Thus, alternate configurations based on various rail service needs were tested. The configuration tests are shown in *Figures IV-20 to IV-24*.

The recommended realignment is to consolidate the tracks as shown on *Figure IV-23*. In addition, it is recommended that the existing rail easement south of Paseo de Peralta be widened to accommodate the potential for a second set of tracks for light rail. An easement widening such as this would require negotiations between the City of Santa Fe and the Trust for Public Land as the current holder of the design, development, and management of that easement.

Historic Note

The existing tracks in the North Railyard and Baca Area are historic materials.

It is desired that if not used for future operations, that existing tracks are left in place and disconnected from the operational tracks.

The unused extant tracks should be carefully and thoughtfully accommodated into the design of the site and its structures.

Figure IV-20. This configuration shows the existing rail line with all current uses.
A: Main line; 1290 feet needed
B: Heavy freight loading/unloading line
C: Tracks 2, 3 & 4 used for rearranging train cars
D: Track 4 for passenger loading at depot.

Figure IV-21. This configuration shows the rail lines consolidated to reduce the amount of land consumed by the rail line.
A: North entry trackage becomes unoperational
B: Tracks 3 & 4 are moved adjacent to tracks 1 & 2
New configuration removes need for north entry track.

Figure IV-22. This configuration shows the rail line with all freight operations and heavy maintenance moved off-site. Only excursion use remains on the railyard, and the remaining tracks are required for rearranging of train cars.
A: Freight loading line and ramp become unoperational.

Figure IV-23. This configuration shows the rail line configured for regional commuter operations only. The configuration remains the same as the above option for excursion use. Excursion and regional commuter operations can use the same rail trackage.

Figure IV-24. This configuration shows the tracks needed for light rail and excursion passenger use only. Light rail and excursion trains require separate lines to operate if occurring simultaneously. With Congressionally established time requirements for separation, the same track may be used.
A: Excursion line
B: Light rail line

Figure IV-20: Rail Line, Existing Conditions

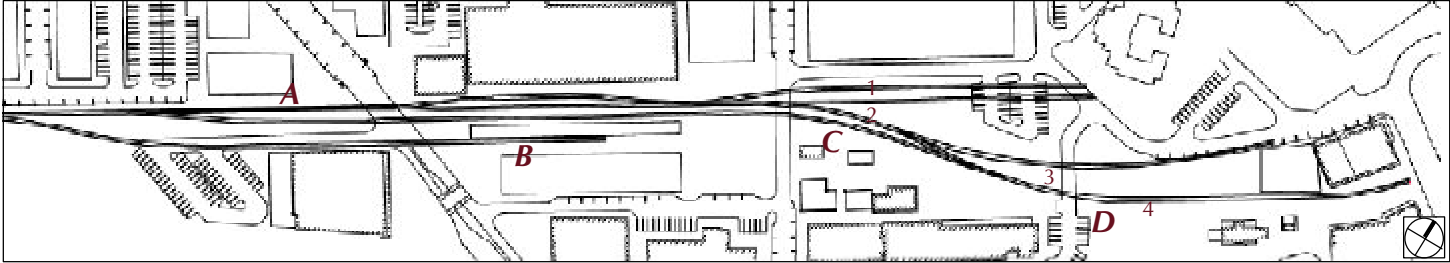


Figure IV-21: Rail Line Consolidation

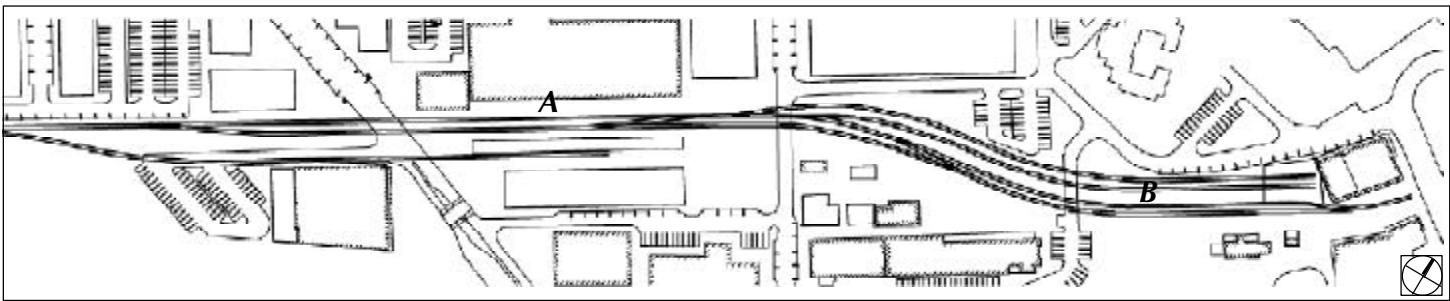


Figure IV-22: Freight/Heavy Maintenance Offsite

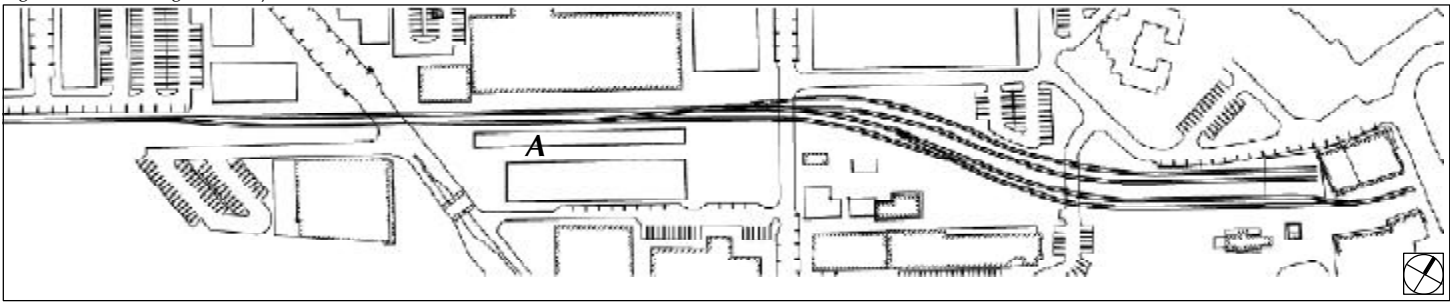


Figure IV-23: Commuter Rail Use Only

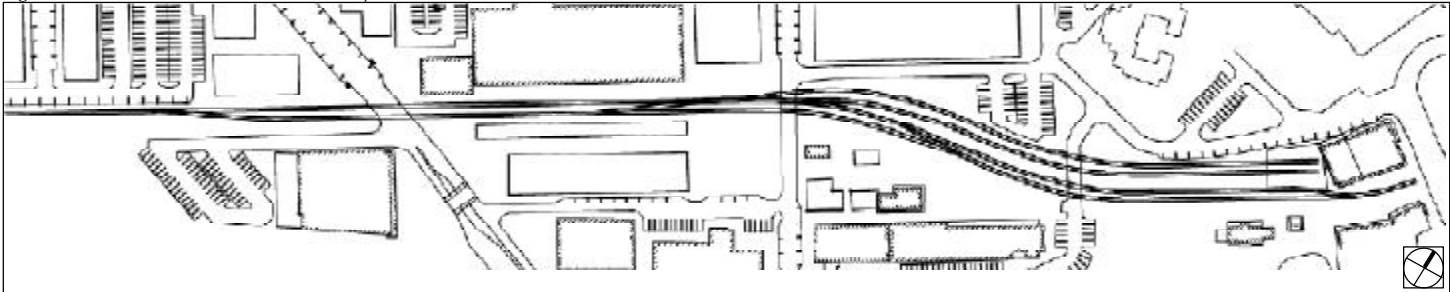
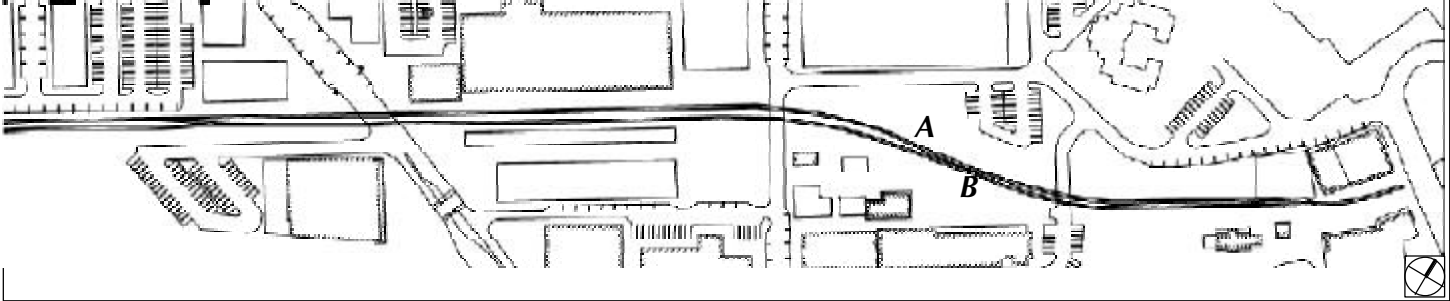


Figure IV-24: Light Rail and Excursion Passenger Loading Only



RAIL OPERATION / ISSUES

Safety

Safety is the most important railyard operational issue and it is of particular concern in the Santa Fe Railyard. All other issues must be secondary, and all key rail design decisions should be based on their relationship to safety. The Federal Railroad Administration (FRA) and railroad professionals always put safety first.

Many historic railroads have restored older equipment and facilities to good or mint condition, but if such equipment cannot be operated safely it should be used for display only or moved off-site. Rail operations should also emphasize safety. Trains should not be run on track that is unsafe, operate with rolling stock that has sharp wheel flanges, use lead paint, use motive power equipment that leaks oil or other contaminants into the environment, or poses other major risks to the public. All equipment, facilities and operating personnel must meet today's safety standards. The FRA will audit and inspect the operation and unless it has a proven safety record they will not be allowed to operate. In order to operate trains in the Santa Fe Railyard FRA Class One operating standards must be met. This is the minimum classification for operating and maintaining passenger, or commuter rail trains. Train speed cannot be in excess of 15 M.P.H.

Switching

Railyard switching is the process by which different pieces of railroad rolling stock are made up into a train. This process poses one of the greatest safety concerns for railroad operating personnel. Because of possible injuries to railroad personnel, railyard switching has been the subject of a great deal of study from both the industry and public sector. This analysis has shown that there is no one factor that leads to a railroad related injury. Instead, rail related accidents result from a combination of many reasons, including:

- Train movement on adjacent tracks.
- Poor communications between the operator of the engine and other parties.
- Distraction from the task at hand.
- Falls from the train.
- Tripping hazards.
- Pedestrian and non-railroad personnel disregard for safe practices.

The proposed railyard track configuration may be more difficult to switch than the existing one. The switch tracks will be on a curve and line of sight hand signals will be difficult for train crew members to see. Vehicle and pedestrian crossings will make these switching movements a greater safety hazard. People who are visiting the railyard will need to be protected from switching and rail operations to reduce personal risks. The Master Plan requires the use of landscape bollards and fencing to reduce these risks.

Crossings

The “at-grade” street crossings should be gated and signaled with “motion sensor” train detection circuits. This type will only activate closing gates and signals when the train is moving. Trains will be able to stop near the depot without activating the crossing alarms and the gates will remain up or in the rest (off) position. Crossings should not be located where there is a switch. That placement would increase the frequency of switch failure and maintenance expenses. Adequate drainage should be established at all crossings to reduce problems with electrical circuits that govern operation of crossing alarms.

The pedestrian only crossings within the Railyard site will require gates and may be used for emergency vehicles. We suggest a removable bollard be installed in conjunction with these crossings in order to prevent unauthorized vehicle use and to restrict traffic to pedestrian use only. The FRA, under some circumstances, may grant a waiver from the rules and not require the use of locomotive horns in this type of crossing.

Frequently Asked Questions

Q. *Can the freight activities be moved off the railyard?*

A. Yes. Both the City and the rail line operator would like to move the freight activities. Funding is the major factor as to when and how it will be done. There are federal resources to fund moving the freight operations. To receive those funds requires the collaborative efforts of the County, the City as owner of the land, and the rail operator as owner of the line.

Timing is important. The City accepted in August 2001, Trust for Public Land's proposal to design and construct the railyard park and plaza including the pedestrian alameda. The realignment of the rail lines needs to happen before completing construction of the plaza and alameda.

Q. *Can the 1200 ft. train runaround activities be moved south of Paseo de Peralta?*

A. No. EP Hamilton, our rail engineer, tested moving the 1200-ft. runaround southward toward St. Francis Drive and did not feel this is an option. For the runaround to work it uses about 1200 ft. of trackage beyond the south switch of the runaround. If the runaround moves south, the train as it uses the runaround would trigger the automatic crossing signal for the St. Francis and Cerrillos intersection which would send the lights at that intersection into a sequence of changes to allow the train passage through the intersection. The train would not go through the intersection, and it would constitute a false signal. The rail line would be assessed a substantial penalty every time this happened. This would not be acceptable to the federal authority that oversees the rail lines' operations.

Q *Can horn noise and blowing be reduced?*

A. Yes. There are technologies that can replace the train whistle sound. We recommend that changes to the locomotives horns be made when practical. It is important to note that many citizens love to hear the sound of the train whistle.

RAIL DETAILS

The standard passenger and commuter rail train platform section is shown in *Figure IV-25*. The platform is raised to allow for easier access for train egress and ingress when train is parked at the station. This design allows for the best wheelchair access. It also drains water away from the track.

Figure IV-26 represents the normal right-of-way requirement of track on tangent or straight track.

Figure IV-27 is a cross section of a standard RE rail used in the United States.

Figure IV-28 represents the normal right-of-way requirement of track in curved track.

Figure IV-29 is a new type 36E “easy throw” switch stand. The triangular hand lever has a grasp point that is 30 inches above the ground, helping to prevent painful bending and lifting. The typical 180 degree movement has been reduced to 120 degree, so the switch can be thrown with a minimal operator motion. Together, these ergonomically engineered features help to increase operations safety.

Figure IV-25: Typical Platform Section

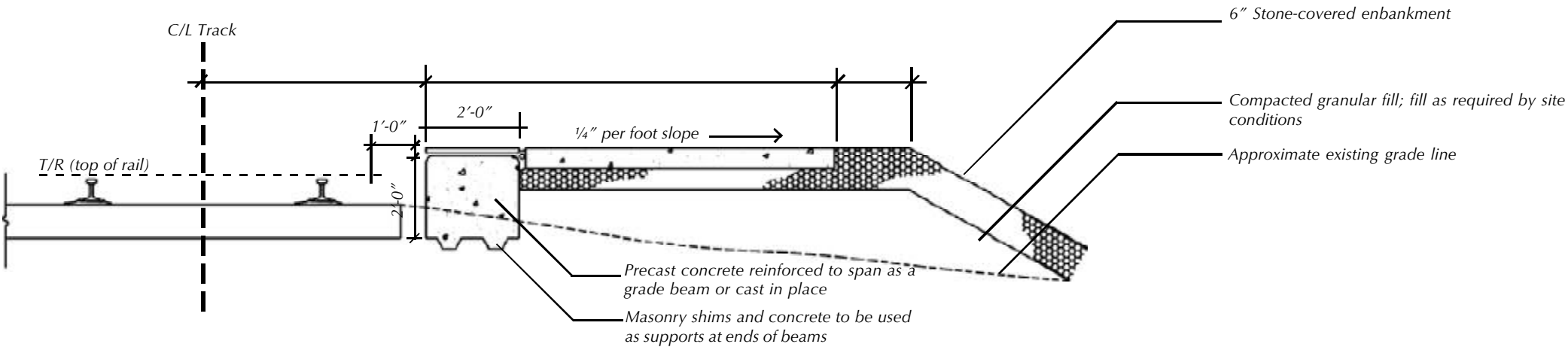


Figure IV-26: Right-of-way, straight or tangent track

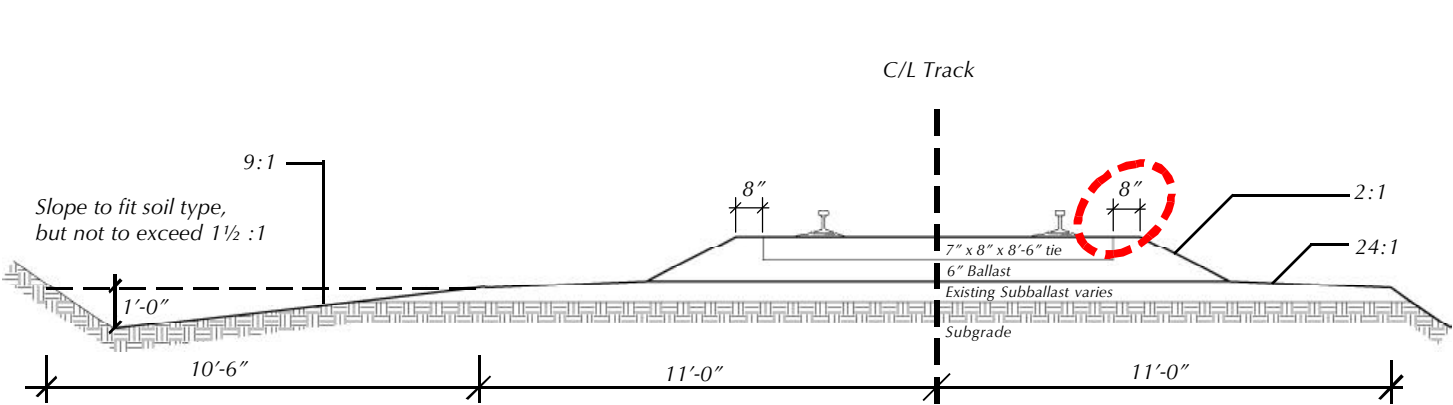


Figure IV-28: Right-of-way, curved track

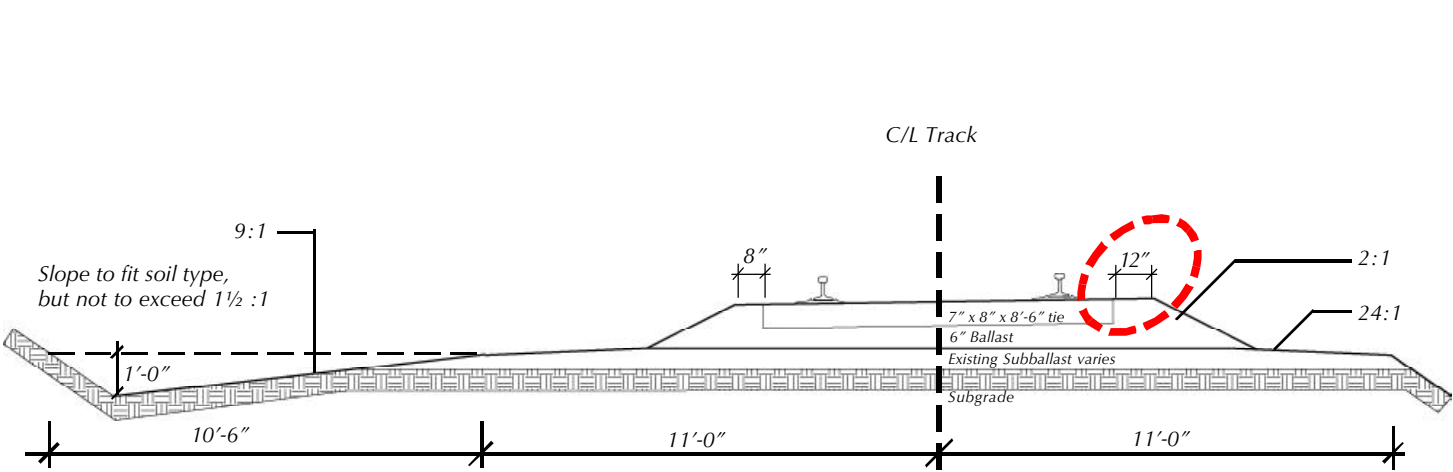


Figure IV-27: Standard RE Rail used in the United States

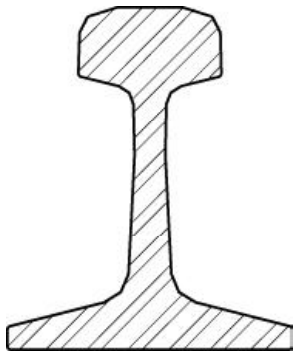
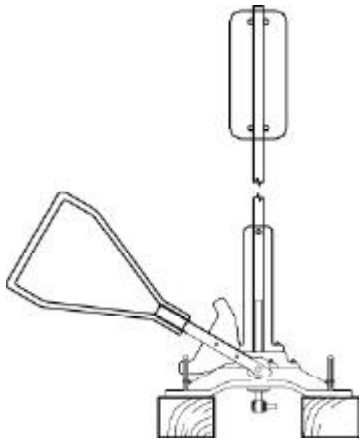


Figure IV-29: “Easy Throw” Switch Stand



RAIL DETAILS

Crossing Types

All crossing sub-grade will be constructed to standard practice for rail and road interaction. All crossings should be installed with ten foot ties with four screw spikes per tie, using Pandrol fasteners.

The Hyrail pedestrian crossing is the least costly of the three methods described here. It uses recycled tires and meets ADA standards. It has an attractive, slip-resistant surface that is designed for low maintenance. It is a full depth crossing that is easy to install. However, this crossing will not work well under heavy vehicle traffic, and is only recommended for pedestrian and light use. (See *Figure IV-31*).

The Bodan Level-Crossing system utilizes high-strength precast polymer panels that “bridge” between rails and require no fastening to cross ties. This crossing is impervious to salt spray, moisture or diesel fuel. It also features a skid and wear resistant surface and is designed to be maintenance free. An added feature of the crossing is the inclusion of built-in red warning lights. Manufacturers claim the system to be high load carrying but we recommend that it be used only for light loads of operation until additional performance values are known as a result of additional research. See *Figure IV-32*.

The Startrack crossing system is the recommended material for crossings that have a large amount of vehicle traffic. The system also allows easy access to buried utility lines under the crossing.

- Uses no cross ties
- Has permanence and abrasion resistance of 6,000 psi.
- Provides easy access to rail for maintenance.
- Allows easy installation
- Can be reused in event of abandonment

This crossing will stand the test of time and will need the least amount of maintenance in the long term. This crossing is now used in the Whittier road-rail tunnel in Alaska and won an engineering award for its design (*Figure IV-33*). We believe that all crossings should have rubber filler in the gaps between the rail and the crossing surface. This results in the safest operation with a large amount of pedestrian traffic. All suggested crossing types can use this filler, which fits snugly against the field and gauge side of rail to form a barrier between crossing material and rail. This blocks out moisture and protects the road and rail fastening system. It also provides for an easy walking and safe surface at rails (*Figure IV-34*).

Figure IV-30: Crossing Installation

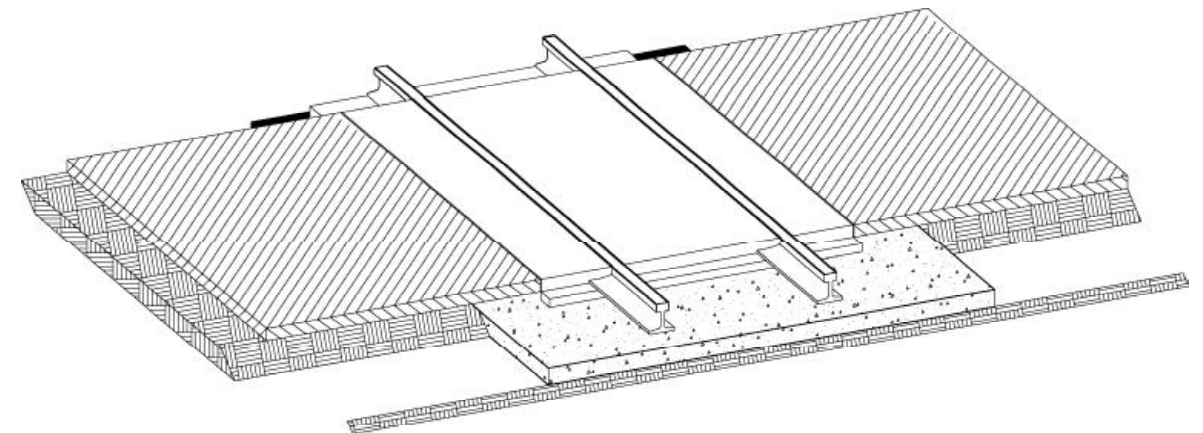


Figure IV-31: Hyrail Pedestrian Crossing



Figure IV-32: Bodan Pedestrian Crossing

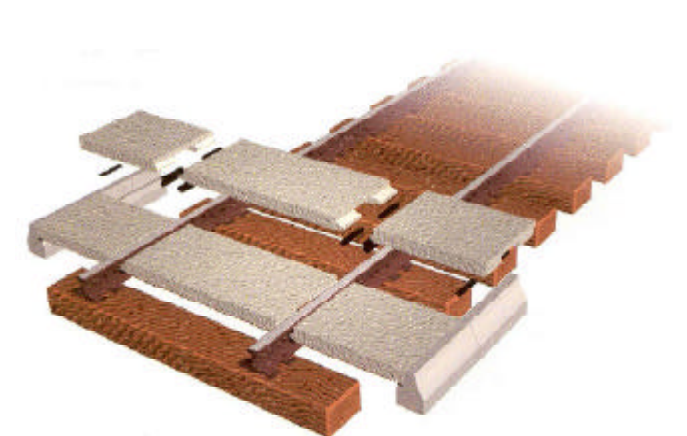


Figure IV-33: Startrack Pedestrian Crossing

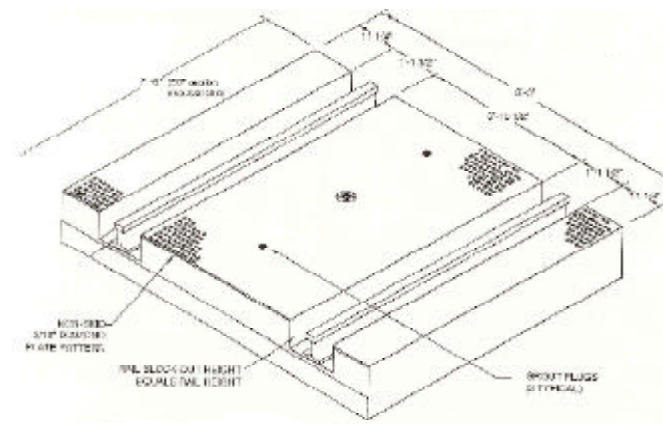
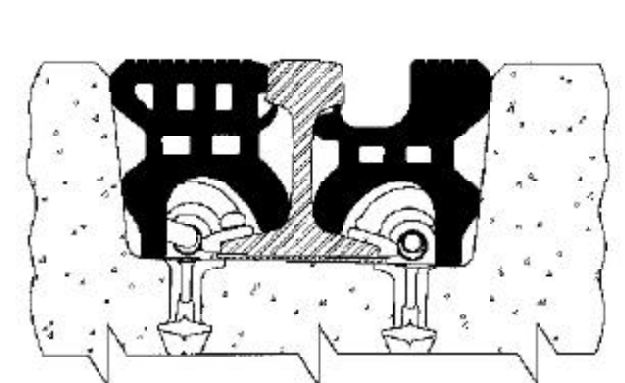


Figure IV-34: Rubber Filler for Standard RE Rail



INTERMODAL CENTER

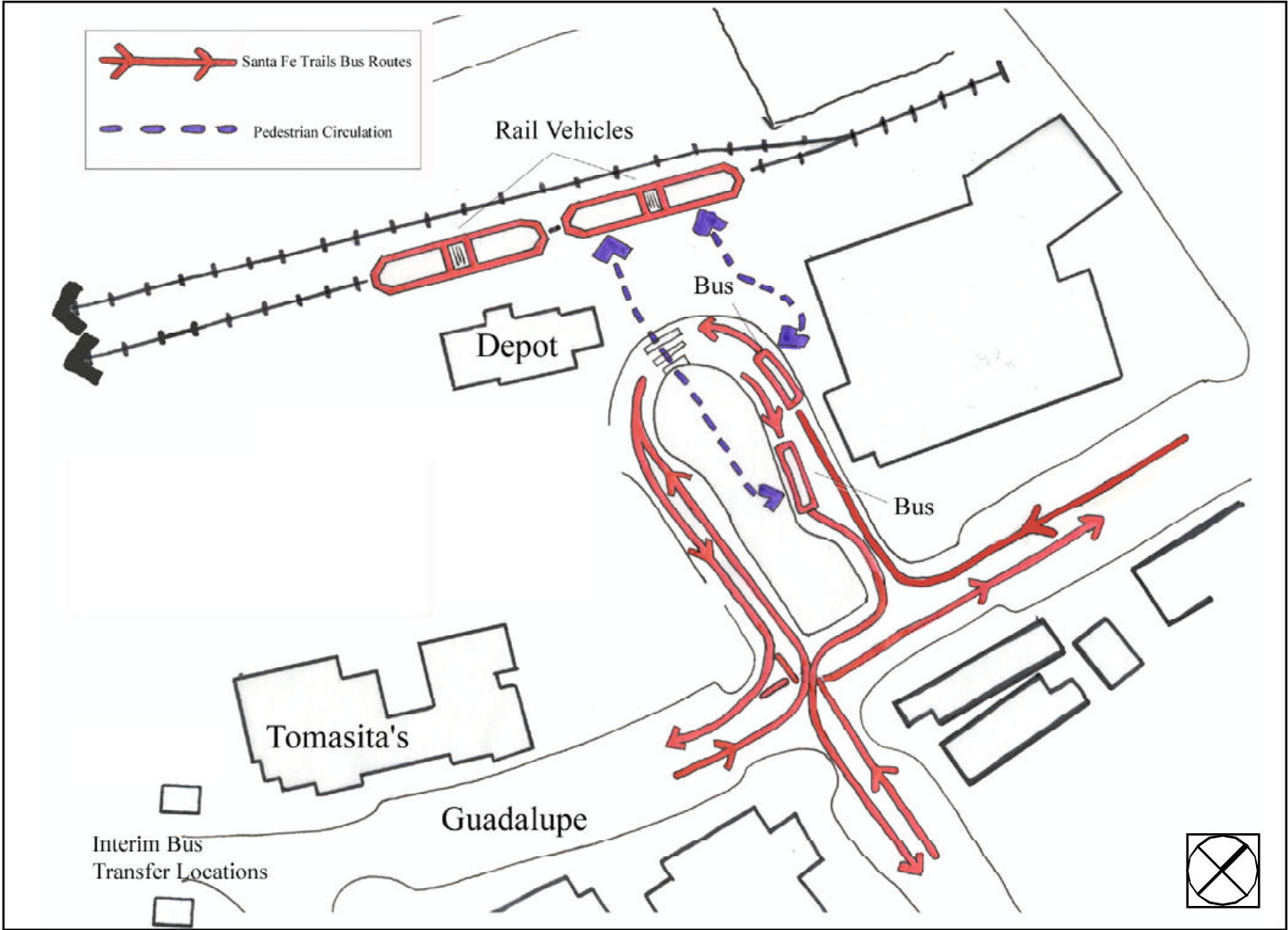
A multi-modal transfer center is a location where travelers are able to connect between different transportation modes, usually including at least one type of transit service (e.g., city bus, commuter rail, intercity bus, etc.). Multi-modal transfer centers function most effectively when:

- they provide seamless connections between the different modes (i.e., the connections do not require long walks or cumbersome changes in grade levels).
- supportive land uses exist at and around the transfer center. Supportive land uses include such things as

cafes, restaurants, dry cleaners, day care, movie rental, tourist information, etc. These land uses provide things for people to do while waiting for connections, and offer conveniences for travelers on the way to some other place (e.g. work, school, shopping, recreation, etc.).

There have long been discussions about developing a multi-modal center at the Railyard to connect a future commuter rail system, local bus, bike, and walkway systems. Two potential long-term sites for multi-modal transfer centers are recommended for further study and planning to support the development of the Railyard project:

Figure IV-35: Intermodal Transfer Location at Santa Fe Depot



- The historic AT&SF Railway depot at the corner of Garfield and Guadalupe Street
- The site of the New Mexico State Highway and Transportation Department between Cordova and Alta Vista Streets.

The two potential sites could both be developed or be separately done. Each enhances access and circulation in the Railyard area and throughout the entire Santa Fe region.

Historic AT&SF Depot Site / Neighborhood Scale

Given its size, the site at the historic AT&SF depot is best suited to provide neighborhood scale connections between the rail, city bus, bicycle and pedestrian systems. (Figure IV-35). Activities for the depot site should accommodate transfers between commuter rail and city buses; biking and walking access to the bus and rail systems; and connections between hotel shuttles and taxis and the rail system. Improvements would include passenger platforms along the railroad (which already exist), a passenger boarding/ drop-off/waiting area related to a shuttle bus loop, bicycle facilities such as bike racks and lockers, appropriate sidewalks, and landscaping.

New Mexico State Highway and Transportation Department Site / Regional Scale

The multi-modal transfer center at the New Mexico State Highway and Transportation Department (NMSHTD) site holds potential for regional, long-range planning. The development of a regional scale multi-modal transfer station at the NMSHTD site could not be acted on by the City independently, but would have enormous benefits for the Railyard and the City as a whole. Thus, this recommendation is a long-term objective upon which to work collaboratively with the State of New Mexico.

The NMSHTD site due to its size has much greater potential for incorporation of functions needed to make a regional multi-modal center successful such as large scale park-and-ride, auto rental, and ancillary services. (See Figure IV-36). For this to occur, the existing parking would have to be incorporated into structures. A multi-modal facility at this location should be designed to complement redevelopment of the existing office complexes in the future. The redevelopment would work best if designed using transit-oriented design principles (i.e., direct pedestrian access, land use mixing, heavy emphasis on streetscaping, etc.).

A multi-modal center at the NMSHTD could accommodate a wide variety of transportation systems and land uses. Transportation systems that should be considered are: the proposed commuter rail system, the proposed Albuquerque-to-Santa Fe regional rail system, Santa Fe trails buses, intercity buses, tour buses, hotel shuttles, taxis, automobile park-and-ride, bicycle park-and-ride, and pedestrian access. Land uses might include the existing State offices; ancillary services such as cafes, childcare, dry cleaners, etc.; housing (if the NMSHTD site were to be redeveloped); automobile rental, and a tourist information center.

The tourist information center could be designed to intercept people off St. Francis Drive and Cerrillos (the two primary tourist routes into Santa Fe from the south), and provide a potential option for visitors to travel into the center of Santa Fe without having to drive.

Strong bicycle connections would also be an innovative component of the multi-modal center. The connections would be particularly strong given the location along the City's Santa Fe-to-Lamy bike and hike Rail Trail, and the potential for connections to the Acequia Trail on the Railyard project.



LONG-TERM OPPORTUNITIES

Baca Area Access

The existing tenants on the Baca Area of the Railyard rely on large semi-truck traffic for their businesses to operate. The current access in the Baca Area is not conducive to semi-truck traffic nor to long term automobile traffic. This is primarily due to current improvements happening at the Monterey Drive and Cerrillos Road intersection.

The current improvements are intended to eliminate the signal light at Monterey and Cerrillos. As part of those improvements, the medians in Cerrillos Road are being changed. The specific change that affects the Baca Area is

the closure of the median opening on Cerrillos Road where Alta Vista Street intersects.

Semi-trucks leaving the Baca Area used the left turn opening at Alta Vista to exit the area. Due to closure of the opening, the semis will be forced to head south on Cerrillos into the most congested part of Cerrillos Road or make a left hand turn cross four lanes of traffic on Cerrillos Road--which for any vehicle is quite daunting.

Opportunities for solving this access issue are generally in the mid to long range time horizon, but are important for the City to promote for the long-term viability of the Baca Area.

In Figure IV-36, the Phase 1 note shows the improvements currently being made at Monterey Dr. and the closure of the median at Alta Vista.

In the same figure, Phase II is an opportunity presented by on-going discussions within State agencies to redevelop the State Highway and Transportation Department site across the street on Cerrillos into commercial or retail uses or a transit center. If redeveloped, a signaled intersection on Cerrillos would be a desirable access. Realigning Alta Vista through the highway department site on an alignment with the Baca Area entry road would greatly improve the safety and access to the highway department site and the Baca. The traffic analyst for the Master Plan feels that the proposed signal location, which is approximately mid-point between the Cordova Rd. and the Baca Street intersections, would smooth traffic flows on Cerrillos Road and could improve the sequencing of traffic lights.

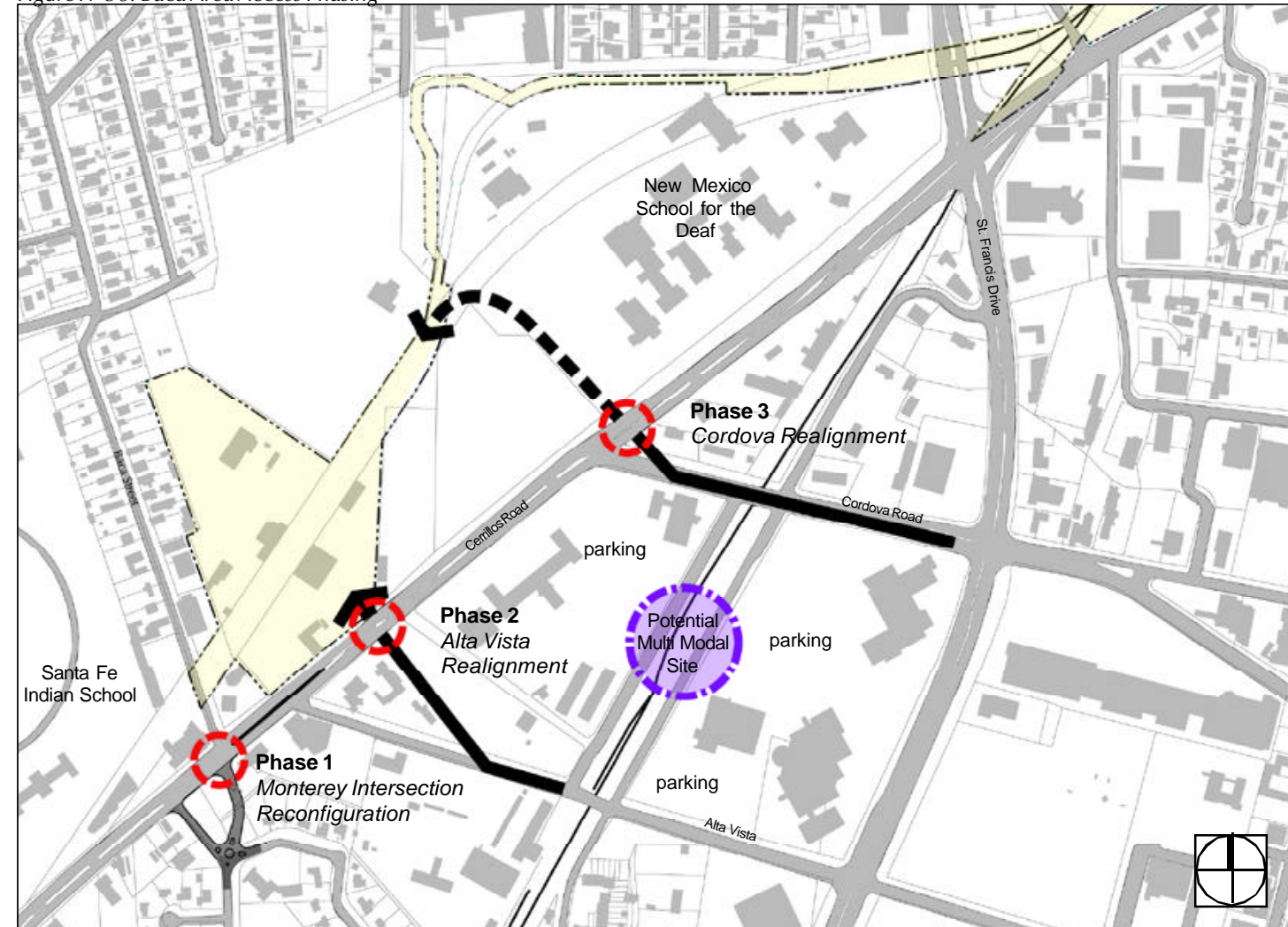
Phase III as shown in Figure VI-36 is very long time horizon possibility for a second access to connect Cordova Road with the north end of the Baca Area. Currently the School for the Deaf is not interested in access at the Cordova intersection, but in the future they may need to consider a signaled left turn intersection into their property and the Cordova intersection is a reasonable location for that signal. At the time such an opportunity were to occur, the City should evaluate its interest in making a road extension through to the Baca Area.

St. Francis Drive Grade Separation

The 1997 Community Plan proposed a grade separation at St. Francis Drive for a pedestrian access trail from the Baca Area to the North Railyard. The concept is still a valid and desirable one today. The issue preventing it is the complexity of the St. Francis Drive and Cerrillos Road intersection. The St. Francis and Cerrillos intersection is not a local issue, but a regional one. The intersection is a failed intersection from a traffic perspective. It is the central crossroad of Santa Fe. The proposed solutions to the intersection over the years have been ambitious with off and on ramps and raised or buried roadways. What stops action is the realization that the scale of change required could fundamentally change the look and feel of the core of Santa Fe. There are many ways that a grade separated crossing could be designed at St. Francis, but perhaps the issue is different. Perhaps for Santa Fe, the question is, can a far-reaching regional transportation plan be developed that moves people from individual automobiles towards ride sharing, transit, walking, bicycling or other travel modes that can reduce traffic at the St. Francis/Cerrillos intersection and avoid change at a level that could so irrevocably alter the character of Santa Fe.

From the perspective of the Railyard project, a bridge connection over St. Francis is more practical from a construction standpoint, but may meet with community resistance as to its visual effect on St. Francis Drive. An underground connection is more desirable to the community, but would need to be done in the context of the full St. Francis and Cerrillos Road intersection issues and should be done as part of that process. The best alternative until a more comprehensive approach can be taken, would be to provide a clearly marked route for pedestrians and bicyclists at the St. Francis and Cerrillos intersection, or to mark a route northward to the signaled Paseo de Peralta intersection.

Figure IV-36: Baca Area Access Phasing



ROADWAYS

The layout and design of the internal roadway system is a key component of any site plan. People come to know places by their experience traveling through them, and roadways are the primary corridors of travel. This is true for motorists, and for the pedestrians, bicyclists and transit users as well. The internal roadway system also has a critical impact on the economic character and health of a site, and how traffic is distributed.

Key Design Concepts

Use a grid pattern.

The street system is designed as a rectangular grid. The grid is oriented so that streets run either parallel or perpendicular to the railroad, which generally reflects the historic pattern of roadways in the area. The simple structure of the grid pattern eases orientation and wayfinding. The grid will also help travelers by offering them the ability to choose the most direct routes to destinations and—for

pedestrians and cyclists—the routes they perceive as most safe. Finally, the grid pattern will enable motorists to circulate through the site and avoid backtracking when in search of parking.

Interconnect to surrounding streets.

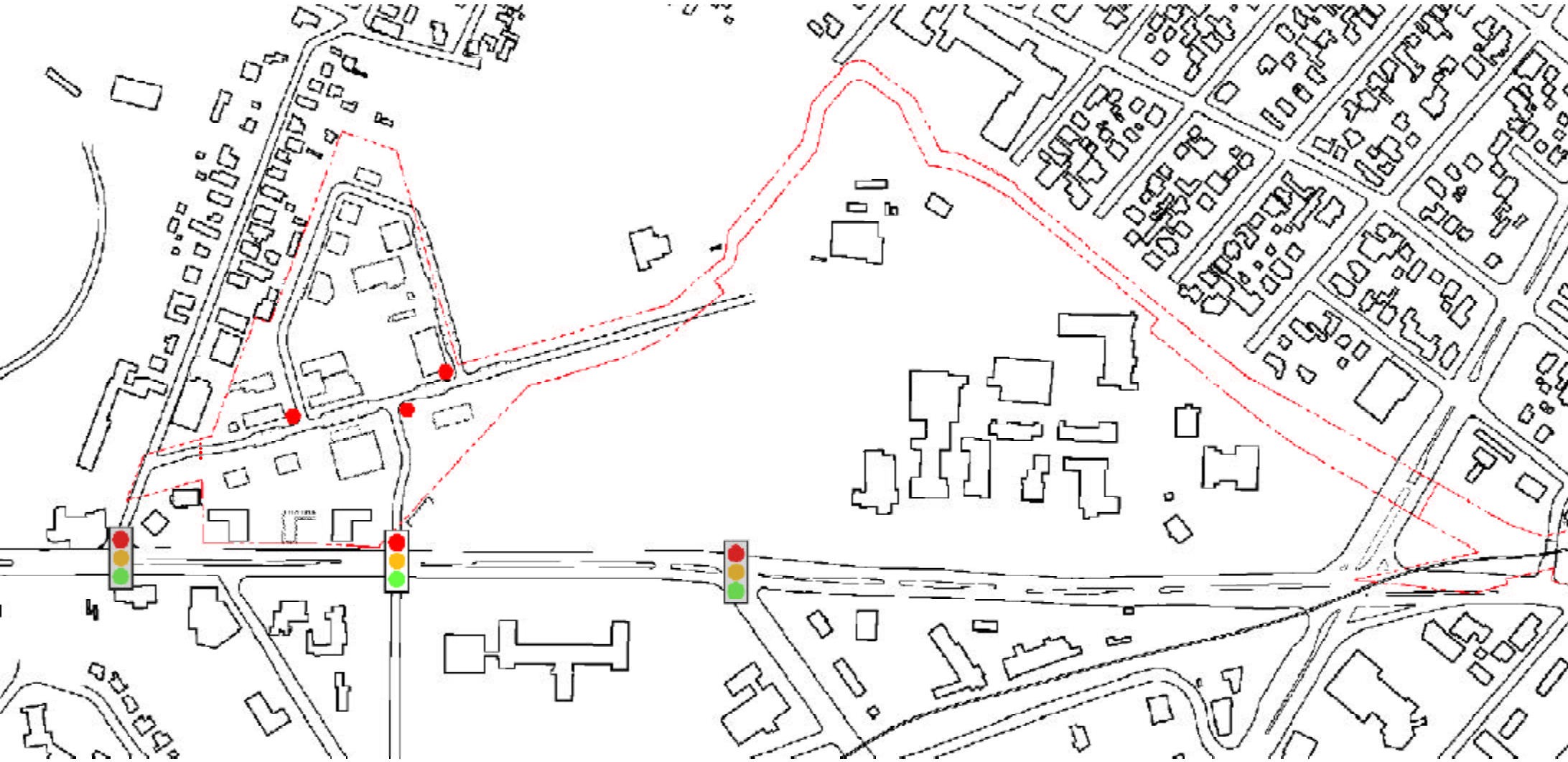
The street system in the Railyard is designed to connect with the surrounding street pattern in a seamless fashion. For the purposes of good access management, points of connection to the new roadway system would be

limited where possible to existing intersections or extensions of existing streets. For example, the extension of East Manhattan into the North Railyard is recommended, as is the extension of Market Street from Montezuma.

To provide for rapid ingress for emergency vehicles, at least two points of access are provided to all locations on the site in both the North Railyard and the Baca District. At some locations, the recommended access for emergency vehicles is by means of mountable or break-away barriers (e.g., at Alarid and at West Manhattan).

Roadway Goals

- Support, enable and stimulate safe and comfortable pedestrian and bicycle circulation and way finding to and through the Railyard.
- Support and enable desired density and urban design patterns, including the development of a Railyard “center”.
- Provide access to and from parking on the site while encouraging high rates of alternative mode use.
- Enable transit vehicles, emergency vehicles, and trucks to travel to and through the Railyard as necessary to encourage alternative modes use, ensure safety, and provide delivery/pickup.
- Reduce or eliminate cut-through traffic in surrounding residential areas.



Incorporate traffic calming.

Traffic calming on internal and adjacent roadways represents a critical component of the Master Plan. The internal street system should be designed to limit vehicle speeds to 25 mph or slower. Appropriate traffic calming devices for the internal system include:

- A narrow road profile.
- On-street parking.
- Landscaping features including large street trees.
- Bulb-outs at intersections and curb extensions at mid-block locations where appropriate.
- Strategically placed stop signs and other signage.
- Raised crosswalks.

Encourage multi-modal circulation.

Travelers will arrive and circulate within the Railyard by a variety of modes - automobiles, delivery trucks, transit vehicles, bicycles, on foot. Therefore, the Master Plan recommends designing the roadway system to accommodate the mobility and safety needs of a wide variety of users. Designing streets to be multi-modal requires making roads wide enough to enable pass through by automobiles, transit vehicles, and trucks, while slowing traffic speeds to make pedestrians and bicyclists feel comfortable in sharing or crossing the roads.

Design streets as social spaces.

The road cross-sections for the Railyard are designed to create a street system that is a welcoming, safe environment. Incorporated in the roadway cross-sections are pedestrian walks and trails, street landscape, water harvesting/drainage features. In the Urban Open Space section of this Master Plan, is additional guidance on the human environment of the streets in the Railyard. The importance of designing streets not just as conveyance through the site, but as part of the atmosphere and active spaces of the Railyard is critical to the success of the project both economically and socially.

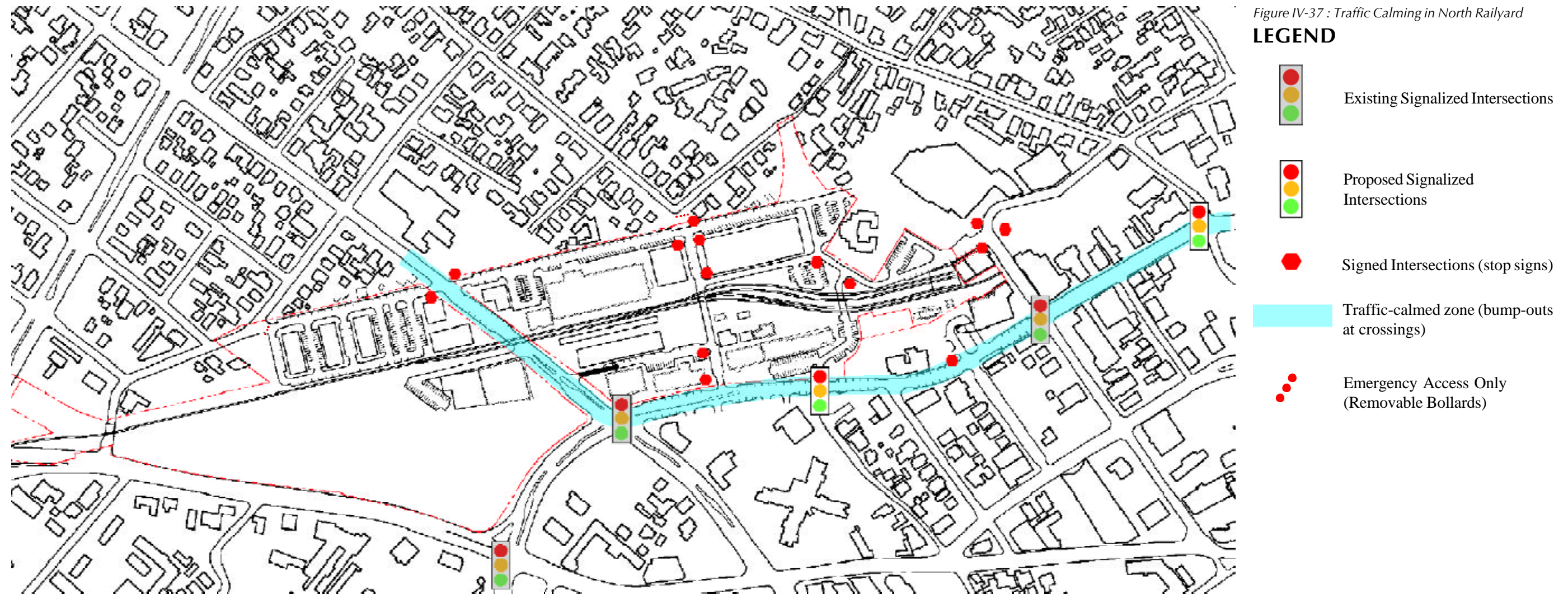


Figure IV-38: Paseo de Peralta Arts Corridor Traffic Calming

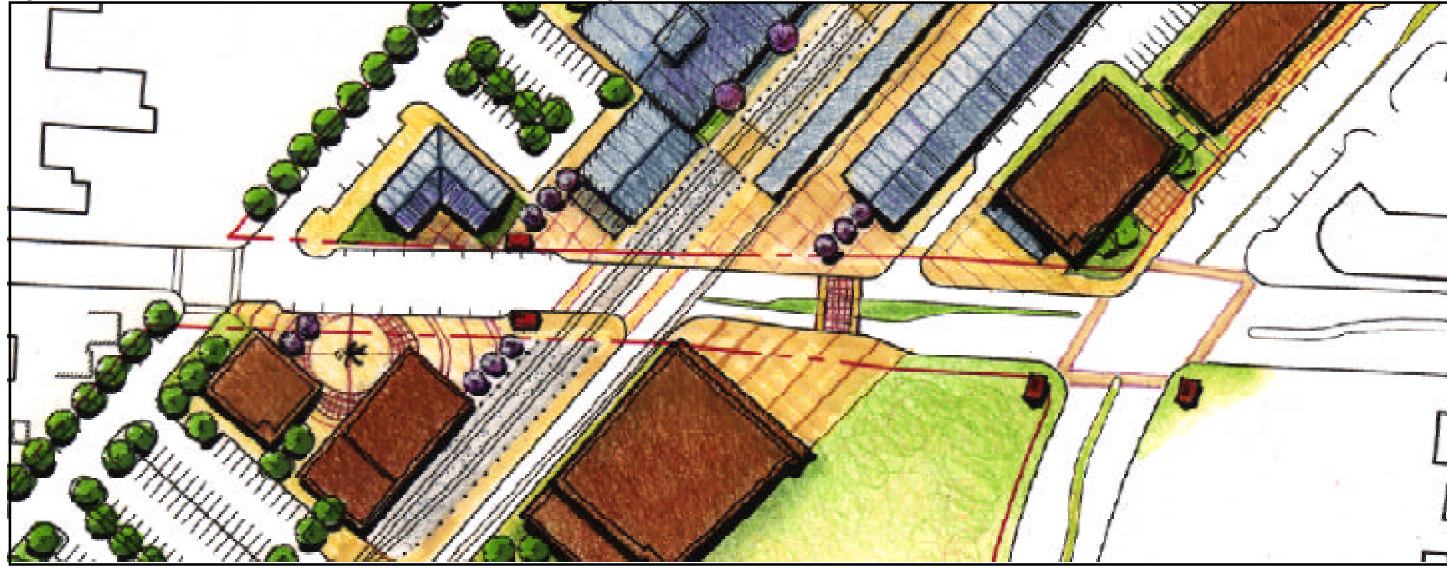
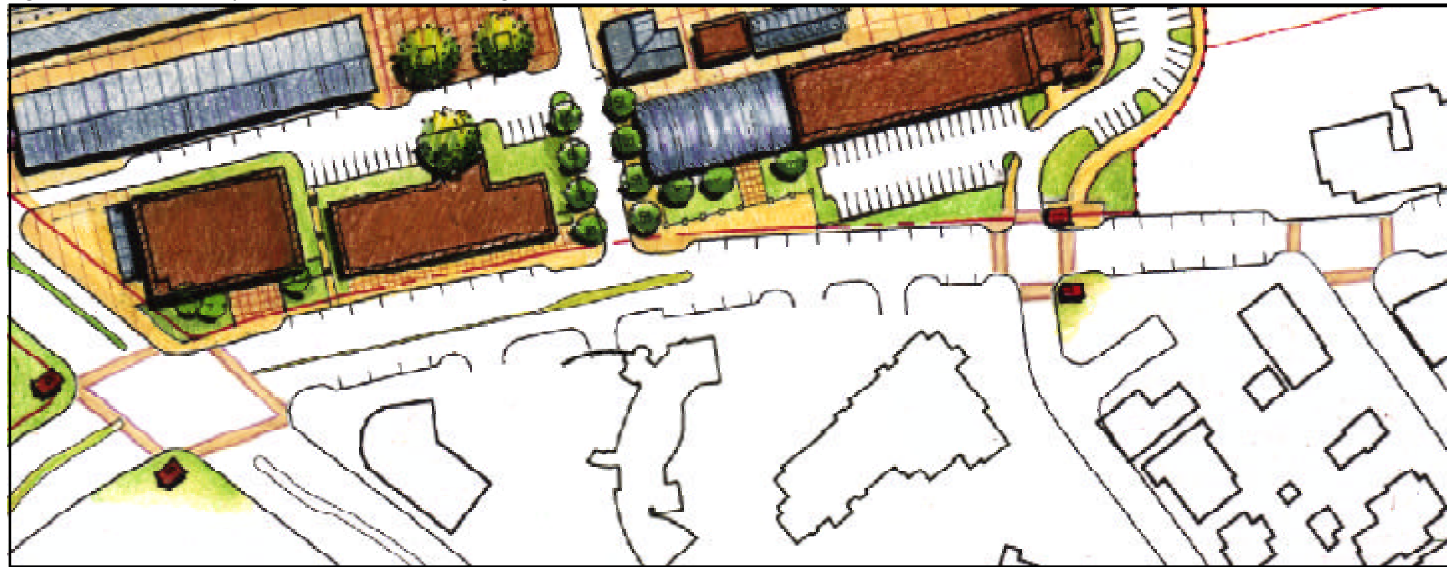


Figure IV-39: Guadalupe Corridor Traffic Calming



Traffic Calming Paseo de Peralta

On surrounding streets, the traffic calming treatments should be appropriate to the functional classification of the road. Recommended traffic control devices are as shown in *Figure IV-37*. Recommended traffic calming treatments on Paseo de Peralta would focus on the portion between Guadalupe and Alarid, and would include the following:

- A raised table for pedestrian crossings just east of where the railroad crosses the road.
- Pedestrian-actuated flashing lights.
- A narrowed cross-section.
- Raised center medians (east of the railroad).
- On-street parallel parking.
- Appropriate adjustments to laneage at the intersection with Guadalupe.

The raised table and pedestrian-actuated signal or warning lights would improve safety and comfort for pedestrians crossing from the proposed site of the Farmers' Market (current Wholesale Builders site) to Site Santa Fe and the Railyard park. It would also provide a safe means of crossing for pedestrians and bicyclists on the Rail Trail/Acequia Trail.

Traffic Calming Guadalupe Street

The City of Santa Fe classifies Guadalupe Street as a major arterial, thus, the range of traffic calming treatments is more limited than in the case of Paseo de Peralta. The purposes of traffic calming on Guadalupe include slowing traffic to the existing posted speed limit of 25 mph, providing a safer and more comfortable means of crossing the road for pedestrians and bicyclists, and facilitating left turns onto and off of Guadalupe from intersecting streets. The recommended approach to traffic calming on Guadalupe includes the following (see *Figure IV-37*):

- Retain on-street parking between Paseo and Agua Fria.
- Construct bulb-outs at the corners of all intersections between Cerrillos and Alameda.
- Extend curbs at appropriate locations for example, the west side of Guadalupe along the curve next to Tomasita's.
- Raise medians along Guadalupe between Paseo and Montezuma, with left-turn bays at appropriate locations.
- Signalize the intersections of Guadalupe & Manhattan and Guadalupe & Agua Fria.

The bulb-outs and curb extensions provide a "vista" point for pedestrians prior to crossing the street and enable drivers to see the pedestrians more easily. Illustration of these bulb-outs in the Master Plan can be seen in *Figures IV-38 and IV-39*.

Road Cross-Sections

The cross-sections for the road system on the Railyard are diagrammatic. They are intended to guide the development of detail street designs for the site. Guidance is provided on the following roadway elements and features.

- road bed width
- parking location, width, and pattern
- walkway and trail location and width
- general landscape design related to the road
- specific setbacks to adjacent neighborhoods
- specific drainage easements at neighborhood edges
- specific drainage easements at Baca area

Adjustments to the cross-sections should keep in mind the principles noted on the Roadway Design Checklist.

Roadway Design Checklist

- Streets are designed primarily to slow traffic and enable safe and comfortable circulation by pedestrians and bicyclists.
- Buildings face the street and are oriented to pedestrians and transit.
- The street network is continuous and inter-linked throughout the site.
- At least two points of access for emergency vehicles are provided to all locations.
- Streets and driveways are designed to facilitate low-speed flows and discourage speeding.
- Streets are constrained to a maximum of two travel lanes.
- Sidewalks or trails are provided along both sides of all streets.
- Streets include on-street parking wherever feasible.
- On-street parking is designed to help shield pedestrians from moving traffic.
- Driveway connections to external streets are consolidated to reduce congestion.

Figure IV-40: Baca Area Locator Map for Road Cross-Sections

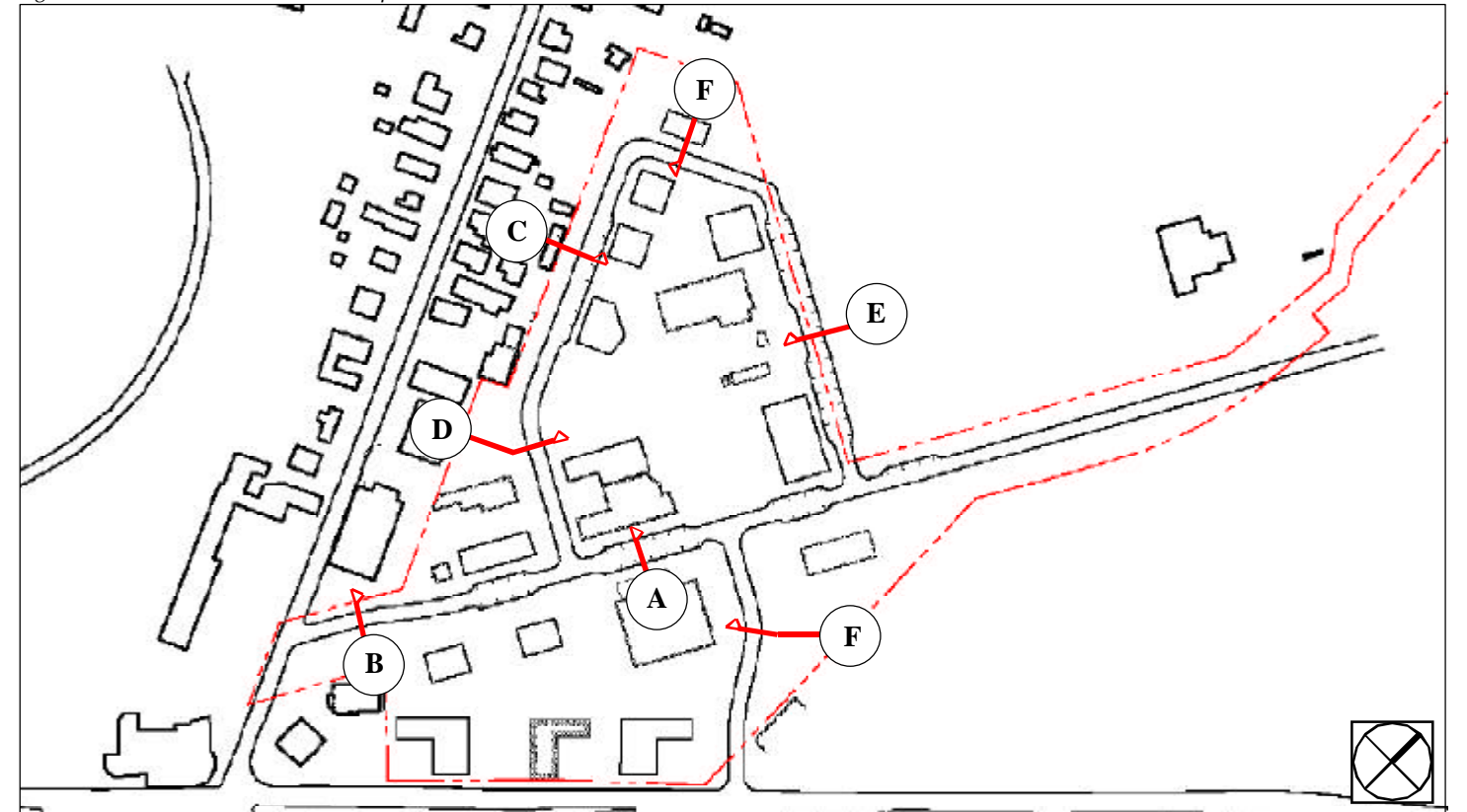
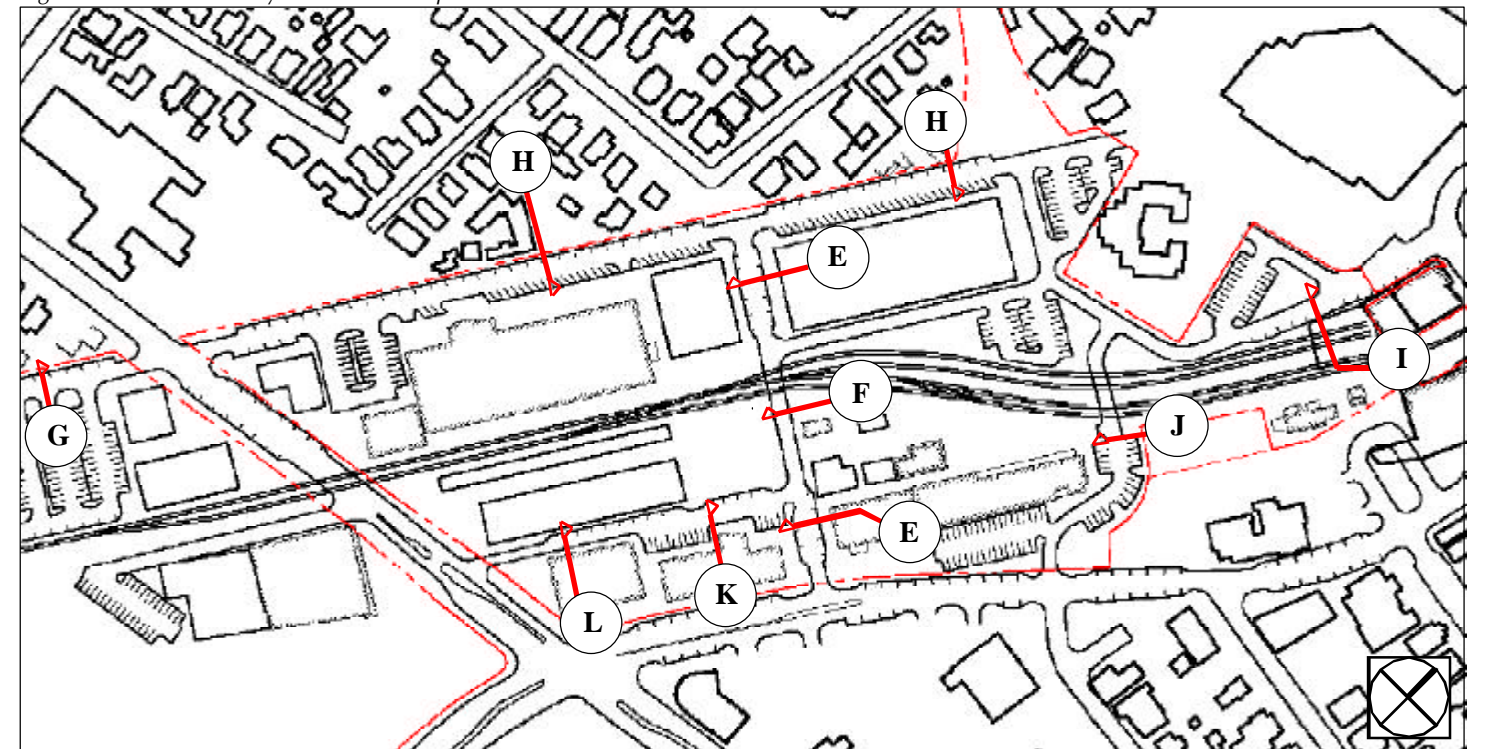


Figure IV-41: North Railyard Locator Map for Road Cross-Sections



ROAD CROSS-SECTIONS

Figure IV-42: Road Section A -- Baca Paseo w/ Parking

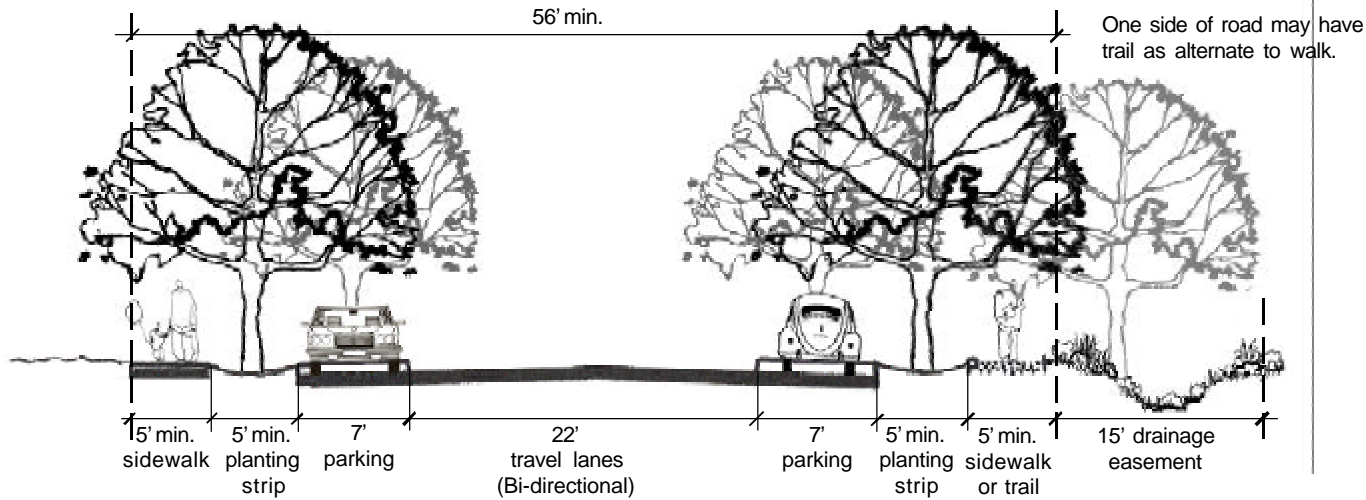


Figure IV-43: Road Section B -- Baca Paseo w/o Parking

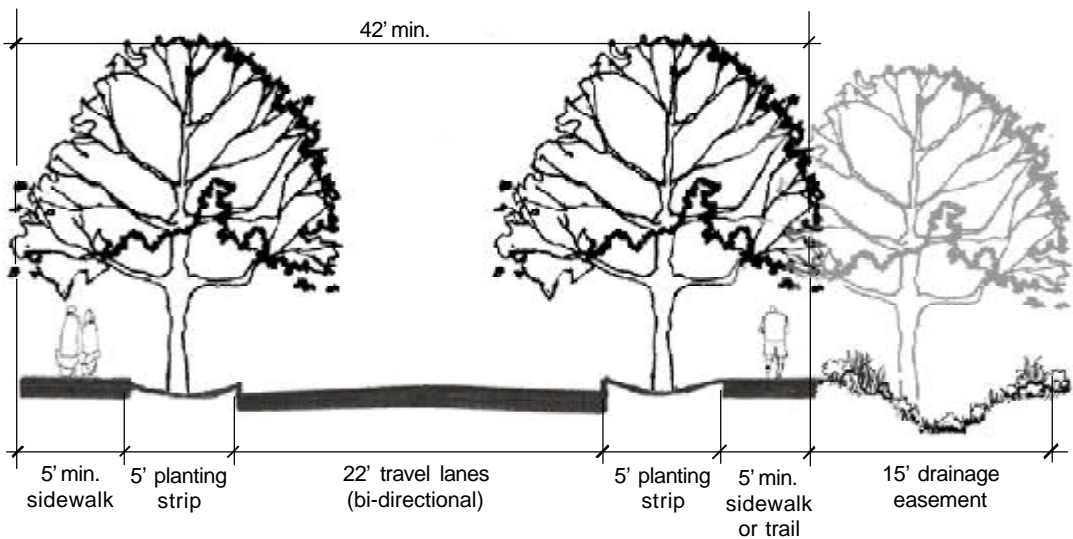


Figure IV-44: Road Section C --- Baca Area Road at Neighborhood Edge
Baca Neighborhood

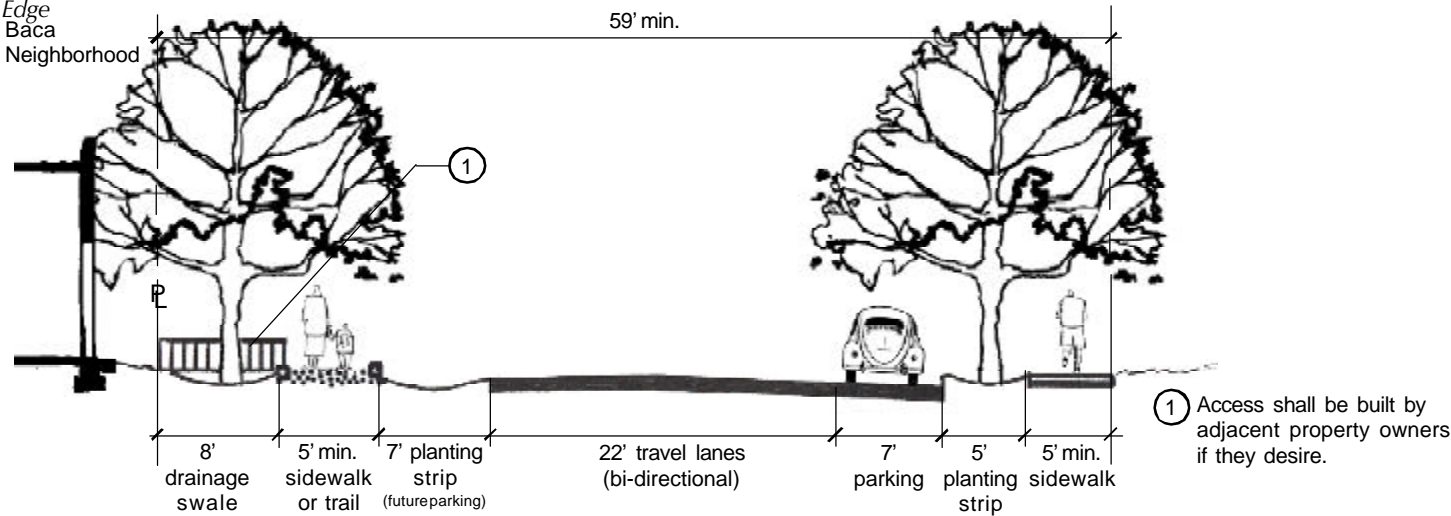


Figure IV-45: Road Section D -- Baca Area Internal Road w/o Parking

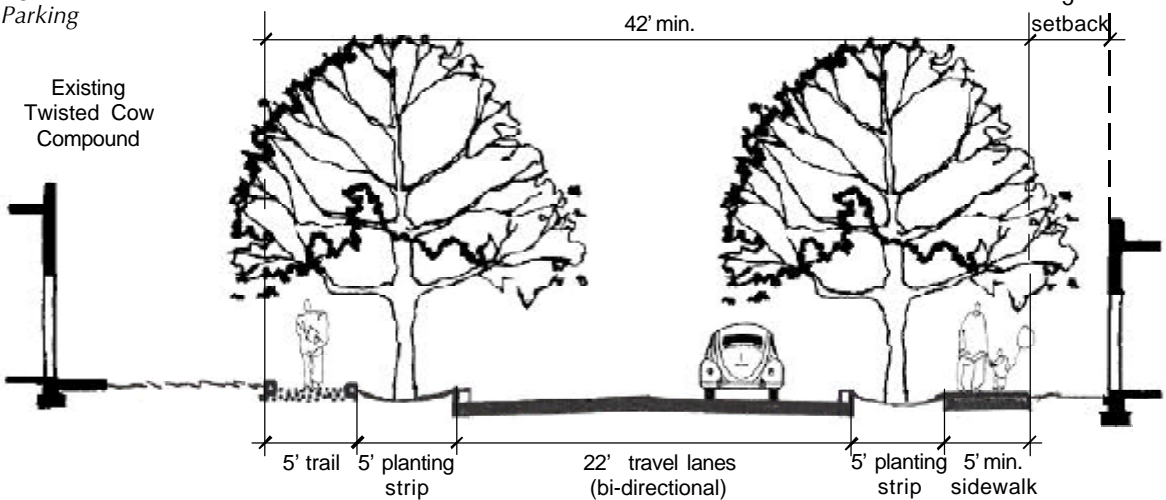


Figure IV-46: Road Section E -- Internal Road w/ Parking

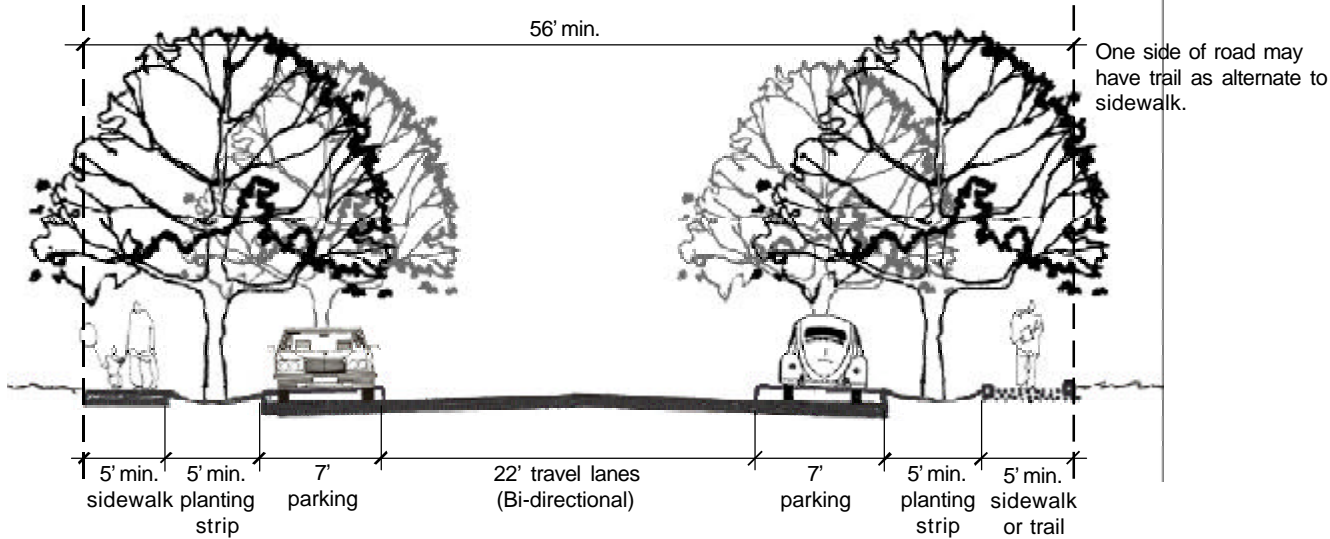


Figure IV-47: Road Section F -- Railyard Road w/o Parking

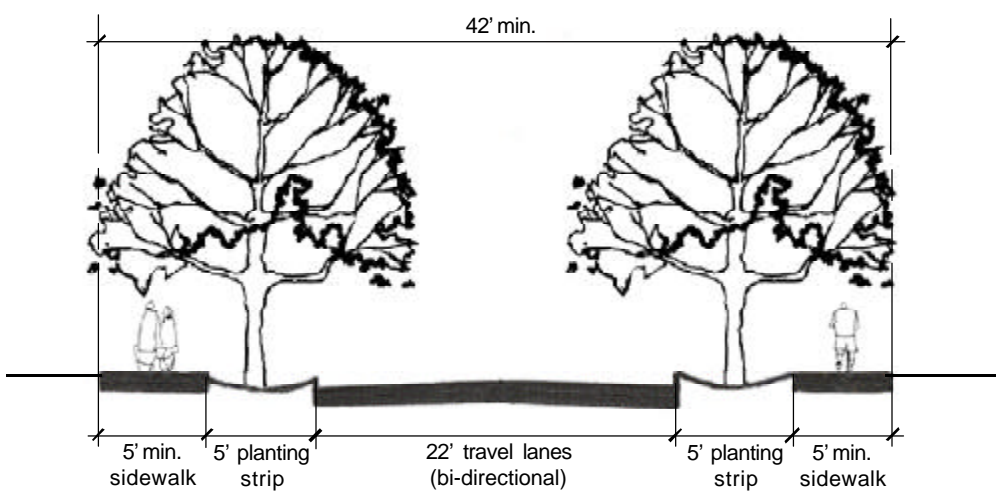


Figure IV-48: Road Section G -- Alarid Neighborhood Edge Road

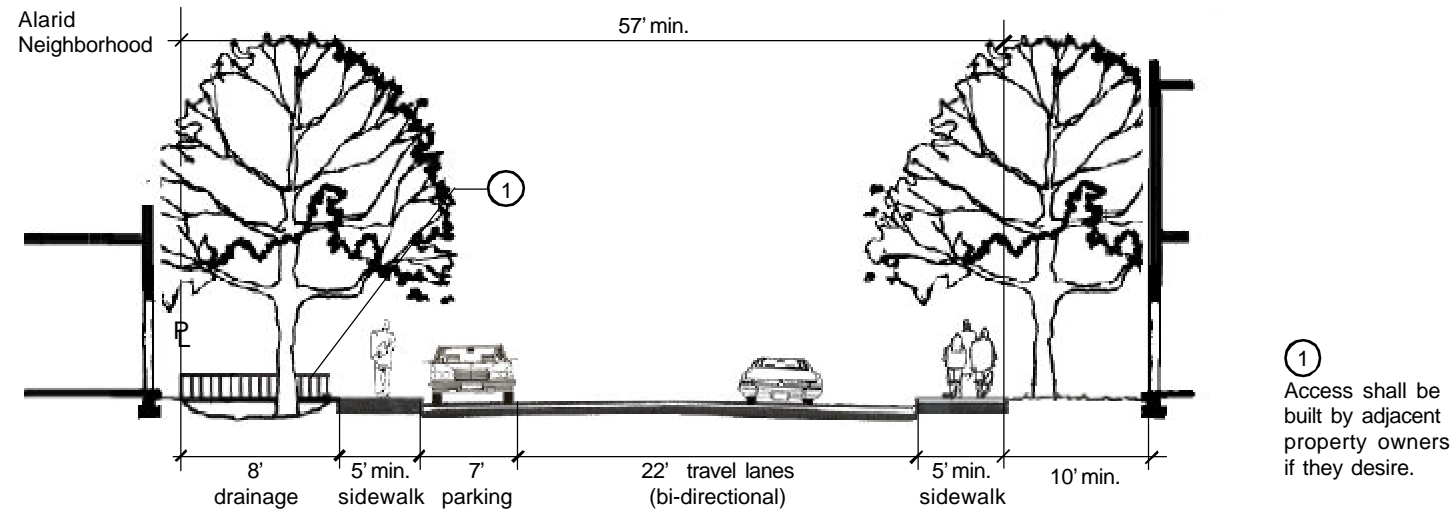


Figure IV-49: Road Section H -- West Guadalupe Neighborhood Edge Road

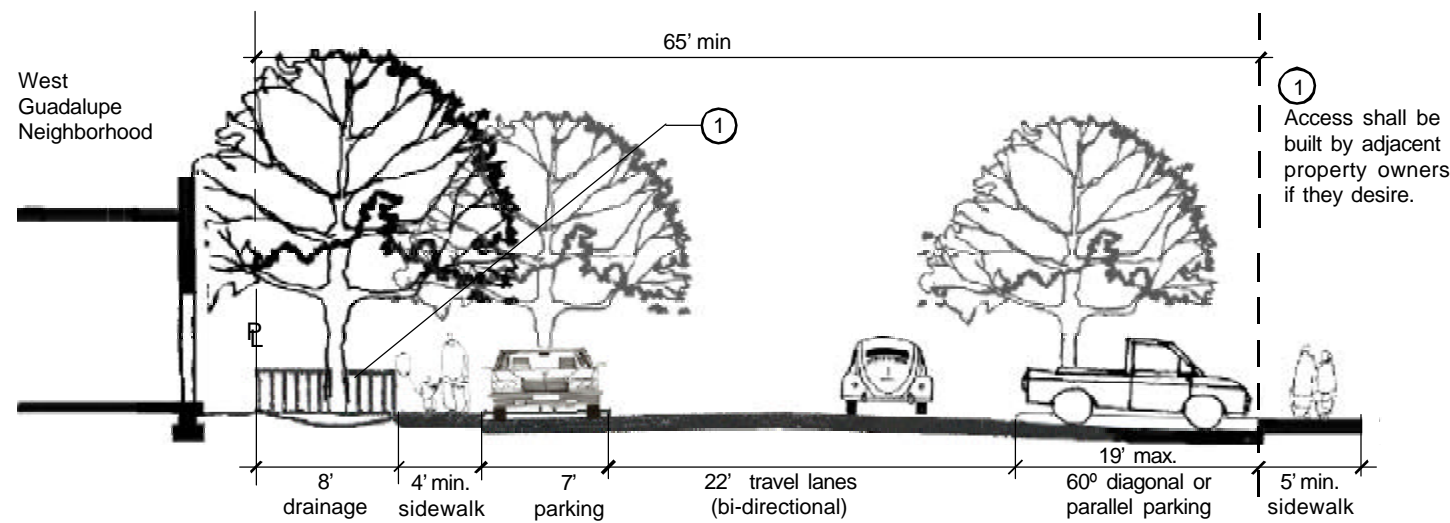


Figure IV-50: Road Section I -- Entry Road from Montezuma Street

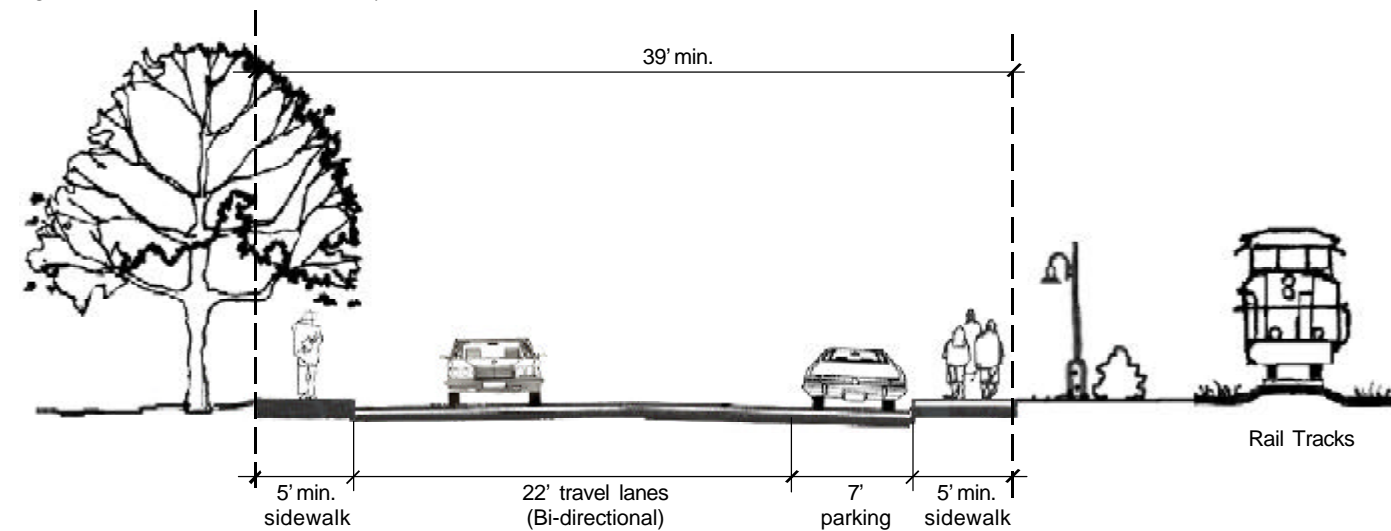


Figure IV-51: Road Section J -- Entry Road North of Gross Kelly Co. Warehouse

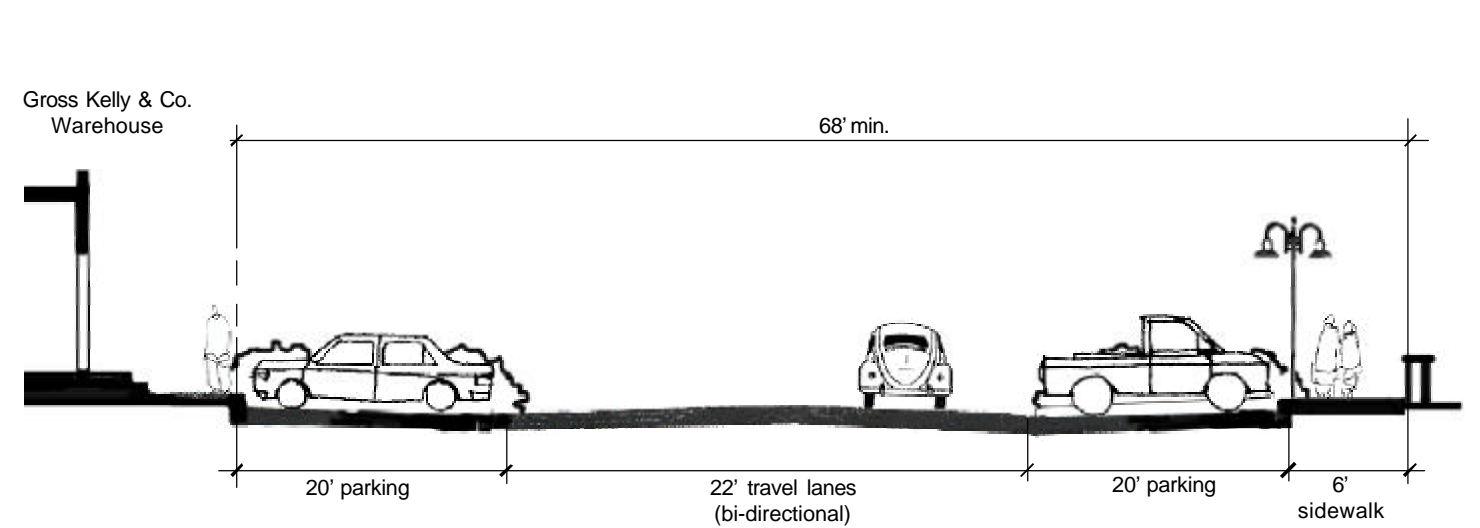


Figure IV-52: Road Section K -- One-Way Alley w/ Parking Both Sides

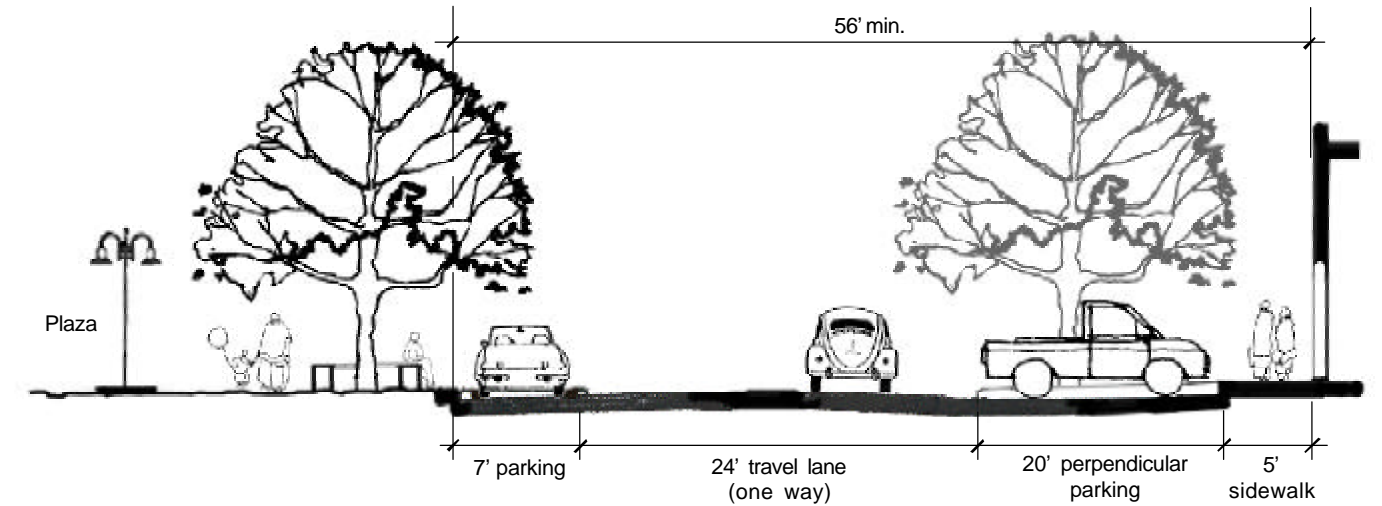
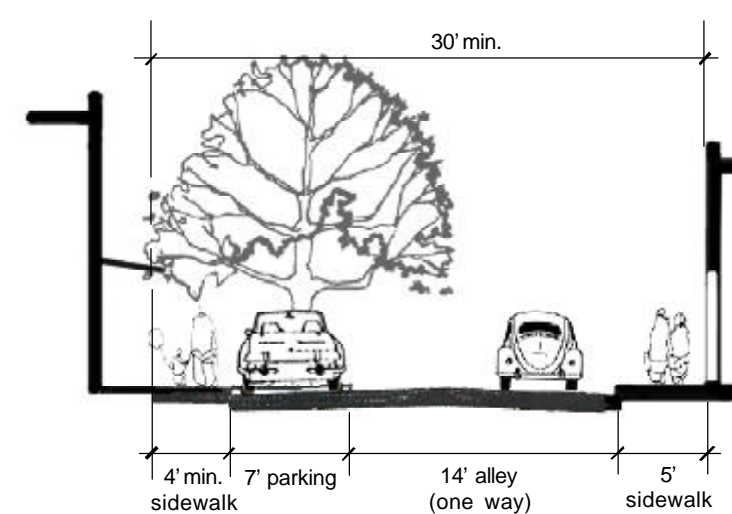


Figure IV-53: Road Section L -- One-Way Alley w/ Parking One Side



PARKING CONCEPT

As well as being designed to encourage and support access by foot, bicycle, rail, and transit, the Railyard also needs to provide for comfortable access by private automobile (See *Figure IV-47, Parking Distribution*). People who arrive by car need places to park, and most parking should be provided within a reasonable five-minute walking distance of travel destinations. This said, it is important to recognize that providing large amounts of surface parking involve trade-offs with other worthy community goals for the Railyard, such as a vibrant walking environment, public open space, protecting neighborhoods from traffic increases, and reducing development costs.

Key Design Concepts

Control the visibility of surface parking.

Creation of a vibrant, pedestrian-oriented environment is related to reducing the quantity and visibility of surface parking. To avoid an environment in which pedestrians feel overwhelmed by automobiles, managing the visual effect of parking is important.

Reduce the quantity of surface parking.

Reducing surface parking enables the ability to preserve the historic railyard and to have public open space.

With the average parking space consuming around 350 square feet, large-scale open space is difficult to achieve without minimizing surface parking areas.

Protect neighborhoods by managing parking demand.

Protecting surrounding neighborhoods by reducing traffic and parking impacts involves thinking about how parking pricing and management policies affect travel and parking behavior. Pay parking is a key incentive for travelers to use alternative travel modes. Reducing the number of people who drive individual cars to the site also reduces traffic on local streets around the site. Crucial to protecting surrounding neighborhoods is diligent enforcement of

parking rules in the adjacent neighborhoods to address parking spillover issues that arise.

Reduce the fiscal impact of providing parking.

The Railyard project needs to reasonably control the fiscal burden to the community of providing parking in the Railyard. The capital cost of developing parking is not cheap. The average cost of paved surface parking ranges from \$3,000 to \$4,000. If the parking is in a structure, the average cost estimates climb to \$12,000 per space, and to \$18,000 when underground, and more when taller than two-stories above or below ground. The Master Plan seeks to rationally control and reduce the need for parking.

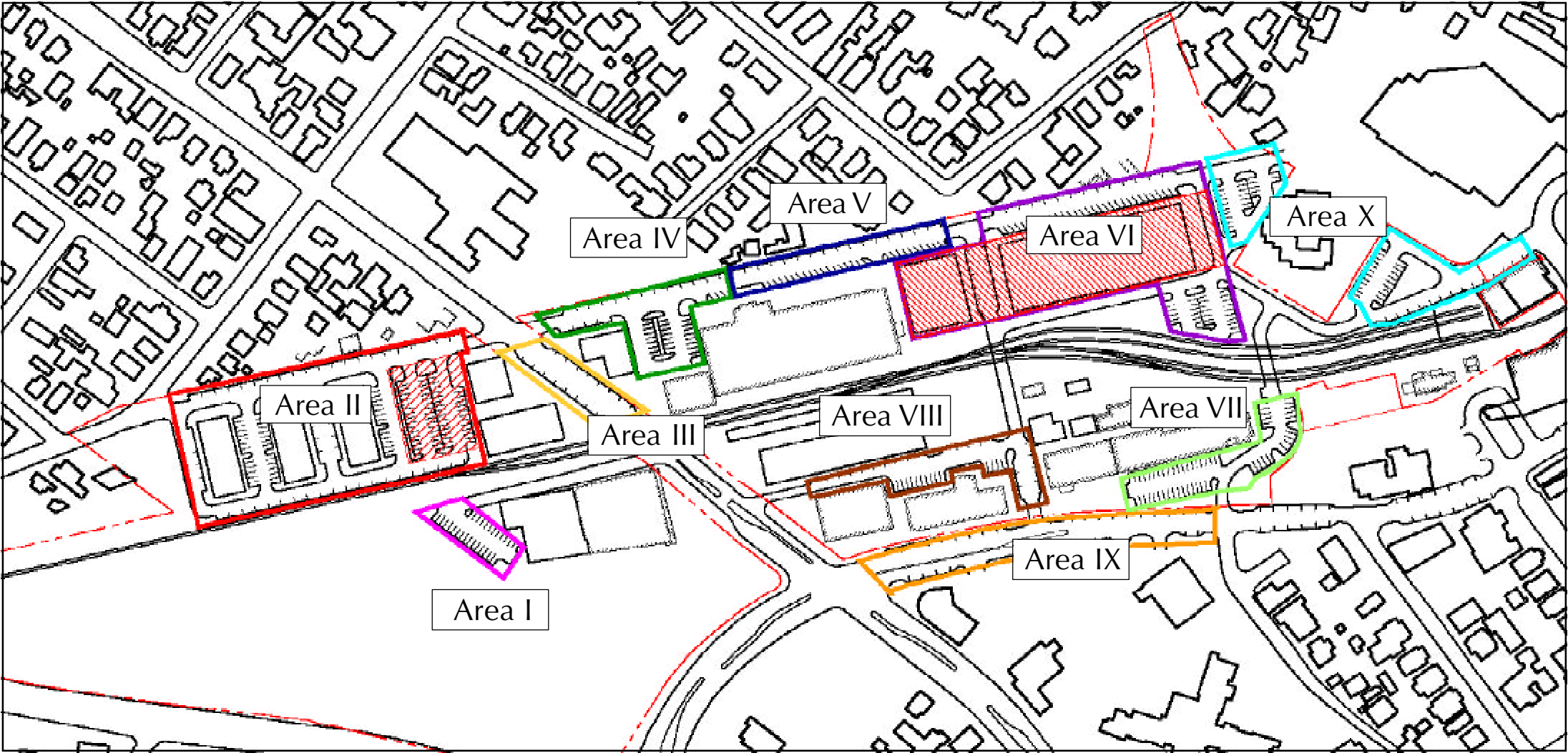


Figure IV-47: North Railyard Parking Distribution

LEGEND

- Phase I ~ Proposed Underground Parking Structure
- Phase II ~ Potential Parking Structure: Long Term Need (15-20 years)

Table IV-1: Planned Parking Supply in the North Railyard

Location	On-Street	Off-Street Surface	Underground Structure	TOTAL
Area I	--	28	--	28
Area II	55	102	--	157
Area III	14	--	--	14
Area IV	19	25	--	44
Area V	44	--	--	44
Area VI	54	28	259	341
Area VII	20	35	--	55
Area VIII	20	10	--	30
Area IX	23	--	--	23
Area X	--	44	--	44
TOTAL	249	272	259	780

Parking Goals

- Enable access by motor vehicle to the Railyard while encouraging high rates of alternative mode use.
- Ensure that parking is provided for all types of users (short-term, long-term, car-pool, handi-capped, trucks, etc.), either on-site or in appropriate nearby locations off-site.
- Support and stimulate safe and comfortable outdoor pedestrian activity in the Railyard through careful pedestrian-friendly design and placement of parking lots, parking structures, parking bays, vehicle and foot entrances, etc.
- Support and enable desired density and urban design patterns.
- Be financially self-supporting.
- Minimize “spillover” parking impacts on surrounding residential areas.

Parking Planning and Design Checklist

- Shared parking provisions are applied to minimize surface parking.
- The parking is managed to support the desired land uses and activities at the Railyard, mitigate spillover impacts on adjacent neighborhoods, and encourage high rates of alternative modes use.
- Large, contiguous surface parking areas are avoided.
- Existing large surface parking lots are planned for later conversion to higher-density development.
- Parking structures are the preferred form of parking, and large new surface lots are allowed only as part of phased development.
- If parking structures are above grade, they are to be “wrapped” with street-level storefront uses.
- Buildings are oriented to the streets, pedestrians and transit; parking lots are placed behind, under or over buildings wherever possible.
- Where surface parking lots face streets, edges are treated with low walls, trees, etc. to provide a sense of enclosure to the sidewalk and street space.
- Curb cuts for access to parking facilities are consolidated where practical as a means of ensuring continuity of sidewalks, streetscapes and building frontages.
- Angle parking along roadways is situated 60-degrees to the curb, and is adjacent to concurrent travel lanes no less than 14.5 feet wide.
- All surface parking lots are landscaped.
- Parking structures are designed to put people into the public open space first, and are not allowed to have direct entrances into commercial, office or retail buildings.

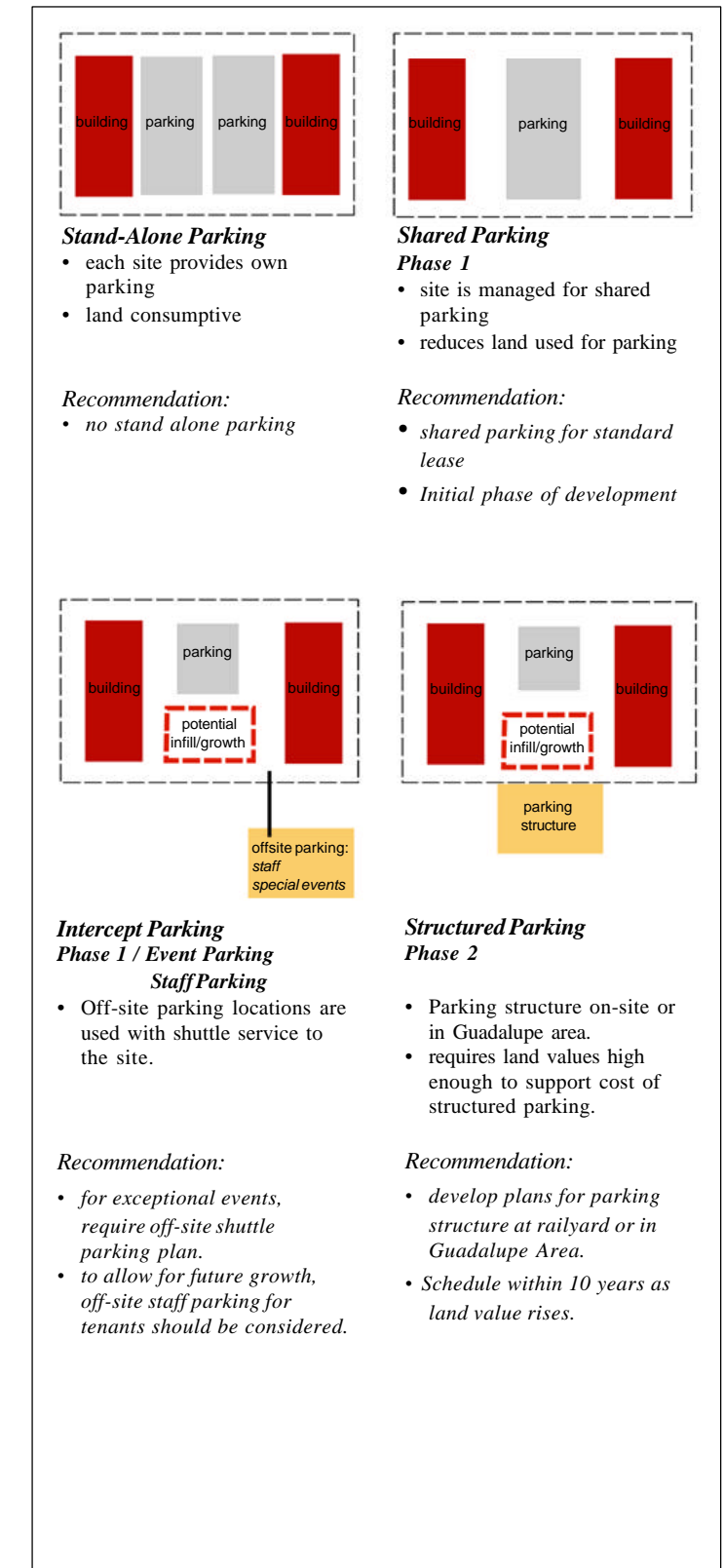
SHARED PARKING

Fundamental to the transportation strategy recommended in the Master Plan is the concept of shared parking. Shared parking refers to the ability of two or more land uses to utilize the same set of parking spaces to accommodate the nonconcurrent parking needs of their visitors, patrons, employees or residents. Shared parking works when parking demand generated by different land uses varies by time of day, the week, or season. The Master Plan recommends developing a widely diverse set of complimentary land uses in the Railyard, with numerous opportunities for shared parking.

Shared parking is not a new concept. In fact, it has been around for as long as there have been automobiles. Downtowns throughout the U.S. rely heavily on shared parking, as do most shopping centers and an increasing number of other activity sites. Santa Fe has historically relied on shared parking throughout the core area, and the City of Santa Fe formally recognizes the shared parking concept in its parking standards for downtown.

The reason for the growing popularity of shared parking and for its inclusion in the Master Plan is that it offers a number of substantial benefits to the community. First, shared parking will enable a significant reduction in the number of parking spaces that are required on the Railyard site, thus reducing the amount of expensive structured parking that may be required (See *Figure IV-48* for an example of how shared parking works). Second, the reduction in the number of spaces will help to conserve land for other, more valuable uses such as parks and plaza space. Third, shared parking will enable reductions in the number of access points to parking facilities, which in turn will reduce interference with vehicular traffic on streets and pedestrian traffic on sidewalks.

Figure IV-48: Conceptual Diagram of Shared Parking Alternatives



PARKING DEMAND MANAGEMENT

The estimated demand for parking in the North Railyard can be expected to peak at approximately 660 spaces on a typical weekday. This estimate assumes a “build-out” mix and intensity of land uses as shown in *Table IV-2, Estimated Demand for Parking in the North Railyard*.

Demand factors used to develop the estimate include the City’s proposed revisions to the BCD parking standards for the downtown area. The proposed revisions rely on gross floor area of land uses as the basic unit of analysis. The demand factors also include standards derived from other sources for the farmers’ market, museum, theatre, tourist railroad and teen center land uses in the Railyard. Finally, the estimate incorporates the existing observed level of “spillover” parking generated by land uses in the Sanbusco/ Guadalupe Street area.

Appropriate adjustments have been made to components of the demand estimate to account for expected within-day variations in parking demand between the different land uses proposed for the site (i.e., shared parking opportunities). *Table IV-1* illustrates how the demand estimate was derived.

Parking Supply: The planned supply of parking in the North Railyard totals 780 spaces, distributed by location and type as shown in *Table IV-1* and as follows:

On-street spaces (parallel or angle)	249 spaces
Off-street spaces in surface lots	272 spaces
Off-street spaces in parking garages	<u>259 spaces</u>
Total Planned Supply	780 spaces

Included within the parking count total are sufficient spaces to accommodate the estimated levels of long and short-term parking demand, with approximately 35 extra spaces provided as a buffer supply. Additional on-street parking spaces are also available on the east of Guadalupe Street as a supplemental source. Included within the total are spaces for handicapped people and loading zones. These should be located appropriately in the implementation designs for the Railyard street system and parking facilities.

Potential Impacts on Demand Due to Changes in the Railyard Development Program: In the event that the

development program ultimately realized in the North Railyard proves to be substantially different from that assumed in developing estimates of parking demand for this Master Plan, the amount of needed parking may be higher or lower than 660 spaces.

Demand at a lower level would represent an opportunity to reduce the number of spaces to be provided in the proposed parking structure. This would substantially reduce the capital cost of providing parking in the North Railyard.

Demand at a higher level could be accommodated either by increasing the level of incentives for travelers to use alternative modes, making more efficient use of currently underutilized street parking east of Guadalupe, or developing a second parking structure in the area between Garfield and Montezuma, just west of Sandoval. A third possible location is at the surface parking lot of Area II shown in *Figure IV-47*. This structure would be at maximum one level below ground, one at surface, and possibly roof parking if a one-story above ground structure was agreed to by the Alarid Neighborhood. In either case, the additional required spaces should accommodate primarily the needs of Railyard employees, as closer-in spaces should be reserved for visitors and patrons of businesses. The second parking structure could also accommodate parking demand generated in the Guadalupe District and, if a “Capitol Connection” type shuttle service becomes available, downtown as well.

Parking Ownership, Management, and Operation: The Master Plan recommends a comprehensive approach to ownership, management and operation of parking in the North Railyard. Elements of such an approach could be as follows:

- **Public Ownership.** All parking spaces and facilities in the North Railyard would be owned, managed and operated by the City of Santa Fe (or perhaps by a nonprofit district formed for this and other transportation-support purposes in the Railyard/ Guadalupe District area).
- **Parking Structure.** The only exception to the complete public ownership of parking would be a 240-259 space parking garage recommended for the proposed North

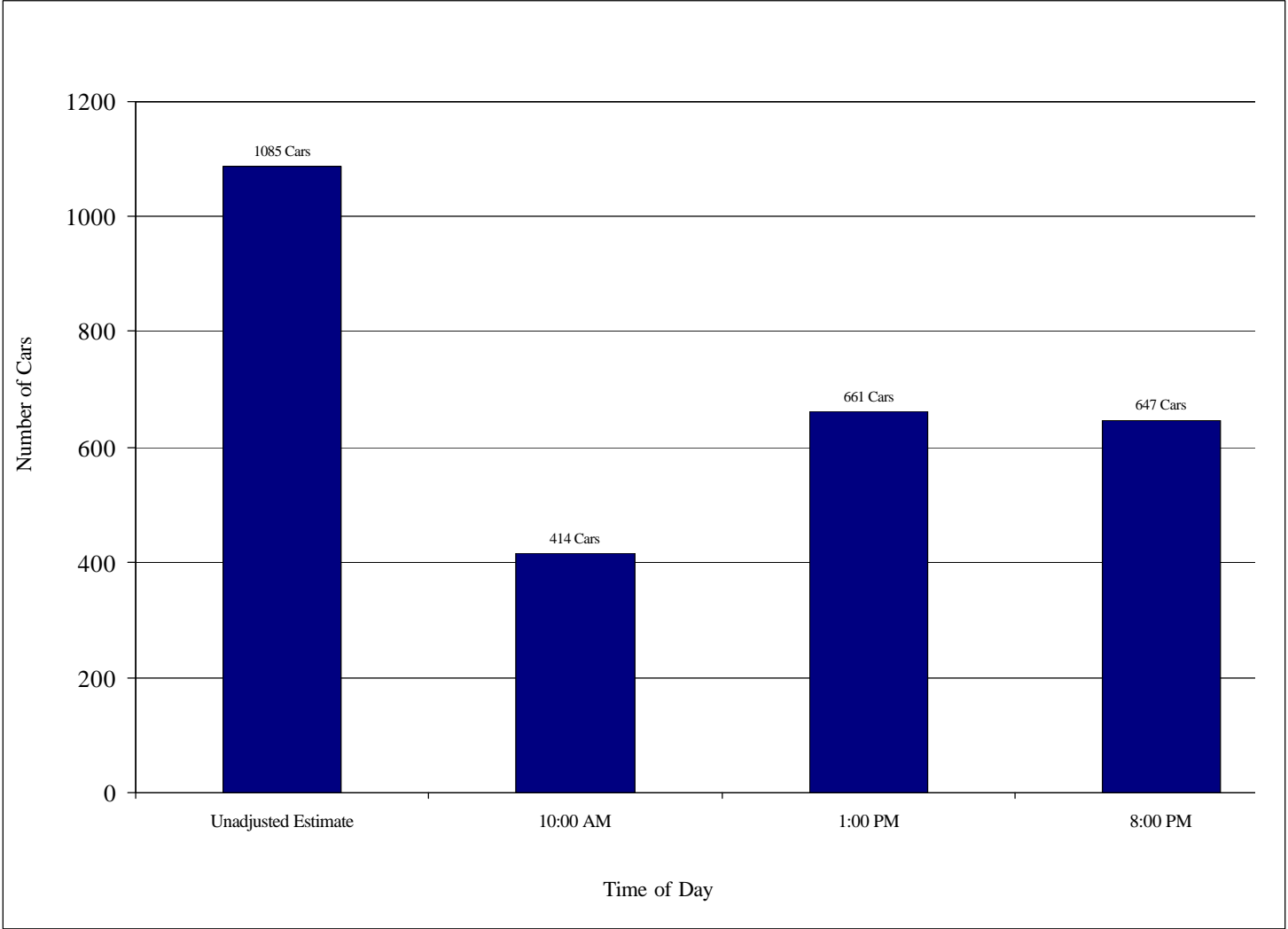
Center site. This could be built and operated jointly by the City of Santa Fe and a private entity, possibly the owner of a proposed theater. The City would be responsible for operating the facility and collecting revenues, but the net proceeds (after expenses) would be shared with the private entity at a rate to be determined through negotiation. If the proposed theater is the private entity, it might also have the option to provide free parking to its customers (but, as a means of providing an incentive for alternative mode use, not to its employees).

- **Pay Parking.** In general, people will be much more likely to drive to the Railyard rather than use alternative

modes if parking is free and abundant than if parking requires payment. For this and other reasons, the Plan recommends implementation of pay parking in the Railyard as a central concept. This concept may require further coordination with current lease language.

Pay parking would apply throughout the North Railyard, with a minimum hourly rate of \$0.75 to \$1.00. Price variations could exist within the site, however, with rate adjustments made periodically to manage demand. Adjustments should also be made periodically to adjust to overall price inflation over time.

Figure IV-48: Estimated Parking Demand vs. Planned Supply in the North Railyard



Parking rates should be set so as to accomplish several objectives, including: recovery of costs of parking operation and enforcement; recovery of costs associated with controlling parking spillover in surrounding neighborhoods; support for the development and operation of alternative travel modes; and provision of sufficient incentive for travelers (particularly Railyard Area employees) to use alternative modes.

In thinking about pay parking, it is important to recognize the relationship between parking demand and the price of parking. That is, the demand for parking spaces in the Railyard is not a fixed quantity, but can be managed successfully through pricing and other measures. Parking management – particularly pay parking — is one of the most powerful tools available to a community for encouraging motorists to switch to alternative travel modes such as car-pools, taxis, hotel shuttles, buses and bicycles.

Another key benefit of pay parking relates to the need of businesses to provide adequate parking for their customers. Typically, in an environment in which parking is free, employees arrive prior to the customers and occupy the prime parking spaces. In a pay-parking environment, however, employees have a strong incentive to use alternative modes or to find cheaper or free parking at remote locations. The result is an increase in the effective supply of parking for customers. Customers also benefit from pay parking because it increases turnover. High rates of turnover are associated with low search costs for parking

(i.e., the chance of finding a parking space near the travel destination is higher).

- Control of Spillover Parking in Adjacent Neighborhoods. Spillover of parking into surrounding neighborhoods will be an issue that must be addressed as part of whatever parking strategy is adopted for the Railyard. Options for controlling spillover include:

- Prohibiting curb parking in the surrounding neighborhoods.
- Time restrictions on curb parking (to discourage parking by Railyard employees).
- Establishment of a residential parking permit program.

Regardless of the option selected, enforcement will be key to controlling spillover. Revenue generated from pay parking in the Railyard will be key to providing adequate funds for support of the enforcement effort.

Parking for Special Events: Special events held in the North Railyard may periodically generate demand for parking above the available supply. In a few cases, the demand may exceed the supply by a substantial margin. This Master Plan recommends the following approach to dealing with such cases:

- Traffic and Parking Impact Mitigation. Similar to successful instances in dozens of other communities throughout the U.S., the sponsors of special events should be held responsible for mitigating traffic and reducing demand for on-site parking to the maximum extent possible by enabling and encouraging event attendees to travel to and from the site by alternative travel modes. The scope of the responsibility should be clearly specified through conditions imposed during the development approval process or through provisions incorporated into site lease documents.

- Focus on Alternative Modes of Access. Alternative travel modes that should prove most effective in capturing trips to and from special events include hotel shuttles, taxis, special shuttles to and from remote parking locations, Santa Fe Trails buses, tour or charter buses, bicycles (particularly as the Railyard area bike-way system develops to its full potential in the future), and walking (e.g., from downtown and Railyard area lodging accommodations). The costs of providing special shuttles or any other necessary transportation services should be borne by the sponsors of the special events.

- Remote Parking. Potential locations for remote parking include the proposed site of a parking structure on Sandoval between Garfield and Montezuma, the State Capitol, the South State Office Complex, the New Mexico Highway Department office complex, and the PNM site adjacent to the Baca area. Other locations should be

investigated as well. Agreements with the owners of the remote parking locations would be necessary in order to make use of them, as would some improvements and site management to accommodate parked vehicles and the security concerns of vehicle occupants. While city staff should cooperate with special events sponsors to secure the necessary agreements, the responsibility for obtaining the agreements should rest with the event sponsors.

- Preferential Parking for Car-pools. Very high occupancy Car-pools (i.e., Car-pools with four or more people) could be provided preferential parking spaces at special event locations.

- Employee Travel Demand Management. Employees should especially be encouraged to travel to and from special events by alternative modes, including the Santa Fe Trails bus system.

Baca Area

Parking demand in the Baca Area is expected to derive from existing land uses in the near term, and from a combination of mixed uses in the long term. Parking in this area assumes that land uses will self-park in accordance with the BCD standard parking rates.

Table IV-2: Estimated Demand for Parking in the North Railyard

Type of Land Use	Assumed Amount	Parking Demand Multiplier	Unadjusted Parking Demand	Adjustment for Within-Day Variation in Demand			Adjusted Parking Demand Estimates		
				10:00 AM	1:00 PM	8:00 PM	10:00 AM	1:00 PM	8:00 PM
Commercial	110,000 sqft	2.38 spaces per 1000 sqft (gfa)	262	50%	100%	50%	131	262	131
Office	120,000 sqft	1.67 spaces per 1000 sqft (gfa)	200	100%	100%	10%	200	200	20
Museum	46,000 sqft	1.90 spaces per 1000 sqft (gfa)	88	25%	100%	0%	22	88	0
Theatre	2,060 seats	0.20 spaces per seat	412	0%	0%	100%	0	0	412
Residential	16 dwelling units	1.00 space per dwelling unit	16	50%	25%	100%	8	4	16
SFS Railroad & Warehouse 21	100 persons	0.29 spaces per person	29	50%	100%	100%	14	29	29
"Spillover" Parking	N/A	N/A	79	50%	100%	50%	40	79	40
TOTAL DEMAND			1,086				415	661	647

Existing Tenants Limited Controlled Parking

Limited controlled parking at the Railyard was approved by City Council for existing for-profit leaseholds to accommodate for the unique circumstances related to those leaseholds. The following are the provisions of the limited controlled parking condition.

1. This provision is unique to the current leases for the existing for-profit leaseholds in the north railyard area as of January 2002. Any changes to the permitted land uses, lessee, or building owner may terminate this provision upon the discretion of the Railyard manager or the City. There are only (6) existing for-profit leases involved.
2. This provision is limited to the period up to the first appraisal in the current leases or fifteen years at which time the Railyard management or the City will reevaluate and possibly renegotiate with the goal to terminate this provision.
3. The limited controlled parking areas are limited to three areas designated in *Figure IV-50*. Unless the Railyard management demonstrates that continued application of these terms prevent the Railyard management from leasing at terms acceptable to the Railyard management, and subject to the results of any new parking studies acceptable to the Railyard management and the City. It is recommended that the Parking Division review new parking studies. Exact number of parking stalls provided within the areas will be dependent on final development design.
4. The controlled parking areas have these use limitations.
 - a. Controlled only on Monday through Friday.
 - b. Controlled only from 8 am to 4 pm.
 - c. Areas and stalls shall be signed to indicate controlled days and times and that stalls are open for public use at all other times.
 - d. Special times beyond the normal controlled times may be agreed to by the Railyard management or City to accommodate special needs of the participating tenants. The evaluation should be based on a unique need and should be limited to maintain the overall concept of shared parking.
 - e. The controlled parking areas are to be leased, developed, controlled and maintained by the participating tenants. A written agreement between the tenants for the controlled parking shall be developed under the direction of the Railyard management or the City with concurrence by the tenants. The Railyard management shall only be responsible for documenting and recording the agreement.
 - f. The controlled parking areas are to be developed to allow for future transition to full shared parking with pay parking capabilities. (All designs for shared parking locations shall be reviewed by the City Parking Division to coordinate improvements required to allow for future pay parking.)
5. This provision does not extend to any future leaseholds either not-for-profit or for-profit unless the Railyard management demonstrates that continued application of these terms prevent the Railyard management from leasing at terms acceptable to the Railyard management, and subject to the results of any parking studies acceptable to the Railyard management and the City. It is recommended that the Parking Division review any new parking studies.

Figure IV-50: North Railyard Shared Parking

