<table>
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<th>Sir Francis Drake Boulevard - Agenda</th>
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<tr>
<td>1.</td>
<td>Opening Remarks</td>
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<td>2.</td>
<td>Team Presentation</td>
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<td>3.</td>
<td>Breakout Session</td>
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<td>4.</td>
<td>Breakout Session Report Back</td>
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<td>5.</td>
<td>Next Steps</td>
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<tr>
<td>6.</td>
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Presentation Agenda

• Introduction
• Community Meeting Number 1 Feedback
• Existing Conditions, Strategies, and Toolkit
• Alternatives and Tradeoffs
INTRODUCTION
Introduction: Project Goals

• Repair pavement.
• Close sidewalk gaps and improve pedestrian crossing safety.
• Improve traffic flow and reduce congestion.
• Improve transit access.
• Improve bicycle access and safety.
We Are Here

SPRING 2015
Existing Conditions
• Opportunities
• Constrains
• Public Brainstorming (May)

FALL 2015
Review Potential Alternatives

WINTER 2016
Review Refined Alternatives

SPRING 2016
Review Preferred Alternative

FALL 2016
Complete Environmental Process

2017-2018
Project Design and Construction

INTRODUCTION: Project Schedule
Introduction: Available Budget

$13.2 Million Budget Available from TAM
Transportation Sales Tax

What is other?

- Sidewalk gap closures
- Bicycle facility enhancement
- Reduce traffic delays
- Transit facilities
- Intersection modifications
- Advanced traffic signal systems

Includes soft and hard costs
Introduction: Community Character

Local Scene
- Local, Small Town Feel
- Consistent Small Scale
- Balanced Residential + Commercial Activity
- Pedestrian + Vegetation Presence

Community Heart
- Active Community Hub
  - North: Residential
  - South: Schools, Church, Hospital
  - Ped/Bike, Transit Opportunities
  - Beautification Opportunities

Parkway Zone
- Auto-Oriented Zone
  - Vehicular Oriented Pace + Scale
  - Beautification Opportunities
  - Opportunities to Increase Pedestrian, Bicycle + Transit Access

Bay Gateway
- Visual + Physical Link
  - Vehicular Oriented Pace + Scale
  - Opportunities to Strengthen Physical + Visual Connections
Introduction: Corridor Study Segments

- **SEGMENT 1**: Ross Limits to Broadway
- **SEGMENT 2**: Broadway to Wolfe Grade
- **SEGMENT 3**: Wolfe Grade to El Portal
- **SEGMENT 4**: El Portal to US 101
May 2, 2015
Community Meeting
Feedback
Summary of Corridor Priorities

Corridor Feedback Summary

- Improve Bicycle Access: 20
- Improve Bus Stops: 3
- Enhance Crosswalks & Reduce Crossing Distance: 38
- Improve Sidewalks & Address Missing Segments: 23
- Corridor Beautification: 5
- Improve Traffic Flow & Reduce Congestion: 74
EXISTING CONDITIONS, STRATEGIES, and TOOLKIT
Existing Conditions and Strategies:

- Traffic
- Pedestrian and Bicycle Access
- Transit Access
- Community Character
Existing Conditions and Strategies:

- Traffic
- Pedestrian and Bicycle Access
- Transit Access
- Community Character
Existing Conditions: Daily Traffic Volumes

weekday = Average Daily Traffic

<table>
<thead>
<tr>
<th>Location</th>
<th>2015 Traffic Volumes</th>
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<tbody>
<tr>
<td>ELM</td>
<td>26,800</td>
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<tr>
<td>LAUREL GROVE</td>
<td>35,600</td>
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<tr>
<td>WOLFE GRADE</td>
<td>28,000</td>
</tr>
<tr>
<td>ELISEO</td>
<td>45,500</td>
</tr>
<tr>
<td>LA CUESTA</td>
<td>49,500</td>
</tr>
<tr>
<td>BOXAIR RD</td>
<td>49,200</td>
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</tbody>
</table>

Vehicle Classification:
- <1% Bicycles
- 1% Motorcycles
- 1% Buses
- 5% Trucks
- 93% Passenger Vehicles

+5% Traffic Growth from 2011 to 2015
EXISTING CONDITIONS: Daily Traffic Volumes

AVERAGE DAILY TRAFFIC, 2011 COMPARED TO 2015
SIR FRANCIS DRAKE BOULEVARD AT ELISEO DRIVE

5% INCREASE IN WEEKDAY TRAFFIC IN 4 YEARS.
Existing Conditions: **Weekday Peak Hour Service Levels**
Existing Conditions: Vehicle Speeds

Source: Marin County, February 2015
Existing Conditions: Regional Traffic

Expected Benefits of 3rd Eastbound Lane on Richmond – San Rafael Bridge and Improvements on East Sir Francis Drake Blvd.

Planned Improvements

- Provide 2 southbound right-turn lanes and re-time intersection
- Extend eastbound left-turn lane 120 feet
- Provide 3rd Eastbound Lane
- Extend eastbound merge 1,000 feet

Legend

- Increasing Congestion

Existing (2015) Conditions (PM)

Forecast (2020) Conditions (PM)
Minimum standard lane widths:

11’ Travel Lane
10’ Turn Lane
Toolkit: Intersection Improvements

- Signal Phasing Changes
- Reconfigure Turn Lanes
- Signal Coordination
Potential Traffic Signal Upgrade

- Multiple traffic signal coordination plans
- System wide vehicle detectors, cameras, and communication upgrades
- Initial cost several million; ongoing maintenance

Potential Benefits on Sir Francis Drake Boulevard

- Most noticeable benefits related to incident management, off-peak and ‘shoulders’ of peak traffic
- Minimal benefit during periods of recurring congestion

Toolkit: Upgrade Traffic Signal System Technology
Existing Conditions and Strategies:

- Traffic
- Pedestrian and Bicycle Access
- Transit Access
- Community Character
Existing Conditions: **Bicycle & Ped Facilities**

- Signalized Intersection
- Multi-Use Path
- Corte Madera Creek Path
- Bike Lane (Painted Lane)
- Bike Route (Sharrow)
- Steep Grade

**SIDEWALKS**
- Less than 5’ With No Guardrail
- Less than 5’ With Guardrail
- 5’-10’ With No Guardrail
Existing Conditions: Key Routes to Schools
Existing Conditions: Ped Crossing Length
Toolkit: Sidewalk Widths

4’ – 6’ wide
Target minimum for new sidewalks

8’ – 10’ + wide
Allows for trees, streetlights, furnishings.
Toolkit: Pedestrian Crossing Enhancements

- Pedestrian refuge
- High-visibility crosswalk
- Flashing beacon
- Bulb-out
Toolkit: Bicycle Access

Bike Lane

Separated Bikeway

Bike Lane with Buffer

Multi-use Path
Existing Conditions and Strategies:

- Traffic
- Pedestrian and Bicycle Access
- Transit Access
- Community Character
Toolkit: Typical Bus Stop Improvement
Toolkit: Bus Shelters & Transit Amenities
Existing Conditions and Strategies:

- Traffic
- Pedestrian and Bicycle Access
- Transit Access
- Community Character
Existing Conditions: Community Character
Toolkit: Community Greening
ALTERNATIVES AND TRADEOFFS
Criteria to Evaluate Alternatives

- Traffic Performance and Reduction in Delay
- Pedestrian access
- Bicycle access
- Physical Feasibility – right of way, buildings, etc
- Cost
- Beauty/ Character
- Environmental Impact
Segment 1 - Community Feedback

• “Add crosswalks at every intersection”
• “Need more lighting at crossings and audible tones at signalized crossings”
• “Grade change and street alignment creates a sight distance challenge”
• “Increase left turn capacity at College Avenue”
NOTE: SIGNAL MODIFICATION REQUIRED

REMOVE 3-4 CURBSIDE PARKING STALLS

ADDITIONAL LEFT TURN LANE

REMOVE 5 CURBSIDE PARKING STALLS

SHORTEN POCKET BY 50' TO IMPROVE LANE TRANSITION DISTANCE
Ash Avenue - Pedestrian Crossing

- Bulbouts for additional pedestrian refuge
- Install RRFB system
- Wider median for additional pedestrian refuge
- Install pavement markings (typical)
- Install yield line
- Shift U-turns to Terrace Avenue
McAllister Avenue – Key Routes to Schools

- Reduce median and add merge lane to improve left turn from McAllister
- Bulbouts for additional pedestrian refuge
- Continuation of sidewalk to Stadium Avenue
Segment 1 - West of College Avenue

Existing

Bike Lane/Shoulder
Segment 1 - College to Broadway

Existing

Bike Lanes
Segment 2 - Community Feedback

- “Left turn lane into Bacich is not long enough”
- “No-turn-on-red signal is too long from SFDB to Wolfe Grade – backup occurs”
- “Remove parking along SFBD in front of Bacich and widen the sidewalk”
- “Keep parking on Sir Francis Drake at Bacich”
Laurel Grove Avenue

BULBOUTS FOR ADDITIONAL PEDESTRIAN REFUGE

BUS STOP

BULBOUTS FOR ADDITIONAL PEDESTRIAN REFUGE

ADJUST MEDIAN FOR ADDITIONAL CROSSWALK
Segment 2 - Cross Section Study

Bike Lanes

*Sidewalk, parking and bike lane don’t fit within ROW on south side.

Existing

At Bacich Elementary

Bacich Elementary – Bike Lanes, No Parking on South Side
Segment 3 - Community Feedback

- “Need to improve the sidewalks especially related to SRTS”
- “Marin Catholic’s driveway is hard to negotiate for bicyclists, vehicles, and pedestrians”
- “El Portal is too wide for pedestrian crossing”
- “Students heavily use the Rosey path connection”
- “Bon Air to SFDB has a heavy right turn movement complicating pedestrian crossing”
- “Need additional capacity in the right turn lane from SFDB to Bon Air Road – when the right and left turn lanes backup, there remains only one e/b through lane”
Segment 3 - Wolfe Grade to Bon Air

Existing Bike lane/shoulder EB & WB

No bike lanes, potential vegetated buffer

Bike lane/shoulder EB & WB
Segment 3 - Bon Air to El Portal

**Existing**
- Sidewalk south side, bike lane/shoulder WB only
- Bike Lane/Shoulder EB & WB, No SW South Side

**Sidewalk south side, bike lane/shoulder WB only**
- No bike lanes, potential vegetated buffer
Segment 4 - Community Feedback

- “Mark the third lane from El Portal to Highway 101”
- “Consider working with Bon Air to improve pedestrian access during their remodel”
- “Increase capacity of SFDB left turn pocket to Barry Way”
- “Make the shoulder a right turn lane into the Bon Air Center”
La Cuesta - Intersection Improvements

- Adjust median width to allow 3 lanes
- Remove right turn lane and create larger pedestrian refuge area
- Remove all pork chop islands
- 3rd lane improvement
Segment 4 - Cross Section Study

**Existing**
- 2 lanes both ways, sidewalks, bike lanes
- 3 lanes eastbound, bike lane/shoulder WB only

**Proposed**
- 2 lanes both ways, sidewalks, bike lanes
- 3 lanes eastbound, multi-use path on north side
## Segment 4 - Delay Reduction Analysis

### Potential Benefits: Peak Period Delay Reduction

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<thead>
<tr>
<th>LOS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<td>Intersection Improvements No 3rd Lane</td>
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<td>Intersection Improvements + EB 3rd Lane</td>
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<tr>
<td>Intersection Improvements + EB &amp; WB 3rd Lane</td>
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- **Delay**
- **Delay Reduction**

**EXISTING**

**PROPOSED**
Breakout Session
Breakout Session - 8:00 to 8:45 PM
## Alternatives Summary

### Segment 1 – Ross Limits to Broadway
- Alternative 1A: BIKE LANES
  - BiKE lanEs both directions

### Segment 2 – Broadway to Wolfe Grade
- Alternative 2A: BIKE LANES
  - BiKE lanEs both directions
  - Reduced parking at Bachrach Elementary to accommodate bike lane
- Alternative 2B: BIKE LANES
  - BiKE lanEs both directions
  - End bike lane at Bachrach Elementary to retain on-street parking

### Segment 3 – Wolfe Grade to I-5 Portal
- Alternative 3A: SIDEWALKS
  - SideWALKS both sides, entire length of segment
  - Bike lane/shoulder westbound only, Ross Air to I-5 Portal
- Alternative 3B: BIKE LANES
  - BiKE lanEs both directions, entire length of segment
  - No sidewalk on south, Son Air to I-5 Portal
- Alternative 3C: SIDEWALKS + VEGETATED BUFFERS
  - SideWALKS both sides, entire length of segment
  - No bike lanes
  - Potential vegetated buffers between roadway and sidewalks

### Segment 4 – I-5 Portal to US 101
- Alternative 4A: SIDEWALKS + BIKE LANES
  - ImProved sidewalks both sides
  - BiKE lanEs both directions
  - No third lane
- Alternative 4B: THIRD LANE EASTBOUND
  - 3 lanes eastbound
  - BiKE lane/shoulder westbound only
- Alternative 4C: THIRD LANE EASTBOUND + MULTI-USE PATH
  - 3 lanes eastbound
  - Multi-use path north side
# Workshop Exercise

Write your comments here!

Use your dots to indicate your preferences here!

## SEGMENT 2
BROADWAY TO WOLFE GRADE

<table>
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<tr>
<th>DESCRIPTION</th>
<th>PLAN</th>
<th>BROADWAY TO BACICH ELEMENTARY</th>
<th>AT BACICH ELEMENTARY</th>
<th>TRADE-OFFS</th>
<th>DOTS</th>
<th>COMMENTS</th>
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<td><img src="image" alt="Existing Conditions Broadway to Bacich" /></td>
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<td><img src="image" alt="Existing Conditions Trade-offs" /></td>
<td><img src="image" alt="Existing Conditions Dots" /></td>
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<td>Alternative 2A: BIKE LANEs</td>
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<td>• BIKE LANEs Both Ways</td>
<td>• BIKE LANEs Both Ways</td>
<td>• Reduced Parking at Bacich Elementary</td>
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<td>Alternative 2B: BIKE LANE</td>
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<td>• BIKE LANE Both Ways Except at Bacich</td>
<td>• Bidirectional Parking at Bacich Elementary</td>
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Feel free to mark-up the drawings!
Mark up the plan to suggest bike-network improvements!
Next Steps: Project Schedule

**SPRING 2015**
- Existing Conditions
  - Opportunities
  - Constrains
  - Public Brainstorming (May)

**FALL 2015**
- Review Potential Alternatives

**WINTER 2016**
- Review Refined Alternatives

**SPRING 2016**
- Review Preferred Alternative

**FALL 2016**
- Complete Environmental Process

**2017-2018**
- Project Design and Construction
Additional Comments:

www.marincounty.org/depts/pw/divisions/transportation/sir-francis-drake-boulevard-rehabilitation