

CITY OF FOWLER
Central Fowler Revitalization Plan
December 21, 2007



Prepared By:



**Local
Government
Commission**

Local Government Commission
Sacramento, California



Opticos Design, Inc.
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Central Fowler Revitalization Plan

A Report to the City of Fowler

December 21, 2007

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Project Overview and Objectives

This report summarizes the results of an intensive community-based planning process in Fowler called a charrette. A charrette is a series of public involvement events that spans several days or more and culminates in a vision or plan. The Fowler charrette was conducted April 12 – 18, 2007. Its purpose was to identify improvements to Merced Street and Golden State Boulevard to create a safe and inviting pedestrian environment and develop a plan to rejuvenate adjacent blocks and guide new development for a cohesive, economically successful, and community-oriented downtown.

The study area that is the focus of this report includes Fowler’s central commercial area and immediate neighborhoods, bounded by Adams Avenue to the east, Highway 99 to the west, Tuolumne Street to the north and Main Street to the south. The area also includes the approximately one-mile section of the Golden State Boulevard Corridor between Adams Avenue to the north and West Peach Street to the south, and selected areas observed as important opportunities to connect existing neighborhoods and future development to the downtown and schools.

Central Fowler Revitalization Plan
Opticos Design, Inc.

This project was made possible through a Caltrans Environmental Justice: Context Sensitive Planning Grant received by the City of Fowler in partnership with the Local Government Commission (LGC). The LGC is a Sacramento-based nonprofit organization that works with communities, agencies and elected leaders to create healthy, walkable, and resource-efficient communities. The LGC assembled a skilled consultant team to prepare the recommendations and designs presented in this report. Building and urban design firm Opticos Design, Inc. (Berkeley, Calif.) led development of the proposals with transportation circulation expertise provided by Glattig Jackson Kercher Anglin (Orlando, Fla.).

Community Engagement

In coordination with the City, the Local Government Commission organized a public design charrette to study design strategies for revitalization. This included a multi-day series of meetings, presentations and workshops that engaged residents, businesses, community organizations and local government in a variety of activities to elicit hopes and concerns, draw out ideas about possible solutions, and foster collaborative development of a community vision.

The charrette took place Thursday, April 12 through Wednesday, April 18, 2007 at Fowler High School. Focus group meetings of school officials, emergency responders, community service organizations, businesses, transportation and planning agencies and elected officials were held Thursday and Friday during the day to hear input from a variety of specific interests. The public events kicked off with a Thursday night opening town meeting, and continued with a community walk audit, training and collaborative design tables on Saturday. The consultant team continued to develop recommendations and drawings throughout the period based on public input, field checks and review of planning data. The initial plan concepts were presented at a closing meeting on Wednesday night.

Thursday evening approximately 60 people viewed a presentation that showed existing conditions and some potential solutions used in other communities. Paul Zykofsky of the Local Government Commission explained the principles involved in creating walkable, livable places using images to illustrate his points. Residents also participated in activities to identify key values for the community and to determine design priorities for the charrette. Top values by votes included:

- Sense of Community
- Good Schools
- Safety
- Small Town Feel
- Family
- Accessible/Conveniently Located



Above, from top to bottom: Image from April 13th, 2007 focus group meeting; Community members discussing design alternatives during Saturday morning's session; Community members on Saturday morning's "walking audit" assessing potential areas for improvement.



Top priorities by votes included:

- More activities (e.g., street fairs and farmers' market) — 23
- Landscaping — 21
- Design, Architecture — 21
- Plazas, Outdoor Eating — 20
- Nicer Streets — 17
- Gateway Entrance — 15
- Bicycle Lanes — 13
- Connect New Development to Existing — 13
- Increased Occupancy, Fewer Vacancies — 13
- Improve School Crossings — 12
- Art — 11
- Parking — 11
- Improved Sidewalks — 8
- Roundabouts — 7



Above, clockwise from top left: Paul Zykofsky leads Thursday evening presentation; Community members work to prioritize potential improvements; Community members sharing and grouping their key values.



Saturday approximately 35 people attended a facilitated walk audit in the morning to review and discuss conditions in the downtown area. After a training presentation, the group gathered around maps to develop ideas to revitalize Fowler. General recommendations are listed below and summarized in the image.

Above: A summary of participant recommendations from the Saturday morning public workshop.

- Add gateways and signage to downtown
- Narrow streets to slow traffic
- Improve parking, drop offs and pickups at schools for cars and buses
- Add medians and landscaping on West Merced
- Add more landscaping on Golden State, especially near Merced Street
- Complete sidewalks and bike path system connecting downtown to neighborhoods
- Create safe bicycle/pedestrian bike route underneath 99 overpass
- Add skateboard park to new park on west side
- Improve pedestrian crossings at key intersections
- Create consistent building facades
- Add restaurants
- Better parking for cars and bicycles (explore back-in angle parking)
- More tree canopy that doesn't block signage
- Murals and public artwork

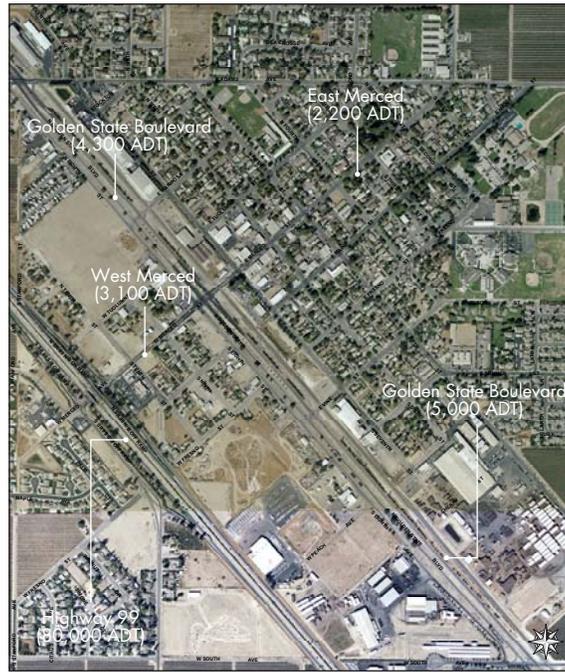
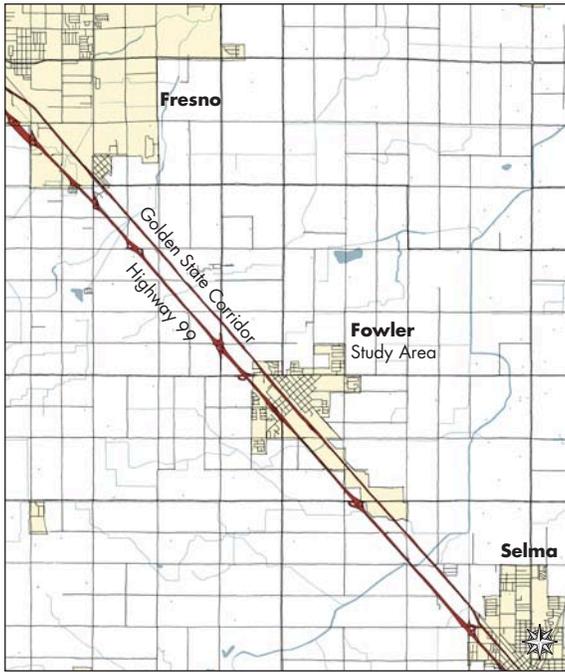
Wednesday evening design concepts and highlights prepared by the consultant team based on the community input were featured in a final public meeting of over 60 people. Participants added closing comments, which included:

- Make sure to share plans with school district
- Consider funding options/sources
- How to pay downtown maintenance costs
- Address problem of absentee landlords
- Address freeway on/off ramps and beautification to entry of Fowler
- Beautify crossing under the overpass/make pedestrian friendly
- Cost of comparison for redesign of streets (extending sidewalk/add median vs. full reconstruction/paving of streets)
- Bike path on Fresno Street
- Traffic impacts on Seventh Street
- Provide examples of community-based beautification efforts (murals, plants)

In the weeks following the charrette, Opticos Design continued refinement and organization of the different design concepts developed through the events. The results, presented on the pages that follow, include information on the City's physical and historical background, a summary of the research and analysis completed as part of the study, and the conceptual urban design proposals to guide future revitalization activities throughout central Fowler.



Above, from top to bottom: Design team discusses results from presentations and workshops; Community members huddle around a map discussing various alternatives during Saturday's morning session; Community members on "walking audit."



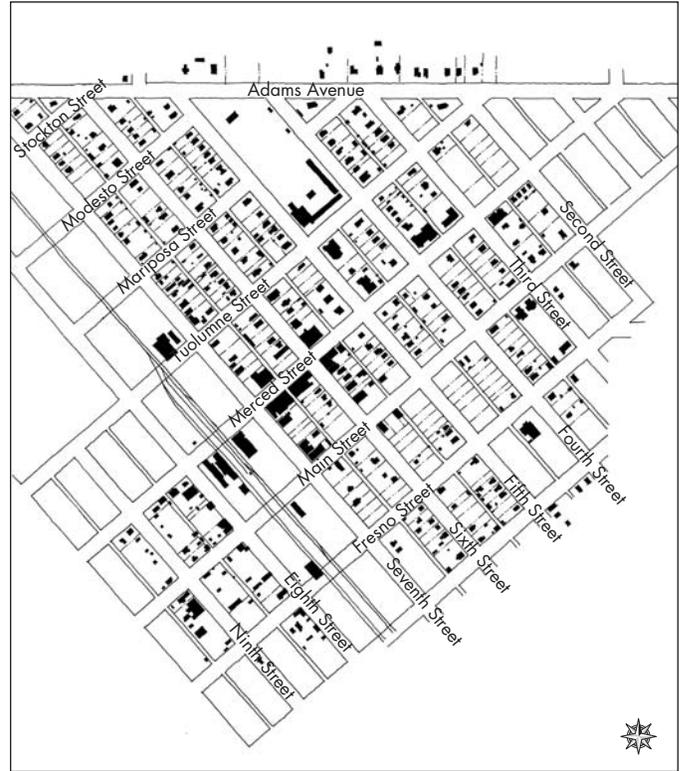
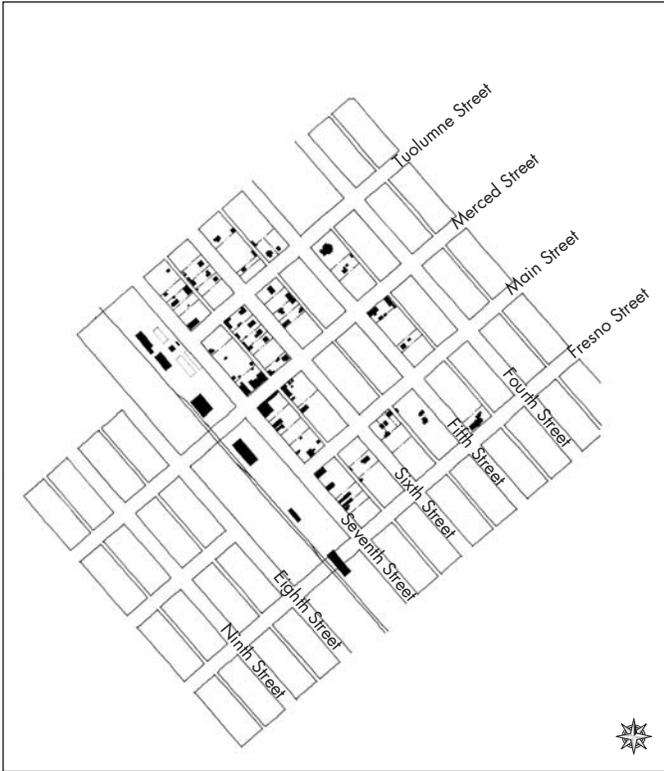
Project Area and The Community

The City of Fowler is a small, nearly century-old town of 5,300 residents in Fresno County, located approximately ten miles south of the City of Fresno and three miles north of the City of Selma. The community is centered about a half-mile east of State Highway 99, and is largely surrounded by agricultural land.

Merced Street serves as Fowler’s primary downtown commercial street and connection to State Highway 99, a major interregional north-south route that carries over 80,000 vehicles daily (Caltrans, Fresno COG). The Council of Fresno County Governments Travel Demand Model estimates that Merced Street carries about 3,100 vehicles per day west of Golden State Boulevard and tapers down to about 2,200 east of Golden State Boulevard and the railroad tracks. Golden State carries approximately 4,300 vehicles on the north side of Merced Street and 5,000 on the south side.

Above left: Fowler’s location along Highway 99, about 11 miles south of Fresno.

Above right: Central Fowler’s principal access routes with corresponding traffic levels (measured in average daily traffic or ADT).



Historical Background

The community of Fowler was established in 1872 when State Senator Thomas Fowler implemented the “Fowler Switch” along the southern extension of the Central Pacific Railway. In its early years the community was a center for the cattle ranching industry, and activity surrounded the railroad tracks within the historic core.

The City incorporated in 1908. The Sanborn Company produced Fire Insurance maps in the early years of Fowler’s development which provide insight on how the community grew and changed.

In 1896 the City was contained largely within a 16-block area bordered by Mariposa Street to the north, the Southern Pacific railway tracks to the west, Fifth Street to the east, and Fresno Street to the south. Blocks were laid out in a uniform grid that measured 400’ long by 320’ wide and included north-south alleys measuring 20’ in width. Despite the small size of the community, Merced Street east of the railroad had already become a center of commercial activity, with several buildings lining the public right-of-way.

By 1945 the City had expanded all the way to Adams Avenue to the north but had not grown much past Vine Street to the south. Although the gridiron pattern of rectangular blocks continued, the town remained compact and walkable in form. Merced Street east of the railway tracks continued as a commercial center, adding new businesses and institutions along its route.

Above left: Fowler in 1896. Originally laid out to serve the Central Pacific Railroad, the town at its core has a form that is compact, pedestrian-oriented, and walkable.

Above right: Fowler in 1942. The City continued to thrive as a service center for the surrounding agricultural industries and Merced Street continued to grow as the center of Fowler.

Primary Challenges

The railroad experienced diminished significance with the construction of the original Highway 99 (the Golden State Boulevard). Later construction of the new Highway 99 and the removal of the train depot greatly diminished their function with respect to the downtown. They now pose a physical barrier to maintaining a cohesive commercial core. Golden State Boulevard and the railroad tracks divide Merced Street, the downtown business district’s primary connection to Highway 99. Golden State is very wide and vehicle speeds are fast, making the area less attractive for new investment. Many properties adjacent to and west of Golden State Boulevard have deteriorated, become vacant or remain underutilized.

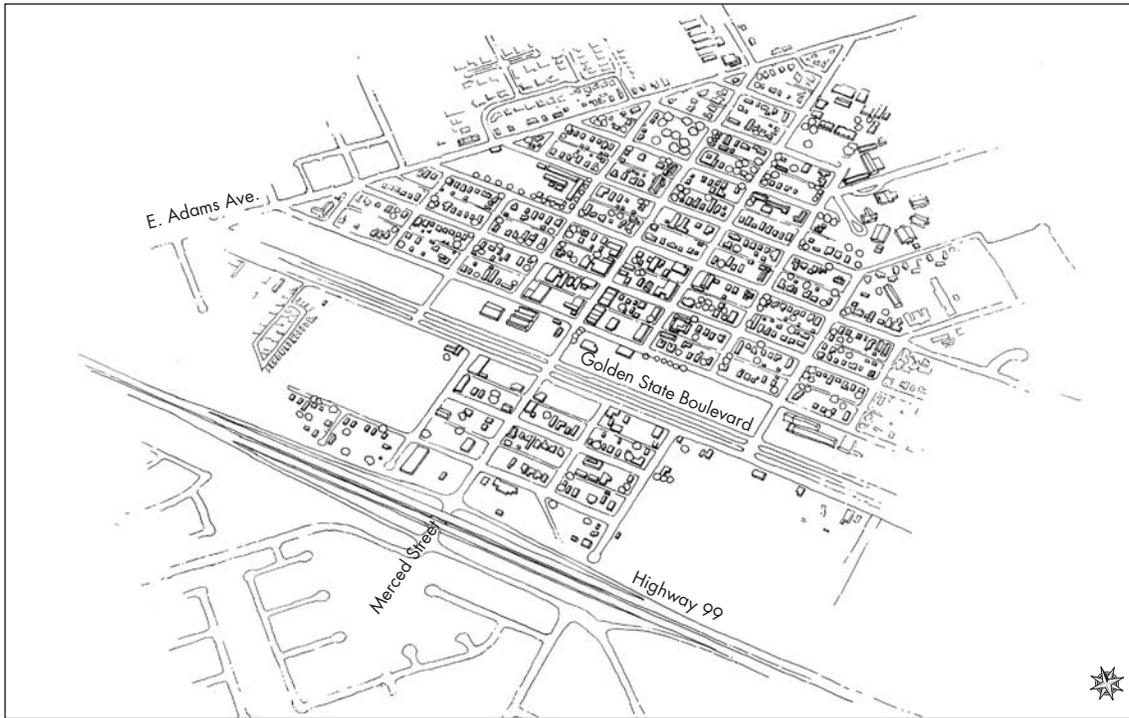
Merced Street west of Golden State and the railroads tracks is also very wide and lacks streetscape enhancement to define it as the town main street or to create a sense of arrival into the central city area. While recent new development on West Merced Street has brought new economic development opportunities and services to the community, it is primarily oriented toward Highway 99, which detracts from the existing historical downtown and undermines the creation of a cohesive commercial district.

East Merced has also suffered. Although limited new investment has occurred with the addition of new commercial tenants, many of the historic structures have deteriorated, resulting in unappealing storefronts and interior spaces poorly-equipped for retail.

The fragmentary condition of downtown land uses, presence of wide roads with high traffic speeds, absence of entry and other place-making features, and barren streetscapes along principal corridors make pedestrian mobility unsafe and untenable. Solutions are needed for traffic calming, pedestrian and bicycle crossings, pedestrian and bicycle linkages from downtown to surrounding neighborhoods, sidewalks, streetscapes and buildings in order to create a safer and more appealing place for walking, bicycling, visiting and spending time. This in turn will help set the stage for new commercial development and housing opportunities in the downtown area.



Above, from top to bottom: Vacant lots and under utilized properties along West Merced Street in Fowler; Wide cross-section of West Merced encourages higher traffic speeds; The Golden State Boulevard presents a significant physical barrier along Merced Street.



Introduction

Despite some significant challenges, several new projects in the downtown area have brought the potential for revitalization to central Fowler. The City has secured funding for the restoration and improvement of storefronts along Merced Street, and new construction along West Merced has encouraged a continuous pedestrian environment across Merced. Additional investment, such as the new library along Seventh Street, will encourage downtown’s centrality.

In order to assist the City in prioritizing projects that may have a maximum positive outcome, the consultant team has identified some Design Principles to help direct the revitalization of central Fowler. These Design Principles seek to provide a framework for new implementation programs that can ensure that the City continues to grow in a healthy and viable manner for its present and future residents and visitors.

Guiding Design Principles

- 1. Maintain a Compact, Walkable, Accessible Town Center**
- 2. Provide a Well-Connected Network for Bicyclists and Pedestrians**

Above: Bird’s eye view of Fowler looking northeast across Hwy 99 and Golden State Boulevard.

A Revitalized Downtown

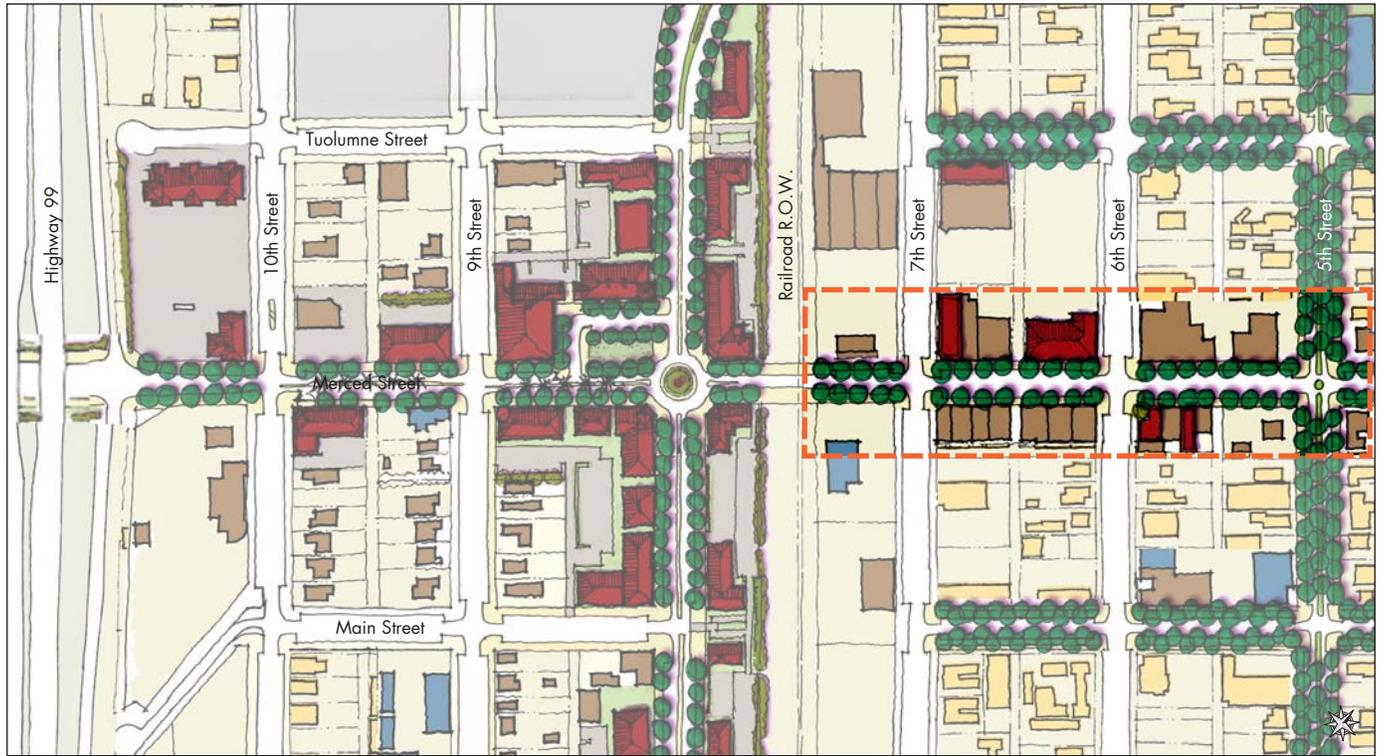


Design Principle 1: Maintain a Compact, Walkable, Accessible Town Center

East Merced Street currently provides a “main street” retail storefront environment for local businesses and entrepreneurs. Many of the buildings along East Merced are historically significant and provide a great opportunity for visitors to experience the unique character of the city in a pleasing, pedestrian-friendly environment. Despite these positive aspects, retail has struggled in part due to its limited visibility from Highway 99 and its lack of connectivity between east and west.

New economic development in Fowler should be organized in a manner that increases the viability of existing Merced Street businesses, and encourages visitors to patronize existing available services. This section outlines strategies that should be pursued to provide Fowler with a healthy, vibrant, mixed-use center, including the encouragement of infill development and façade renovations along East Merced, the creation of new, pedestrian-oriented, mixed-use development along West Merced, and street improvements to both sections of Merced Street that encourage a continuous pedestrian environment.

Above: Bird's-eye view of Fowler looking northeast across the town highlighting the central role East and West Merced Street can play in the City.



East Merced Street

East Merced Street supports a pedestrian-oriented, traditional “main street” environment between the railroad tracks and Fifth Street. The area includes several older buildings that contribute to Fowler’s unique identity in the region, and many local businesses that provide day-to-day services for residents.

Although recent street improvements (landscaping, curb extensions, and crosswalks) have helped to revitalize the area, it still suffers from some significant problems. Many of the older buildings have deteriorated and face costly renovations and seismic upgrades. Several storefronts and second story spaces are vacant and or underutilized.

The City should continue to encourage the revitalization of the area through building renovations, new infill development, and additional street improvements.

Key

- Existing Town Center Structures
- Proposed Development
- Existing, Other
- Civic Institutions

Above: Illustrative vision plan illustrates potential long-term development along Merced. A roundabout at the intersection of Merced and currently Eighth Street creates a gateway to the center of town for traffic flowing along Golden State Corridor as well as vehicles exiting from Highway 99.



The City's Storefront Improvement Program (SIP) provides a considerable stimulus for improvements and upgrades to building façades and signage through grants to the owners of commercial buildings. During the charrette the design team explored the impact selected physical improvements could have on the historic downtown, including this building on East Merced between Sixth and Seventh Streets. The application of simple elements such as coordinated canvas awnings, signage panels, and lighting, as illustrated in the above drawing, can contribute to an attractive environment for both retail tenants and shoppers.



Clockwise from top left: Illustrative view of building showing potential façade renovations made possible by the façade improvement program; Existing façade along Merced; Location map.



Vacant and Underutilized Lots

Several vacant and underutilized lots along East Merced and adjacent side streets can provide significant development opportunities, provided that new buildings are compatible with the form and character of the existing downtown. Mixed-use building types can provide new retail space for local entrepreneurs and additional housing opportunities above. Anticipated amendments to the Zoning Ordinance can help encourage new mixed-use buildings with compatible forms.

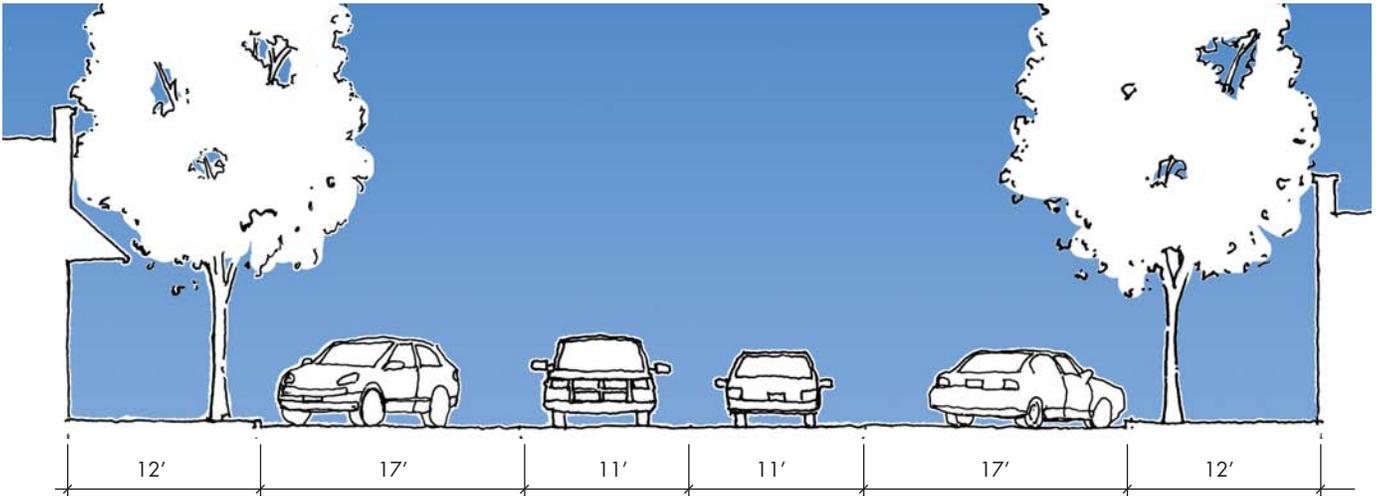
The vacant parcel at the southeast corner of Sixth Street and Merced Street provides a good example. Although the corner “pocket park” provides green and shade, particularly during the hot summer months, it suffers from poor visibility, and the eastern side of the park is defined only by the blank wall of the neighboring building. During the charrette, the design team explored the possibility of inserting an infill building in this location that could provide an active frontage along a corner open space. The image above illustrates a potential design for the site, including a 4,500 sf, two-story mixed use building fronting a 250-sf corner plaza.



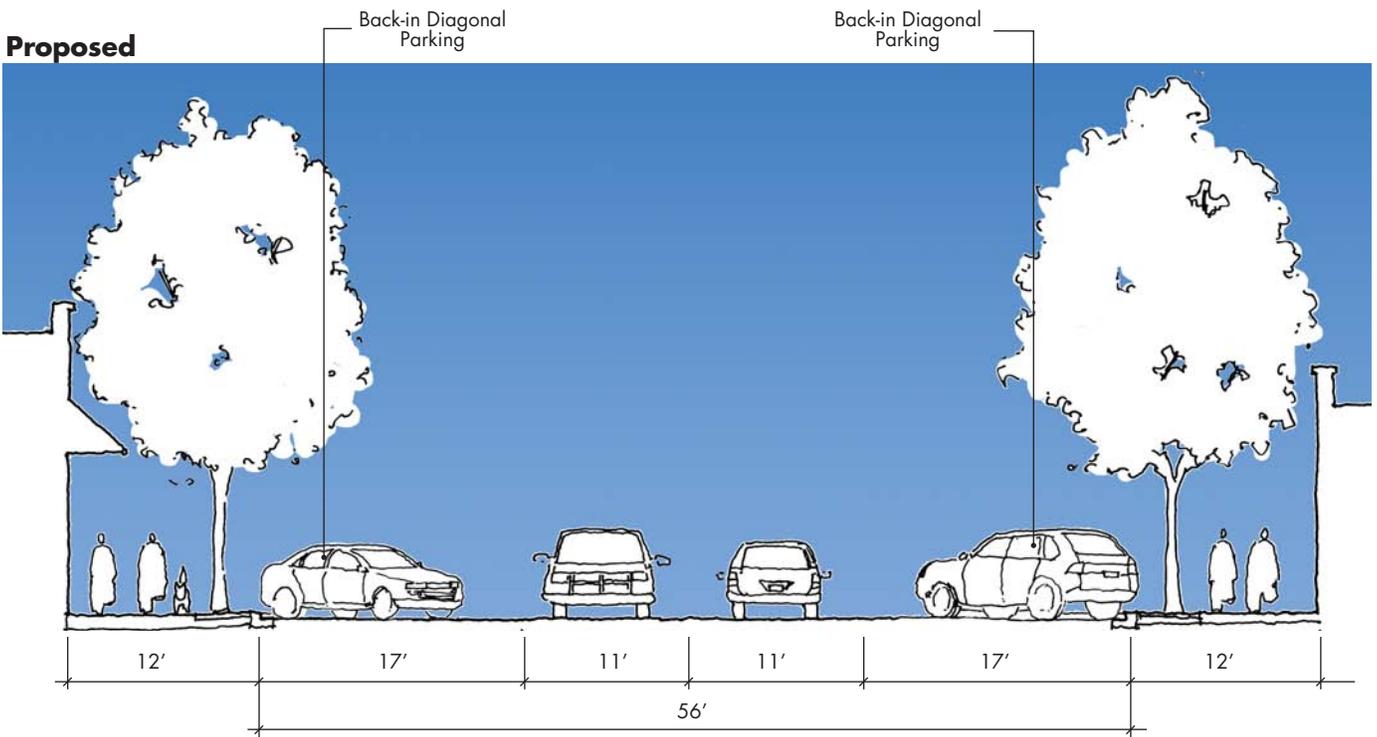
Clockwise from top left: Illustrative view where vacant or underutilized lots are re-developed along Merced; Corner lot along East Merced and Sixth Streets; plan detail of illustrated example.

East Merced Street

Existing



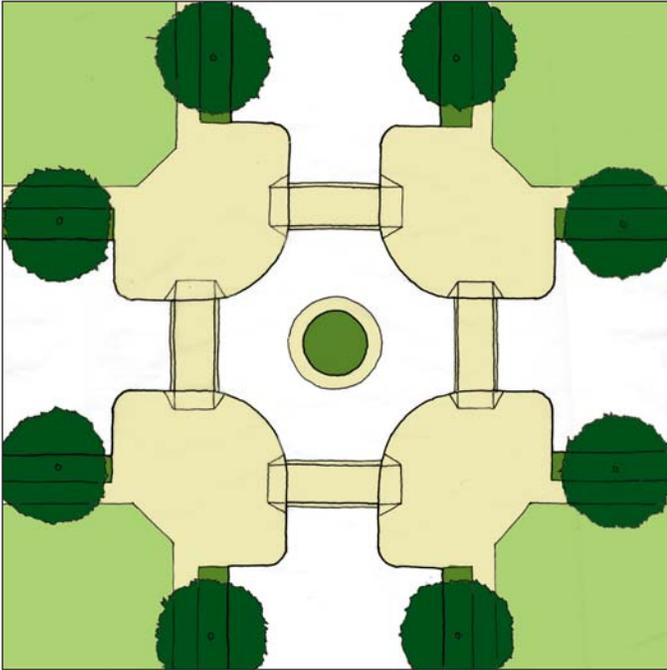
Proposed



East Merced Street has already benefited from recently implemented landscaping, curb extensions, and crosswalks. Despite these improvements, the design team identified additional items that could be implemented to contribute to a successful retail environment.

One item worthy of consideration is “back-in” angled parking, which would virtually eliminate potential conflicts parked cars may have with passing motorists and bicyclists. “Back-in” angled parking also provides for easier loading and side-walk access and maintains a safer environment for children. Its implementation would involve re-striping and reconfiguration of the existing landscaped islands.





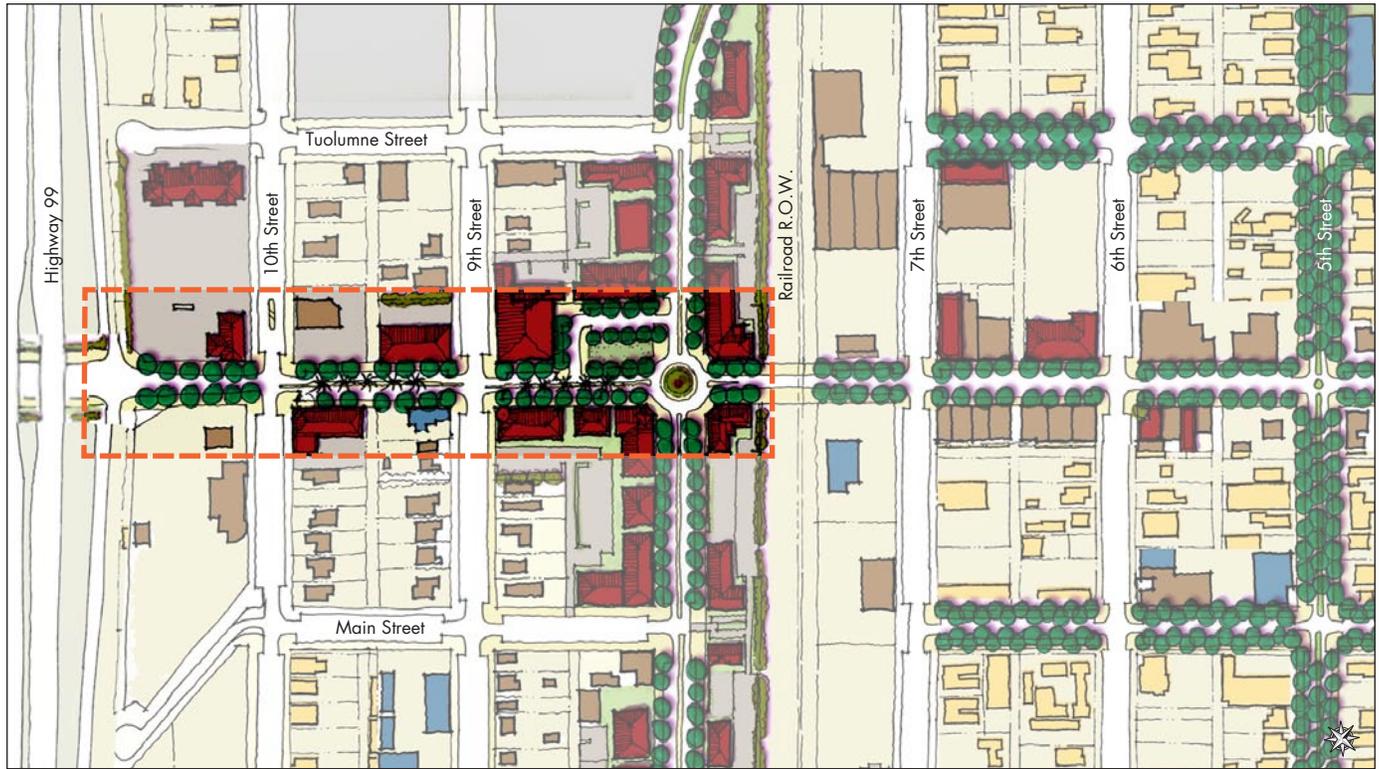
“Back-in” angled parking could be tested along any of downtown Fowler’s side streets with rights-of-way that measure 80 feet. This would allow community residents and business owners a chance to comment and familiarize themselves with the appropriate maneuvers.

Left to right: Plan detail of illustrated “Mini circle” for the intersection of East Merced and Fifth Streets; An example of a “mini circle” incorporating landscape elements.

Mini Circle at East Merced and Fifth Streets

To the east of Fifth Street, East Merced Street changes in character and transitions out of the urban core of downtown Fowler. The introduction of residential lots along Merced with deep setbacks and planting strips changes the character and use of the street, informing motorists that they are exiting the “main street” and entering a residential neighborhood.

During the workshop many community members discussed the possibility of roundabouts along Merced. A “mini circle” at the intersection of Fifth Street and East Merced could mark the transition between the commercial and residential character of the area and provide a safe setting for motorists wishing to change direction. Such a circle could also be used as a location for public art or another civic amenity.



West Merced Street

West Merced Street is a major gateway into the City for drivers traveling from Highway 99 and the Golden State Boulevard. It also provides the only connection in central Fowler between the historic downtown and the neighborhoods to the west of the freeway. With several vacant lots and underutilized properties, it represents a significant opportunity for creating an entry experience that is unique and positive, creating a unified “main street” for the entire community, and complementing the existing business environment along East Merced. Recommendations include public right-of-way improvements between Highway 99 and the Golden State Boulevard, the encouragement of new, infill buildings along West Merced and adjacent side streets, and the creation of a mixed-use plaza at the intersection of West Merced and Golden State.

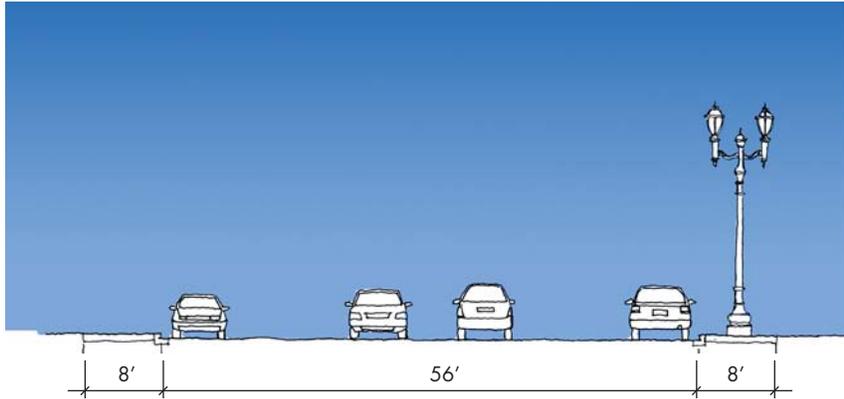
Key

- Existing Town Center Buildings
- Proposed Development
- Existing, Other
- Civic Institutions

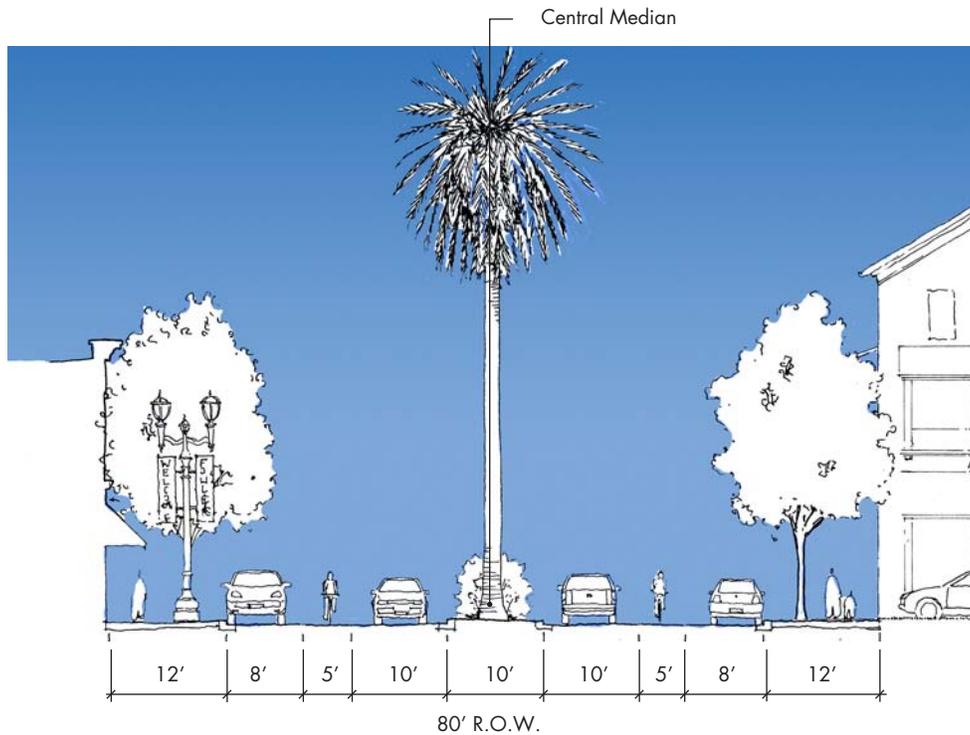
Above: Illustrative vision plan shows potential long-term development along Merced. A roundabout at the intersection of Merced and currently Eighth Street anchors itself as the gateway to the center of town for traffic flowing along Golden State Corridor as well as vehicles exiting from Highway 99.

West Merced Street

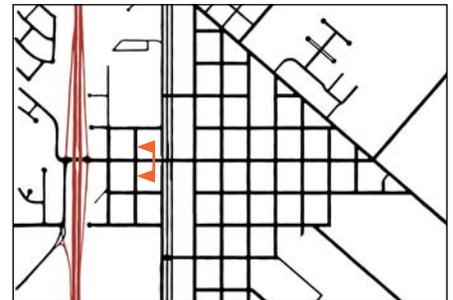
Existing



Proposed



The current configuration of West Merced Street has two lanes and on street parking along a 56' wide roadway. The lanes in both directions are approximately 20 feet wide, thus promoting faster traffic speed and decreased pedestrian safety. The above cross section illustrates the recommendations for narrower traffic lanes, a bicycle lane in each direction, and a wide central median. These design changes will help signal to motorists that they are entering a central, urbanized area that dictates appropriate caution and speeds. It is recommended that for the length of West Merced Street curb extensions and crosswalks at each intersection be integrated in a similar manner as East Merced.



A central median, coordinated with certain planted trees as strong visual markers (such as Canary Date or California Washingtonia Palms) may serve as a gateway point that can provide a setting for appropriate landscaping and signage signifying entry into Fowler from Highway 99. Consistent street trees on either side of the street that provide a large canopy can shade the sidewalks, making it more pleasant for both bicyclists and pedestrians traveling along the street.

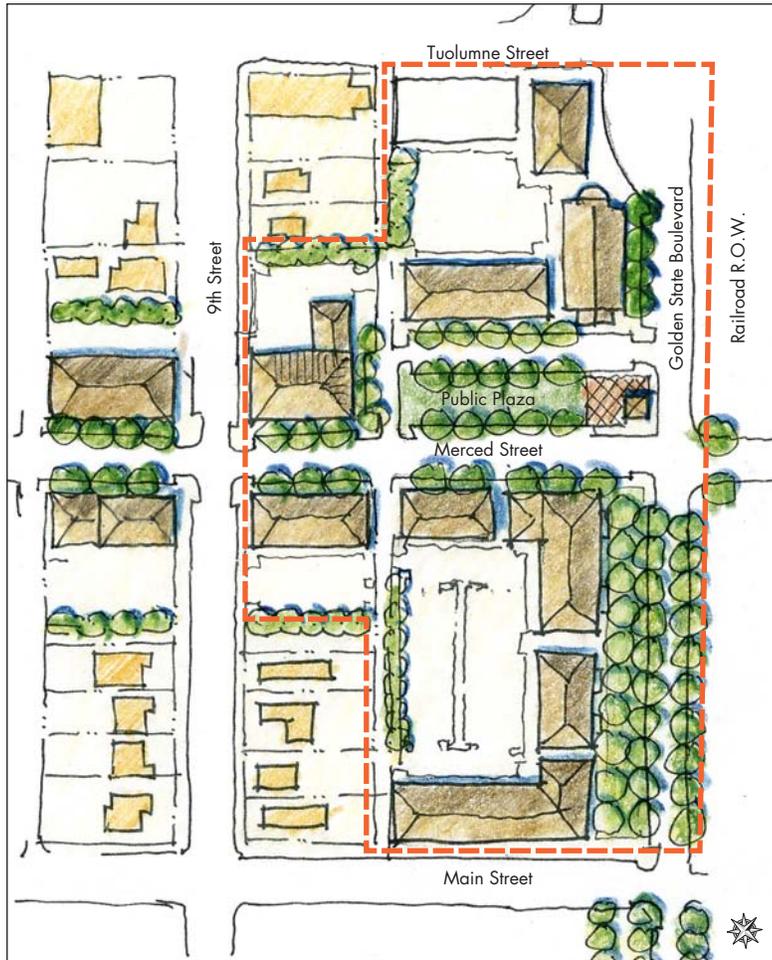


Infill Building Opportunities

The City should work to encourage new buildings along West Merced that can continue the pedestrian oriented nature of the historic downtown. These buildings should have active ground floor uses that are oriented to the street, and setbacks from the right-of-way should be minimized. The above illustration shows how new buildings can frame a fitting entry into the City. Awnings and canopies can help provide a comfortable environment for pedestrians and should be encouraged.



Above top to bottom: Illustrative view down Merced looking southeast with proposed street improvements and development that exemplifies the built form appropriate for central Fowler; Plan detail of illustrated area.



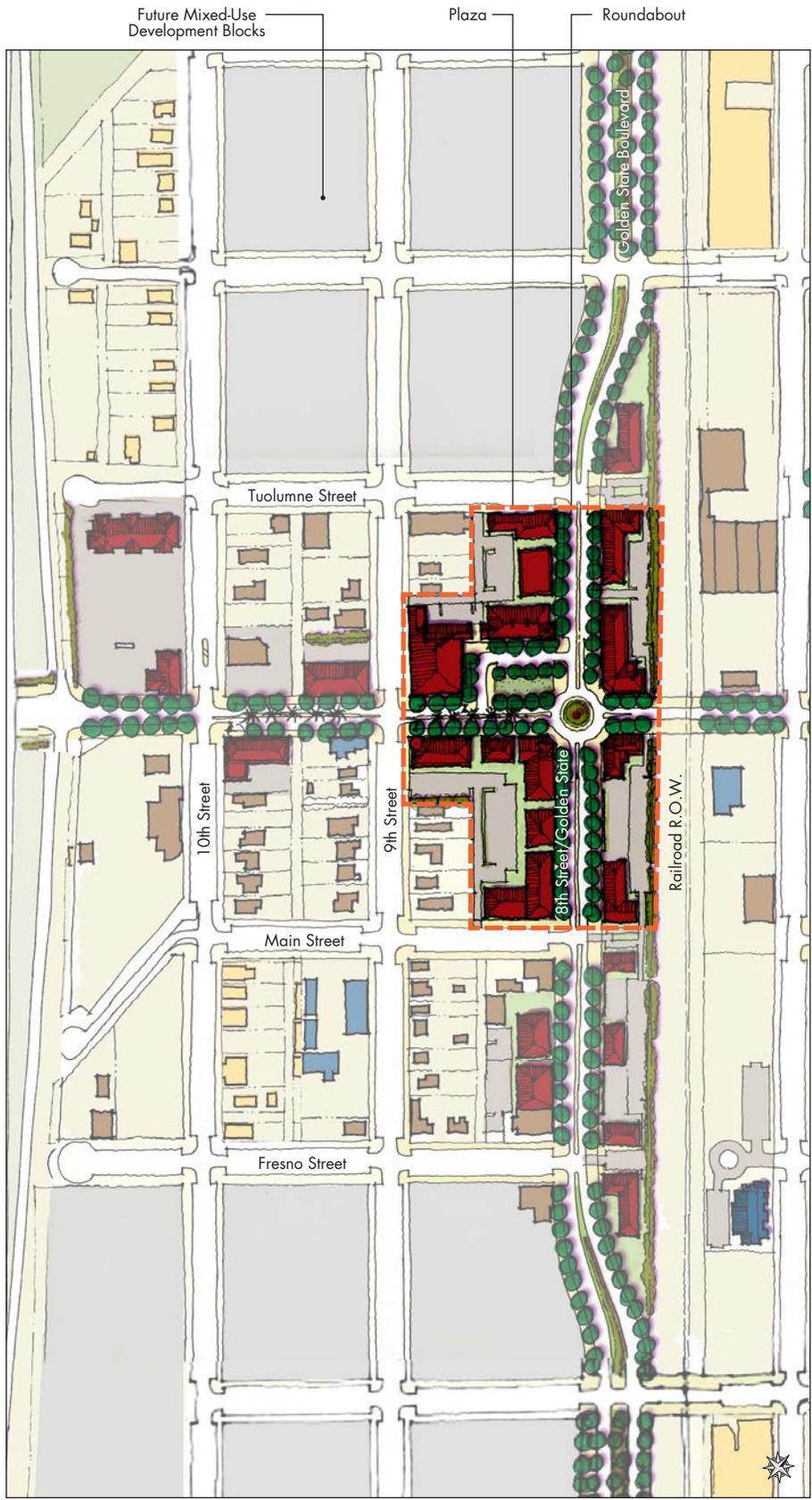
Town Plaza and Mixed-Use Center at Eighth and Merced Streets

During the charrette the design team recognized that the combination of Eighth Street, the Golden State Boulevard, and the rail right-of-way presented a significant, 250' long barrier for pedestrians and bicyclists traveling along Merced. At the same time, the intersection of Golden State and Merced is high in visibility and provides a good opportunity for the creation of an attractive gateway into the City.

The design team explored the possibility of creating a new, mixed-use center at the intersection of Merced and Golden State that could alleviate the existing barriers and provide a highly visible entry into the City. An initial option that was studied included a new center bordered by Ninth Street, Tuolumne Street, Golden State Boulevard, and Main Street with a quarter-acre, public plaza oriented to the intersection of Merced and Golden State. The plaza could provide a viable setting for community festivals and public events. New mixed-use buildings could define the public plaza and accommodate 40,000-60,000 square feet of new retail, with additional floors of office and residential uses in urban, mixed-use buildings. 8th Street between Main and Tuolumne could be closed to provide more efficient development parcels, and Golden State Boulevard could be narrowed to one travel lane in either direction as it passes through the City center.

Such a center could provide a significant opportunity for increased vitality and viability of Merced Street businesses, if new development is designed and strategically positioned to complement, rather than compete with the existing East Merced street environment. New development can also provide existing retail tenants along East Merced with an opportunity to grow into larger spaces without losing their Merced street address.

This initial option could do much to improve this intersection. However, improvements to Golden State would only provide development opportunities on its western side, and the rail right-of-way would still present a significant barrier for pedestrians and bicyclists.



A second option was considered for a new mixed-use center and public plaza that would also provide opportunities for face-to-face development along Golden State and improvements to the railway barrier.

This could be accomplished through the rerouting of traffic from Golden State onto the Eighth Street right-of-way between Vine and Mariposa Streets, creating an opportunity for an additional row of buildings between Golden State and the rail right-of-way.

With improvements to West Merced and Golden State/8th Street, this alternative could provide an optimal experience for pedestrians and bicyclists. With managed on-street parking around the square and behind mixed-use buildings, travelers and shoppers could “park once,” patronize local businesses, and venture over to new and existing businesses along East Merced Street, merely 1 block away.

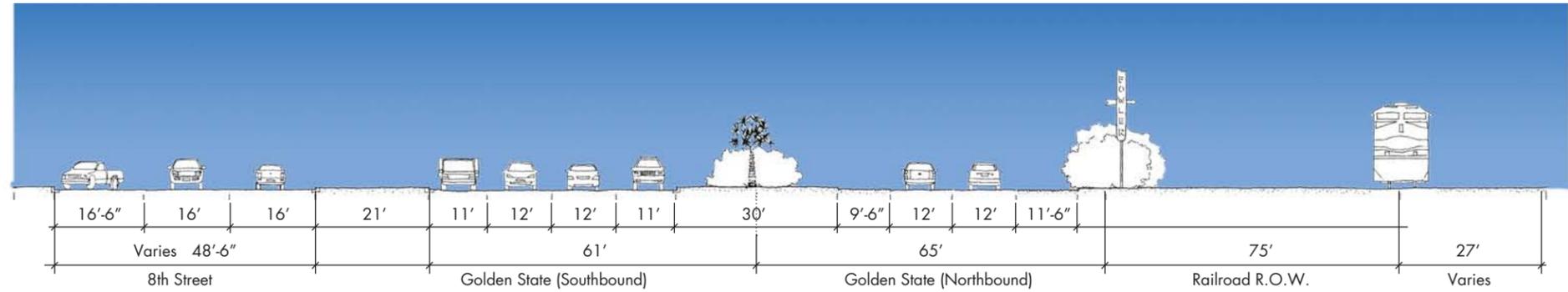
Key

 Existing Town Center Buildings
 Proposed Development
 Existing, Other
 Civic Institutions

Mixed-Use Town Center Sections

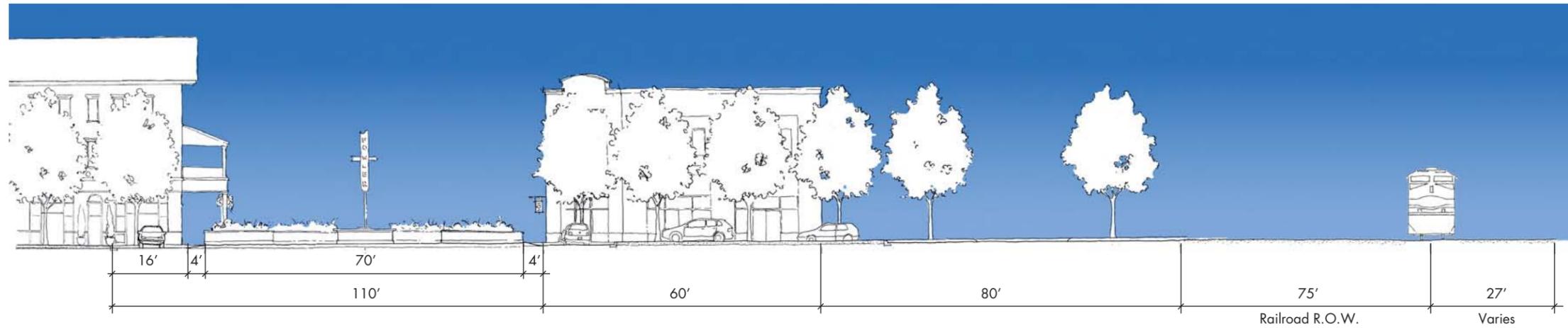
Section A-A Existing

Existing section through 8th Street, Golden State Boulevard, and the railroad right-of-way illustrates the great distance pedestrians must cross between East and West Merced.

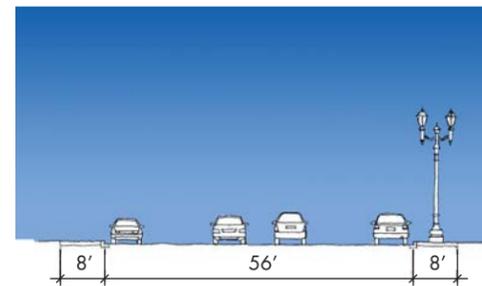


Section A-A Proposed

Shifting the Golden State Boulevard right-of-way westward toward 8th Street creates new development parcels lining Golden State that are typically 140' deep, adequate for new mixed-use buildings with parking lots facing the railway tracks.

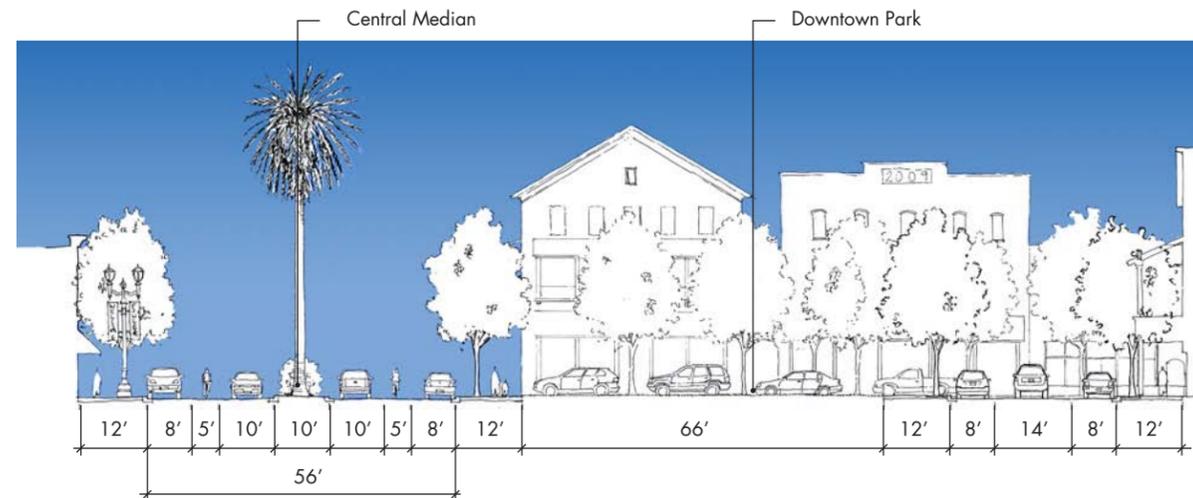


Section B-B Existing



Section B-B Proposed

The proposed development fronting the park is accessed by a one-way service lane which is entered from 8th street and exits westbound on West Merced Street. On-street parking lines both sides of the one-way drive and act as a buffer between pedestrians and the travel lane.



Key Plan





This alternative explored the introduction of an “Urban Single Lane” roundabout at the intersection of Eighth/Golden State and Merced. Such a roundabout could provide smooth traffic flow through the area, accommodate all turning movements between Eighth/Golden State and Merced, and provide a location for a special marker denoting entry into Fowler. Vehicle speeds would be reduced down to a level that would facilitate easy crossings for pedestrians. Typical trucks and agricultural vehicles (with a wheelbase of 50’) could also pass through a roundabout of this size in low gear, eliminating the need for excessive downshifting, and greatly reducing the amount of noise and air pollution that may be incurred.



Above top to bottom: Illustrative bird’s eye view of proposed plaza and roundabout in central Fowler at the intersections of Merced Street and Golden State Boulevard (currently Eighth Street); Plan detail of illustrated area.

Roundabouts are still new in the U.S. and many communities express concern when they are first proposed. However, once built, residents often embrace them and recognize that they are safer, quieter, more attractive and efficient than signalized intersections. While traffic engineers often recommend roundabouts because they are more efficient than a typical stop-controlled or signalized intersection, the lower speeds and more predictable vehicular movement also make them safer for pedestrians and bicyclists. Following are some additional factors that should be considered:

- A typical 4-way intersection, such as the existing Golden State/Merced intersection, may have as many as 32 vehicle-to-vehicle conflicts. At a roundabout these conflicts would be reduced to 8.
- Properly designed roundabouts in urban areas are designed to bring vehicle speeds down to 15-20 mph, speeds at which motorists are much more likely to yield to pedestrians.
- The splitter island in a roundabout provides a refuge for pedestrians as they cross the street and simplifies the crossing by letting them focus on vehicles traveling in only one direction.
- Because roundabouts are more efficient at moving traffic it is often possible to use a one-lane roundabout as a viable alternative to a conventional intersection of four or more lanes. While the existing Golden State Boulevard intersection requires pedestrians to cross over 125 feet, a one-lane roundabout could break the crossing into as little as two, 12-14 foot legs.
- Roundabouts also work well for bicyclists. Most bicyclists at roundabouts simply take the travel lane since vehicles are circulating at a comfortable bicycle speed. Less confident bicyclists can be provided a ramp on the approach to the roundabout so they can exit and walk their bicycle across at the crosswalk. (In areas with high bicycle use, sidewalk and crosswalk areas should be wide enough to avoid creating conflicts between bicyclists and pedestrians.)
- Roundabouts can be designed for long or wide vehicles (such as wide-load trucks or large agricultural tractors) with a mountable truck apron to allow space for wheels or equipment to pass over for turning movements.



Above top to bottom: New roundabout in Honolulu, Hawaii; Proposed roundabout along the Old Redwood Highway in Cotati, California (image courtesy of Steve Price, Urban Advantage).

Additional Design Considerations

The successful implementation of new mixed-use development along Merced Street would likely necessitate a Specific Plan or Master Plan for the project area that could identify funding mechanisms and implementation strategies. A more comprehensive planning process could also generate specific design standards that can guide new development in the area. During the charrette the design team was able to make some preliminary recommendations.

Land Use Considerations

A successful mixed-use project would likely provide a mix of retail, office, housing, and civic uses. Ground floor retail should provide spaces for local businesses as well as chain retail that can successfully integrate into a walkable, pedestrian-oriented environment. The recently completed Buxton economic study has identified potential chain retailers interested in the Fowler market; the City should work to identify which of these might become successful components of the town center.

Building Design Considerations

New buildings should be required to face the street, especially along West Merced and the Golden State Boulevard. “Build-to lines” requiring a high degree of minimum coverage (i.e. 90-100%) should be considered. Well-designed encroachments over the sidewalk, including canopies, galleries, and awnings that shade the sidewalk, should also be encouraged.

Parking Considerations

In order to maximize the pedestrian quality of the area, parking should be located along the street in parallel or diagonal spaces and in lots behind buildings. District-wide management of parking, together with reductions of off-street parking requirements, will help to optimize shared parking scenarios and ensure that any new development is not visually dominated by parking lots. Careful consideration should also be given to ensuring adequate buffers between this area and adjacent residential areas to the north and south.

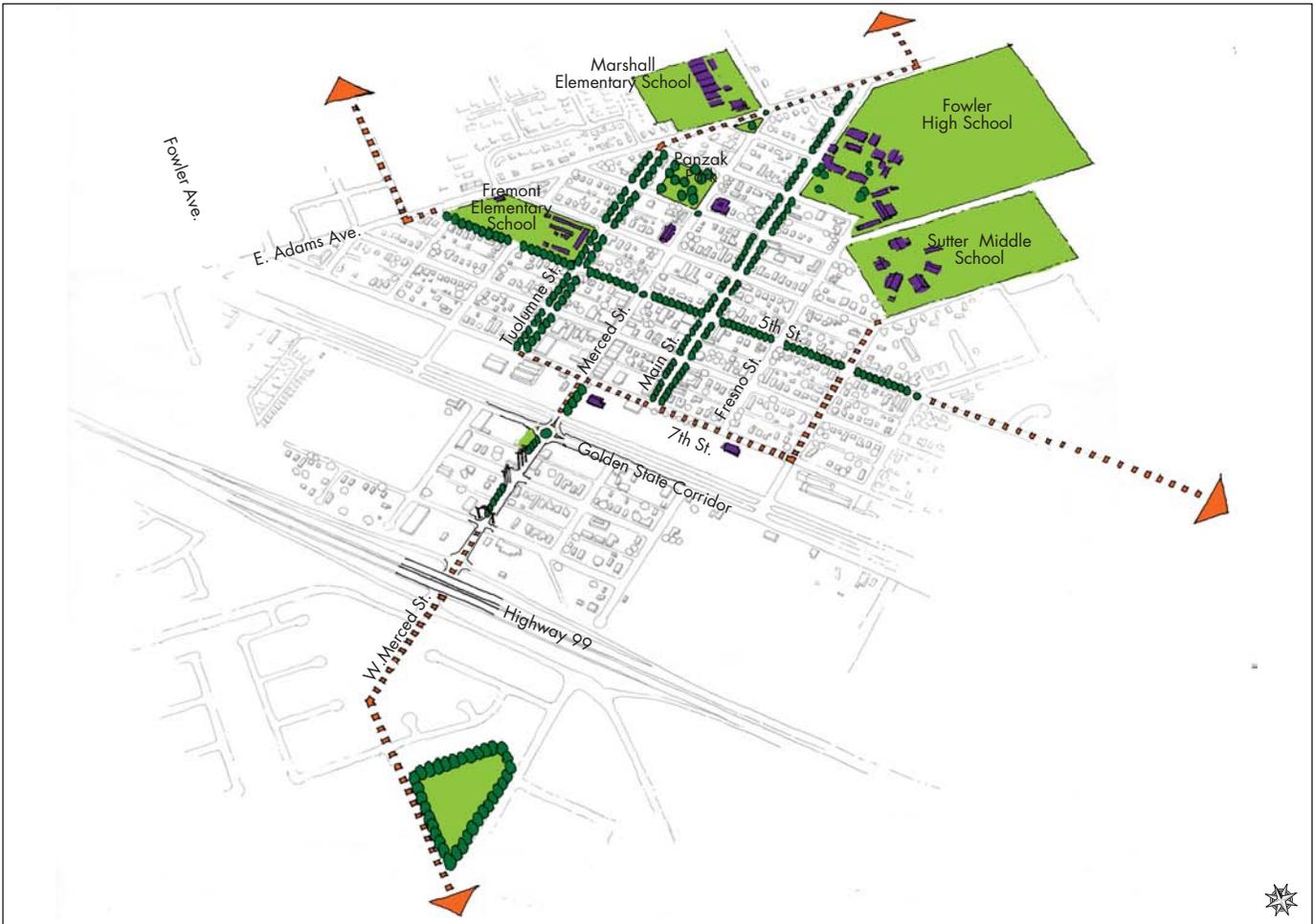
Adjacent Streets and Blocks

As this area redevelops, it will be important to preserve the existing network of streets and alleys to ensure that it will remain walkable and pedestrian oriented, particularly on blocks to the north and south of Merced where vacant and former industrial properties will be susceptible to new development that is freeway oriented. The City should work to maintain all existing streets and alleys, and to encourage sensitive infill in neighboring areas.



Above top to bottom: Two examples of recent urban mixed-use buildings in Paso Robles, California; This chain restaurant in Truckee, California is sited to face the street with parking located in the rear.

A Well-Connected Network

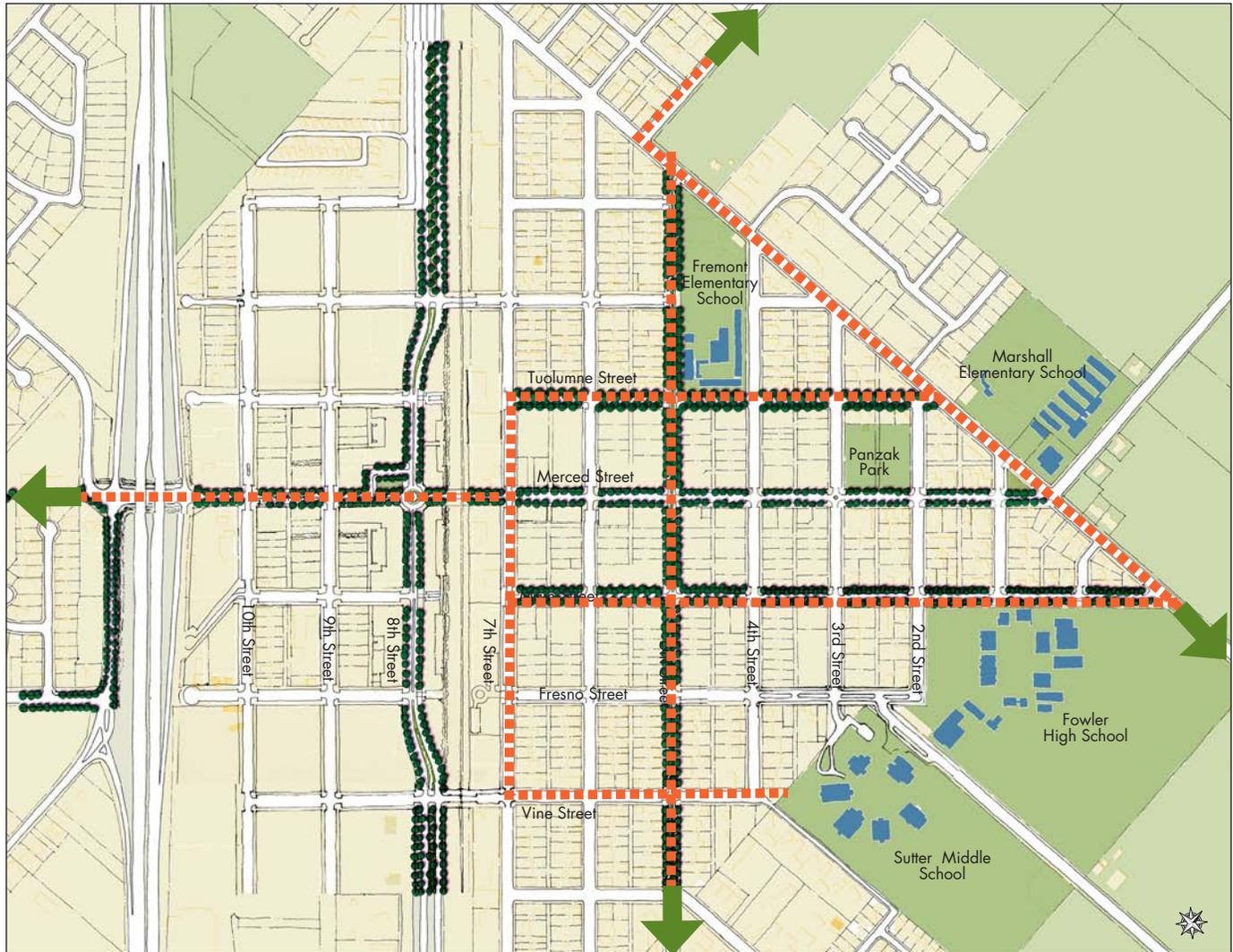


Design Principle 2: A Well-Connected Network for Pedestrians and Bicyclists

The analysis of the City’s physical form shows that there is a great opportunity to link several principal neighborhoods and City schools along one continuous network for pedestrians and bicyclists. This network can provide safe routes for children and families to and from home and school, can ensure that downtown Fowler continues to be accessible to all residents, and can provide an alternative means to auto-oriented travel across town that promotes health and exercise. It can also provide a high-quality network of shaded “green streets” that can provide comfortable outdoor environments during the hot summer months as well as an opportunity for increased storm water management and control. The plan details potential locations for this network as well as opportunities for urban design improvements to streets along the way.

Due to limited connections across Highway 99, the Golden State Boulevard and the railroad, Merced Street represents the best opportunity to provide a central link for pedestrian and bicycle movement from east to west across the City. The plan has already discussed street improvements to West Merced, including im-

Above: Bird’s-eye view of Fowler looking northeast across the town highlighting the potential network accommodating bicycle and pedestrian movement.



proved sidewalks and bike lanes. In order to maximize potential connections to western subdivisions, this network should be continued westward to South Fowler Avenue, where sidewalks should be completed to West Fresno Street. An opportunity also exists to construct a pedestrian and bicycle greenway along a narrow easement between the intersection of West Merced and Sumner Avenue and the intersection of Maple Avenue and Stanford Avenue to the south.

East of the tracks, however, bike lanes should be diverted to adjacent side streets in order to maximize a pedestrian shopping environment along East Merced and minimize potential conflicts between cars and bicycles. Class II bike lanes should be installed along Seventh Street, Fifth Street, Tuolumne Street, Main Street, and Vine Street, and Class III bike lanes should be installed along Adams Avenue. This network can connect all of central Fowler’s schools, major parks and open spaces, and other major institutions, such as the future library along Seventh Street. If these streets are improved with landscaping and, in some cases, wider sidewalks, they can also provide an internal exercise circuit for walkers and joggers.

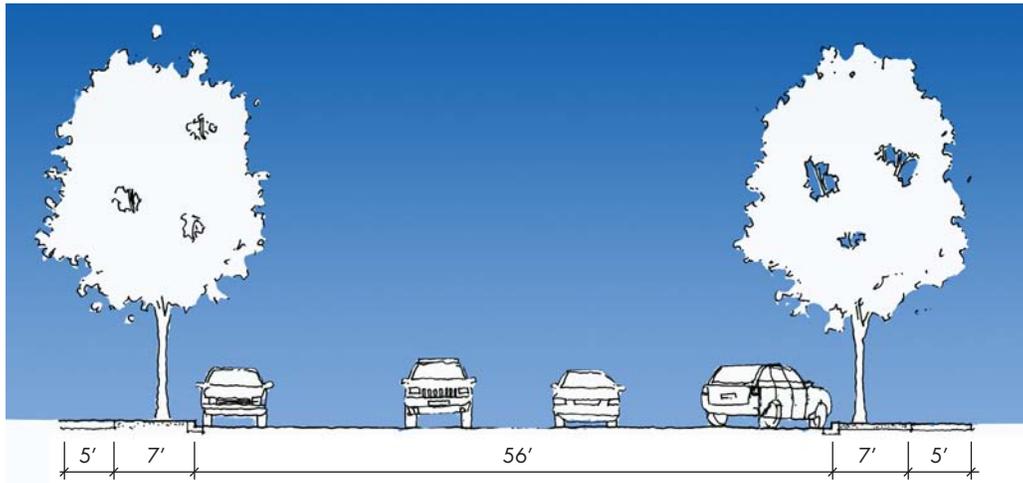
Key

Proposed Bicycle Circulation

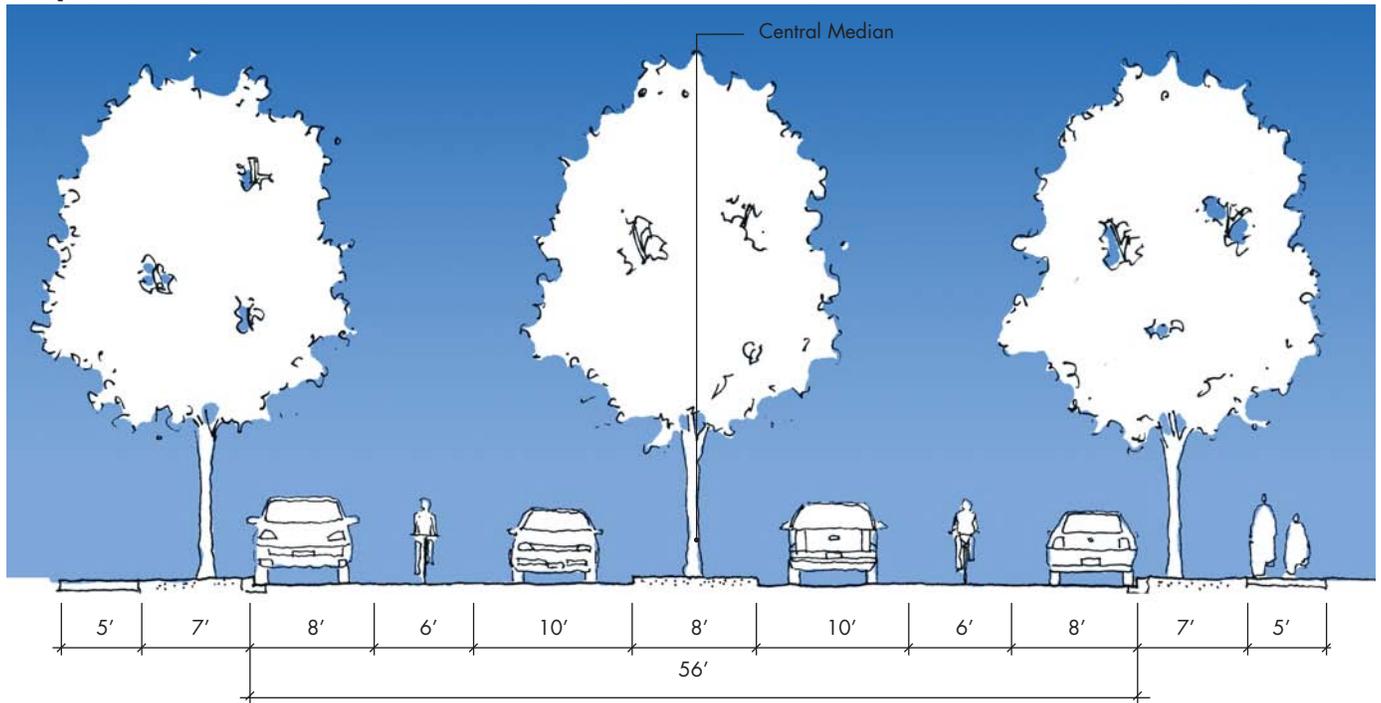
Above: Framework plan illustrating potential bicycle and pedestrian network in Fowler. An exercise circuit running from Seventh Street to Vine Street, Adams Avenue, and Tuolumne could provide a 2-mile loop for walkers and joggers that would pass near school athletic facilities, such as the Fowler High School running track.

Fifth Street

Existing



Proposed



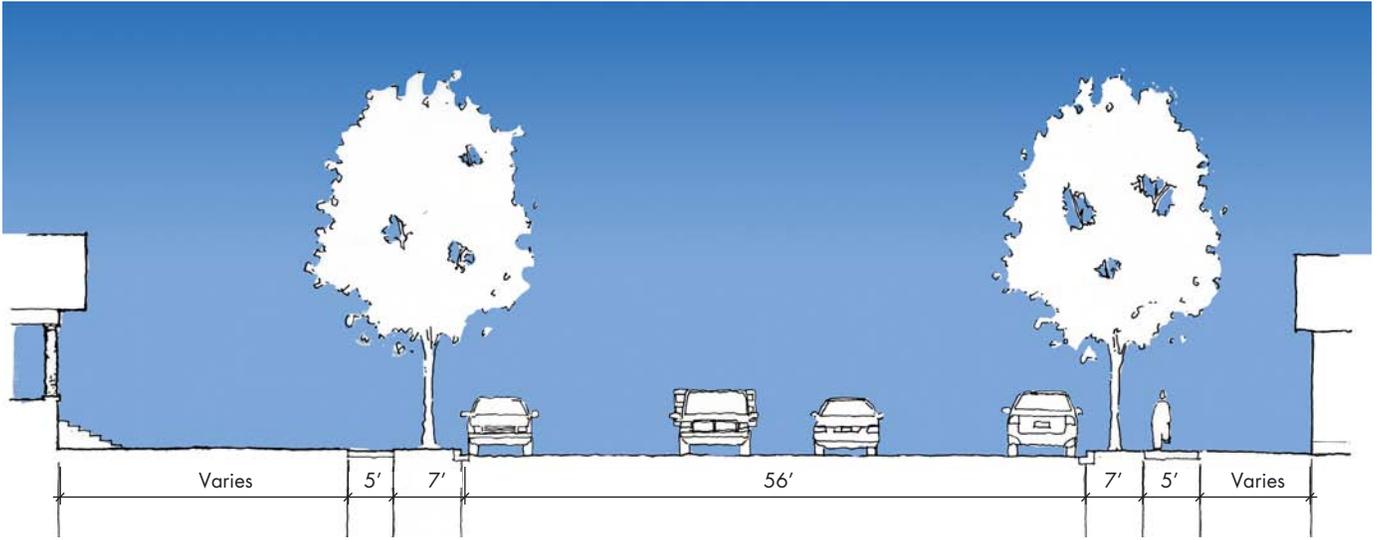
Fifth Street currently measures 56' curb-to-curb and carries very little traffic. This wide thoroughway provides a unique opportunity to reconsider Fifth Street as a walkable, bicycle-friendly “green street” with a central landscaped median, one lane of traffic and a bicycle lane in either direction, and parallel parking.

Because Fifth Street is the only street on the eastern side of Downtown Fowler that runs the length of its thoroughway (between East South Avenue and Adams Avenue) it is the preferred street for southern neighborhoods, northern neighborhoods, and schools accessing the downtown.

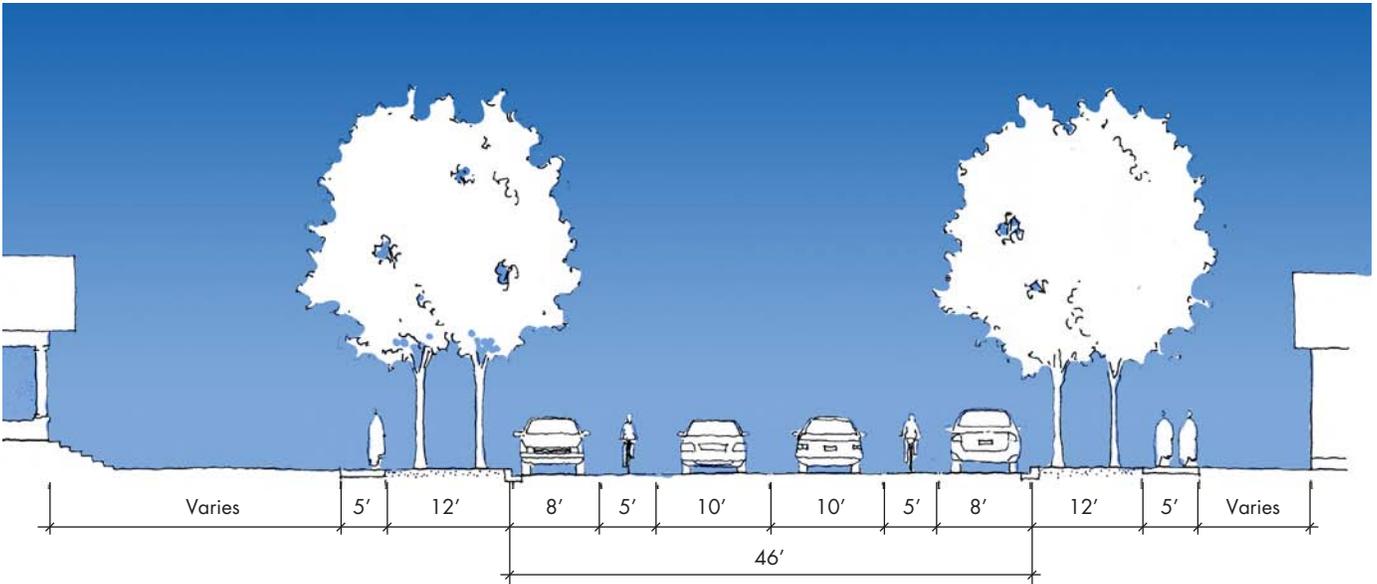


Main & Tuolumne Streets

Existing



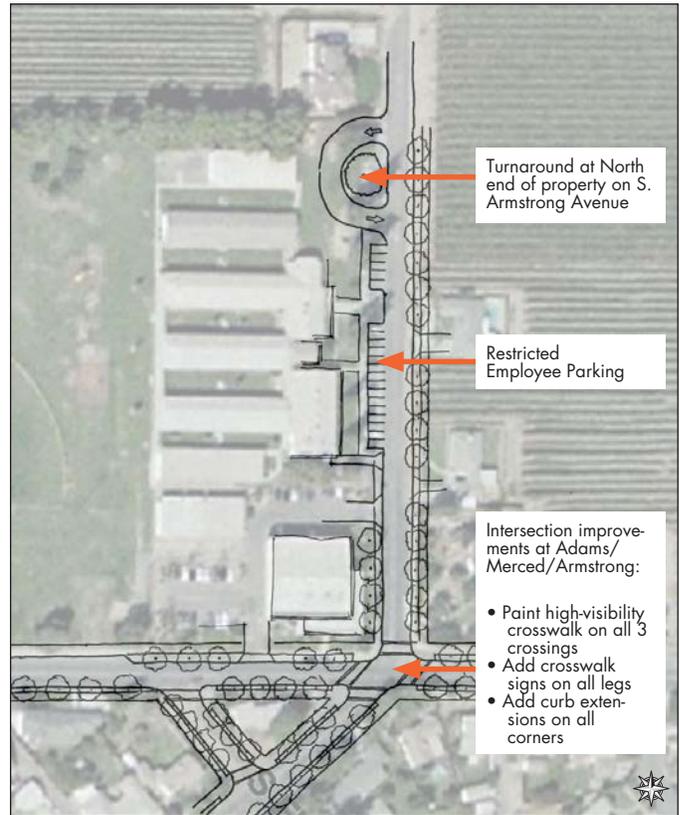
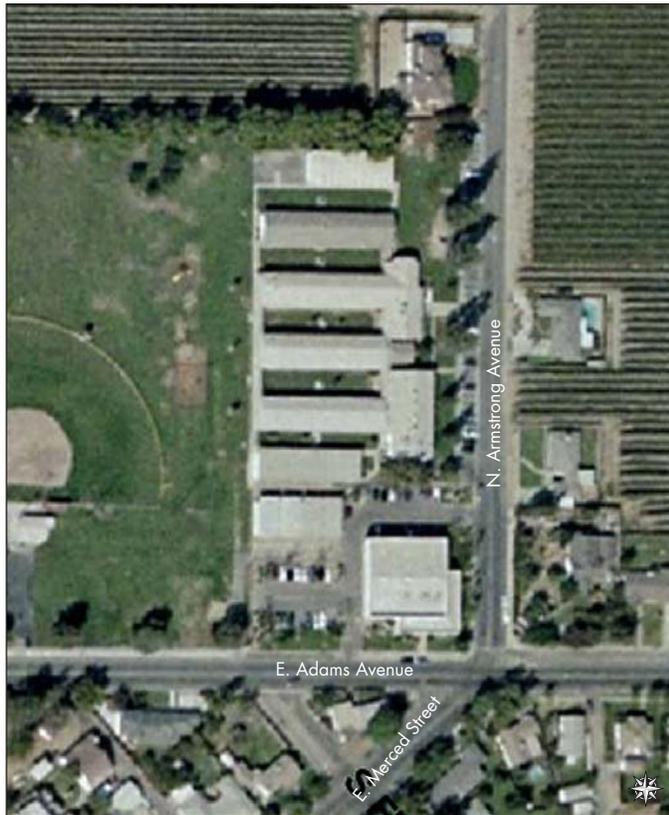
Proposed



Providing secondary east-west routes to Merced Street, Main and Tuolumne Streets have the greatest potential to create bicycle routes as they both lead to most of the schools within the City. It is recommended that the paved street area be narrowed from 56' to 46', adding bicycle lanes in each direction.

By decreasing the width of the street by 10', planting strips can be widened by 5' to allow ample width for large street trees, creating a lush and dense canopy for both roadway and sidewalks.





Safe Routes to School

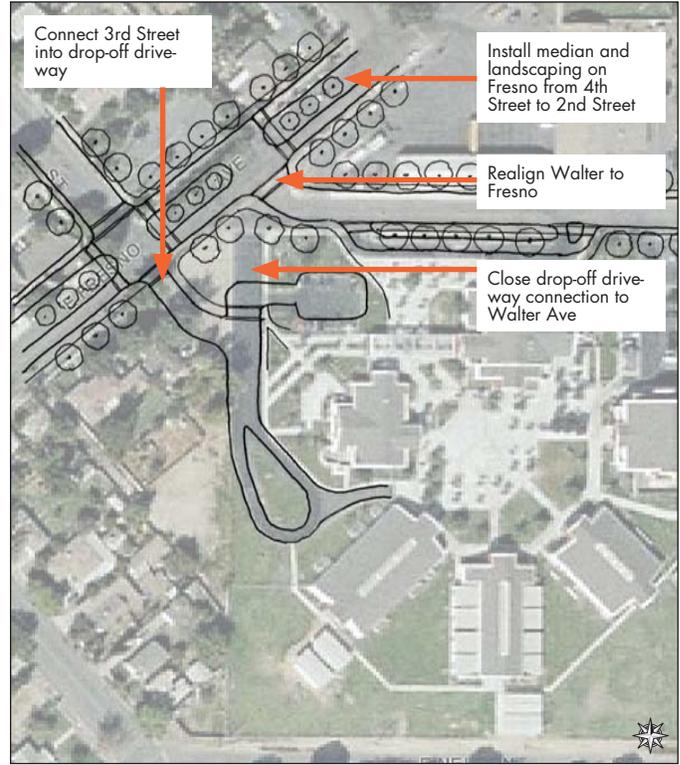
The design team also explored potential improvements to streets around Marshall Elementary School and John Sutter Middle School.

Marshall Elementary School

The proposed recommendations for Marshall Elementary include the improvement of crosswalks at the intersection of East Adams Avenue, East Merced Street and South Armstrong Avenue. Curb extensions, painted crosswalks, and installation of signs at each of the crosswalks would increase the safety of pedestrians as they make their way to and from school and downtown Fowler. A turnaround within school property along South Armstrong Avenue would facilitate the turning movements outside of the travel lanes, making it safer for both those dropping off as well as traffic along Armstrong Avenue.

To prevent motorists from pulling into the perpendicular parking spaces next to the school on North Armstrong Avenue, these spaces should be controlled during morning and afternoon peak hours.

Above left to right: Marshall Elementary School, existing conditions; Proposed changes to intersection at E. Adams and S. Armstrong Ave. and turnaround on S. Armstrong Ave. north of Marshall School.

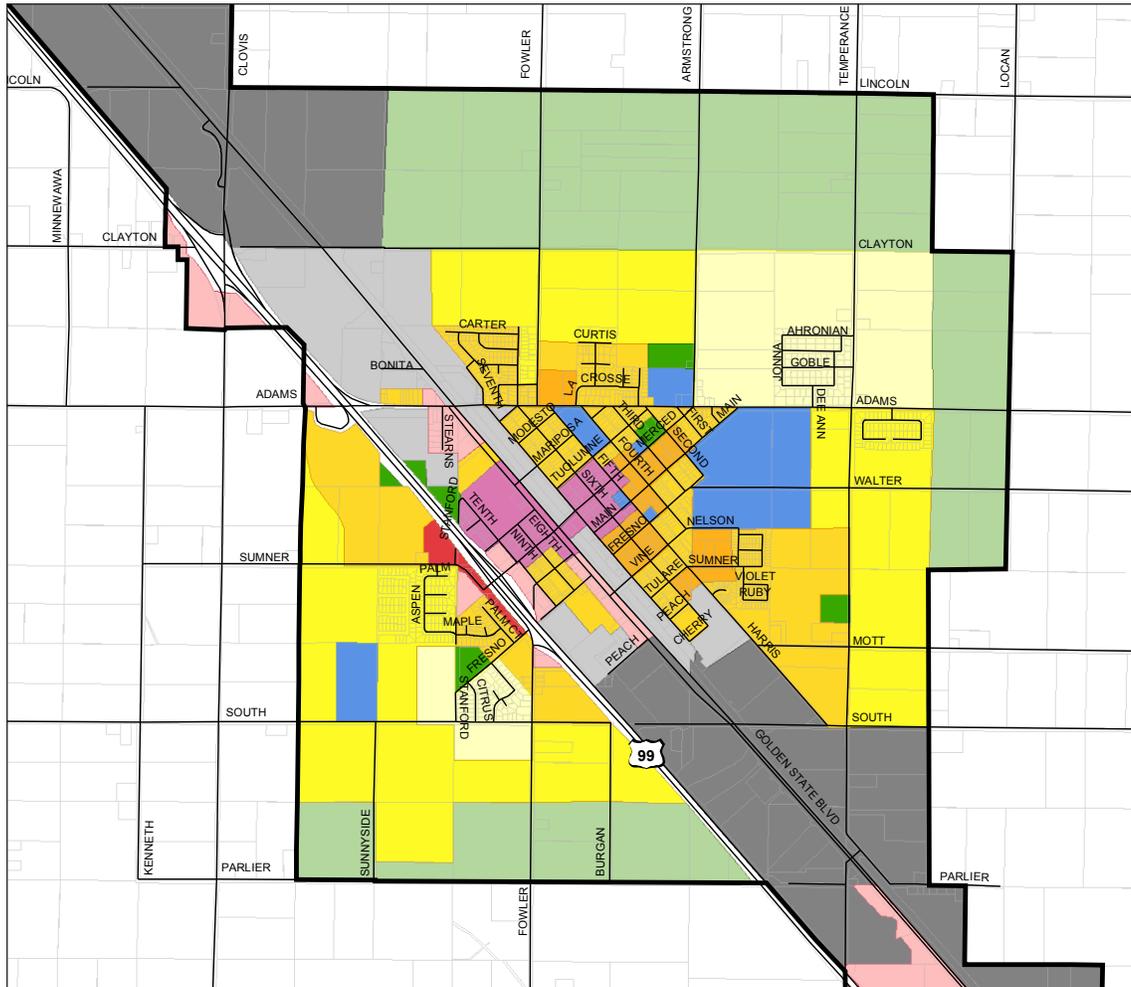


John Sutter Middle School

During the Saturday morning public workshop, several community members expressed their concern for safety at the intersection of East Fresno Street and Walter Avenue. After visiting Sutter Middle School during early morning drop-off rush hour, the design team gave thoughtful consideration to an improvement strategy.

The City should explore the potential realignment and narrowing of Walter Avenue and realignment of the Walter Avenue - Fresno Street intersection to a perpendicular angle in order to minimize crossing distances. Landscaped medians should be installed along East Fresno between 4th and 2nd Streets, and the entrance to the drop-off lane should be realigned from its current location along Walter Avenue to the southern terminus of 3rd Street.

Above Left to Right: Sutter Middle School, existing conditions; Plan and summary of proposed changes to intersections and street conditions pertaining to Sutter Middle School pickup and drop-off areas.



New Development Considerations

The 2004 City of Fowler General Plan sets policies to direct community growth through 2025. The General Plan anticipates a slow, managed rate of growth of 2-3% per year. Over the course of the plan, the City is expected to gain 2 to 3 thousand residents, many of whom will likely be accommodated in new residential neighborhoods at the periphery. Although this change will occur slowly, these new residents will have an impact on the size and scale of the community as a whole. In order to ensure that Fowler does not jeopardize its unique, small-town character, the City should work to encourage new development that works well and complements the historic core. Over time, this should help maintain the centrality and significance of downtown Fowler in the larger community.

Above: Map of central Fowler from the 1994 General Plan illustrating Land Use designations. Many areas that are currently agricultural or undeveloped lands at the periphery are expected to develop with low- and medium-density residential uses.



During the charrette the design team looked at general design concepts for land at the edge of the city that is currently farmland but anticipated for development by 2025. Recommendations included:

- Neighborhoods should be encouraged to set aside open spaces and greenways that can form portions of larger contiguous networks. These linear spaces can be used for effective storm water management, provide buffers against remaining agricultural lands at the edge of town, and provide expanded exercise loops for bicyclists, walkers, and joggers.
- Major bicycle and pedestrian connections should be maintained connecting downtown Fowler with its outlying neighborhoods. Even as the city grows, it will be difficult to live more than 1 mile – a 20-minute walk for most – from the downtown area. Well designed pedestrian paths and bicycle lanes should facilitate easy travel to and from the downtown.
- As the city grows, new development should be organized to create new neighborhood centers. Although it is unlikely that the City could support additional commercial areas beyond very modest, locally-serving nodes, new services and institutions, such as schools, should be organized to provide central gathering places for neighborhoods or groups of neighborhoods.

Many of these could be accomplished through an overhaul of the City’s subdivision ordinance.

Left: Map of Fowler illustrating existing street network overlaid with undeveloped areas (in yellow) that are expected to develop by 2025. Right: Illustrative vision plan for Fowler showing model development of new neighborhoods, with neighborhood centers (shown with 1/4 mile walking radii in red) and linear greenways. Such a greenbelt could create an exercise loop of 6-10 miles for walkers, bicyclists, and joggers.



At the time of the charrette many projects were already underway. New projects, such as the Starbucks/Quiznos building along West Merced Street, and recently approved projects, such as the La Quinta Inn at 10th and Tuolumne Streets, will bring new energy to the project area. The City has begun an overhaul of the City's outdated Zoning Ordinance in order to help promote many of the overriding concepts of the General Plan. And the Storefront Improvement Program will soon result in downtown façade improvements aimed at changing the character and quality of East Merced Street.

Specific Plans and Master Plans

As discussed in chapter 3, a downtown area Specific Plan or Master Plan could provide more detailed project descriptions, provide a framework of implementation methods, and identify funding mechanisms for public improvement projects throughout the project area. Such a plan could also provide detailed development standards that would guide the form and character of new development.

Form-Based Coding

Whether within a Specific Plan or as part of a standard Zoning Ordinance, Form Based Coding could be used to provide the community with a clear set of clear, predictable standards. During the charrette, Form-Based Coding (FBC) was discussed as a potential tool to guide new development and preserve historic character within the downtown area, and the design team looked at how a "FBC" might be applied to Fowler.

**Central Fowler Revitalization Plan
Opticos Design, Inc.**

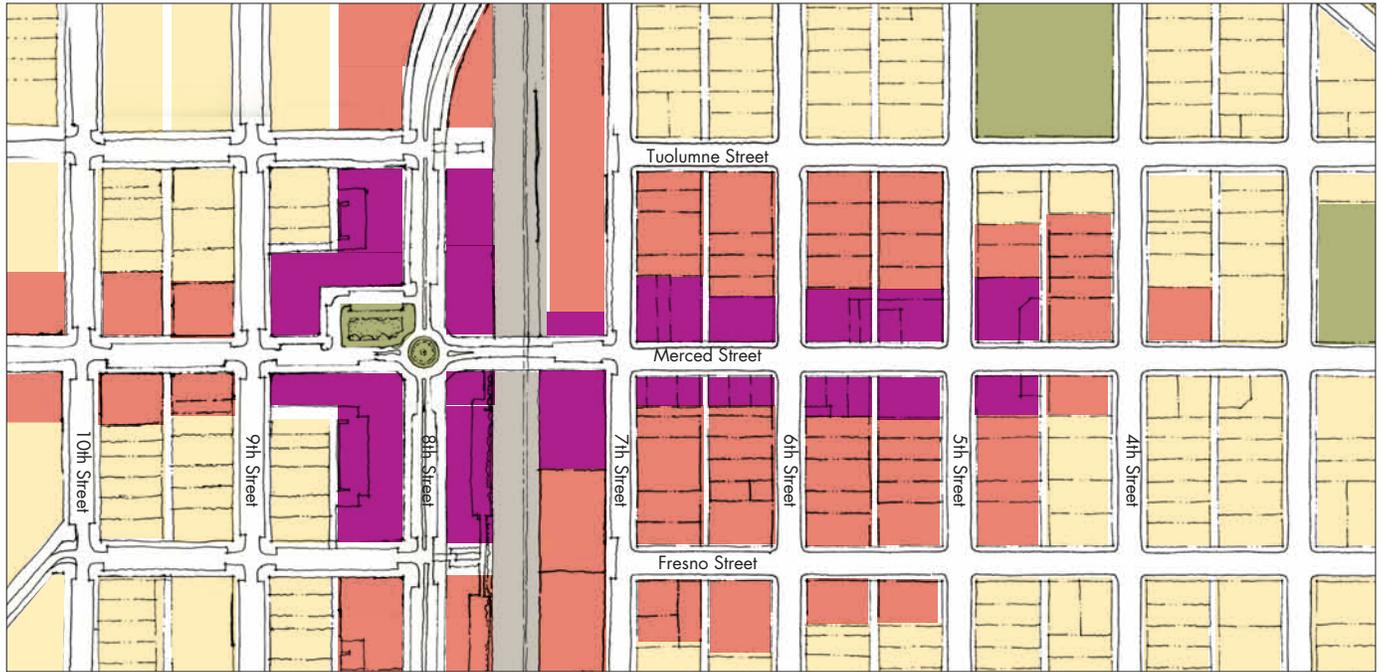


The non-profit Form-Based Codes Institute offers the following definition for Form-Based Codes:

Form-based codes address the relationship between building façades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development rather than only distinctions in land-use types. This is in contrast to conventional zoning’s focus on the segregation of land-use types, permissible property uses, and the control of development intensity through simple numerical parameters (e.g., FAR, dwellings per acre, height limits, setbacks, parking ratios).

Form-based codes are often based on the concept of the transect, which suggests that places can be organized in varying degrees of intensity, from least urban at the rural edge, to most urban at the center. In the case of Fowler, the transect is very apparent and visible in a very short distance moving from the edge of town to downtown. The transect could be used as a tool for determining what new development should be like in order to ensure that it is both appropriate for its location and compatible with the existing community.

Above: Transect diagram for Fowler produced during the charrette. From left to right, the transect starts at its least urban in the “T-2” zone, where vineyards and farmhouses dominate the landscape. “T-3” or “Neighborhood General” follows, which would comprise most of the Fowler community: single family homes and related structures. “T-4” or “General Urban” refers to buildings typically found around the edges of downtown Fowler. “T-5” or “Town Center” refers to Fowler at its most urban, largely around East Merced Street.



Regulating Plan

During the charrette the design team explored how a transect-based regulating plan for central Fowler might look.

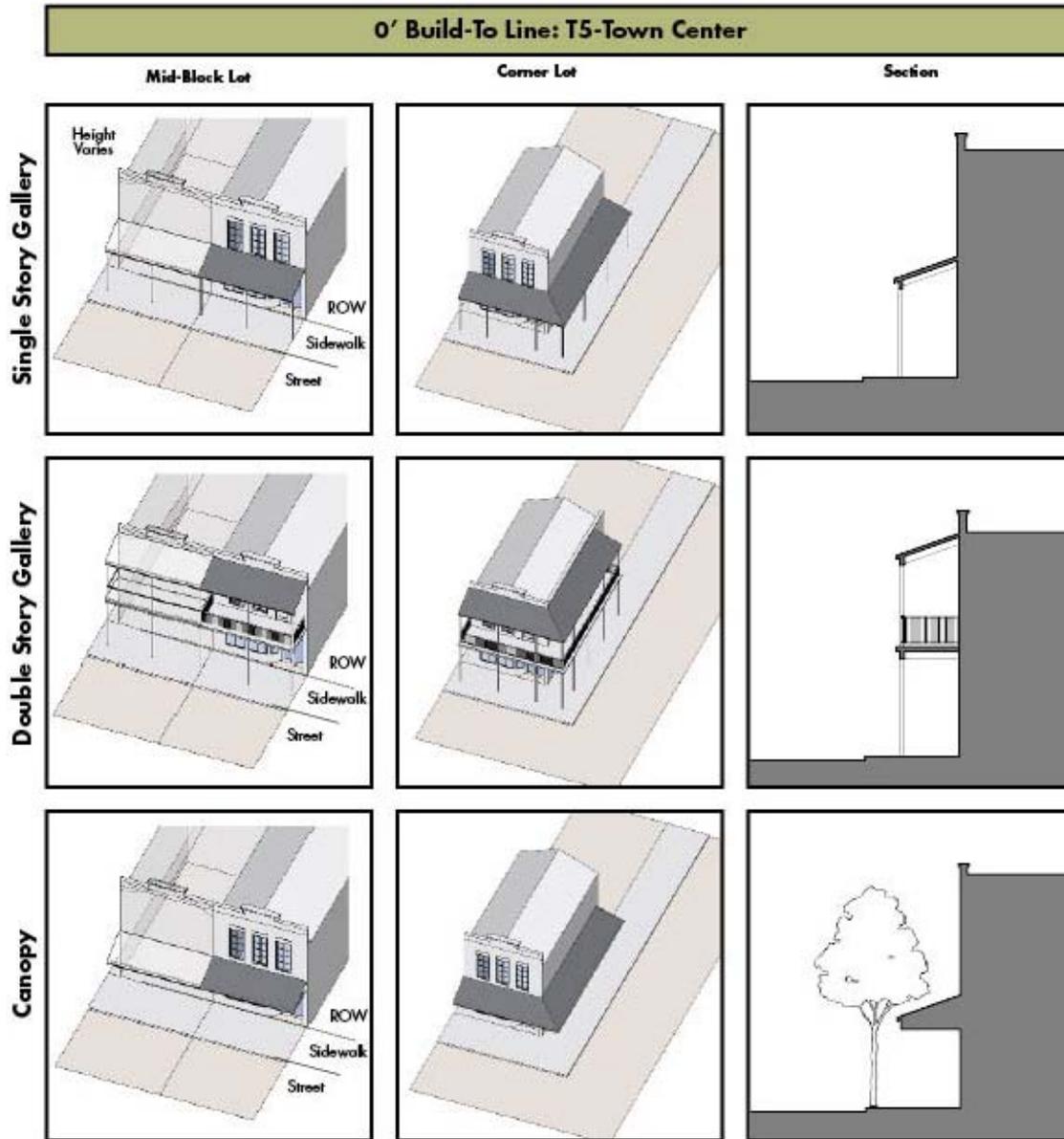
The above diagram illustrates how the Town Center, General Urban, and Neighborhood General zones could be applied to the areas immediately adjacent to Merced Street. The “T-5” or Town Center zone, for example, could be applied to specific areas only along Merced and in the location of the proposed development described in Chapter 3. The zone could have a distinct set of design standards regulating building form, streets, and open space to ensure that it may evolve as a cohesive district, where new development is compatible with historic buildings in the area.

Key

-  T-5: Town Center
-  T-4: General Urban
-  T-3: Neighborhood General
-  Open Space

Above: Conceptual regulating plan for central Fowler.

Fowler Frontage Types (How Buildings Address the Street)



Frontage

One concept that a form-based code could regulate is frontage, which would define the way new buildings address the street. In the case of the Town Center zone, a “build-to” line may be set that would require new buildings to be built up to the front property line. The code could make further suggestions as to what types of frontage encroachments would be possible, such as galleries built over the sidewalk.

Above: Frontage diagram appropriate for downtown Fowler illustrating frontage types that would be acceptable for new development in the “T-5” zone.

Draft: 01.12.05 Section X.X.X: Section Title

NC: Neighborhood Center Standards

Key
 --- Property Line
 --- Build-to-Line (BTL)
 ■ Building Area

Building Placement		Use	
Build-to Line (Distance from Property Line)			
Front	0'	Ground Floor	Service, Retail, or Recreation, Education & Public Assembly*
Side	0' min.; 10' max.	Upper Floor(s)	Residential or Service*
Street Side, Corner Lot	0'	*See Table x.x for specific uses	
Setback			
Rear		Height	
Adjacent to residential	15'	Building Minimum	16'
Adjacent to any other use	10'	Building Maximum	3 stories
Building Form			
Street Facade Built-to BTL	80% min.	Finish Ground Floor Level	12" max. above sidewalk
Street Side, Corner Lot Built-to	30% min.	First Floor Ceiling Height	12' min. clear
Lot Width	100' max.	Upper Floor(s) Ceiling Height	8' min. clear
Notes		Notes	
Street facade must be built to BTL within 30' of every corner. All floors must have a primary ground-floor entrance which faces the street.		Mansard roof forms are not allowed.	
Rear facing buildings, loading docks, overhead doors, and other service entries are prohibited on street facades.			
Any section along the BTL at a street edge that is not built on must be defined by a 4' to 4'6" fence or stucco or masonry wall.			

2-4 Grass Valley Development Code

Section X.X.X: Section Title Draft: 01.12.05

Key
 --- Property Line
 ■ Parking Area
 --- Build-to-Line (BTL)
 ■ Encroachment Area

Parking		Encroachments	
Location			
Distance from Property Line		Galleries	12' max.
Front Setback	20' min.	Upper-Story Balconies	8' max.
Side Setback	0'	Bay Windows	4' max.
Rear Setback	5' min.	Street Side, Corner Lot	
Required Spaces		Galleries	12' max.
Ground Floor	No off-street parking required	Upper-Story Balconies	8' max.
Uses < 3,000 sf		Bay Windows	4' max.
Uses > 3,000 sf	1 space/500 sf	Rear	
Upper Floor(s)		Upper-Story Balconies	5' max.
Residential uses	1 space/unit; .5 space/studio	Upper-Story Bay Windows	4' max.
Other uses	1 space/300 sf	Frontage Type: Galleries	
Notes		Depth	8' min. clear
Parking Drive Width	15' max.	Height	2 story max.
On corner lots, parking drive shall not be located on primary street.		Notes	
Shared drives are encouraged between adjacent lots to minimize curb cuts along the street.		Upper story galleries facing the street must not be used to meet circulation requirements.	
Parking may be provided off-site within 1,300' or as shared parking.		2' max. clear distance between gallery columns and curb.	
Bicycle parking must be provided in a secure environment.			
See page x.x for further parking specifications.			

2-5 Grass Valley Development Code

Sample Codes

Form-based codes typically include detailed standards regulating building placement, general use, building height, parking, allowable encroachments and frontage types, and allowable land uses. They also often include illustrative drawings intended to direct the character of expected development.

For additional information on form-based codes, please visit the Form-Based Codes Institute's web site at www.formbasedcodes.org.

Above: Typical code pages from a form-based code developed for Grass Valley, California.

Potential Projects Summary

<i>Catalyst Projects</i>	<i>Priority</i>	<i>Potential Funding Source*</i>
Design Principle: Maintain a Compact, Walkable, Accessible Town Center		
Downtown-Wide Improvements		
Creation of Downtown Specific Plan or Master Plan	Near-term	TBD
Completion of Zoning Update	Near-term	TBD
East Merced Street		
Storefront Improvement Program	Near-term	TBD
Improvements to East Merced Street between 7th Street and 5th Street, including back-in angled parking, new street trees, and landscaping	Mid-term	TBD
Mini Circle at East Merced and 5th Street, with new landscaping and curb extensions	Mid-term	TBD
Plaza redesign/redevelopment at southeast corner of East Merced Street and 5th Street	Mid-term	TBD
West Merced Street		
Improvements to West Merced Street between Highway 99 and Golden State Boulevard, including central median, gateway elements, sidewalk extensions, street trees, landscaping, and curb extensions	Near-term	TBD
Mixed-Use Town Center Development		
Road diet of Golden State Boulevard with re-routing onto 8th Street right-of-way	Long-term	TBD
Roundabout at West Merced Street and Golden State Boulevard	Long-term	TBD
New public plaza at the northwest corner of West Merced Street and Golden State Boulevard	Long-term	TBD
Design Principle: Provide a Well-Connected Network for Bicyclists and Pedestrians		
North-South Streets		
Improvements to 5th Street between Adams Avenue and South Avenue including central median, bicycle lanes, street trees, landscaping, and curb extensions	Mid-term	TBD
Improvements to 7th Street between Tuolumne Street and Vine Street including bicycle lanes, street trees, landscaping, and curb extensions	Mid-term	TBD
Improvements to Adams Avenue between 5th Street and East Merced Street, including bicycle lanes, street trees, landscaping, and curb extensions	Mid-term	TBD
East West Streets		
Sidewalk completion along Fowler Avenue between West Merced Street and West Fresno Street	Near-term	
Secure easement for bike/pedestrian connection to neighborhoods west of 99	Near-term	TBD
Improvements to Main Street between 7th Street and Adams Avenue including bicycle lanes, roadway reduction, street trees, landscaping, and curb extensions	Mid-term	TBD
Improvements to Tuolumne Street between 7th Street and Adams Avenue including bicycle lanes, roadway reduction, street trees, landscaping, and curb extensions	Mid-term	TBD
Improvements to Vine Street between 7th Street and Sutter Middle School including bicycle lanes, roadway reduction, street trees, landscaping, and curb extensions	Mid-term	TBD
Safe Routes to School		
Sidewalk completion around Fowler High School	Near-term	TBD
Sidewalk completion along Walter Avenue from Fowler Estates to Fowler High School	Near-term	TBD
Improvements to Marshall Elementary School dropoff area, including turnaround at north end of property, intersection improvements at Adams Avenue/East Merced Street/Armstrong Avenue including high visibility crosswalks and curb extensions	Near-term	TBD
Improvements to Sutter Middle School dropoff area, including dropoff lane realignment to 3rd Street, New median with street trees, landscaping, and curb extensions along Fresno Street between 4th Street and 2nd Street, and realignment of Walter Avenue to Fresno Street	Near-term	TBD
Citywide Networks		
Amendments to Subdivision Ordinance	Mid-term	TBD
2 mile downtown exercise loop	Mid-term	TBD
6-10 mile citywide exercise loop	Long-term	TBD
Near-term=start now (0 to 6 months) Mid-term=start soon (6 months to 2 years) Long-term=start later (2 to 5 years)		
*Listed source may only partially fund the cost of the identified project. Additional sources may be required. TBD=To be Determined		

chapter

5

CENTRAL FOWLER REVITALIZATION PLAN

Appendix

Charrette Flyer

Help Plan the Future of Downtown Fowler!

COMMUNITY WORKSHOPS

- ➔ Create the vision for a vibrant town center.
- ➔ Share your ideas with friends and neighbors for beautifying our city and promoting new business and job opportunities.
- ➔ A team of urban design experts will translate your vision into a plan to make Fowler a more inviting place to walk, shop, gather and do business.

For more info: Karen Mukai,
834-3113 x103 or
kmukai@ci.fowler.ca.us

Josh Meyer, (916) 448-1198 x310 or
jmeyer@lgc.org

Organized by the Local Government
Commission and the City of Fowler with
a Caltrans Environmental Justice
Planning Grant.

Please Join Us!

Thursday, April 12

OPENING TOWN MEETING &
PIZZA PARTY

➤ 6:00 - 8:00 p.m.

Saturday, April 14

WALKING TOUR &
COMMUNITY DESIGN FAIR

➤ 9:00 - 2:00 p.m.

Wednesday, April 18

CLOSING TOWN MEETING &
PRESENTATION OF PLAN

➤ 6:00 - 8:00 p.m.

All events will take place at
Fowler High School Cafeteria
• 701 East Main Street

Food & refreshments provided!



**Local
Government
Commission**

¡Ayúdenos a planear el futuro del centro de Fowler!

TALLERES DE LA COMUNIDAD

- Para crear un centro animado y dinámico.
- Para compartir ideas con nuestros vecinos para mejorar la ciudad y apoyar la creación de nuevos negocios en la ciudad.
- Para trabajar con expertos en planeación y diseño en crear un plan para hacer que Fowler sea una ciudad mas placentera para caminar, ir de compras, crear nuevos negocios y reunirse con sus amigos.

Para más información comuníquese con
Karen Mukai, Ciudad de Fowler, 834-3113 x103 o kmukai@ci.fowler.ca.us

Josh Meyer, 916-448-1198 x310,
jmeyer@lgc.org.

Organizado por la Local Government Commission y la Ciudad de Fowler con subvención del Departamento de Transporte de California (Caltrans)

¡Participe y ayúdenos!

jueves, 12 de abril

PRIMERA REUNIÓN DE LA COMUNIDAD CON PIZZA
➤ 6 a 8 de la noche

sábado, 14 de abril

CAMINATA DE INVESTIGACIÓN Y FERIA DE DISEÑO
➤ 9 de la mañana a 2 de la tarde

miércoles, 18 de abril

REUNIÓN DE CLAUSURA Y PRESENTACIÓN DEL PLAN
➤ 6 a 8 de la noche

Todos los eventos se celebrarán en la Cafetería de la Preparatoria de Fowler

• 701 East Main Street

Comida y refrescos en todos los eventos.



Focus Meeting Notes

Community Service Focus Meeting

April 12, 2007

11:00 AM - 12:00 Noon

Fowler City Council Chamber

In attendance:

Jane Bedrosian – Chamber of Commerce/Kiwanis Club
Karrie Schneider – Fowler Mothers Club
Rosemarie Arraral – County Department of Community Health
Sandie Monis – City Recreation Planner
Karen Mukai – City of Fowler
Randy Deaver – City of Fowler

Paul Zykofsky – Local Government Commission
Josh Meyer – Local Government Commission
Nancy Mathison – Local Government Commission

Notes:

A few years ago created a Design Plan from Cal Poly with Main Street money from the State.

Major issues/opportunities/problems

- Major work needed for buildings
- Absentee landlords
- Parking
- Longs Drug helped
- Need landlords to want to invest in the town
- Diagonal parking is bad
- Limited parking
- Revisit amount of handicap parking (in silly places – in front of flower shop but not the doctors office)
- Loose business because of lack of parking
- Make plan so that it encourages physical activity
- Need for enforcement of codes for landlords to maintain
- Need to educate on codes for new owners or renters
- No better sidewalks on Merced street for all the kids to walk to school
- New Library is going to be built on Seventh Street and Vine in July; open next June
- New hotel/restaurants going in next to Highway 99
- Everything is growing on the Southwest side of Golden State Blvd. There needs to be more focus on filling in the downtown area

- One bus – Door to Door transit (school kids priority – only 18 a day); second bus added on July 1st.
- Parking at the Elementary school is horrible (Armstrong and Adams) – small two lane road; U-shaped drop off could help
- Freemont (3-5th grade) has diagonal parking; picking kids up works a little better
- High school is the best for parking (on Main Street)
- Need to visualize the types of businesses to bring in so that people can be serviced in one area
- Need rezoning of stores to get more uses for kids in the downtown
- There are three grocery stores downtown (two are very poorly maintained); these cause a lot of litter; the two downtown stores are really convenience stores
- Additional element of the general plan is the Public Health Element – funders such as Kaiser could help; get a whole foods in the downtown area
- Could tie in with the Regional Blueprint process

What is good about the downtown?

- Community involvement is there
- Park is a focal point; needs to be upgraded for diversified use; larger stage area; eating area is limited; used a lot; very accessible; better lighting needed

Is there a draw to downtown?

Should move sign to 99 to aim people downtown

What types of businesses?

- A study done years ago to determine which ones might be interested
- Need to survey the community needs
- Day-to-day services needed
- Buxston supply store is going in
- Just updated the zoning ordinance
- Downtown buildings are too expensive for people to rent or buy

Challenge working with absentee landlords

Adopted storefront improvement program to stimulate revitalization

- Three buildings are now undergoing interior and exterior improvements
- No agreed upon theme for the downtown
- Have design guidelines, but not a theme

- Need uniqueness, but right now just need to be presentable; well-kept
- Need patio seating
- La Quinta has a “no fast food restaurants” ordinance
- Don’t have any restaurants on Merced
- Have Favoritos on Fifth

Storefront façade improvement program: \$25,000 per store front or \$50,000 for the entire building. Tenant can apply with landlord’s approval.

Roundabouts?

River park roundabout is horrendous; it’s dangerous.

“I hate them”

Lincoln and Fowler throughway has very fast cars; needs traffic calming; is a Caltrans area.

Need transition areas to announce that you are coming into town:

- Seventh and Merced
- Adams and Temperance

Bicycle paths?

None

Trail possibilities or existing trails?

- All development is boxed in
- There is low connectivity; not any trails
- Sidewalk obstructions (such as displays are good, but “junk” on the sidewalk is bad); how can we regulate this?

Farmer’s Market downtown – use to have one; use to have a downtown association; the partnerships aren’t there anymore.

People head out to Selma for restaurants.

Need to connect the downtown to the other side of Golden State.

Fowler is becoming a bedroom community for Fresno.

Where to put a lighted announcement sign for advertising events, etc.?

No flowers or planters at all along the downtown main street.

Verizon building takes up _ of the downtown on 6th and Main (right in the middle of downtown).

Emergency Responders Focus Group

April 12, 2007

1:00 PM – 2:00 PM

Fowler City Council Chamber

In attendance:

Darrell Jamgochian, Police Chief

Mark Padilla, County Sheriff

Josh Meyer, Local Government Commission

Nancy Mathison, Local Government Commission

Paul Zykofsky, Local Government Commission

Notes:

Downtown area:

On the way in and out of the community there are congestion, traffic problems (Merced St. and 99).

Another option is to take Clovis Ave. which has two lanes in each direction.

When does congestion take place?

All day long. Use to just be during peak hours

New commercial development. Starbucks is there.

Speeding issues?

Largest problem is residential areas.

Long roadways.

Speeding is perceived as a larger problem than it really is. The police have done speed checks in the downtown and most speeds are under 25mph.

Manning and 99 is another place where traffic backs up.

Any truck traffic?

Seventh Street has some. Otherwise, mostly cars.

Traffic around the schools?

Drop off is a real problem – Marshall and Sutter schools are the biggest problems.

Crime?

Crime rate is pretty low. People feel safe walking, even in lower income areas.

Fire station is on the east side of the railroad – train traffic can slow fire trucks to the west side.

The State has been looking at high-speed rail going through.

Bike path from Kingsburg to Fowler has been proposed.

Ambulance service is dispatched from Selma.

Safety corridor – Manning, 41 to Orange Grove; has done a great job doing traffic enforcement - Sergeant Baker of CHP has details.

Manning and 99 has a truck stop. Buford oil (gas station) provides the free parking, charge to take a shower, sell food, sell diesel.

Merced Street from 99 to Golden State needs turn pockets and two lanes.

Positive is that there is very good access to on-ramps for 99.

Incorporating mixed use into zoning right now in the downtown.

There is a Bar on Eighth and another one on Sixth and Main.

No problem with lighting around the downtown.

Very limited on downtown parking.

Schools Focus Meeting

April 13, 2007

9:00 AM -10:00 AM

Fowler City Council Chamber

In attendance:

Karen Mukai, City of Fowler

John Cruz, Superintendent of Schools

Eric Cederquist, Assistant Superintendent

Randy Deaver, City of Fowler

Josh Meyer, Local Government Commission

Paul Zykofsky, Local Government Commission

Billy Hattaway, Glatting Jackson Kercher Anglin

Stefan Pellegrini, Opticos Design

Nancy Mathison, Local Government Commission

Notes:

School traffic congestion areas:

- Traffic congestion around Marshall school.
- Looking at staggering start times for the schools in order to cut down on congestion.
- Traffic congestion at school on Walter Avenue just east of the school: this entire area needs to be looked at because there are not many sidewalks.
- Need to get the County to disallow trucks to park along Walter.

Better connectivity needed:

- Need connectivity of sidewalks from new development to the schools. Freemont Elementary is biggest concern.
- Main needs beautification. Connectivity needed along Vine.

School drop off/pick up sites:

There are drop off areas on Adams. Congestion here should improve with the development happening along Clayton.

Parking:

- Overflow is on street on Armstrong. Parking is at the district office on Armstrong.
- Have looked at purchasing additional acres just for parking (directly North of Armstrong – North of the new home there).
- Only high school seniors can drive to school. Must have a 2.0 GPA.

Buses:

- 60% of students are bused in the district.
- Rosie Herrera can tell us what routes the buses take: Transportation Director
559.647.9206

Food:

- Alternative, healthy choices for food in downtown needed for the high school students.
- Have a grant from Fresno County for Farm to Schools.

Roundabouts:

Have looked at having Roundabout on Adams and Armstrong. Buses unload and load along Adams.

Typical routes:

The only way the kids get in and out of town are across the railroad tracks. Buses provided for the kids that live on the other side of the railroad tracks.

Beautification:

Number of vacant buildings downtown. What do we do to get businesses in these buildings and upgrade them?

New Elementary School:

New school and park site will go in on the West side of 99.

Needed improvements:

- Adams Avenue.
- Improve parks and recreation downtown.
- Lighting at some of the major intersections needed for night; Adams and Merced; East out of town.

Business Focus Meeting

April 13, 2007

10:30 – 11:30 AM

City Council Chamber

In attendance:

Brian Costales, Video Warehouse

Bonny Costales, Video Warehouse

Gerald Croft, Borga, Inc.

Terry Sterling, County Library

Mary Anne Ward, U.S. Postal Service

Karen Mukai, City of Fowler

Randy Deaver, City of Fowler

Josh Meyer, Local Government Commission

Stefan Pellegrini, Opticos Design

Paul Zykofsky, Local Government Commission

Nancy Mathison, Local Government Commission

Notes:

The new library will be located at Seventh and Fresno

Parking:

Big problem is that there is no parking at all (very little along Merced)

Maintenance of buildings:

Owners won't upgrade or maintain; e.g., old radio building

Improvement Ideas:

- Wireless internet for the City
- The new Library will hopefully have wireless internet

Users:

Many families commute from Fowler for work

Town Entrance:

Vacant lots at entrance of town make a bad impression

Eighth and Merced street is a chaotic intersection. Everyone is trying to get on the freeway there to get out of town. Some go down Main and over to 9th. People make right hand turns that you can't observe.

Some people wanted to block off Eighth street, but this was heavily fought.

There are frequent detours through Fowler when there are car wrecks on 99.

Fowler is a “hidden secret”: everybody knows each other, very safe, low crime.

Buildings are not earthquake safe. May require demolition. Need to be completely re-wired. Basically need to gut the building and keep the façade – is very expensive.

Town growth rate: 60-80 homes a year; 3% annual growth increase.

There are some possibilities for infill development.

Location of the packing company by the railroad tracks (right behind Elaine’s Café) is very bad; a better use could be there.

Could rehabilitate, or replace old railroad station off of Adams; three story buildings.

There are a good about of people walking in the downtown.

There is low unemployment; very diverse work force (age and race).

Not a lot of eating opportunities. No Japanese, Indian, or Armenian restaurants; people would travel from Fresno to go to these types of restaurants, and it would reflect the diversity of Fowler’s population.

Majority of downtown business is Friday, Saturday, and Sunday.

Sidewalks are not clear, blocked by clutter.

Could use empty lots for parking (behind Ace) and put in simple shade coverings.

The Library will be putting in a joint parking lot with the City.

Could put in bike paths down on Fresno St. between the schools.

Need to remove the pine trees by the post office, because of tree debris (especially because of the wind). Need better trees.

There is an issue between planting Palms vs. shade trees; have applied for tree grants.

Murals in parking areas can beautify – like in other Valley towns.

Transportation/Public Works/Planning Focus Meeting

April 13, 2007

1:00 PM - 2:30 PM

Fowler City Council Chamber

In attendance:

Sandie Monis, City Recreation Planner
Jeff Webster, County Rural Transit Agency
Todd Sobrado, Fresno COG
Ken Okereke, Caltrans
Bruce O'Neal, Planning Consultant
Ken Hutchings, Giersch and Associates
Randy Deaver, City of Fowler
Bernard Jimenez, Fresno County

Josh Meyer, Local Government Commission
Paul Zykofsky, Local Government Commission
Stefan Pellegrini, Opticos Design
Billy Hattaway, Glatting Jackson Kercher Anglin
Nancy Mathison, Local Government Commission

Notes:

Town Entrance:

- Large Christmas tree at Sixth and Merced.
- Madding and Golden State: Madding is first intersection that you come to from the South and parallels 99. Need to study accommodating left turn there.

Useful plans/reports/data

- Golden State Corridor Report and follow up specific plan.
- COG – public transportation infrastructure study: people want light rail transit. What do we have to do in order to support this? Can get study off of the COG web site.
- Traffic Counts done back in Dec. '04 – is available through Ken.

Rezone:

Rezoning overhaul looking at the possibility of downtown form-based code.

Organizations:

- Association for the Beautification of Hwy 99.
- Land buffer task force: looks at land use issues with regard to well-defined boundaries between cities. The unique characteristics of each city are retained.

Railroad:

Railroad crosses at Adams, Merced, Vine, South, Temperance, Madding Ave.

Bike trails:

The bike trail along the railroad was considered but the railroad was not willing to give up that land.

Light rail to Kingsburg: PTIS study showed needed higher density (30 units/acre – 3-5 story apartment complexes) to make it light rail viable.

Condos are being built on west side of 99; 15 units/acre.

Need greater acceptance of density in Fowler.

No turning pockets at South Ave. and Golden State.

Temperance: one the southbound roadway the median becomes reduced.

How will Adams be able to handle the increase in development?

Would need to redesign some of the planters and sidewalk furniture if you put in backing angled parking in the downtown area.

Manning Ave. – linkage to 99: is going to be at capacity very soon.

_ cent sales tax passed – measure C – can help fund transportation improvements.

Design of the old residential streets in Fowler are 56 ft. wide – very wide.

Selma and Kingsburg:

Working with them along the corridor to better define transitioning from Selma to Kingsburg; using treatments; can contact Ken for more information.

On-ramp on West side of 99 has no sidewalk. The City and Caltrans need to reach agreement to connect the sidewalks there.

Requiring bike lanes along Fowler Ave. down to the school.

Never going to get enough bike lanes if relying on new development to build new ones.

Looking at getting funding for bicycle lanes along Adams Ave, East of the high school.

On Merced Street, on South side of 99 there is an easement on some property there. Could have pedestrian or bicycle easement down towards where the school is being built. Could lose this opportunity if don't act soon.

Merced is the only connection from west to east.

There is a proposed subdivision and planned park south of the 99.

Specific plan for the 3 cities and County be considered for the Golden State Corridor.

One voice: 33 representatives went to Washington D.C. to seek funding. Information available on COG web site.

Fairly stagnant community for many years. Recent street improvements.

West side development has been very dramatic.

How much retail development can you handle with out being susceptible to leap-frog development across the train tracks?

Fowler is at a place now where they can regulate what is coming in more.

Lacking something attracting people to downtown. Something needed – signage, etc; then something to keep them there – more esthetic.

99 corridor will have more traffic in the future.

Golden State can be used as a business loop.

Lack of clearly identified towns along the 99 distinguishing them from Fresno.

Ripon has a welcome sign.

The trucks use the Merced and Golden State intersection.

Eighth Street issue: there has been talk of closing that frontage road.

People walk in the streets because the sidewalks are too small and not maintained (broken).

Local Elected Officials Focus Meeting

April 13, 2007

3:00 PM - 4:00 PM

Fowler City Council Chamber

In attendance:

Rica Aguayo, Council Member

Astine Zadourian, Council Member

David Elias, City Manager

Gary Mukai, Planning Commission

Josh Meyer, Local Government Commission

Nancy Mathison, Local Government Commission

Paul Zykofsky, Local Government Commission

Notes:

Downtown area could have mixed use. Great option for senior living.

Creation of agricultural islands area a problem. Now being surrounded by development.

Downtown could have a theme to make it look nicer:

- Look at the old radio station, post office, or other old buildings for a possible theme
- Irvine spectrum (downtown mall); very attractive; something like that is possible here
- Looking at a few city blocks in Fowler
- Trees; replace crepe myrtles
- Need to try to capture the town's identity in the buildings
- Zoning allows for 7 stories in the downtown area
- Buildings need a "face lift"

A Community Vision for the Golden State Corridor as been created.

More partnerships are needed:

- City and county to get more parks
- City and private partnerships (façade improvements)

Merced and Adams corner needs attention.

Downtown Fowler is getting more inquires for professional office uses.

Need to connect the downtown to Highway 99.

Merced Street is the connection from the East to the West.

Biggest challenge is to maintain a small community, while providing all the services needed in town.

Adams and Merced intersection is an eye sore. A monument sign or school marquee would be good here.

Clovis old downtown area is nice as an example. Has small boutiques.

Fowler is a small, but very multicultural community.

Big fan of murals, as in Exeter.

Cobble stone walk ways in the alley ways (Fifth Street and Seventh Street) would help.

People living on the West side of 99 are using Sumner Ave. heavily.

Fowler is the only city in the county to designate farmland as farmland. Need to keep farmland this way, don't grow all the way to the boundary line. Don't fully grow into your sphere of influence.

Growth management ordinance – allows the city to grow at its rate, not at the developer's rate.

Extend the streetscape features all the way through to the other side of town to the West of 99. Help draw in the West side of town and help connect the two.

Roundabouts?

- 10th street and Merced, combining the residential and retail.
- Develop them between 10th street and 99.

Library will include a public parking lot.

Can continue stamped concrete North of Adams Avenue with medians; could put in a trail N. of Adams to Temperance Ave. to beautify the Golden State Corridor.

Big problem with changing the Golden State Corridor is moving the utilities.

Public Events Attendees

Kam	Boparai	Jim	Martin
Rico	Aguayo	Henrietta	Martin
Mary	Aleromian	Ernest	Matal
Joe	Alvarez	Linda	Matal
Raul	Alvarez	Craig	Mellon
Frances	Alug	Sandie	Monis
Jane	Bedrosian	Gary	Mukai
Pete	Biscay	Joel	Murillo
Peggy	Blayneg	Pearl	Murphy
Pawan	Boparai	Mike	Murphy
Clara	Bousion	Laura	Nielsen
Sandra	Browning	Bruce	O'Neal
Jeff	Budwig	Alma	Padella
Jayleen	Budwig	Sam	Raunon
Elena	Catello	Jane	Raunon
Jack	Chappell	Dee	Ribarich
Bonnie	Costales	Richard	Ribarich
Brian	Costales	David	Rodriguez
Janet	Daniels	Vernica	Salmeron
Randy	Deaver	Pete	Serrato
Gus	Del Jone	Ernest	Serrato
Ted	Dick	Dyann	Serrato
Arpie	Dick	Shelley	Serrato
David	Elias	Yolanda	Serrato
Marta	Frausto	Mac	Sharo
Olga	Garnica	Stephanie	Sherrell
Andy	Gonzoles	Mark	Sherrell
Staci	Gundry	Naomi	Sosa
Tim	Hamblet	Melissa	Squeo-Rodrigu
Denise	Hamblet	David	Squeo-Rodrigu
Britta	Hammer	Terry	Sterling
Barbara	Harding	Terry	Sterling
Shelley	Henshaw	Tammy	Stone
Elaine	Hergenrach	Jim	Tikijian
Bergann	Hernandez	Linda	Turpin
Earl	Honda	Rita	Watkins
Paul	Irwin	Dave	Weisser
Jeff	Jackson	David	Weisser
Bernard	Jimenez		
Talene	Kasparian-Clev		
Paul	Khasigian		
Connie	Khasigian		
Larry	Kirkes		
Doug	Kirkorian		
Oswaldo	Loya		
Pastor Marty	Lynch		
Julie	Maldenado		



Tree Guidelines for San Joaquin Valley Communities

by

E. Gregory McPherson

James R. Simpson

Paula J. Peper

Qingfu Xiao

Western Center for Urban Forest Research and Education

USDA Forest Service, Pacific Southwest Research Station

March

1999

5 Trees for San Joaquin Valley Communities

Tree selection is a compromise. There is no perfect tree that matches all the criteria required by specific sites: beautiful flowers and form, deep rooting, drought tolerance, pest/disease resistance, rapid growth, strong branch attachments, low BVOC emissions, and so on. Finding the best tree takes time and study. Collecting information on conditions at the site is the first step. Consider the amount of below- and above-ground space, soil type and irrigation, microclimate, and the type of activities occurring around the tree that will influence its growth and management (e.g., mowing, parking, partying). In most cases, it is too expensive to alter site conditions by making them more suitable for a specific tree species. Instead, it is more practical to identify trees with characteristics that best match the existing site conditions, particularly those conditions that will be most limiting to growth.

The matrix in this chapter presents information to assist tree selection. Tree species recommended in general for San Joaquin Valley communities are listed alphabetically by mature tree size category—large, medium, and small. Information is presented on characteristics influencing selection for energy and water conservation (i.e., solar friendly, deciduous/evergreen, irrigation requirement, growth rate), air quality improvement (ozone-forming potential), and reducing infrastructure conflicts (surface rooting, tidiness, pruning requirement). A general assessment of each tree's suitability for street, yard, and park locations is also presented.

We received helpful reviews of this information from Alan Lagarbo (City of Modesto), Keith Warren (J Frank Schmidt & Son Co.), and Janet Rademacher (Mountain States Nursery).

References used to develop the tree selection matrix are listed in Chapter 6.

Key to the Matrix

- A: Mature tree height (ft.)
- B: Mature tree crown spread (ft.)
- C: Tree Type: D=deciduous, E=evergreen, S=semi-evergreen
- D: Solar friendly trees provide winter solar access as well as summer shade; trees numerically ranked based on crown density, time of leaf drop, time of leaf out, crown area and growth rate; NDA=no data available (Ames 1987).
- E: Growth Rate: F=Fast; M=Moderate; S=Slow (Gilman et al. 1996). Note that actual growth rates depend on soils, irrigation, and other factors.
- F: Longevity: L=Long (>50 years); M=Medium (25-50 years); S=Short (<25 years) (Gilman et al. 1996).
- G: Availability of cultivars (an asset when trees with specific traits are needed to match site conditions, such as upright form, pest resistance, fruitless): Y=Yes; N=No.
- H: Resistance to pests and disease: S=pest/disease sensitive; R=resistant; F=free from pests/disease (Gilman et al. 1996).
- I: Problems with surface roots: Y=can form large surface roots; O=occasional problem; N=not a problem (Reimer 1996).
- J: Contribute to ozone formation (data only available for Los Angeles): H=> 10; M=1-10; L=<1 g ozone per day, NDA=no data available (Benjamin and Winer 1998).
- K: Other important features that influence tree selection such as irrigation requirement (from Costello and Jones 1992), soil tolerance, tidiness, and pruning requirement (Gilman et al. 1996, Reimer 1996).
- L: S- Street=difficult growing conditions, in heavily used areas: median, streetside, commercial plaza, and retail. Y- Yard=less difficult growing conditions, less public, sometimes restricted space: residential yard, common areas in residential developments, commercial office. P- Park=less restricted space, public use: parks, schools, cemeteries, commercial campus/industrial park.



Chapter 5

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning)	L Suitability S=Street Y=Yard P=Park
Large Trees > 50 ft. Height												
<i>Celtis australis</i> , <i>occidentalis</i> European/common hackberry	40-70	40-50	D	Y	M	L	N	R	O	L	fruit, mod. irr., avoid clay soil	S/Y/P
<i>Eucalyptus papuana</i> , <i>sideroxylon</i> , ghost gum, red ironbark eucalyptus	40-80	30-80	E	N	F	M	Y	R	Y	H	litter, little irr., limb breakage	P
<i>Fraxinus americana</i> 'Autumn Purple,' 'Chicago Regal' - white ash	40-60	35-50	D	Y	F	L	Y	S	O	L	mod. irr., fall color	S/Y/P
<i>Fraxinus pennsylvanica</i> 'Patmore,' 'Leprechaun,' 'Centerpoint,' green ash	60-70	45-50	D	Y	F	L	Y	S	O	L	mod. irr., fall color	S/Y/P
<i>Gymnocladus dioica</i> Kentucky coffee tree	40-60	40-60	D	Y	M	L	N	R	N	NDA	mod. irr., tough conditions, fruit	S/Y/P
<i>Liquidambar styraciflua</i> sweetgum	60-75	35-50	D	N	M	L	Y	R	O	H	fruits, mod. irr., fall color	S/Y/P
<i>Magnolia grandiflora</i> Southern magnolia	60-80	30-40	E	N	M	L	Y	R	Y	M	litter, high irr., flowers	S/Y/P
<i>Pinus canariensis</i> Canary Island pine	60-90	30-40	E	N	F	L	N	S	O	L	low irr., litter	Y/P
<i>Pinus pinea</i> Italian stone pine	35-80	35-60	E	N	M	L	N	S	N	L	low irr., limb breakage	P
<i>Pinus torreyana</i> torrey pine	40-60	40-50	L	N	F	L	N	F	O	M	native, low irr.	P
<i>Platanus acerifolia</i> 'Yarwood' or 'Bloodgood' London plane	50-70	50-70	D	N	F	L	Y	S	O	H	litter, low irr.	S/P

Large
Trees
> 50 ft. height

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning)	L Suitability S=Street Y=Yard P=Park
<i>Platanus x hispanica</i> 'Columbia' London plane	40-60	40-60	D	N	F	L	Y	R	O	H	litter, low irr.	S/P
<i>Quercus frainetto</i> 'Forest Green,' Forest Green oak	40-50	30-40	D	N	F	L	Y	S	O	H	low. irr., acorns	Y/P
<i>Quercus ilex</i> holly oak	40-50	40-50	E	N	M	M	N	R	O	H	mod. irr., acorns	Y/P
<i>Quercus suber</i> cork oak	60-70	40-50	E	N	M	L	N	R	O	H	low irr., acorns	P
<i>Quercus virginiana, fusiformis</i> Southern, escarpment live oak	50-80	50-80	E	N	M	L	Y	R	O	H	mod. irr., acorns	P
<i>Taxodium distichum</i> bald cypress	50-60	25-30	D	Y	F	L	N	R	N	M	mod. irr., rusty fall color	S/Y/P
<i>Umbellularia californica</i> California laurel	40-60	40-60	E	N	S	L	N	F	O	M	native, mod. irr.	S/Y/P

Large
Trees
> 50 ft. height

Chapter 5

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning)	L Suitability S=Street Y=Yard P=Park
Medium Trees 30-50 ft. Height												
<i>Acacia stenophylla</i> shoestring acacia	30-40	20-30	E	N	R	L	N	R	N	L	very low irr., thornless	S/Y/P
<i>Acer freemanii</i> 'Autumn Blaze,' Autumn Blaze maple	40-50	30-40	D	Y	M	M	Y	R	O	L	mod. irr., fall color	S/Y/P
<i>Brachychiton populneus</i> bottle tree	35-50	25-40	E	N	M	L	N	F	Y	NDA	fruit litter, mod. irr.	S/Y/P
<i>Cercidium</i> x 'Desert Museum,' palo verde	25-35	25-35	S	N	F	M	Y	F	N	L	thornless, low irr.	S/Y/P
<i>Cinnamomum camphora</i> camphor tree	40-60	50-70	E	N	M	L	N	R	Y	L	mod. irr., shallow roots	S/Y/P
<i>Dalbergia sisoo</i> , rosewood	30-50	30-50	S	N	R	M	N	R	O	NDA	low irr., low maint	S/Y/P
<i>Diospyros virginiana</i> (male clones), persimmon	30-50	20-40	D	Y	M	L	Y	S	N	NDA	mod. irr., litter, fall color	Y/P
<i>Eucalyptus microtheca</i> , coolibah	40-50	40-50	E	N	F	L	N	F	O	H	low irr., soil tolerant	S/Y/P
<i>Geijera parviflora</i> Australian willow	30-35	20-25	E	N	F	M	N	F	N	L	low maint., mod. irr.	S/Y/P
<i>Koeleruteria paniculata</i> , <i>bipinnata</i> , <i>elegans</i> goldenrain, Chinese flame, and Formosan flame tree	30-40	20-40	D	Y	M	M	N	R	N	H	litter, mod. irr., attractive flowers/fruit	S/Y/P
<i>Metasequoia glyptostroboides</i> dawn redwood	40-50	15-25	D	Y	F	L	N	R	N	M	high irr.	S/Y/P

Medium
Trees
30-50 ft. height

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning) litter, mod. irr.	L Suitability S=Street Y=Yard P=Park
<i>Paulownia tomentosa</i> princess-tree	40-50	40-50	D	Y	F	M	N	F	O	NDA	litter, mod. irr.	S/Y/P
<i>Pistacia chinensis</i> 'Keith Davey', Chinese pistache	40-50	30-40	D	Y	M	M	Y	F	O	L	low irr, fall color, use male clone	S/Y/P
<i>Prosopis alba</i> 'Thornless' thornless Mesquite	25-35	25-35	S	N	F	M	Y	R	O	L	thornless, low irr.	S/Y/P
<i>Pyrus calleryana</i> 'Trinity', 'Chanticleer', flowering pear	25-35	15-20	D	N	M	M	Y	R	N	L	mod. irr., fruit litter, fall color	S/Y/P
<i>Sapium sebiferum</i> Chinese tallow tree	25-40	25-35	D	Y	F	S	N	F	O	NDA	low irr., fall color, poison seeds	Y
<i>Tilia americana</i> 'Redmond' Redmond linden	30-50	30-45	D	Y	M	L	Y	R	N	NDA	mod. irr., fall color	S/Y/P
<i>Ulmus</i> 'Frontier', 'Prospector' Frontier and Prospector elm	35-50	25-45	D	Y	F	M	Y	R	O	L	mod. irr., disease resist.	S/Y/P
<i>Ulmus parvifolia</i> 'Athena', 'Allee', Chinese/facebark elm	40-50	25-35	D	N	F	S	Y	R	N	L	freq. pruning, mod. irr.	S/Y/P
<i>Zelkova serrata</i> 'Green Vase' Green Vase zelkova	40-60	40-60	D	Y	M	L	Y	R	N	L	low irr., orange fall color	S/Y/P

Medium
Trees
30-50 ft.
height

Chapter 5

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning)	L Suitability S-Street Y-Yard P-Park
Small Tree < 30 ft. Height												
<i>Acer bergianum</i> and <i>truncatum</i> , trident and 'Norwegian Sunset' maple	20-30	20-30	D	Y	S	M	Y	R	N	L	mod. irr., attractive fall color	S/Y/P
<i>Amelanchier</i> 'Autumn Brilliance', serviceberry	15-25	10-20	D	Y	S	M	Y	S	N	NDA	white flws, fall color	S/Y/P
<i>Arbutus unedo</i> strawberry tree	10-30	10-30	E	N	S	M	Y	F	N	NDA	low irr., needs pruning	S/Y/P
<i>Cercis canadensis</i> , <i>occidentalis</i> , Eastern and Western redbud	15-25	15-25	D	Y	M	M	N	R	N	L	low-mod. irr., flowers/fall color	S/Y/P
<i>Chilopsis linearis</i> desert willow	15-30	15-25	D	NDA	M	M	N	F	N	H	very low irr., needs pruning.	S/Y/P
<i>Chitalpa tashkentensis</i> chitalpa	20-30	20-25	D	NDA	M	M	Y	R	N	NDA	litter, mod. irr., flowers	S/Y/P
<i>Lagerstroemia indica</i> x L. <i>faurei</i> clones, crape myrtle (Catawba, Cherokee, Pecos etc.)	15-25	10-20	D	Y	M	M	Y	R	N	L	low irr., needs training, flowers	S/Y/P
<i>Malus</i> 'Snowdrift' and 'Golden Raindrops', crabapple	15-25	15-25	D	N	M	M	N	R	N	L	mod. irr., litter, attractive flws.	Y/P
<i>Prunus</i> 'Cascade Snow' Cascade Snow cherry	20-25	15-20	D	Y	M	S	Y	R	N	L	high irr., white flowers	S/Y/P
<i>Prunus cerasifera</i> 'Krauter Vesuvius' 'Thundercloud', purple leaf plum	20-30	20-30	D	Y	M	S	Y	S	N	L	mod. irr., fruit litter, pink flowers	Y/P

Small
Trees
< 30 ft. height

Tree Name	A Mature Height ft.	B Mature Spread ft.	C Type	D Solar Friendly	E Growth Rate	F Long- evity	G Cultivars Avail.	H Pest/ Disease Resistance	I Sur- face Roots	J Ozone Forming Potential	K Comments (soil, drought, tidiness, pruning)	L Suitability S=Street Y=Yard P=Park
<i>Syringa reticulata</i> 'Ivory Silk' Ivory Silk Japanese tree lilac	20-30	15-20	D	Y	M	M	Y	R	N	NDA	mod. irr., white flowers	S/Y/P
<i>Quercus buckleyi</i> 'Redrock' redrock oak	20-30	20-25	D	NDA	M	L	Y	R	N	H	low irr., red fall color	S/M/P
<i>Vitex agnus-castus</i> chaste tree	10-15	15-20	D	NDA	F	M	Y	R	N	NDA	low irr., flowers	S/Y/P
<i>Xylosma congestum</i> shiny xylosma	15-30	15-30	E	N	M	M	N	R	N	NDA	low irr., needs training	S /Y/P

Small
Trees
<30 ft. height