

## 5. Complete Streets Toolkit

Complete Streets are designed and operated to enable safe access for all users, including people with disabilities, motorists, pedestrians and bicyclists, and transit riders of all ages and abilities. All complete streets improvements recommended by the final study will be informed by and measured against the Diamond Springs and El Dorado Community Values adopted by the Diamond Springs Community Advisory Committee on June 20, 2013 and the input received during the five SAC meetings and two public workshops held during the project. At its core, the complete streets concept is about giving all people transportation options by improving connectivity, which is also a goal of the Community Transportation Plan.

### Design Elements

While some specific design elements of a “complete street” that are typically applied in an urban environment may not be appropriate in a rural setting, there are a number of complete street design features that have successfully been implemented in rural and historic settings similar to El Dorado and Diamond Springs that have simultaneously preserved the rural and historic character of their respective locations while providing much needed connectivity benefits. The types of complete street design features that could be compatible with the rural and historic character of the project area include:

#### Shoulders



Standard Shoulders

Adding standard shoulders to a roadway with no shoulders or unmarked shoulders can be an inexpensive and effective way to improve safety. Pedestrians and bicyclists will naturally gravitate towards shoulders in a rural environment where sidewalks and bike lanes aren’t practical, and a well-marked shoulder provides a visual separation with vehicular traffic. Shoulders also have a minimal impact to existing roadside ditches in a rural drainage environment.

#### Enhanced Shoulders

Enhanced shoulders are shoulders that have been accentuated with a different treatment than standard asphalt (usually with a stamped pattern and/or a color additive). They have the same benefits as regular

shoulders for bikes and pedestrians, but the contrast with regular asphalt has a traffic calming benefit for vehicular traffic. They are more expensive than regular shoulders to construct and have on-going maintenance costs to maintain the contrast, but are very effective as a safety improvement measure. The stamped concrete shown here was constructed in Capay, CA as part of a series of safety improvement projects on State Route 16.



Enhanced Shoulders

### **Class III Bicycle Routes**



Class III Bicycle Route

Class III Bicycle Routes are an inexpensive way to accommodate bicyclists in a rural environment. They are intended to inform vehicular traffic to be aware of cyclists and “share the road” by means of special roadway signs and pavement markings. They are simple to implement and do not require any additional roadway widening, but do have their limitations. Most rural local and collector roads with low traffic volumes and speeds are ideally suited for Class III Bicycle Routes, but higher speed facilities such as minor or major arterials present too much of a speed differential between automobile and bicycle traffic to be safe.

### **Class II Bicycle Lanes**

Class II Bicycle Lanes are moderately more difficult to implement than Class III Bike Routes, but provide an exclusive space for bicyclists that separates them from vehicular traffic. This makes them better suited on higher speed facilities like minor and major arterials where there is a substantial speed differential between bicycles and automobiles. Similar to a shoulder widening, they are well suited in a rural setting that relies predominantly on roadside ditches for drainage.



Class II Bicycle Lanes



Class I Bicycle Path

### Class I Bicycle Paths

Class I Bicycle Paths separate bicyclists and vehicular traffic entirely making them the safest of the three bicycle facilities. They can also be widened to more easily accommodate other modes of active transportation including pedestrians and equestrians, making them a popular recreational amenity. However they are also the most expensive non-motorized facility to construct and maintain.

### Detached Sidewalks

Detached sidewalks provide a pedestrian walkway with a physical separation from the vehicular traveled way. This provides a buffer space which both improves pedestrian safety and is an opportunity site for landscaping or other pedestrian amenities. Detached sidewalks are advantageous in a rural environment with roadside ditches since the existing drainage can sometimes be incorporated in the buffer space, however they require more right-of-way than a conventional attached sidewalk.



Detached Sidewalk



Attached Sidewalk

### Attached Sidewalks

Attached sidewalks are directly adjacent to the vehicular traveled way and require a curb and gutter section to separate pedestrians and vehicular traffic. This creates a more formal space for pedestrians than shoulders alone with less right-of-way impacts than a detached sidewalk, but does require drainage modifications to existing roadside ditches to accommodate curb and gutter drainage. Attached sidewalks accommodate on-street parking and frequent driveway access points more efficiently than detached sidewalks without curb and gutter.

## Medians

Medians can be used as a traffic calming feature on busier roadway segments to organize or limit left turn access and create a refuge for pedestrians as they cross the street. They also provide an opportunity site for landscaping and other aesthetic amenities that can accentuate the culture or history of an area.



**Median Improvements**



**High Visibility Crosswalk**

## Enhanced intersections

Intersections can be enhanced in historic and commercial areas to improve pedestrian safety and better control vehicular traffic. Improvements could include high visibility crosswalks, bulb-outs to reduce pedestrian crossing distances, and aesthetic streetscape improvements that improve the public space with wayfinding or entrance monuments.

## Organized Parking

A well designed layout of on-street parking properly distinguishes vehicular and pedestrian space and provides enhancement opportunities for bulb-outs and other traffic calming measures to improve pedestrian safety. A proper parking layout is easier to regulate and enforce and can be an effective tool in encouraging higher turnover for local businesses.



**Organized Parking**