

# **CITY COUNCIL COMMITTEE**

## **SPECIAL MEETING**

### **HOUSING & ECONOMIC DEVELOPMENT**

**Ron Leone, Chair**

**Dan Helix, Committee Member**

**5:30 p.m., Monday, December 15, 2014**

**Building A, Garden Conference Room  
1950 Parkside Drive, Concord**

#### **ROLL CALL**

#### **PUBLIC COMMENT PERIOD**

1. **UPDATE** –Project No. 2239 - Central Concord Pedestrian Improvements and Streetscape Project (Funded By: Measure J TLC, Gas Tax, and Measure-C funds). Report by Jeff Rogers, Associate Civil Engineer.
2. **ADJOURNMENT**

In accordance with the Americans with Disabilities Act and California Law, it is the policy of the City of Concord to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including those with disabilities. If you are disabled and require a copy of a public hearing notice, or an agenda and/or agenda packet in an appropriate alternative format; or if you require other accommodation, please contact the ADA Coordinator at (925) 671-3361, at least five days in advance of the meeting. Advance notification within this guideline will enable the City to make reasonable arrangements to ensure accessibility.

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Distribution: City Council  
Valerie Barone, City Manager  
Scott Johnson, Assistant City Manager  
Mark Coon, City Attorney  
Victoria Walker, Community & Economic Development Director  
Robert Ovadia, City Engineer  
Jeff Rogers, Associate Civil Engineer  
Administrative Services



**TO THE HONORABLE COUNCIL COMMITTEE ON H&ED:**

DATE: December 15, 2014

**SUBJECT: PROJECT NO. 2239 - CENTRAL CONCORD PEDESTRIAN IMPROVEMENTS & STREETScape PROJECT (FUNDED BY: MEASURE-J TLC, GAS TAX, AND MEASURE-C FUNDS)**

**Report in Brief**

Project No. 2239 (Central Concord Pedestrian Improvements & Streetscape Project) is one of several projects planned in the downtown area with the goal of enhancing pedestrian and bicyclist safety in and around the Downtown mixed use area. Because of the recent focus in the Downtown area, as well as the availability of grant funding for projects within the City's Downtown Priority Development Area (PDA), a number of projects are upcoming or currently underway in various phases (planning, conceptual design, construction design and/or preparation for construction). While this report concentrates on the Central Concord Pedestrian Improvements and Streetscape Project, it also provides background on other interfacing downtown projects.

The City's consultant, Harris and Associates, has completed the conceptual design report for the Central Concord Pedestrian Improvements & Streetscape Project and has proposed several design options for consideration including sidewalk options along Willow Pass Road, pavement resurfacing options for Willow Pass Road and crosswalk treatments. Several of the options go beyond the minimum grant requirements and have the potential to significantly impact the project construction budget, exceeding the total available funds. Staff has compiled a recommended list of options to be included in the project based on available funding.

Staff recommends that the Housing & Economic Development Committee review the options presented below for Project No. 2239 (Central Concord Pedestrian Improvements & Streetscape Project) and provide direction to staff. If alternate design options are selected by the Committee, additional funding may be required.

**Background**

The Central Concord Pedestrian Improvements & Streetscape Project is one of several projects planned in the downtown area with the goal of enhancing pedestrian and bicyclist safety in and around the Downtown mixed use area. These projects are shown on Attachment 1 and include:

- **Detroit Avenue Pedestrian and Bicycle Improvements (PJ#2276)** – a “Complete Street” project that will construct pedestrian improvements, install bike lanes and install traffic signals on Detroit Avenue between Clayton Road and Monument Boulevard. This project is currently under design and pursuant to public input received, staff is exploring the potential, with the funding agencies, to improve the street pavement conditions in lieu of installing the traffic signals.

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- **Downtown Concord Bicycle Lane Improvements (PJ#2277)** – will install Class II Bike Lanes (designated striped bike lane) on segments of Clayton Road, Concord Boulevard, Oakland Avenue, and Grant Street; will install a Class III Bike Route (shared with vehicular traffic) on Mt. Diablo Street from Laguna Street to Oakland Avenue. This project also includes the removal of the couplet between Concord Boulevard and Clayton Road, the construction of a sidewalk in the median island on Clayton Road between Mira Vista Terrace and Sutter Street and the widening of the sidewalk along the east side of Grant Street between Concord Boulevard and Willow Pass Road. Staff is currently working on obtaining environmental clearance prior to selection of a consultant for design services.
- **Willow Pass Road and Nearby Intersections Traffic Signal Upgrades (PJ#2285)** – will enhance traffic safety by installing protected left turn phasing and ADA upgrades including “Pedestrian Push Buttons” on Willow Pass Road at: Galindo Street, Grant Street, Parkside Drive and Sixth street as well as on Market Street at Fry Way and on Salvio Street at East Street. A consultant has been selected and design of this project will be initiated in December 2014.
- **Citywide Bicycle and Pedestrian Master Plan (PJ#2280)** – includes development of a master plan to expand the City’s bikeway and pedestrian network and make recommendations for priority projects. A consultant has been selected and development of the plan will begin in January 2015.
- **Salvio Street Improvements at Mount Diablo Street (potential new CIP project)** – proposes to remove the diagonal parking along Salvio Street in front of Salvio Pacheco Square and provide a wider pedestrian area with options for future seating areas, as well as to improve pedestrian accessibility along the sidewalk and at the Mount Diablo Street intersection. A grant for project design has been obtained, consultant selected by the funding agency and design will be initiated by January 2015.
- **The Oak Street, Grant Street and Salvio Street Corridor Plan** – will develop streetscape design recommendations for the “Greenframe Corridors” outlined in the City’s Downtown Specific Plan. A grant for plan development has been obtained from the Contra Costa Transportation Authority (CCTA). The City will receive services equal to \$250,000 which funds the cost of a CCTA-approved consultant to complete the plan development and design. At this point, the consultant has been selected and approved by CCTA and development of the plan will be initiated by January 2015.
- **Concord BART Station Modernization Project** – proposes to provide certain upgrades to the Concord BART station and its interface with the City streets surrounding the station. BART has initiated their project design and will be presenting their conceptual plans to the Design Review Board on January 22, 2015, the Planning Commission on February 18, 2015 and the City Council on February 24, 2015.
- **Downtown Sewer Rehabilitation** – significant sewer improvement needs have been identified in the Downtown area; funding for the required improvements has not been fully secured.
- **Rectangular Rapid Flashing Beacon at mid-block crossing on Salvio Street between Grant Street and Mt. Diablo Street** – this project is in the planning phase.

In order to maintain fluidity based on common/similar project scope and location, the design of the Central Concord Pedestrian Improvements & Streetscape Project will be coordinated with these neighboring CIP projects. Several of the above-referenced projects are proposed for construction in outlying years. Staff hopes to base the design of these future projects on the design and style of the project elements chosen for this project by the Council Committee.

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The City applied for and was awarded a \$2,458,200 Measure-J Transportation for Livable Communities (TLC) Grant, administered by the Contra Costa Transportation Authority (CCTA), for the design and construction of the Central Concord Pedestrian Improvements & Streetscape Project (Project No. 2239). The project is also funded with Measure J and Gas Tax, and has a total budget of \$3,540,700, as approved by the City Council when it adopted the FY 2012-13 Capital Improvement Program (CIP) Ten Year Plan. As outlined in the grant award, the project includes the following components:

- Installation of a traffic signal and safety lighting at the intersection of Clayton Road and Sutter Street, as well as landscaping in the median island on Clayton Road between Mira Vista Terrace and Sutter Street;
- Rehabilitation of the asphalt pavement on Willow Pass Road between Market Street and Galindo Street;
- Widening of the sidewalk along the north side of Willow Pass Road between Gateway Boulevard and Sutter Street (where feasible);
- Removal and replacement of deteriorated crosswalks on Willow Pass Road at Mira Vista Terrace, Sutter Street, Fry Way, Gateway Boulevard and Market Street with ADA compliant, decorative colored crosswalks;
- Rehabilitation of the crosswalks at approximately 30 intersections in the Downtown Area with pothole repairs and re-staining of colored concrete crosswalks;
- Installation of a Class-III bike route (shared with vehicular traffic) on Grant Street between Willow Pass Road and Pacheco Street, on Salvio Street from Broadway Street to East Street, and on Broadway Street from Salvio Street to Market Street;
- Installation of miscellaneous enhancements in the Downtown area that include: way-finder kiosks, tree lighting along Grant Street, bike racks, trash receptacles, refinishing of pedestrian light poles, and curb ramp upgrades.

As noted above, the primary funding source for this project is the Measure-J Transportation for Livable Communities (TLC) Grant administered by CCTA. With this grant, any proposed scope changes need to be approved by CCTA. After accounting for the costs associated with project management, design, construction management, and inspection services, the available construction budget is approximately \$2,500,000, including contingencies. At its regular November 2013 Board Meeting, CCTA approved an initial allocation of \$458,600 in grant funds to be used for design, environmental and right-of-way services for the project. Following CCTA's allocation, the City awarded a design contract to Harris and Associates (Harris) on March 11, 2014 to complete this work.

The initial conceptual level design plans (Attachment 2) that were developed by Harris included enhanced project elements such as Full Depth Pavement Reclamation on Willow Pass Road between Galindo Street and Market Street, replacement of the various crosswalks with new decorative crossings, a high level of landscape treatment, etc. The preliminary engineer's estimate for construction including the enhancements was \$5,554,185, significantly greater than the available project budget of approximately \$2,500,000. Staff directed Harris to revise their conceptual design to better fit the grant requirements and the available construction budget. The revised design alternatives and corresponding estimates are presented below.

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**Discussion of Alternatives**

Listed below is a narrative of the project scope (described by major component), as well as the design options and corresponding staff recommendations to realign project features to fit the available project budget.

**Clayton Road Pedestrian Safety Upgrades:** The emphasis of this component is to improve pedestrian safety with a protected crosswalk at the intersection of Clayton Road/Sutter Street, including the installation of a traffic signal at the intersection of Clayton Road and Sutter Street. Re-landscaping of the median island fronting Clayton Road and Concord Boulevard between Mira Vista Terrace and Sutter Street is also included in the grant scope.

The initial project design concept considered two landscape options with estimated costs between \$175,000 and \$190,000, which were in excess of the approved grant budget of \$45,000 for landscaping. The design consultant has been instructed to prepare landscape options that fit the approved \$45,000 budget. Two such concepts have been prepared and are shown in Attachment 3. Staff recommends the “Natural” landscape concept.

**Roadway Improvements on Willow Pass Road (Market Street to Galindo Street):** The emphasis of this component is to rehabilitate the aging asphalt pavement on this heavily traveled segment of Willow Pass Road between Galindo Street and Market Street. The initial preliminary design called for complete pavement rehabilitation by a process referred to as Full Depth Reclamation (FDR.) This process pulverizes and recycles a large percentage of existing materials in place, adds “Portland Cement” and lime to the recycled material, and produces a rehabilitated Base section made up of 18” of cement/lime treated base which is then overlaid with new asphalt. The estimated cost for FDR is 1.25 million dollars.

This level of treatment is typically used on streets with a significant amount of base failure or in need of reconstruction. Though Willow Pass Road between Market Street and Galindo Street requires some percentage of base repair (estimated at 10-15% of the total pavement area), it does not warrant FDR. Staff recommends addressing the localized dig-outs/repairs of the failed base areas, grinding the asphalt surface area and overlaying with new asphalt. This component of work will also include the replacement of traffic signal loop detectors that will be damaged during construction. The estimated cost for this option is \$560,000.

**Pedestrian Improvements on Willow Pass Road (Gateway Blvd to Sutter Street):** The emphasis of this component is to widen the existing four-foot wide sidewalk fronting the Park’n Shop Retail Center from Gateway Boulevard to Sutter Street to an eight-foot wide sidewalk where feasible. Improvements also include removal and replacement of deteriorated crosswalks on Willow Pass Road at Mira Vista Terrace, Sutter Street, Fry Way, Gateway Boulevard and Market Street with ADA compliant, decorative colored crosswalks and upgrade curb ramps as needed within this street segment to current ADA standards.

The Basis of Design Report (Attachment 2) originally provided by Harris, included two options for the replacement of the sidewalk fronting the Park’n Shop retail center; a Promenade Concept and a Node Concept, both of which were over budget and would have a significant impact to the existing trees along Willow Pass Road.

Due to funding limitations and the impacts to the tree canopy, staff recommends that the sidewalk work be limited to widening the existing sidewalk from Sutter Street to Fry Way, as well as the construction of five additional localized widening spots (“Nodes”) between Fry Way and Gateway Boulevard (Attachment 4). Discussion of crosswalk treatments is provided below.

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**Downtown Streetscape Improvements:** These improvements represent the most aesthetic components of the project that will be noticeable to the public. The grant calls for crosswalk improvements at approximately 30 downtown intersections which currently contain various decorative crosswalk treatments including colored concrete and pavers. Rehabilitation would include pothole repairs and concrete stain upgrades at these intersections. Additional improvements to be installed on Grant Street between the Downtown BART Station and Todos Santos Plaza include: reconditioning the pedestrian light poles and installing tree lighting, and installation of new way-finder kiosks, trash receptacles and bicycle racks.

This component will also upgrade curb ramps to meet current ADA standards, and install Class-III bike routes on Grant Street between Willow Pass Road and Pacheco Street, Salvio Street from Broadway Street to East Street, and on Broadway Street from Salvio Street to Market Street.

**Miscellaneous Improvements on Grant Street (Concord BART Station to the Downtown Area):**

- Pedestrian Light Poles – The project includes the “refinishing” of the pedestrian light poles on Grant Street that lead the way from the Concord BART Station to Todos Santos Plaza and the Downtown Area. After a field site visit, staff determined that some of the light poles within the project area are in good condition and do not require refinishing (repainting). For budget purposes, staff recommends refinishing only those poles where the condition warrants it.
- Bike Racks – This project will install eight (8) bike racks along Grant Street. To minimize sidewalk obstruction, staff recommends installing the bike racks in such a way that the bikes will be parked parallel to the sidewalk.
- Wayfinder Kiosk – The project will also install two (2) new Wayfinder Kiosks on Grant Street for pedestrian guidance from the Concord BART Station to the Downtown area. The grant calls for the Kiosks to be installed at the intersections of Grant Street/Park Street, and Grant Street/Clayton Road. The new kiosks are proposed to match the existing downtown kiosks.

**Crosswalk Treatments:** The project design as identified in the grant, includes the following two crosswalk treatments: (1) Crosswalk Upgrades-pothole repair and re-staining of existing colored concrete at approximately 30 intersections in the Downtown area; (2) Decorative Colored Crosswalks-remove and replace existing crosswalks with a decorative colored asphalt treatment at five intersections along Willow Pass Road, and a similar treatment at the intersection of Clayton Road/Sutter Street. Installation of the Decorative Colored Crosswalks includes removal of the existing crosswalks, repaving the intersection, and installation of new decorative crosswalks. Initially, staff looked into applying the Decorative Colored Crosswalk Treatment option at all intersections slated for upgrades. Unfortunately, after further investigation, it was determined that the costs associated with completing this type of reconstruction at all the intersections is more than the available project budget. In an effort to re-align the project scope with available budget funding, staff recommends keeping the number of intersections to receive the Decorative Colored Crosswalk Treatment to the ones called out in the grant. These intersections are: Willow Pass Road at Mira Vista Terrace, Sutter Street, Fry Way, Gateway Boulevard, and Market Street, and on Clayton Road at Sutter Street. The remaining intersections slated for rehabilitation would still receive pothole repairs and re-staining of aging colored concrete as called for in the Grant.

At this point in the project design, the City must choose a uniform decorative colored crosswalk treatment for the 6 intersections slated to receive this treatment. The Basis of Design Report prepared by Harris offers three

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possible treatments: Color Surfacing, Stamped Asphalt Surfacing, and Thermoplastic Pattern Markings. Each treatment would require pre-treatment which includes the complete removal of the current crosswalk and reconstruction with a new asphalt surface (with costs estimated at \$50,000-\$100,000, per intersection). The cost per square foot to install each of the various crosswalk treatments are listed below and is “in addition” to the pre-treatment cost mentioned above.

- **Color Surfacing (\$3/SF)** - is a resin based system used for area markings and anti-skid surfacing on either asphalt or concrete surfaces (Attachment 5). Color surfacing is a cost effective and durable solution and is capable of full cure in a wide range of temperatures. This method provides a smooth finished surface with no pattern and will require color recoats approximately every 5 years, or as traffic volume dictates.
- **Stamped Asphalt Surfacing (\$15/SF)** - Thermoplastic Panels (approximately 2' x 2') sheets are positioned over a sealant treated asphalt surface (Attachment 6). The asphalt and panels are heated and then a welded wire template is placed over and stamped onto the panel (the impression is transmitted into the AC). This method comes with a variety of different patterns and will require replacement every 7-9 years, or as traffic volume dictates).
- **Thermoplastic Pattern Markings (\$15/SF)** - uses preformed patterned thermoplastic (approximately 2' x 2') sheets. The thermoplastic sheets are positioned and heat applied to the asphalt surface (Attachment 7). Stamping of the asphalt surface is not necessary. This method comes with a variety of different patterns and will require replacement every 7-9 years, or as traffic volume dictates.

Staff recommends the Thermoplastic Pattern Markings alternative. It is the preferred treatment to maintain by Public Works as the thermoplastic sheets can be purchased and applied as needed to localized areas. Staff seeks concurrence from the Committee regarding this recommendation.

### **Fiscal Impact**

If the HED Committee directs staff to proceed with the recommendations in this report, the construction costs are estimated to remain within the project budget. If the HED Committee does not agree with the recommendations included in this report, the project budget would require additional funding appropriations.

### **Recommendation for Action**

Staff recommends that the Housing & Economic Development Committee review the options presented below for Project No. 2239 (Central Concord Pedestrian Improvements & Streetscape Project) and provide direction to staff.

1. **Clayton Road Pedestrian Safety Upgrades:** In regards to the median island landscaping, staff recommends the “Natural” landscape concept illustrated in Attachment 3.
2. **Pedestrian Improvements on Willow Pass Road (Gateway Blvd to Sutter Street):** In regards to the sidewalk widening on Willow Pass Road fronting the Park'n Shop retail center, staff recommends widening the sidewalk from Sutter Street to Fry Way, and constructing additional sidewalk widening

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“pedestrian passing lanes” approximately 20’ in length, at five locations between Fry Way and Gateway Blvd (Attachment 4).

3. **Roadway Improvements on Willow Pass Road (Market Street to Galindo Street):** Staff recommends a grind and overlay with associated base repair dig-outs in-lieu of Full Depth Pavement Reclamation.
4. **Downtown Streetscape Improvements:**
  - Decorative Crosswalk Treatments – recommend pothole repair and re-coloring of existing colored concrete crosswalks and bands at the intersections noted for rehabilitation and limiting the reconstruction of crosswalks with new decorative treatment to those listed in the grant. These intersections are: Willow Pass Road at Mira Vista Terrace, Sutter Street, Fry Way, Gateway Boulevard, and Market Street, and on Clayton Road at Sutter Street.
  - Bike Racks – recommend installation such that bikes are parked parallel to sidewalk.
  - Way-finder Kiosks – recommend design matches existing downtown kiosks.
  - Refinishing of Pedestrian light poles – recommend refinishing only those poles in need of refinishing.

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Attachment 1: Downtown Project Area Map

Attachment 2: Conceptual Design Plans – 35% Submittal, and Basis of Design Report

Attachment 3: Landscape Concepts (Natural Landscape, Tree Lined Concept & Landscape Materials)

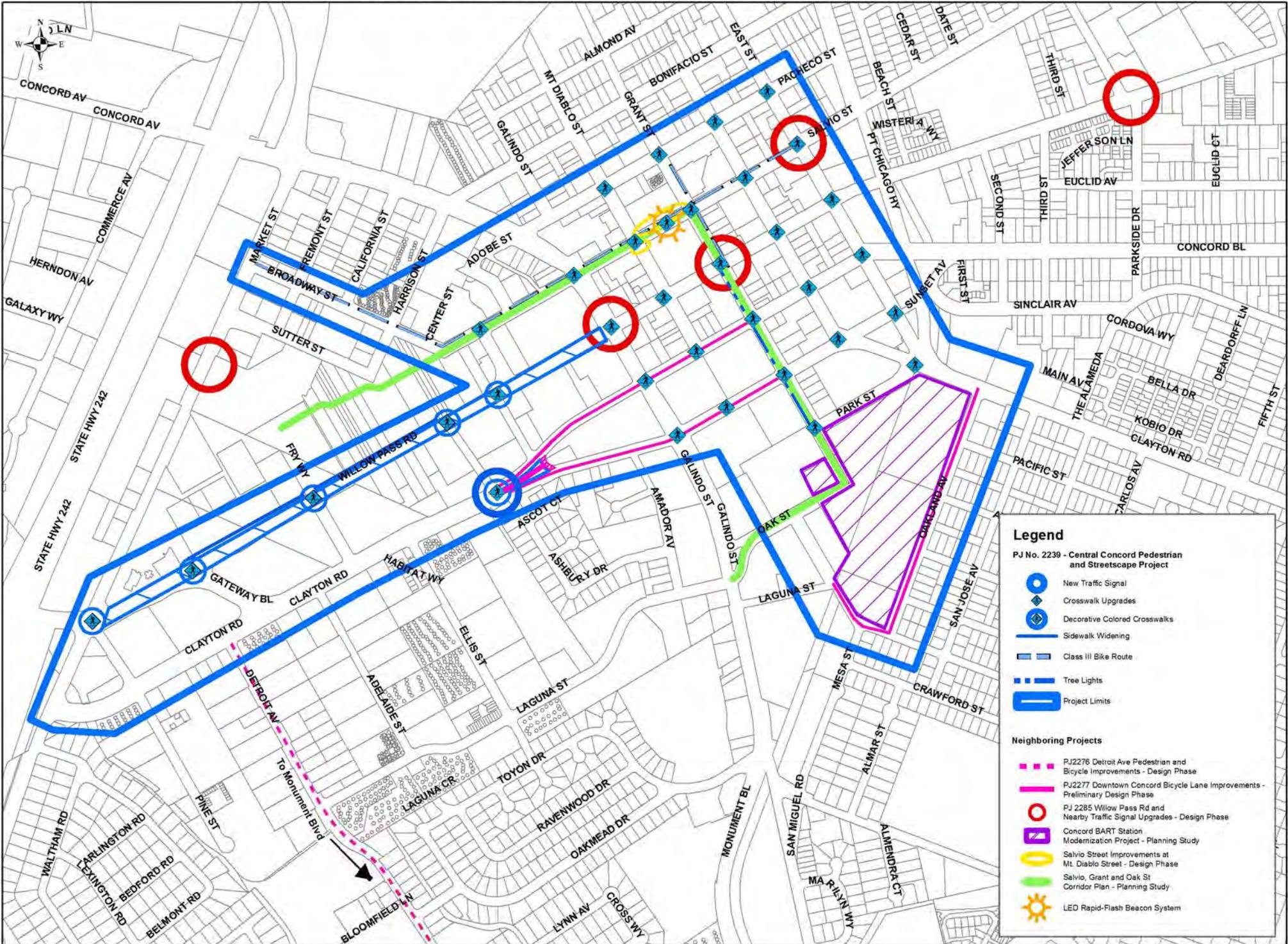
Attachment 4: Willow Pass Road Sidewalk Exhibit

Attachment 5: Color Surfacing

Attachment 6: Stamped Asphalt Surfacing

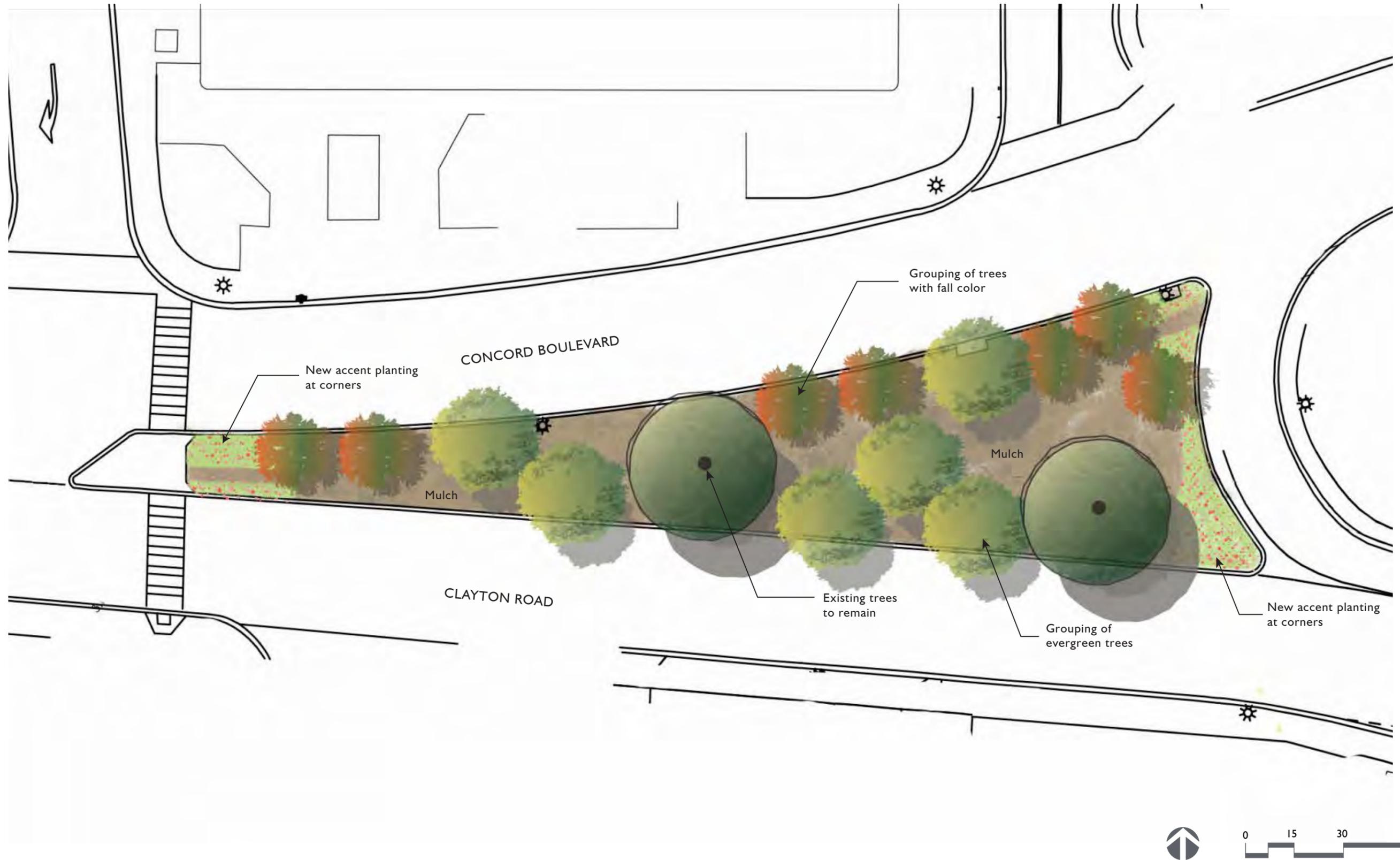
Attachment 7: Thermoplastic Pattern Markings

# Attachment 1

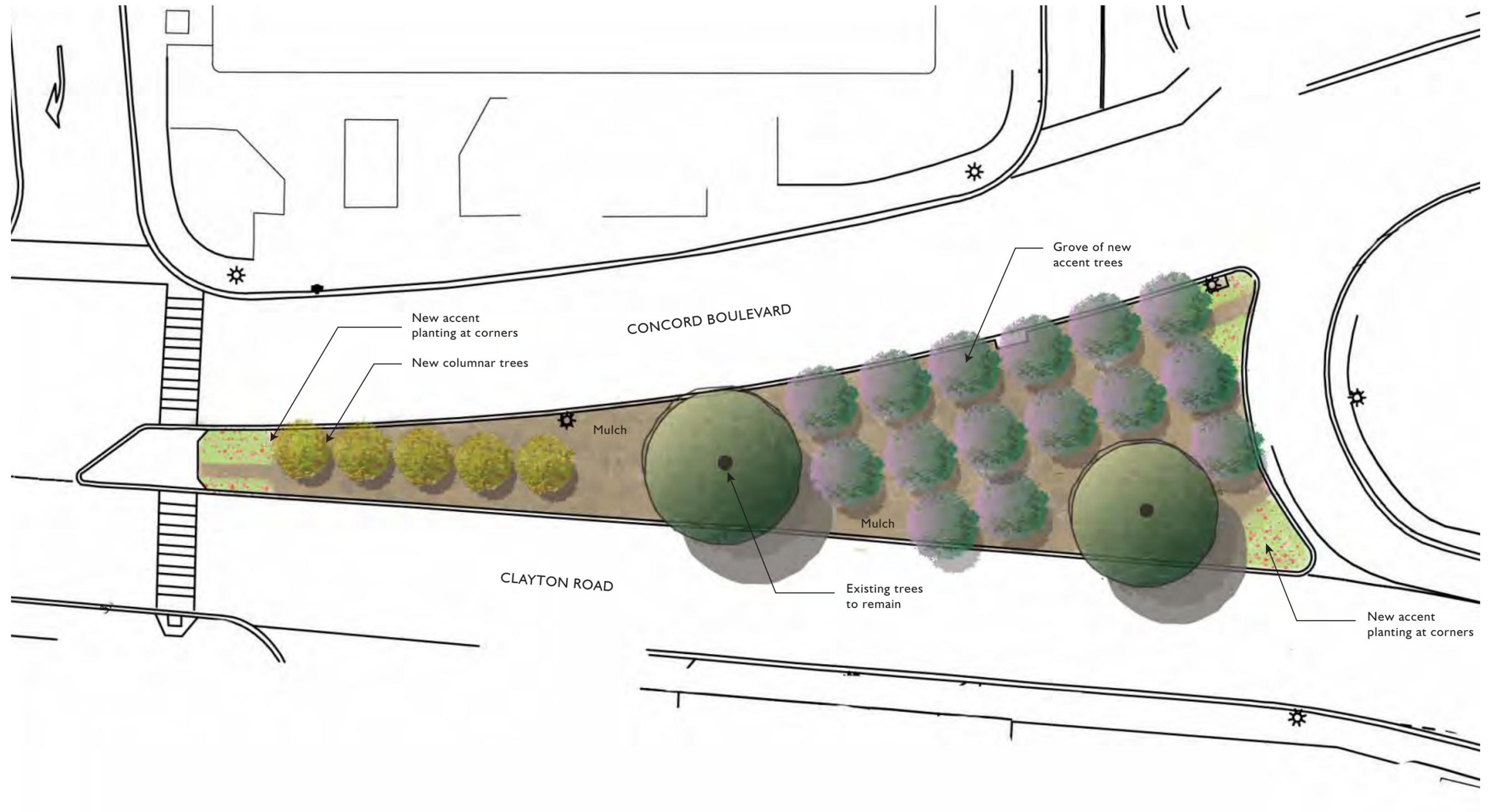


## Attachment 3

# ATTACHMENT 3 - NATURAL CONCEPT



# ATTACHMENT 3 - TREE LINED CONCEPT



Willow Pass Rd



Dwarf Mat Rush



Wheeler's Dwarf Tobira



Bush Germander

Clayton Triangle 'Natural' Concept



Fall Color Tree  
Chinese Pistache Tree



Evergreen Tree  
Cork Oak

Clayton Triangle 'Tree Lined' Concept



Accent Tree  
Chitalpa



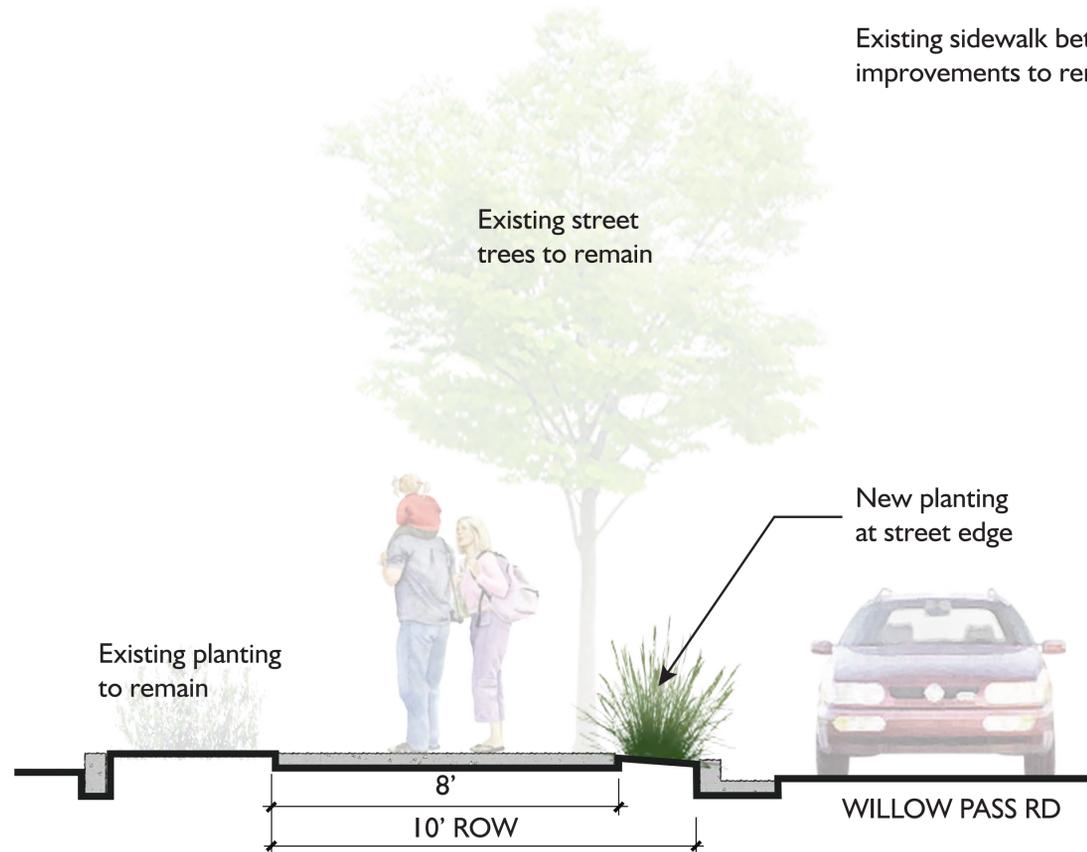
Columnar Tree  
European Hornbeam

## Attachment 4

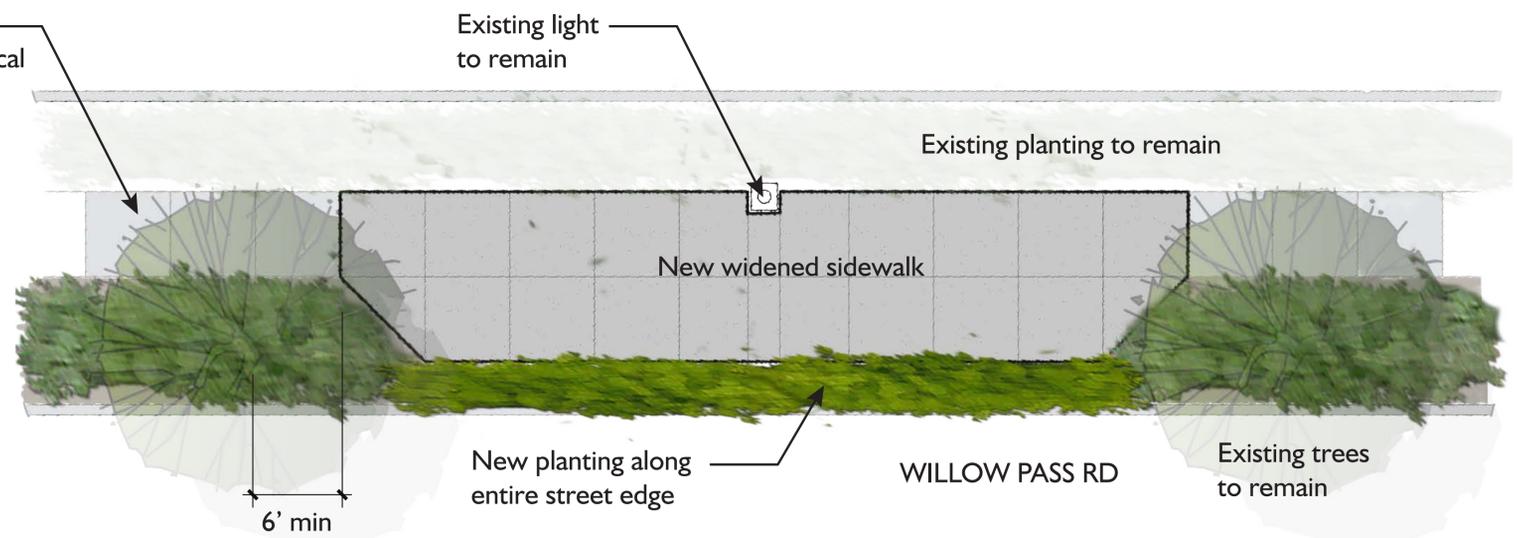


 New widened sidewalk improvement locations

**PEDESTRIAN IMPROVEMENTS**  
FRY WAY TO SUTTER

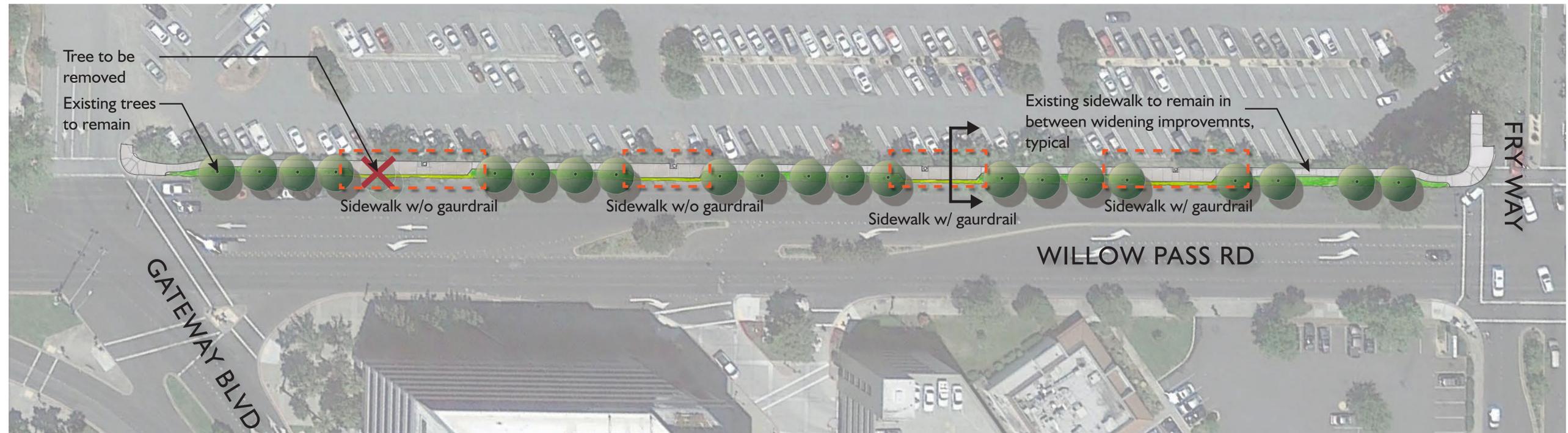


**New Widened Sidewalk Section**  
Scale: 1/2" = 1'-0"



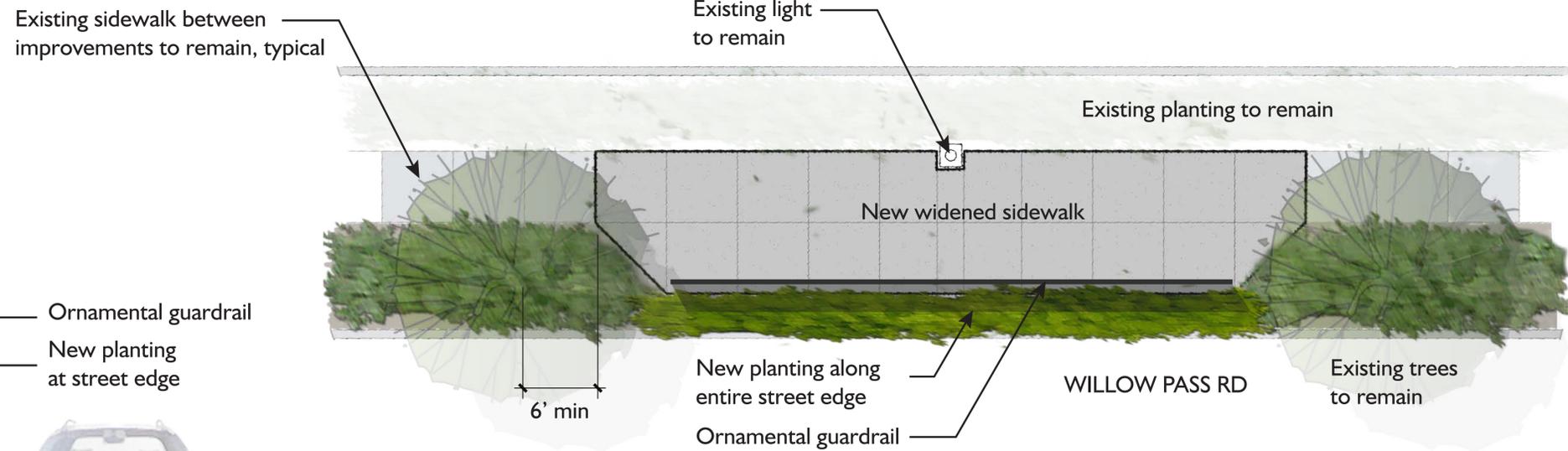
**Widened Sidewalk Enlargement**  
Scale: 1/4" = 1'-0"

Sidewalk improvements to be kept a minimum of 6' away from existing tree trunks

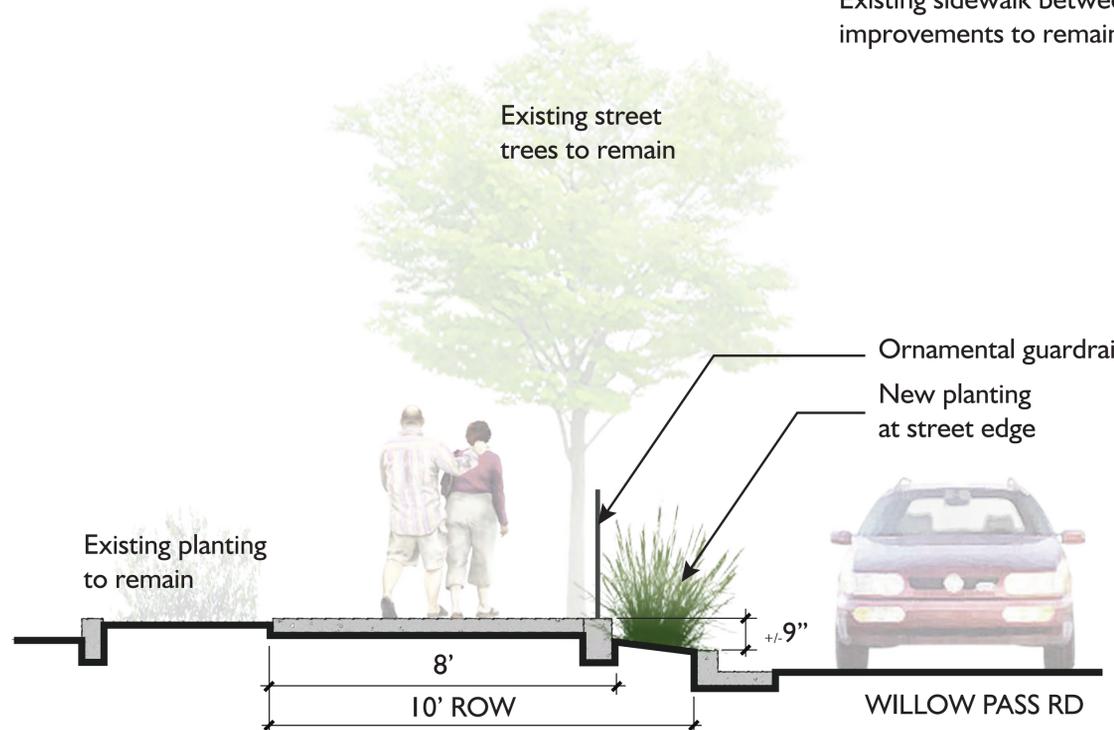


 New widened sidewalk improvement locations

**PEDESTRIAN IMPROVEMENTS**  
GATEWAY BLVD TO FRY WAY



**New Widened Sidewalk Enlargement**  
Scale: 1/4" = 1'-0"



**New Widened Sidewalk Section (with guardrail)**  
Scale: 1/2" = 1'-0"



**Ornamental Guardrails**

Sidewalk improvements to be kept a minimum of 6' away from existing tree trunks

## Attachment 5

We have evaluated 3 different types of commonly used pavement imprinting/coloring for the City staff to evaluate. And they are:

Type	Common Brand and Manufacturer	Cost per SF	Service life in Years
Color Surfacing	Color-Safe® by Transpo Industry, Inc.	\$3	5
Asphalt Inlaid Surfacing	DuraTherm® by Ennis Flint	\$15	7-9
Stamped Asphalt Surfacing	TrafficPatterns® XD by Ennis Flint	\$15	7-9

**Color Surfacing** is a resin based system used for area markings and anti-skid surfacing on either asphalt or concrete surfaces. Color surfacing is a cost effective and durable solution and is capable of full cure in a wide range of temperatures. This method provides a smooth finished surface with no pattern. The photo below shows an example of color surfacing.



*Example of color surfacing*

**Features & Benefits:**

- Variety of Standard and Custom Colors and Aggregate Sizes Available
- Durable Skid-Resistant Surface

## Attachment 6

# TrafficPatternsXD™

A TrafficScapes™ Solution by Ennis-Flint

## Impressed Preformed Thermoplastic Crosswalks and Traffic Calming Surfaces for Asphalt

TrafficPatternsXD™ is an extremely durable preformed thermoplastic material that incorporates a unique aggregate-reinforced formula with unprecedented wear resistance. The result is a traffic-tough crosswalk that provides traditional brick-like aesthetics built to last.

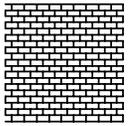
### PERFORMANCE-BASED FEATURES AND BENEFITS

- Designed for extreme use and wear in high-traffic crosswalks and traffic calming surfaces.
- 150-mil thickness engineered for a robust application system and enhanced durability
- Enhanced performance in all climates
- Applied to high-quality, stable asphalt, with minimal substrate impact
- Fast installation; minimal traffic downtime
- High skid/slip resistant for safety. As material wears, new anti-skid elements are exposed.
- ADA compliant - Pedestrian and wheelchair friendly surface
- Eliminates the maintenance and safety concerns of loose pavers
- All preformed thermoplastic materials are made at Ennis-Flint's manufacturing facility which is ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic. Quality, value and long-term performance are built into the marking. Anti-skid elements are added at time of manufacturing for optimized application at the jobsite.

TrafficPatternsXD™ is installed by a network of Certified Applicators so you can be confident that your design intentions will translate to fully-met expectations on the job site. The 2 ft. x 2 ft. sheets of material are positioned on the non-stamped, prepared asphalt surface. The material is heated to allow proper embedment of the anti-skid elements. A specialized grid gently stamps a pattern into the material and just into the top layer of the asphalt.



### STANDARD PATTERNS



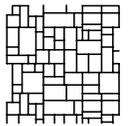
OFFSET BRICK



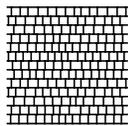
DIAGONAL HERRINGBONE



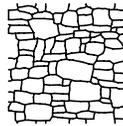
STANDARD HERRINGBONE



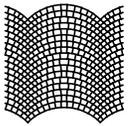
SLATE



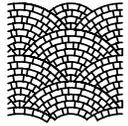
COBBLE



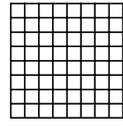
STONE



EUROFAN



SCALLOP



TILE

### STANDARD BORDERS



### STANDARD COLORS



BLACK



WHITE



SAND



TAN



BRICK RED



COLONIAL BRICK



HERITAGE RED



FIELD GRAY



SONOMA SAND



CINNAMON



SANTA FE CLAY



CHESTNUT



GREY



DARK BRICK RED



KHAKI



SIENNA



COCOA



SALMON



## Attachment 7

# TrafficPatterns®

A TrafficScapes™ Solution by Ennis-Flint

## Interconnected, Surface-Applied Preformed Thermoplastic Crosswalks and Traffic Calming Surfaces for Asphalt and Concrete

TrafficPatterns® provides a cost-effective, traditional look and alternative to the use of brick and stone pavers because the material is surface applied and virtually maintenance free. The pattern and color combinations of the interconnected sheets allow designers the flexibility to create the ideal crosswalk or traffic calming pattern that complements the overall streetscape design.

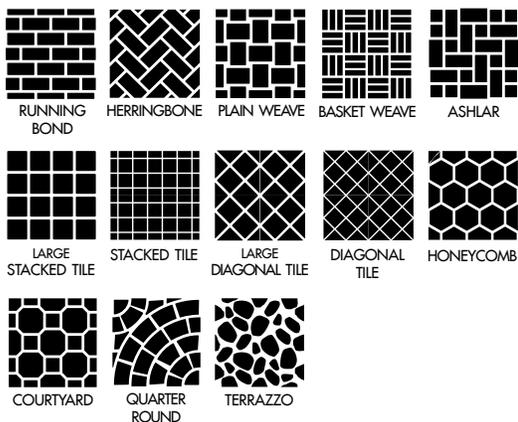
### PERFORMANCE-BASED FEATURES AND BENEFITS

- Engineered as heavy-duty intersection grade pavement marking material with enhanced durability
- 125-mil; interconnected sheets of material
- High skid/slip resistant for safety. As material wears, new anti-skid elements are exposed.
- Can be applied on newly-stamped asphalt as soon as the road surface cools and sets
- Does not alter substrate
- Does not require stamping templates or grids
- Open to traffic minutes after application
- ADA compliant - Pedestrian and wheelchair friendly surface
- Eliminates the maintenance and safety concerns of loose pavers
- All preformed thermoplastic materials are made at Ennis-Flint's manufacturing facility which is ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic. Quality, value and long-term performance are built into the marking. Anti-skid elements are added at time of manufacturing for optimized application at the jobsite.

TrafficPatterns® does not require expensive capital equipment, customized tools, templates or grids for application. The 2'x2' sheets of interconnected material are easily lifted and positioned onto an asphalt or concrete surface. Border segments can be added for design variability. Application is simple with a large infrared heater or a propane heat torch.



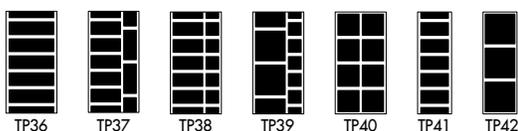
### STANDARD PATTERNS (2'x2' Sheets)



### STANDARD COLORS



### STANDARD BORDERS



### PREMIUM COLORS



New Patterns/Borders and Colors in 2'x2' Format

