

VTA's BART Silicon Valley Phase II Extension

Santa Clara Community Working Group

June 11, 2015



Agenda



- Recap of CWG Process
- Follow up items
- VTA's BART Silicon Valley Program status
 - Phase II recap
 - Environmental update
 - Community Engagement process
- Ridership and Modeling
- Planned Land Use Framework
- Next Steps



CWG Process

Eileen Goodwin, Facilitator

3



Role of the CWG

- Be project liaisons
- Receive briefings on technical areas
- Receive project updates
- Build an understanding of the project
- Collaborate with VTA
- Contribute to the successful delivery of the project

4

Your Role as a CWG Member



- Attend CWG meetings
 - Bring your own binder (BYOB)
- Be honest
- Provide feedback
- Get informed
- Disseminate accurate information
- Act as conduits for information to community at large

5

Role of the CWG Team



CWG Team Member	Role
Eileen Goodwin	Facilitator
Erica Roecks	Primary Outreach Contact & Technical Lead
Leyla Hedayat	Phase II Project Manager
Debby Fernandez	City of Santa Clara – Planning Liaison
Dennis Ng	City of Santa Clara – Engineering Liaison

6

Work Plan



Items from the work plan discussion during orientation fall in 3 categories:

- Item was added to the work plan
 - Added early because it informs CWG of items to be discussed in the 1st quarter of 2016
 - Added later because decision or information is not readily available
- Item is included as part of topic previously identified in the work plan
- Item will be covered at a later date at another meeting, but we will inform the CWG when info becomes available or topic is not part of the scope of this project

7

Work Plan Items



- BART staff to present need for maintenance facility and justification of location of maintenance facility including why facility cannot be at the Hayward maintenance facility(HMF). HMF is expanding for Phase I, why not just accommodate the Phase II extension at HMF also
- Presentation on proposed ridership at Santa Clara Station—justification for station in Santa Clara and dollar savings from deferring Santa Clara Station
- Financial Analysis as part of New Starts program, including operations and maintenance assumptions.
- Presentation on emerging technologies (driverless cars, parking garage technologies etc.)
- Presentation on 2000 Measure A--how can those projects be modified or dropped.
- Presentation on HSR Interface at Diridon.

8

Work Plan Items (continued)



- Presentation regarding details of construction staging.
- Presentation on shared parking opportunities.
- Presentation in June about VTA's community engagement process for this effort. Cover how CWG member blogs and lists can be utilized.
- Presentation on Measure B BART operations fund.
- Impact of internet sales on sales tax revenues.
- Presentation on project status regarding what is at what level of design particularly the 90% level in June.
- City to present its plans in June.
- Have a panel of BART construction "neighbors" come and do a Q and A with the group at a future meeting.

9

Work Plan Items (continued)



- Presentation on Santa Clara West parking option: Why is the option being studied now after it was not studied in the original EIR?

10

Follow-up Items



- Add Envision Process to graphic schedule
- Send Jack Morash station graphic
- Coordinate corridor tour for Denise Harris and members of the Santa Clara Chamber of Commerce
- Send Jack Morash Diridon CWG meeting dates and locations

11

Upcoming Meetings



VTA Board of Directors

- August 6, 2015
- September 3, 2015
- October 1, 2015

SVRT Program Working Committee

- August 3, 2015
- October 5, 2015
- December 7, 2015

City of San Jose Station Area Walk Audits

- July 21, 2015

12



Project Status

Erica Roecks, Project Engineer

13



Phase II Design Completion

Tunnel

EPB Boring Machine	95%
Tunnel Liners	95%
Horiz. & Vert. Alignment / Geotech.	95%
Trackwork	65%
Portal Structures	65%
Mid-Tunnel Ventilation structures	65%
Cross Passages	65%

Stations

Alum Rock	65%
Downtown	65%
Diridon/Arena	65%
Santa Clara	65%

Systems

Traction Power	65%
Line Electrical	65%
Train Control	65%

Maintenance and Storage

Newhall Yard	30% - 50%
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14

Environmental Update



- Scoping Report released May 26, 2015
- Over 350 total comments were received in all.
- Documents and consolidates comments received, and considers:
 - Topics/concepts already analyzed
 - Topics/concepts that are not feasible and/or outside of environmental scope
 - New topics/concepts that are feasible and warrant analysis
- Technical analysis continues

15



Community Engagement process

Brent Pearse, Community Outreach

16

Community Engagement



- Strategy: To actively engage and educate community stakeholders on project status and technical subjects
- Build long term relationships that will last through environmental, final design and construction
- Develop and encourage public participation between VTA and the community

17

Three Pronged Approach



- 1. Workshops and Walks:** Engage audiences, dive deep on complex subjects: finance/funding, ridership/modeling, access and construction
- 2. Community Engagement during Environmental Process**
- 3. Ongoing Communication:** 20 plus presentations to organizations/businesses since early 2015



18

Important Upcoming Opportunities



Open to All

1. **July 21, 2015** – Access Planning – Audit Walk, CSJ Lead
2. **July 2015** – Land Use Workshop
3. **October 2015** – Finance/Measures A Workshop
4. **January 2016** – Construction Methods/Approach

Why These Topics?

Answer: We receive more public comments and questions on these topics than anything else.

Goal: Address questions and concerns through technical experts and hands on exercises

19

General Questions




- When and how is the best time to use my own organization communication tools: blog, website, social media?
 - A: Key project milestones, release of public documents, board meetings
- What types of other groups has or will VTA outreach to?
 - A: Business organizations, community based organizations, low income/minority communities
- How can assigned outreach staff assist me?
 - A: Organize special presentations, meetings, follow up on questions and concerns, keep us moving forward

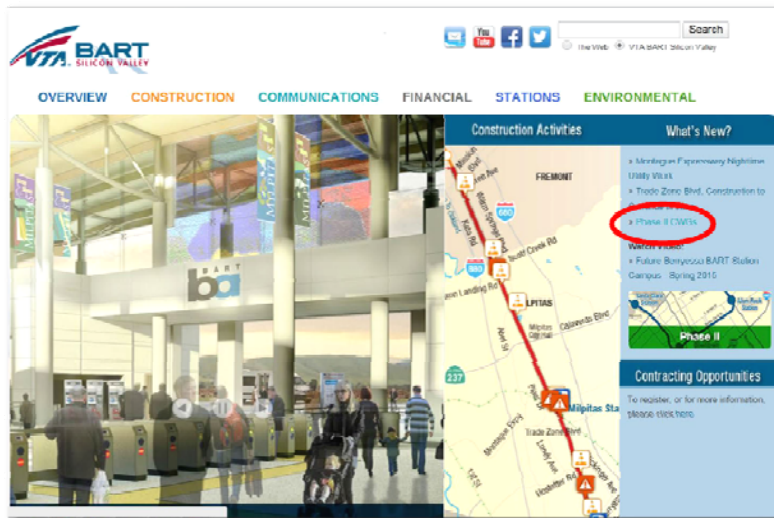
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Staying Involved



- CWG Portal on www.vta.org/bart/phaseIICWGs
- Email Updates: www.vta.org/bart/subscribe
 - Recommend Topics BART Planning, BART, Environmental, BART News
- Social Media Sharing
 -  @bartsv
 -  facebook.com/bartsv
- Committee and Board Meetings

CWG Information - www.vta.org/bart/phaseIICWGs



CWG Information - www.vta.org/bart/phaseIICWGs



Home > Environmental Phase II

Phase I Environmental | **Phase II Environmental**

Environmental Documents | **Phase II CWGs**

Phase II Quick Links

- Environmental Documents
- Phase II Extension Map
- Upcoming Meetings
- VTA's BART Silicon Valley Phase II Extension Project Environmental Process - Fact Sheet 2015 - pdf
 - Spanish
 - Chinese
 - Vietnamese
 - Korean
 - Portuguese
- BART Phase II Environmental Scoping

Project Description

The BART Silicon Valley Phase II Extension Project is planned to begin ground level at the Berryessa Extension terminus south of the Berryessa Station in the City of San Jose, descend into an approximately 5-mile-long subway tunnel, continue through downtown San Jose, and terminate at-grade (street level) near the existing Caltrain Station in the City of Santa Clara.

23

CWG Information - www.vta.org/bart/phaseIICWGs



Home > Environmental > Environmental Phase II > Environmental Phase II CWGs

Phase II Community Working Groups

Alum Rock CWG

- Alum Rock CWG Work Plan
- 05-13-15 Alum Rock CWG Orientation Agenda
- 05-13-15 Alum Rock CWG Orientation Presentation
- 05-13-15 Alum Rock CWG Orientation Meeting Summary
- Alum Rock CWG Contact List

Downtown/Diridon CWG

- Downtown/Diridon CWG Work Plan
- 05-12-15 Downtown/Diridon CWG Orientation Agenda
- 05-12-15 Downtown/Diridon CWG Orientation Presentation
- 05-12-15 Downtown/Diridon CWG Orientation Meeting Summary
- Downtown/Diridon CWG Contact List

Santa Clara CWG

- Santa Clara CWG Work Plan
- 05-14-15 Santa Clara CWG Orientation Agenda
- 05-14-15 Santa Clara CWG Orientation Presentation
- 05-14-15 Santa Clara CWG Orientation Meeting Summary
- Santa Clara CWG Contact List

Phase II CWG Links

- Upcoming Meetings
- Role of Community Working Groups
- Community Working Groups Map
- Community/Stakeholder Engagement Milestone Schedule
- Travel Demand Modeling Fact Sheet
- Environmental Process Fact Sheet
- Phase II Frequently Asked Questions

Hotline: (408) 934-2662 | Email: vtabart@vta.org | Connect with us: [Social Media Icons]

24

Santa Clara Valley Transportation Authority Countywide Model

Presented by George Naylor
Transportation Planning Manager
Travel Demand Forecasting, Research and GIS
Santa Clara Valley Transportation Authority

george.naylor@vta.org

June 11, 2015



Overview of the VTA Travel Demand Model



- Set of Mathematical Models Used to Estimate Existing and Future Travel Patterns > Planning Tools used for Policy Decisions
- Key Inputs – Land Uses, Transportation Networks, Pricing
- Key Outputs – Trips, Mode Shares, Travel Volumes on Roadways and Transit Lines, Travel Speeds and Times

Overview of the VTA Travel Demand Model

- Developed using Observed Travel Patterns from Household Travel Survey Data and Census (Calibration and Validation)
- Forecast Inputs are Applied to Predict Travel Demand
- Used to Define Transportation Improvement Policies and Test ‘What-if’ Scenarios
- Allows for Different Scales of Analysis > Regional, County, Facility, Route, Transit Stop/Station

27

The Basic Travel Demand Modeling Process

Model Inputs



Apply Model Equations

$$a^2 + b^2 = c^2$$

$$T_{ij} = T_i \frac{A_j f(C_{ij}) K_{ij}}{\sum_{j=1}^n A_j f(C_{ij}) K_{ij}}$$



$$e = mc^2$$

Generate Model Outputs



28

Key Model Inputs - Building Blocks



- Socioeconomic Data Inputs
 - Development Patterns and Activities
 - Population, Households, Workers, Age, Income
 - Provided by ABAG: reviewed by local jurisdictions
 - Employment by Industry Type (Retail, Manufacturing, Service, etc.)
 - Summarized by Traffic Analysis Zone
 - Multi-modal Transportation Network Inputs
 - Roadways, Transit Lines and Stations, Bicycle Paths, Pedestrian Paths
 - Pricing Descriptors
 - Gasoline, auto operating, transit fares, parking costs, tolls

29

Socio-economic Data Inputs



- VTA is required to use the official regional forecasts prepared by Association of Bay Area Governments (ABAG)
- ABAG prepared latest series used in the Regional Transportation Plan (RTP) known as ABAG Projections 2013
- Projections 2013 have been tailored to meet ABAG and MTC policy goals as well as meet GHG emission targets mandated by Senate Bill 375
- VTA receives census tract data from ABAG
- Data are then allocated to smaller Traffic Analysis Zones (TAZs) for use in the VTA models

30

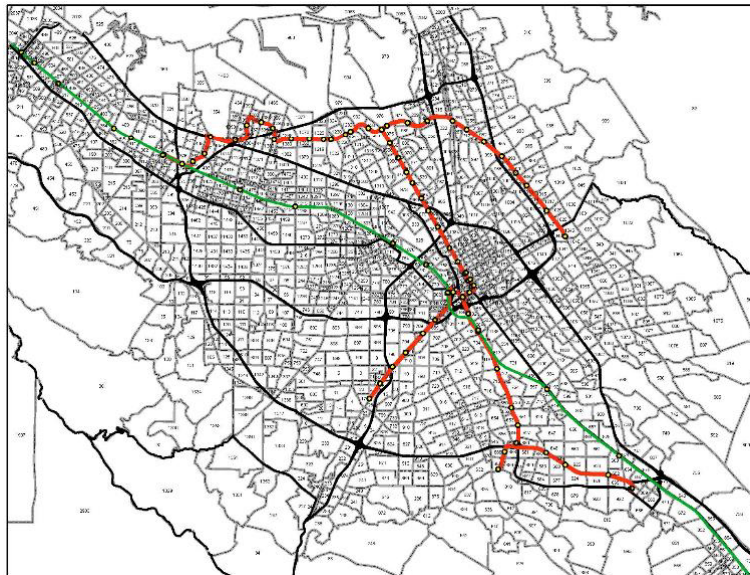
Allocation Procedure to VTA Model Traffic Analysis Zones (TAZ)



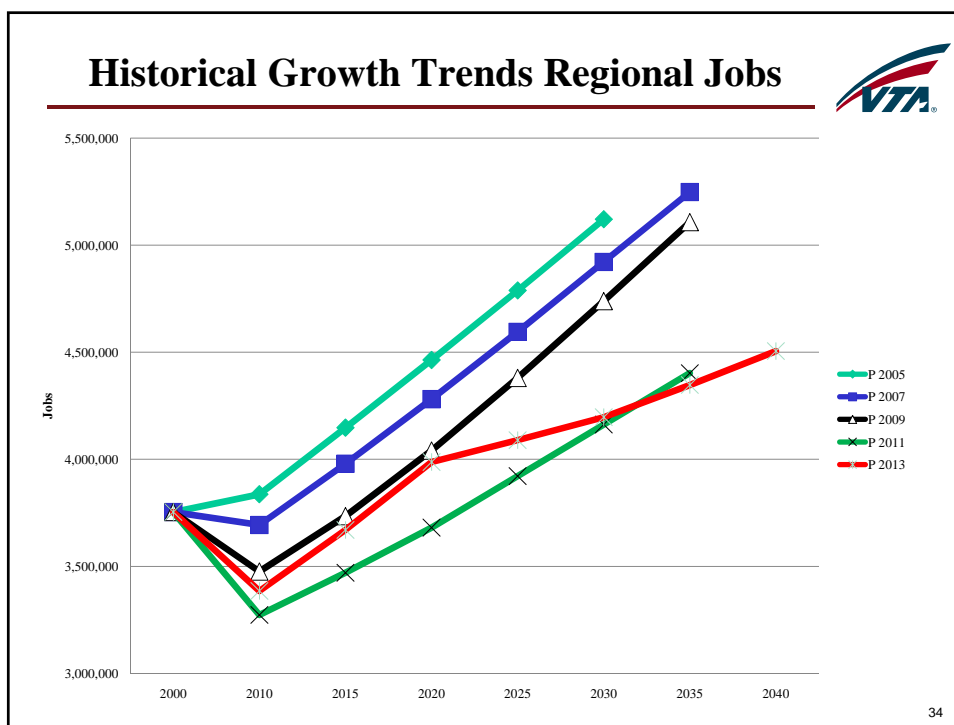
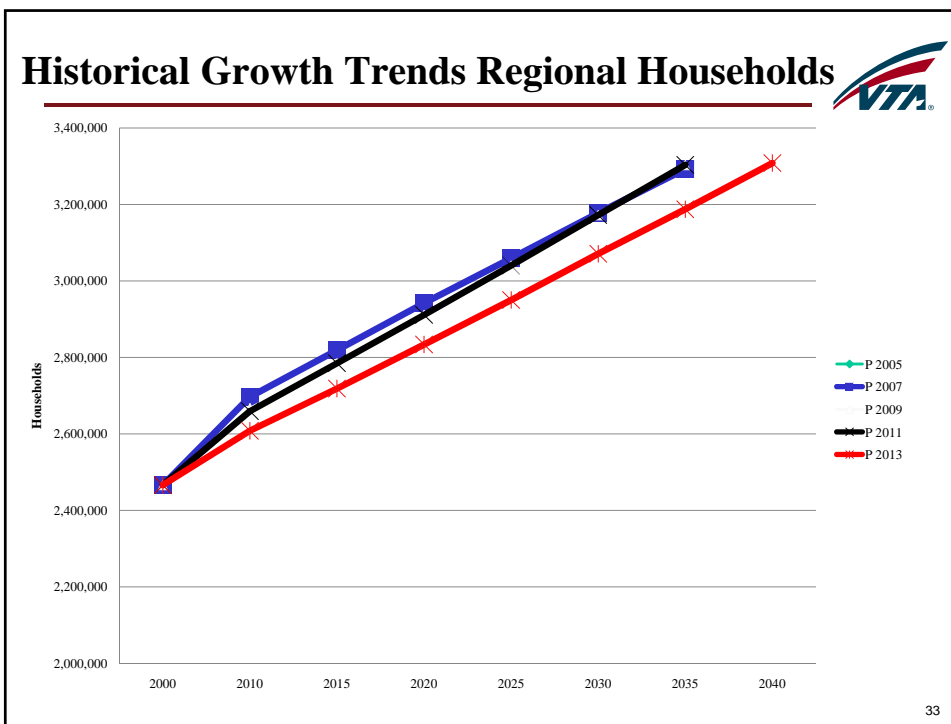
- Start with development of base year 2010
- Households and population from 2010 Census
- Jobs from latest parcel data from Dataquick
- Allocated ABAG Census totals to Traffic Analysis Zones (TAZs)
- Added in future growth from approved projects inventory
- Allocated to specific areas based on General Plan data from jurisdictions (if available)
- Conserve to ABAG census tract control totals

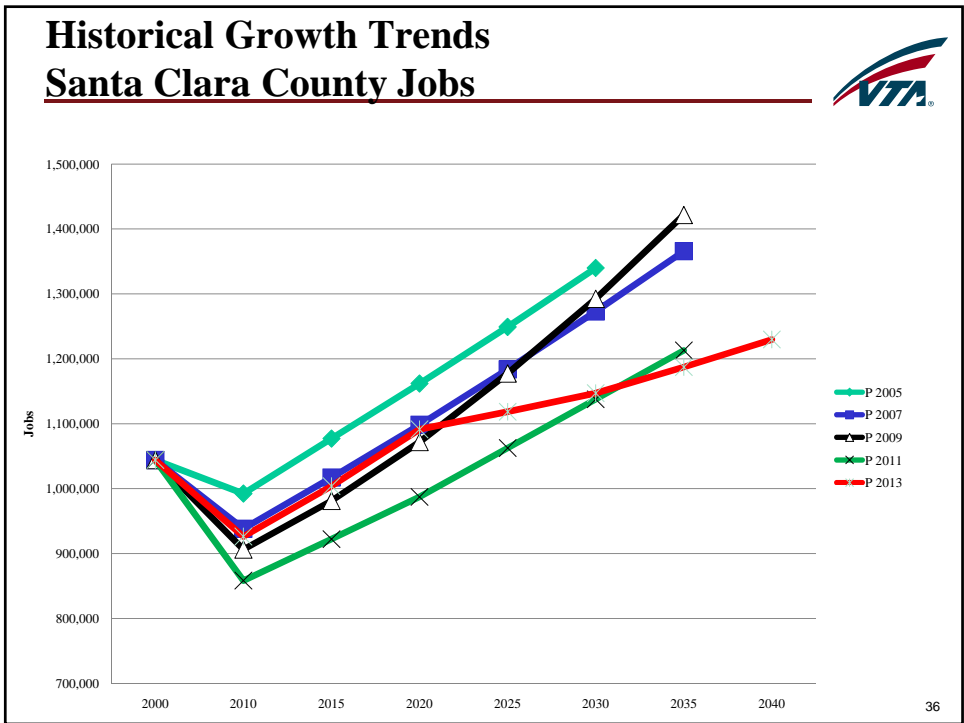
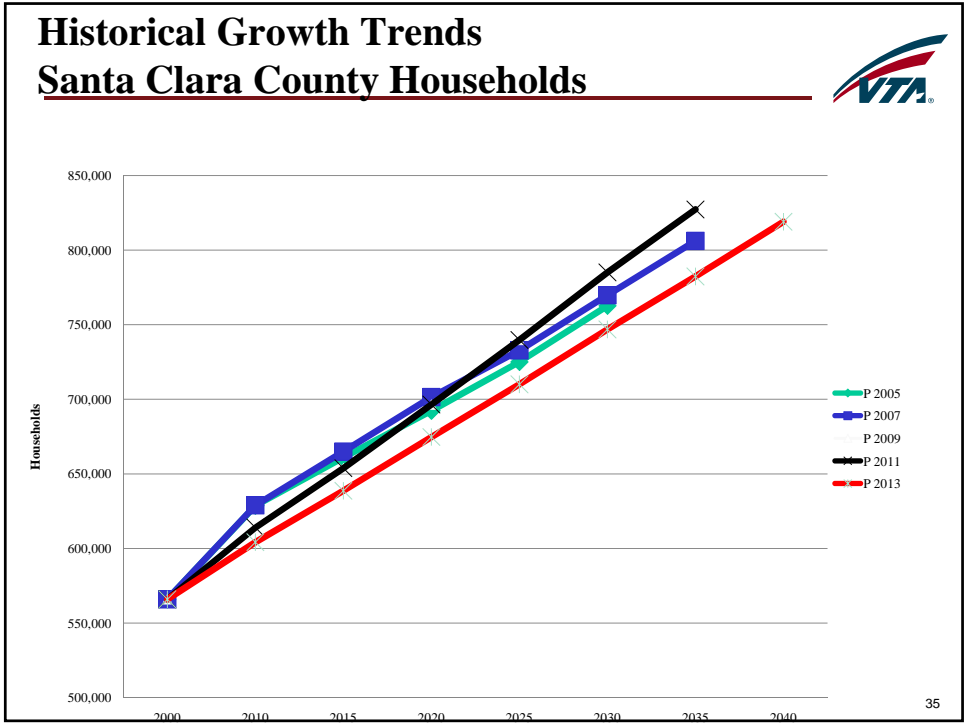
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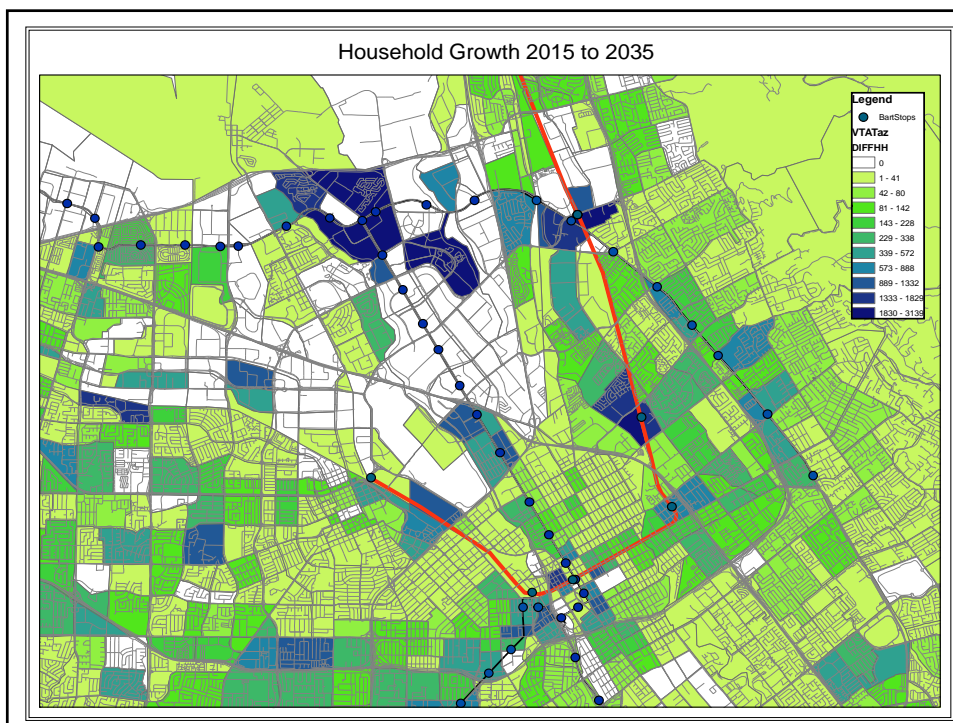
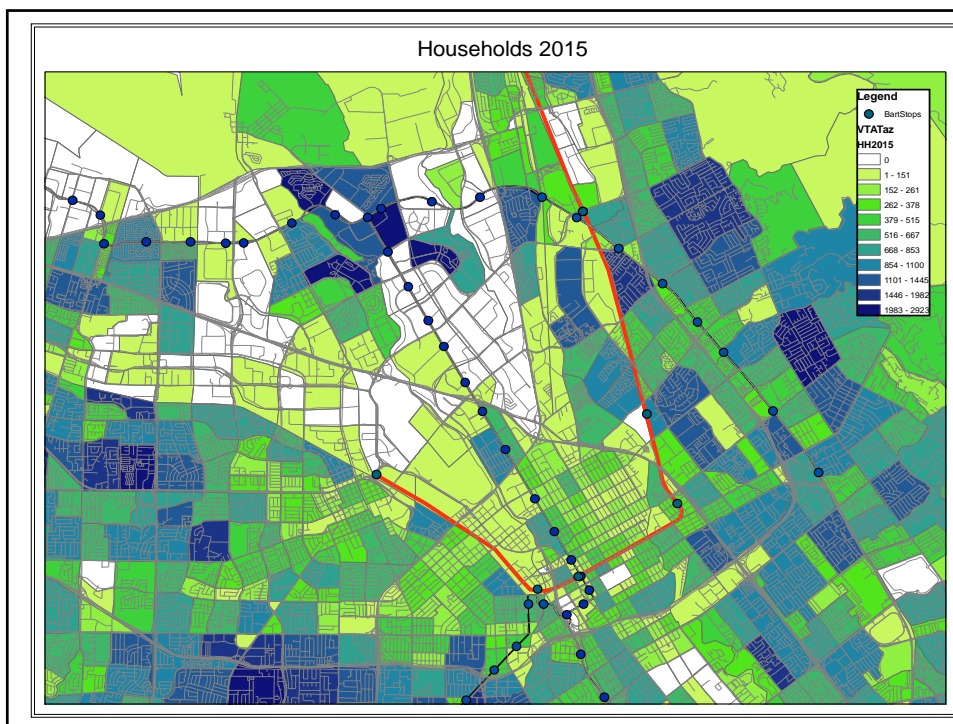
Countywide Model Traffic Analysis Zones

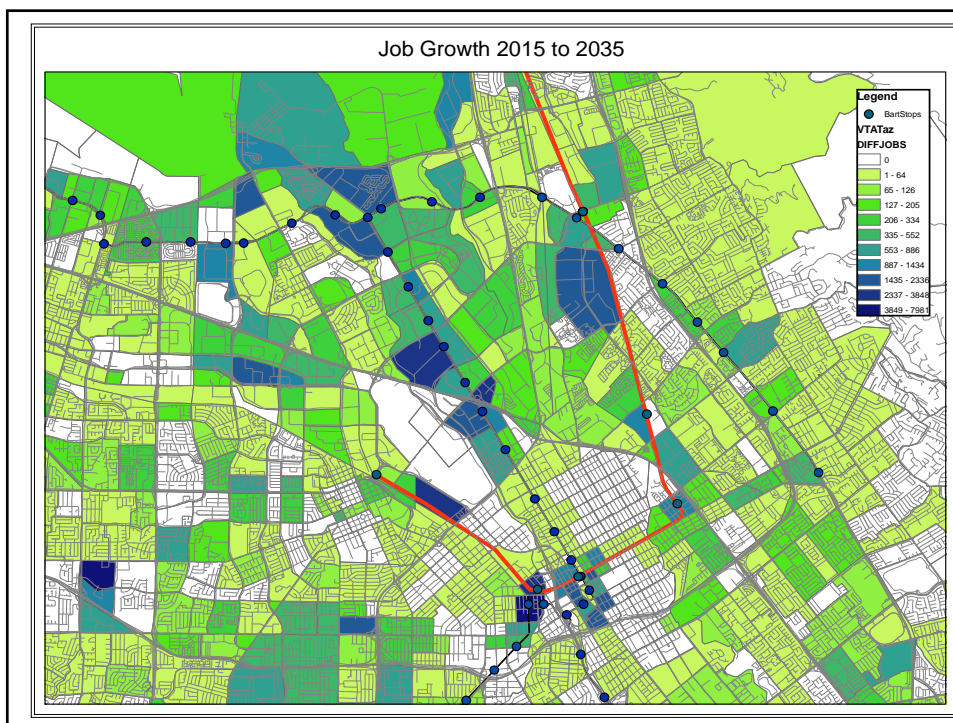
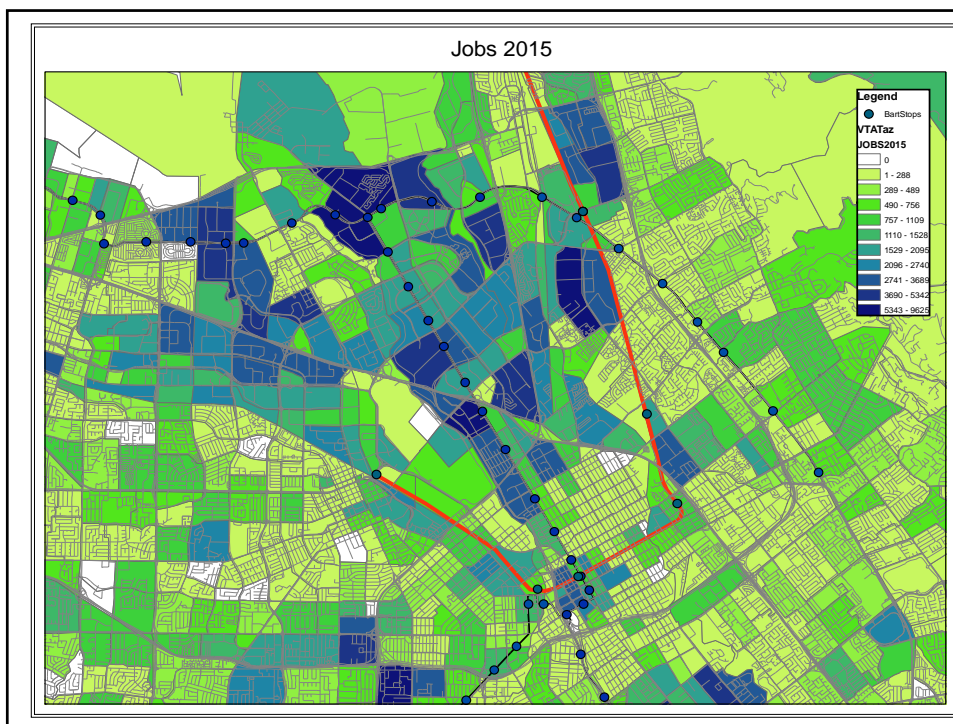


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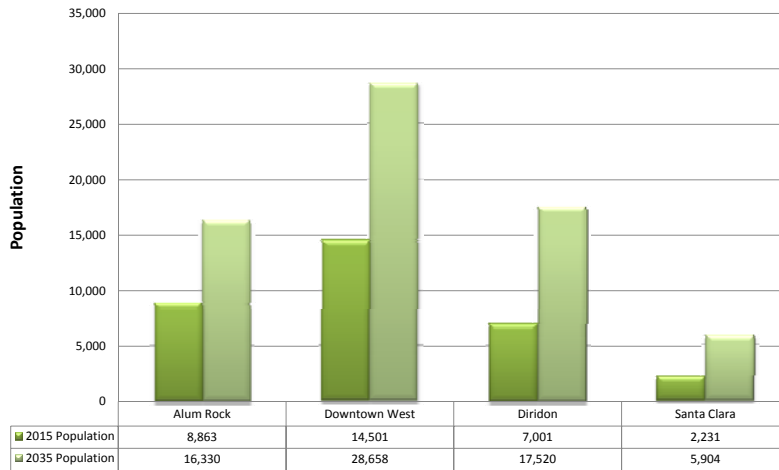




Station Area Demographics - Population



Year 2015 and 2035 Population within 0.5 Miles of Station

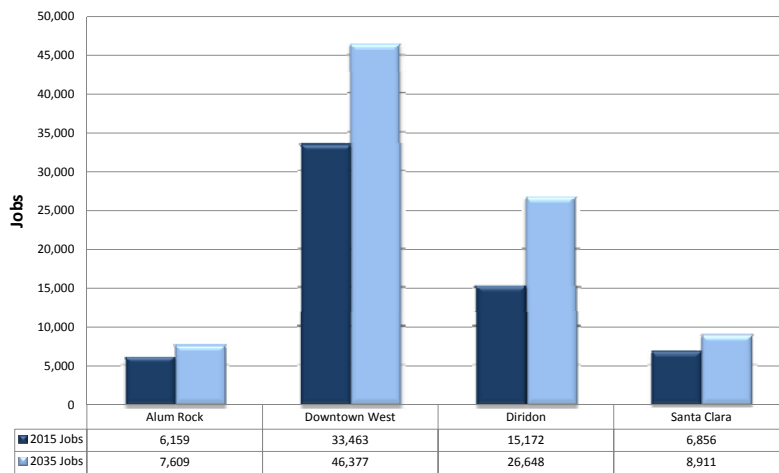


41

Station Area Demographics - Jobs



Year 2015 and 2035 Jobs within 0.5 Miles of Station



42

Highway and Transit Networks



➤ Highway Networks

- Roadway attributes on network links
- Lanes, free-flow speeds, peak hour lane capacities, etc.

➤ Transit Networks

- Bus service utilizes road network speeds
- Rail and Ferry services use transit links with coded speeds
- Transit attributes include:
 - Frequencies (peak and off-peak)
 - Fares
 - Stop/Non-stop coding
 - Access connectors (walk, transfer, park-and-ride)

43

Model Calibration and Validation



➤ VTA Models are Calibrated to Observed Data

- 1990 MTC Home-Interview Travel Survey for Non-work Trips
- 2010 Census Data Travel Patterns for Work Trips

➤ VTA Models are Validated to Observed Traffic and Transit Patterns

- AM and PM Peak Traffic Counts
- Daily Transit Boardings by Operator (BART, Caltrain, VTA)

44

Year 2035 Forecast Networks



- Includes Funded Projects in the Adopted Regional Transportation Plan
- Major Transit Projects Include:
 - VTA BART Extension to Silicon Valley
 - 2-Station Phase I in 2035 No Project (existing + committed projects included)
 - 4-Station Phase II in 2035 Project
 - Caltrain Electrification and Transbay Extension
 - VTA Light Rail Improvements
 - Capitol Corridor Extension
 - Vasona Corridor Extension
 - Alum Rock-Mountain View (Long T) Line
 - VTA ECR and Stevens Creek BRT Corridors
- Major Highway Projects Include:
 - VTA Express Lane Corridors – Countywide
 - Various Countywide Roadway Improvements

45

BART Silicon Valley Extension



- Model output used in all phases of Project Analysis
 - Transit ridership
 - New transit trips and diverted transit trips
 - Transit vehicle requirements
 - Rail and bus vehicles
 - Station boardings by access/egress modes for station design
 - Park-and-ride spaces and required/kiss-and-ride drop-off
 - Transit transfers – station design for feeder bus and shuttle access/egress

46

BART Silicon Valley Extension



- Capital cost estimates

- Operating and maintenance cost estimates

- Traffic volumes
 - Station intersection level-of-service impacts

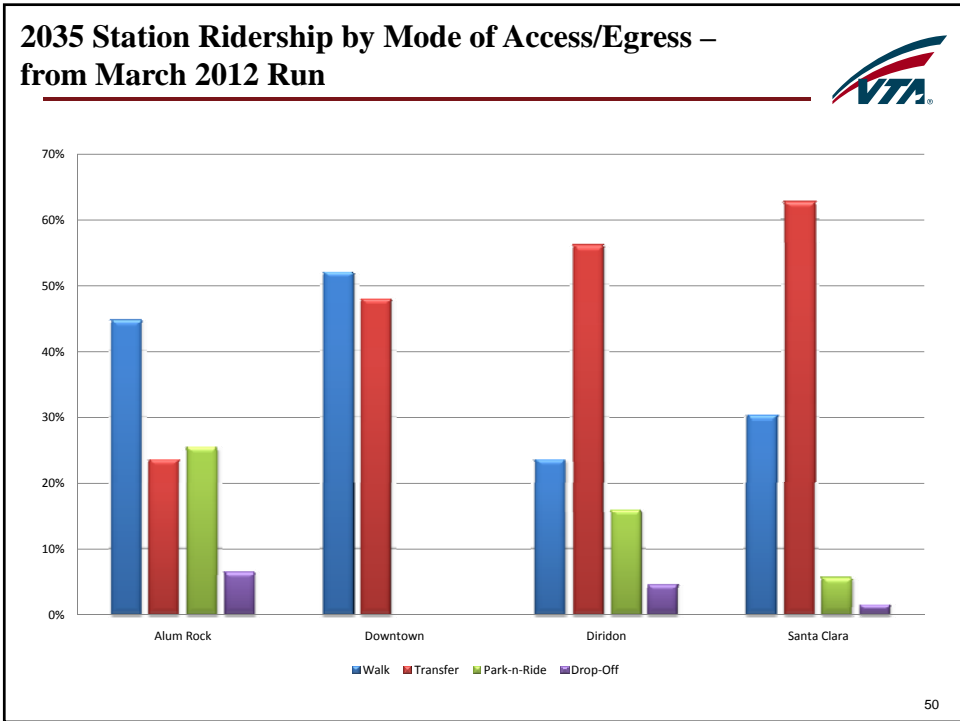
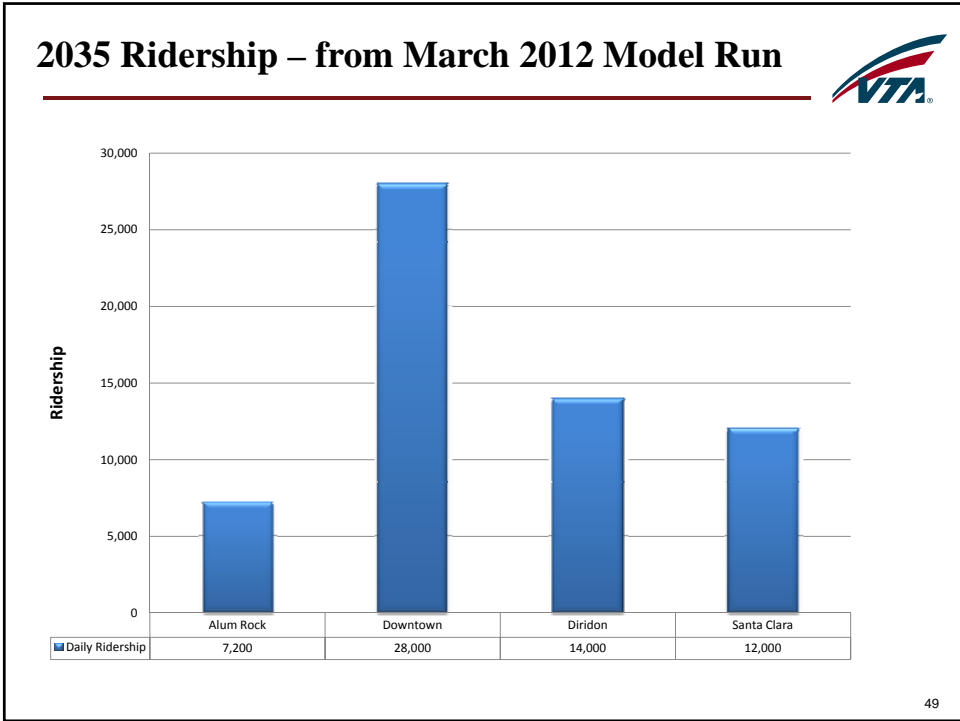
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EIR and FTA Ridership Requirements



- Transit Ridership
 - No Project and Project
 - Existing Year (2015) and 20 year horizon (2035)
 - Opening Year 2025
 - New Starts final reported ridership is calculated as 50 % of existing and 50% of horizon ridership
 - FTA requires an estimate of project ridership made by transit dependents – for VTA models these are lowest income riders estimated by the models

48



Questions??



51

What's Next for Ridership?



- Continue Community Outreach efforts
- Support Environmental Documentation Process – 2015 → 2017
- Coordinate with FTA for Review of Ridership Forecasts – 2015 → 2017
- Incorporate updated ABAG Regional Growth forecasts when available (likely late 2016 → early 2017)
- New Starts Submittal (2017)

52



Update on Planning Efforts in Station Area

Kevin Riley, Director of Planning &
Inspection – Santa Clara

53

City of
Santa Clara

VTA's

BART Silicon Valley Extension

Community Working Group

June 11, 2015



Santa Clara Station Area

Planning Efforts

2002 Transit Area Concept Plan

2010 Santa Clara Station Area Plan

2010-2035 City General Plan

Station Area viewed as an opportunity to meet housing needs and provide desirable commercial uses in a strong transit oriented locale with minimal effect on existing City residential areas.

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City of Santa Clara Transit Area

Concept Plan

Opportunity Sites



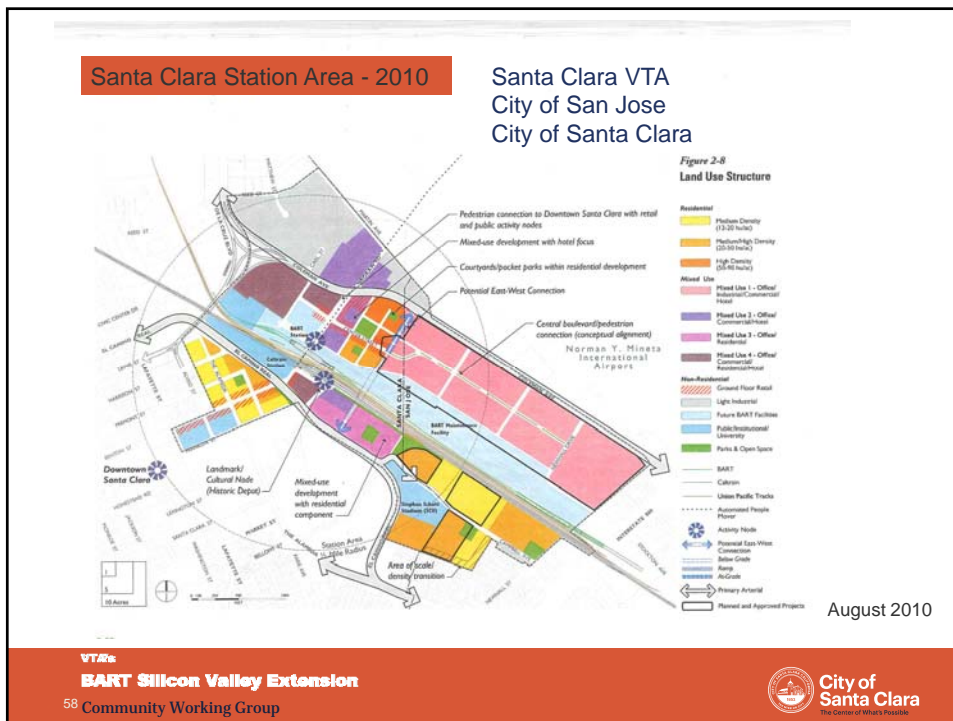
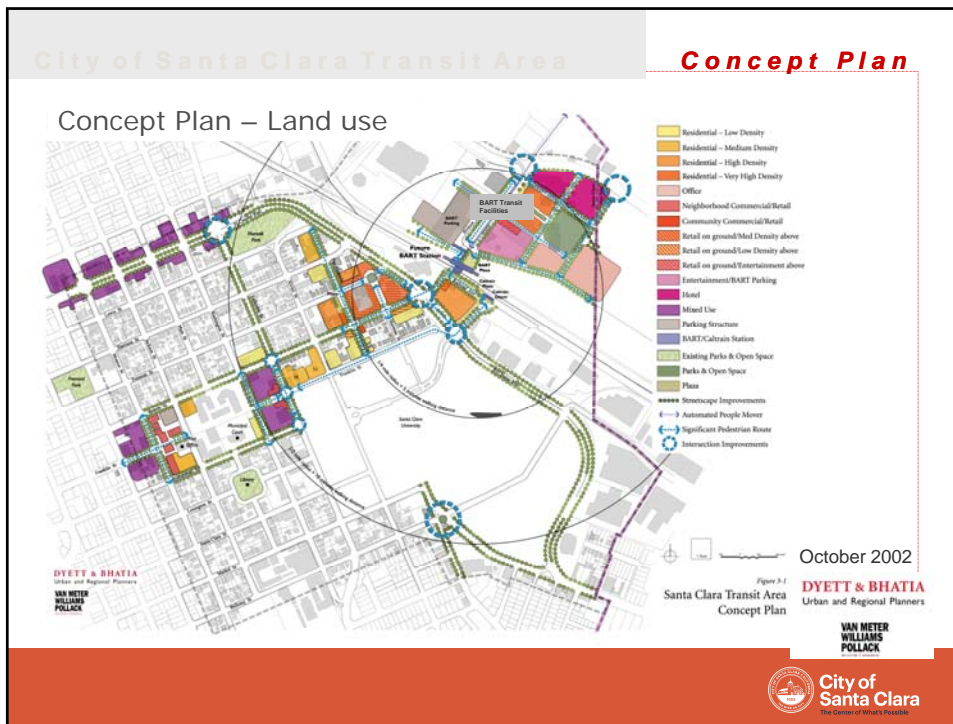
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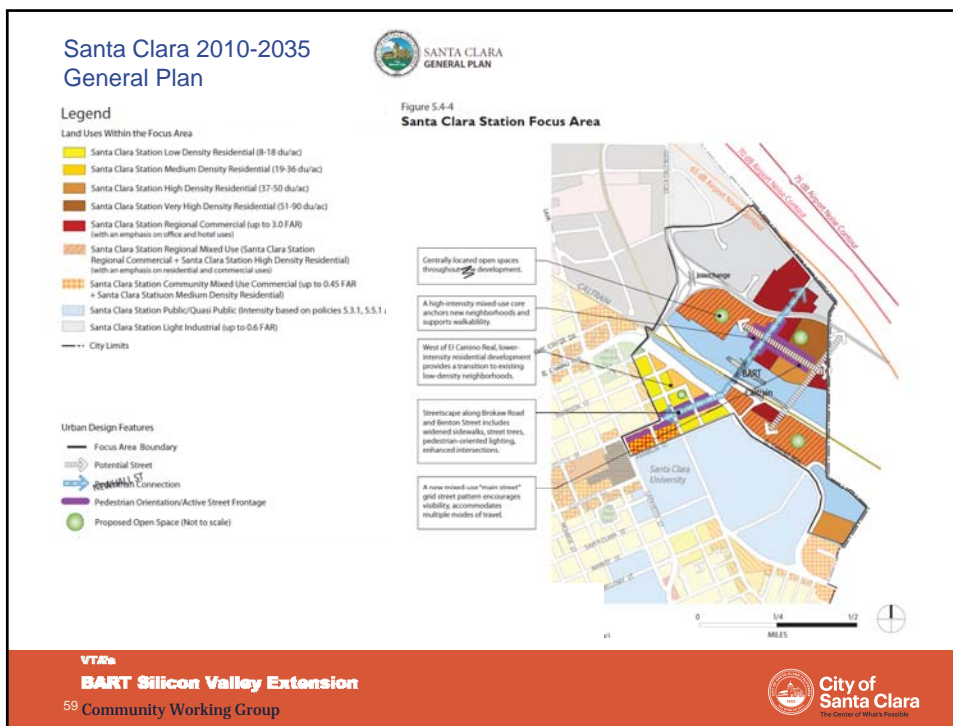
DYETT & BHATIA
Urban and Regional Planners

**VAN METER
WILLIAMS
POLLACK**

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June 11, 2015

City of Santa Clara
The Center of What's Possible



Discussion

Eileen Goodwin, Facilitator

Next Steps



- Next meeting: Thursday, August 13, 2015 ~ 4:00-6:00 PM,
Santa Clara Senior Center ~ BYOB
 - Financial Analysis of BART Phase II (VTA staff & Ernst and Young)
 - City related projects within the BART corridor (Santa Clara staff)
 - VTA related projects within the BART corridor (VTA staff)
 - Economic Analysis surrounding BART stations (SPUR staff)
 - Envision project update (VTA staff)
- Action Items