ALAMEDA County Transportation Commission
1333 Broadway, Suites 220 & 300 ▪ Oakland, CA 94612 ▪ PH: (510) 208-7400
www.AlamedaCTC.org

Technical Advisory Working Group
Meeting Agenda

Thursday, April 14, 2011, 1:30 to 4 p.m.
1333 Broadway, Suite 300, Oakland, CA 94612

Meeting Outcomes:

- Receive an update on the Countywide Transportation Plan and Transportation Expenditure Plan (CWTP-TEP) activities since last meeting
- Discuss Alameda County land use scenarios
- Receive an update on call for projects and programs and discuss methods of packaging transportation projects and programs for CWTP
- Discuss the transportation issue white papers and best practices
- Receive a presentation of polling results
- Discuss outreach outcomes and next steps
- Receive an update on the Sustainable Communities Strategy (SCS)/Regional Transportation Plan (RTP) process

1:30 –1:35 p.m. **1. Welcome and Introductions**

1:35 – 1:40 p.m. **2. Public Comment** I

1:40 – 1:45 p.m. **3. Review of March 10 and 18, 2011 Minutes** I
03_TAWG_Meeting_Minutes_031011.pdf – **Page 1**
03A_TAWG_Special_Meeting_Minutes_031811.pdf – (handout at meeting)
03B_TAWG_Comments_on_031011.pdf – **Page 7**

1:45 – 1:50 p.m. **4. Update on CWTP-TEP Activities Since Last Meeting** I

1:50 – 2:10 p.m. **5. Discussion on Alameda County Land Use Scenarios** I
05_Alameda_County_Land_Use_Memo.pdf – (handout at meeting)

2:10 – 2:30 p.m. **6. Call for Projects and Programs Results and Discussion on Methods for Packaging Transportation Projects and Programs for CWTP** I
06_Memo_on_Programs_and_Projects_Packaging.pdf – **Page 9**
06A1_Preliminary_List_of_Programs_and_Projects.pdf – **Page 13**
06A2_Adopted_Performance_Measures.pdf – **Page 43**
06A3_CWTP-SCS-RTP_Process_Flowchart.pdf – **Page 45**
06A4_Screening_and_Scenario_Dev_Process.pdf – **Page 47**

2:30 – 2:45 p.m.	**7. Discussion on Transportation Issue White Papers and Best Practices** *07 Memo Transportation Issues Overview.pdf* – **Page 51** *07A Sustainability Principles.pdf* – **Page 53** *07B Innovative Funding Opportunities.pdf* – **Page 67** *07C Transit Integration and Sustainability.pdf* – **Page 83** *07D TDM and Parking Management.pdf* – **Page 99** *07E Goods Movement.pdf* – **Page 119** *07F Land Use and CWTP.pdf* – **Page 135** *07G TAWG Issue Papers Presentation.pdf* – **Page 151**	I
2:45 – 3:00 p.m.	**8. Presentation on Polling Results** *08 Polling Results Presentation.pdf* – **Page 163**	I
3:00 – 3:15 p.m.	**9. Presentation/Discussion on Outreach Outcomes and Next Steps** *09 Memo Outreach Update.pdf* – **Page 181** *09A Outreach Presentation.pdf* – **Page 187**	
3:15 – 3:30 p.m.	**10. SCS/RTP: Update on Countywide and Regional Processes** *10 Memo Regional SCS-RTP CWTP-TEP Process.pdf* – **Page 207** *10A Summary CW Regional Planning Activities* – **Page 211** *10B CWTP-TEP-SCS Development Impl Schedule.pdf* – **Page 213** *10C ABAG Memo on Initial Vision Scenario.pdf* – **Page 217** *10D ABAG IVS Presentation.pdf* – **Page 219** *10E RTP-SCS Overview and Schedule.pdf* – **Page 241**	I
3:30 – 3:45 p.m.	**11. Update: Steering Committee, CAWG, and TAWG and Other Items/Next Steps** *11 CWTP-TEP Committee Meetings Schedule.pdf* – **Page 245** *11A TAWG Roster.pdf* – **Page 249**	I
3:45 – 4:00 p.m.	**12. Other Business**	I
4:00 p.m.	**13. Adjournment**	

Key: A – Action Item; I – Information/Discussion Item; full packet available at www.alamedactc.org

Next Meeting:

Date: May 12, 2011
Time: 1:30 to 4:00 p.m.
Location: Alameda CTC Offices, 1333 Broadway, Suite 300, Oakland, CA 94612

Staff Liaisons:

Beth Walukas, Manager of Planning
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Location Information: Alameda CTC is located in Downtown Oakland at the intersection of 14th Street and Broadway. The office is just a few steps away from the City Center/12th Street BART station. Bicycle parking is available inside the building, and in electronic lockers at 14th and Broadway near Frank Ogawa Plaza (requires purchase of key card from bikelink.org). There is garage parking for autos and bicycles in the City Center Garage (enter on 14th Street between Broadway and Clay). Visit the Alameda CTC website for more information on how to get to the Alameda CTC: http://www.alamedactc.org/directions.html.

Public Comment: Members of the public may address the committee regarding any item, including an item not on the agenda. All items on the agenda are subject to action and/or change by the committee. The chair may change the order of items.

Accommodations/Accessibility: Meetings are wheelchair accessible. Please do not wear scented products so that individuals with environmental sensitivities may attend. Call (510) 893-3347 (Voice) or (510) 834-6754 (TTD) five days in advance to request a sign-language interpreter.

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ALAMEDA County Transportation Commission
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Alameda CTC Technical Advisory Working Group Meeting Minutes
Tuesday, March 10, 2011, 1:30 p.m., 1333 Broadway, Suite 300, Oakland

Attendance Key (A = Absent, P = Present)

Members:

__A__ Alex Amoroso	__A__ Diana Keena	__P__ Jeff Schwob
__A__ Aleida Andrino-Chavez	__P__ Paul Keener	__A__ Tina Spencer
__A__ Marisol Benard	__P__ Obaid Khan	__A__ Iris Starr
__A__ Kate Black	__A__ Wilson Lee	__P__ Mike Tassano
__A__ Jeff Bond	__A__ Tom Liao	__P__ Lee Taubeneck (Bob Rosevear attended)
__A__ Jaimee Bourgeois	__A__ Albert Lopez	__A__ Andrew Thomas
__A__ Charlie Bryant	__P__ Joan Malloy	__P__ Jim Townsend (Larry Tong attended)
__P__ Ann Chaney	__A__ Dan Marks	__P__ Bob Vinn
__A__ Mintze Cheng	__P__ Gregg Marrama (Donna Lee attended)	__P__ Marine Waffle
__P__ Keith Cooke,	__P__ Val Menotti	__P__ Bruce Williams
__A__ Brian Dolan	__P__ Matt Nichols	__A__ Stephen Yokoi
__P__ Soren Fajeau	__P__ Erik Pearson	__P__ Karl Zabel
__P__ Jeff Flynn	__A__ James Pierson	__A__ Farooq Azim (Alternate)
__P__ Don Frascinella	__A__ Jeri Ram	__A__ Carmela Campbell (Alternate)
__A__ Susan Frost	__A__ David Rizk	__A__ Cory LaVigne (Alternate)
__A__ Jim Gannon	__A__ Mark Roberts	__A__ Larry Lepore (Alternate)
__P__ Robin Giffin	__P__ Brian Schmidt (George Fink attended)	__A__ Kate Miller (Alternate)
__A__ Mike Gougherty	__A__ Peter Schultze-Allen	
__P__ Terrence Grindall		
__P__ Cindy Horvath		

Staff:

__P__ Art Dao, Alameda CTC Executive Director	__P__ Ryan Greene-Roesel, Cambridge Systematics
__P__ Tess Lengyel, Programs and Public Affairs Manager	__P__ Bonnie Nelson, Nelson\Nygaard
__P__ Beth Walukas, Manager of Planning	__P__ Diane Stark, Senior Transportation Planner
__P__ Stephen Decker, Cambridge Systematics	__P__ Saravana Suthanthira, Senior Transportation Planner
	__P__ Angie Ayers, Acumen Building Enterprise, Inc.

1. Welcome and Introductions

Beth Walukas called the meeting to order at 1:35 p.m. The meeting began with introductions.

Guests Present: Celia Chung, Alameda CTC; Phil Erickson, CD&A; Caroline Leary, Cambridge Systematics; Neena Morgan, Alameda County Public Health; Michael Tanner, BART.

2. Public Comments

There were no public comments.

3. Approval of February 10, 2011 Minutes

TAWG members reviewed the meeting minutes from the February 10, 2011 meeting and approved them as written.

4. Update on CWTP-TEP Activities Since Last Meeting

Tess Lengyel gave an update on the CWTP-TEP activities since the last meeting. The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) will release the Initial Vision Scenario (IVS) on March 11. Tess informed the group that a special TAWG meeting is scheduled for March 18 at Hayward City Hall to receive a presentation from MTC and ABAG on the IVS and Sustainable Communities Strategy (SCS). Alameda CTC has scheduled additional workshops and invited elected officials and community members to IVS discussions on the following dates at these locations:

- March 11 – MTC releases the IVS
- March 16 – San Leandro Library (IVS and CWTP-TEP)
- March 18 –Hayward City Hall (IVS and SCS)
- March 19 – Supervisor Lockyer forum for southern Alameda County elected officials (IVS and SCS)
- March 24 – Alameda CTC Office (IVS and CWTP-TEP)
- March 24 – Dublin Public Library (IVS and CWTP-TEP)

Tess informed the committee that the poll is underway, and staff will release the outcomes at the March 24 Steering Committee.

5. Finalize the CWTP-TEP Briefing Book

Bonnie Nelson stated that the Briefing Book was updated to include the responses from CAWG, TAWG, and the Steering Committee. She stated that the Briefing Book was restructured to address the needs of the youth and low-income communities. Bonnie stated that chapters 5 *Transit* and 6 *Paratransit* were combined into chapter 5 *Transit*. The new chapter 6 is titled *Communities of Concern*, which addresses mobility needs of low-income communities, seniors, and people with disabilities.

Bonnie informed the committee that the Briefing Book will go before the Steering Committee on March 24 for approval. She stated that a summary of all comments and responses is on page 11 in the packet.

6. Discussion of Committed Funding and Project Policy Comments to MTC

Beth Walukas stated that MTC released the draft Committed Funds and Projects Policy with two options for consideration: Environmental Certification and Under Construction by May 1, 2011. Alameda CTC drafted comments and submitted them to MTC that express support for Option 1 Environmental Certification (hand out attachment 06B). Beth stated that Alameda CTC prefers this option because projects have been fully vetted with resource agencies, and the community and project scopes have been fully defined and evaluated at this phase of project development. It was also mentioned that the December 2011 cut off time for projects to be under construction in the committed projects policy was moved up to May 1, 2011. Alameda CTC comments also requested consideration of sales tax measure projects as committed projects because the projects are already approved by the voters.

Question/feedback from the members:

- There were a few questions for which more information was needed from MTC to respond and therefore will be responded to later. They are:
    - Is there a difference between a programmatic and project-level Environmental Impact Report (EIR)? Bonnie clarified that the comments supporting option 1 are intended to include programmatic EIRs, such as BART to Livermore.
    - If a project is being implemented and the committed project is uncommitted, how will land use be affected?
- Why is the Project Study Report (PSR) not included along with an EIR? Art Dao stated that MTC wants to make sure that committed projects costs do not increase. He stated that the PSR stage is too soon in the project development process to establish good costs, because by the time a project gets PSR approval, many things can change.
- A member requested adding another step to make a goal to establish the funding if we commit to a project at the EIR phase.
- A member reminded the group that state law has changed since last RTP with the passing of SB 375, which requires incorporating the land use component in the RTP.
- What does voter's approval for projects mean for committed policy? Art stated that the intent is to consider the sales tax measure. If voters approve any project, it is Alameda CTC's position that MTC should not further evaluate it.

7. Review and Discussion of Call for Projects

Tess reviewed the MTC and Alameda CTC schedules for the call for projects guidelines. She explained that the schedules are extremely tight to review and evaluate the projects and programs prior to the MTC April 29, 2011 deadline. Beth reviewed handout 07D, which shows a flowchart of the project and program evaluation and land use scenario development process and timeline. Sponsors must submit projects and programs to Alameda CTC by April 12, and staff will review and evaluate them and provide sponsors with an updated list by April 21. Alameda CTC will present the list to the Steering Committee for acceptance at the April 28 meeting and submit the draft list to MTC on April 29. A final list will be brought to committees in May for comment and final approval.

There was a question on the land use scenario process about whether there is a possibility that ABAG could refuse the locally preferred option. Staff responded that the intent is to develop the locally preferred option to inform the ABAG process. There was a question on what transportation assumptions were included in IVS. It was enhanced bus service supporting PDAs and backbone HOT Lanes. A follow-up question was about whether applications for projects supportive of IVS need to be submitted. Staff responded that the transportation network to support the IVS was illustrative only. There were questions on the application deadline of April 12th and submitting applications for programs.

Tess explained that the staff will present a final list of projects and programs in May 2011 to Alameda CTC committees (the advisory and commission related committees), and Alameda CTC will hold a public hearing at the May 26 Steering Committee meeting. The Steering

Committee will recommend approval of the list to the Commission. Staff will forward the Commission-approved list to MTC on May 27.

8. Finalize the Performance Measures

Ryan Green-Roesel with Cambridge Systematics reviewed the revised performance measures on page 79 in the agenda packet. She mentioned that the comments from CAWG, TAWG, and the Steering Committee are also in the agenda packet. Ryan stated that staff will present the final performance measures at the March 24 Steering Committee meeting for approval. A summary of comments from members' input on performance measures is attached (attachment 03B).

9. Transportation Issues for the CWTP

Bonnie reviewed the transportation issue papers outlines with the committee. She stated that the CWTP-TEP team is preparing six papers intended to provide case studies and best practices on key issues for the CWTP, and staff will bring the papers to the April 14 meeting. A summary of comments from members' input on the transportation issue papers is included in attachment 03B.

10. Update on Outreach Activities Including a Polling Update

Tess gave an update on the outreach status. She stated that 125 people attended the three workshops so far, 95 toolkits were distributed at the toolkit training sessions, and to date 966 people participated, 390 paper questionnaires were completed, and 275 online questionnaire responses were submitted.

Tess mentioned that the comments from CAWG, TAWG, and the Steering Committee on the draft poll questions were incorporated to create a final list of polling questions. She stated that the first poll is complete, and EMC will conduct another poll in the fall. The third poll will take place in the spring of 2012 to determine whether or not to place the Transportation Expenditure Plan on the ballot. A question was raised how the poll participants were selected. The response was that it will be based on the registered voter list.

11. SCS/RTP: Update on Countywide and Regional Processes

Beth requested the group review the memo in the packet. She said that staff will submit monthly reports to the group.

12. Update: Steering Committee, CAWG, TAWG and Other Items/Next Steps

Tess mentioned that information will be sent to elected officials again.

13. Other Business

A member asked if the city councils will be updated regularly on the initial vision scenario and land use. It was responded that ABAG offered one county meeting. ABAG wants to go back to the city councils in the spring. MTC will do webcasting.

14. Adjournment

The meeting adjourned at 3:30 p.m. The special TAWG meeting will be held at Hayward City Hall, Room 2A on March 18 from 11:30 a.m. to 1:30 p.m.

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TAWG Summary on: Draft Performance Measures and Issues Papers
March 10, 2011 Meeting

The following summarizes comments from the March 10, 2011 meeting of the Technical Advisory Working Group for the Alameda Countywide Transportation Plan and Transportation Expenditure Plan (CWTP-TEP). The group discussed: Draft Performance Measures and Transportation Issues Paper Outlines. Their comments are presented by topic below.

Draft Performance Measures

1. A question was raised regarding how rural roads will be evaluated. There are many rural roads in some parts of the county and safety is a major concern.

2. With regard to the proposed multimodal measure, there was a request to include all modes; autos are not currently included.

3. With regard to discussion of certain measures being calculated per capita, someone wanted a definition of per capita, which means per person.

4. A comment was made that pedestrian and bike connectivity is not addressed by these measures.

5. With regard to the safety measure, there was a request that injuries and fatalities be calculated using rates (e.g. X injuries and fatalities per million vehicles).

6. There was a request to add density as a measure for housing affordability. It was mentioned that according to the California Department of Housing and Community Development, in order for housing to be considered affordable, it has to contain at least 30 units/acre.

7. There was a question regarding how "major activity centers" would be defined. It was suggested that the countywide pedestrian plan contains a definition that may be useful.

Transportation Issues Paper Outlines

- Add Transportation System Management and include pricing as a way to manage congestion.

- Provide examples of best practices for each of the key transportation issues and use local examples when possible.

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M E M O R A N D U M

To: Community Advisory Working Group, Technical Advisory Working Group, and CWTP-TEP Steering Committee Members

From: Bonnie Nelson

Date: March 14, 2011

Subject: **Developing Packages of Projects and Programs for Evaluation in the CWTP**

Over the past several months we have been focused on defining the performance measures that will be used to evaluate alternative packages of investments for the Countywide Plan. These performance measures will be applied to alternative packages of projects and programs which each represent a different approach to investment over the next 30 years. A preliminary set of three packages will be developed and evaluated with initial model runs in June and results presented to the Committees in July. A refined package of investments will be developed from what was learned in the preliminary evaluations and will be advanced and refined through further modeling and evaluation through the summer and into early fall as shown on Attachment 07A3. This memorandum outlines the process of developing packages of projects and programs for evaluation, taking into consideration the information we will have available and the constrained timeframe we are working under.

The schedule for screening projects and programs, developing packages and beginning evaluation is highly constrained. The following are key milestones:

1. **Project screening of "known projects" will be done in time for the May Committees.** While the deadline for project and program submittal is not until after the CAWG and TAWG meetings take place, we will begin screening the projects we already know will be submitted as early as possible. Based on existing planning efforts, previous CWTP and RTP submittals and the ideas we've already heard through outreach, we have a good head start on identifying the universe of projects. If available, a preliminary screening in April will serve as an example of how screening will be done, as well as showing preliminary results on a group of projects. A final list of screened projects will be provided to the May Committee meetings.

2. **A key focus of the April Committees will be on the "themes" for the packages.** This memo contains a recommendation of three "themes" for building our investment packages. Our committee discussions in April will focus on those themes and how specific project or program examples might be dealt with under the packages proposed.

3. **Packages will begin to be built after the April TAWG meeting, but can't be fully developed without the approval of themes by the Steering Committee on April 28th.** Given our timeframe, we will not be able to submit completed packages to the May CAWG meeting in advance of their May 5th meeting. We anticipate having a presentation at the May 5th CAWG

meeting describing our work in progress and packaging completed in time for the TAWG meeting a week later. TAWG will consider the packages at their May meeting and CAWG members who are interested in a fuller discussion can attend that meeting. The Steering Committee will also be able to weigh in on preliminary packages in May in time to provide any needed course correction before we begin modeling work, which will be conducted in June and August per Attachment 07A3.

Guidelines for Developing Packages

In order to facilitate the development of alternative packages for evaluation, it is important to understand the purpose of packaging and how they will be used. The goals of developing alternative investment packages are:

- **Illustrate performance tradeoffs arising from investments emphasizing different policy priorities.** The packaging will help inform the selection of key policy priorities that will drive investment levels in programs as well as high priority projects. For example, does concentrating investment in areas with substantial new development make a difference in the overall performance of the transportation system? Do investments in new infrastructure in a particular corridor have an impact that is different from policy and programmatic investments? By developing packages with different emphases we will be able to assess these alternative strategies.

- **Capture synergies resulting from investments in combined package of complementary projects**. Some projects may work best in combination with other projects or programs with a combined result that is greater than evaluating the two as separate components. Packaging allows us to see the combined benefits of multiple investments pulling in the same direction.

- **Quantify overall performance benefits resulting from county-wide plan investments.** The adopted CWTP-TEP vision and performance measures (see Attachment 07A2) are focused on the overall performance of the transportation system as well as performance in individual corridors. It is only through the packaging of projects that we can see broader impacts of projects and programs throughout the system.

To assist in the development of coherent packages that are different enough to draw distinctions the following guidelines are recommended:

1. A maximum of three preliminary packages will be developed.

2. All packages will be designed to meet the CWTP goals and performance measures – no package will be "set up to fail". The packages will be different enough from one another that it will be possible to evaluate different investment philosophies in different settings.

3. All packages will be multimodal and will be made up of projects and programs that passed through initial project screening. A key difference between the packages will be the relative emphasis on either capital projects or programs in the package.

4. All packages will include both capital investments and programmatic investments including operations and maintenance, although the relative weight of capital versus programmatic spending will vary from package to package.

5. Geographic equity will be respected, with the exception that in the land use oriented package, investments will be focused on areas that are transit oriented, included in PDAs or are other areas for potential TOD development as defined by the initial vision scenario.

6. The performance of project packages will be tested against a future "business as usual" (e.g. no project) scenario that will include already committed projects. Committed projects will be defined consistent with MTC policy. Because committed projects are part of the "base" network, they are included in all packages. The land use for the "business as usual" scenario will be the "base case" land use.

7. Initial packages will represent a range of investment levels based on the balance between projects and programs in each package.

8. All packages will be tested using the same land use scenario, developed by the Planning Directors and TAWG and will be informed by the Initial Vision Scenario as modified and tested against a no project condition.

9. It is not necessary for a project to be included in the highest performing package to be included as a high priority project in the CWTP. The modeling that will be done on the packages may reveal that one type of strategy works best in one area while another strategy works best in another area. The goal is not to produce a "winning package" but to gain enough information to be able to further optimize the CWTP priorities.

10. The final priorities for the CWTP will be "blended" from the three packages to optimize investments in each corridor, in each planning area, and throughout the County.

11. A likely outcome from the evaluation of packages is that we will identify key policy priorities (e.g. maintenance, transit operations, integration with land use) that will inform levels of investment in programs and the sequencing of project investments into short, medium, and long-term.

Proposed Package Themes

The package themes suggested below are designed to test alternative investment philosophies. At this stage, the packages will all be designed to meet CWTP goals to the extent possible, and will include a large range of projects and programs.

1. **Maintenance/Operations and Systems Management Emphasis.** This package will have a higher emphasis on programs than on capital projects and will emphasize the "fix it first" philosophy, as well as focusing on the maintenance and operations of all modes. Managing investments through systems approaches will also be emphasized in this package. At least 60% of the total cost of this package will be programmatic spending.

2. **Capital Projects Emphasis.** This package will emphasize meeting CWTP goals through construction of new projects in all modes. While programmatic spending will be included in the package, at least 60% of the total cost of this package will be capital spending.

3. **Land Use Emphasis.** This package will focus investment in transit oriented development area, PDAs and other potential areas from the SCS. Geographic equity will still be factored into this package, but will be less of a rigorous concern than investing in areas that are most likely to address AB 32 and SB 375 goals. The investments in this package will emphasize both projects and programs likely to reduce greenhouse gases or serve larger numbers of people. Capital and programmatic spending in this alternative would be balanced to the extent possible.

The adopted performance measures will be used in evaluating all three of these themes.

Attachments:
06A1: Preliminary Project and Program List (to be distributed at the meeting)
06A2: Adopted Performance Measures
06A3: CWTP-SCS-RTP Process flowchart for Project and Program Evaluation
06A4: Screening and Scenario Development Process

Working Draft: 2012 CWTP - Initial List of Projects (based on Call for Projects Initial List, Outreach Activities so far and 2008 CWTP)			
#	**Sponsor**	**Project Title**	**Planning Area**
List of Projects from the Call for Projects including 2011 Outreach and 2008 CWTP with sponsors			
1	AC Transit	66th Avenue Upgrade to Operational Facility	
2	AC Transit	College/ Broadway Corridor Improvements - Transit Priority Measures	
3	AC Transit	Contra Flow Lane on Bay Bridge - Transit Priority Measures	
4	AC Transit	East Bay BRT - Transit Priority Measures	
5	AC Transit	Foothill TSP - Transit Priority Measures	
6	AC Transit	Grand/MacArthur Corridor Improvements - Transit Priority Measures	
7	AC Transit	New Transfer Facility Central and Northern Alameda County	
8	AC Transit	San Pablo Avenue Rapid to Hilltop Implementation - Transit Priority Measures	
9	AC Transit	San Pablo Dam Transit Priority - - Transit Priority Measures	
10	AC Transit	Speed Protection in Urban Core - Transit Priority Measures	
11	AC Transit	Dedicated contra flow lane on the SFOBB connecting to Transbay Terminal (AC Transit study)	
12	ACTC	I-80 Integrated Corridor Mobility project	1
13	ACTC	I 580 Strobridge interchange	4
14	ACTC	I-580 auxiliary lanes btw Santa Rita/Tassajara Rd and Airway Blvd	4
15	ACTC	I-580 HOT Lanes from Greenville Rd west to I-680	4
16	ACTC	I-580 ROW preservation for transit in I-580 corridor	4
17	ACTC	I-580 WB auxiliary lane from First to Isabel	4
18	ACTC	I-580 widening for EB and WB HOV and auxiliary lanes from Tassajara Rd to Greenville Rd	4
19	ACTC	I-680 widening for SB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lane)	3
20	ACTC	I-880 / I-238 connector	2
21	ACTC	I-880 extend NB HOV lanes between I-238 and Hegenberger	1, 2
22	ACTC	I-880 extend NB HOV lanes north from Hacienda Ave	2
23	ACTC	I-880 Washington interchange	2
24	ACTC	I-880 West Winton interchange	2
25	ACTC	I-880 Whipple interchange	2
26	ACTC	SR 262 Mission Blvd Improvements	3
27	ACTC	SR 84 Expressway widening btw Jack London and Vallecitos	4
28	ACTC	SR 92 Industrial interchange	2
29	ACTC /City of Berkeley	I-80 Gilman Street Interchange Improvements	1
30	ACTC /Samtrans/City of Newark	Dumbarton Rail Corridor Project	3
31	ACTC/Alameda County	East Bay Greenway Project / UPRR Corridor Improvements Project	
32	ACTC/MTC	I-680/Sunol Express Lanes	3, 4
33	ACTC/MTC	I-580 Express Lanes	2, 4
34	Alameda County	SR 84 Improvements (I-680 to …)	
35	BART	BART Hayward Maintenance Complex	Multi

#	Sponsor	Project Title	Planning Area
36	BART	BART to San Jose	3
37	BART	BART-Oakland International Airport Connector	
38	BART/City of Fremont	Warm Springs BART Station	
39	BART/City of Fremont	Irvington BART Station	3
40	BART/City of Livermore	BART to Livermore extension	4
41	Caltrans	I-580 Eastbound Truck Climbing Lane	4
42	Caltrans	I-80 : SFOBB HOV Bypass at left side of toll plaza	1
43	Caltrans	I-880 NB HOV lane extension from existing HOV terminus at Bay Bridge approach to Maritime on-ramp	1
44	Caltrans	I-880 North Improvements: I-880 SB and 66th/Hegenberger auxiliary lanes	1
45	Caltrans	I-880 widening for SB HOV lane from Hegenberger Rd to Marina Blvd (reconstruct bridge at Davis St. and Marina Blvd.)	2
46	Caltrans	I-880 /23rd/29th interchange	1
47	Caltrans	I-880 / SR 92 Interchange Improvements	2
48	City of Alameda	Miller Sweeney (Fruitvale Avenue) Bridge	1
49	City of Alameda	Rapid Bus Service from Alameda Point to Fruitvale BART station	1
50	City of Alameda	Shoreline Drive Conversion from 4 lanes to 2 lanes	1
51	City of Alameda/City of Oakland	I-880 Broadway/Jackson interchange	1
52	City of Albany	Buchanan Overcrossing	1
53	City of Albany	Cleveland Avenue Improvements	1
54	City of Albany	Key Route Boulevard	1
55	City of Albany	Pierce Street Bicycle Bikeway	1
56	City of Albany	San Pablo Avenue medians, rain gardens and streetscape improvements	1
57	City of Albany	Solano Avenue pavement resurfacing and beautification	1
58	City of Albany	Washington Avenue @ San Pablo	1
59	City of Berkeley	I-80 Berkeley: Improve Ashby Ave. / I-80 IC/Aquatic Park Access streetscape, bicycle and pedestrian facilities.	1
60	City of Berkeley	Ashby/State Route 13 Corridor Improvements	1
61	City of Berkeley	Bay Trail Extension	1
62	City of Berkeley	I-80 Ashby Shellmound Interchange Improvements	1
63	City of Berkeley	I-80 University Avenue Interchange Improvements	1
64	City of Berkeley	Railroad Crossing Improvements	1
65	City of Berkeley	Downtown Berkeley Transit Center	1
66	City of Berkeley /ACTC (Smart Corridor)	I-80 Corridor Improvements: Complete Streets, Smart Corridor, TOD Infrastructure, Priority Development Area	1
67	City of Dublin	Alamo Canal Trail under I-580	4
68	City of Dublin	Dougherty Road Widening from Sierra Lane to North city Limit	4
69	City of Dublin	Dublin Boulevard Widening from Sierra Court to Dublin Court	4
70	City of Dublin	Dublin Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	4

#	Sponsor	Project Title	Planning Area
71	City of Dublin	I-580/I-680 Connector - Project Development	4
72	City of Dublin	Iron Horse Trail Overcrossing at Dougherty Road	4
73	City of Dublin	Iron Horse Trail Overcrossing at Dublin Boulevard near Dublin Transit Center	4
74	City of Dublin	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	4
75	City of Emeryville	Powell St Bridge Widening - West bound with bus bay	1
76	City of Emeryville	I-80 Bike Ped Bridge (65th Street)	1
77	City of Emeryville	I-80 EB Powell Street Offramp	1
78	City of Emeryville	I-80 Ashby Interchange	1
79	City of Fremont	"Rails to Trails"	3
80	City of Fremont	Auto Mall Parkway	3
81	City of Fremont	Extend Capitol Avenue from State Street to Fremont Blvd.	3
82	City of Fremont	Capitol Corridor & ACE	3
83	City of Fremont	City Center/Downtown Bus/Shuttle Circulator	3
84	City of Fremont	Fremont Blvd. extension to connect with Dixon Landing Road	3
85	City of Fremont	Fremont Blvd. widening	3
86	City of Fremont	Greenbelt Gateway Project	3
87	City of Fremont	Include bike/pedestrian grade separation on Blacow at UPRR/BART tracks	3
88	City of Fremont	Mission Boulevard Widening	3
89	City of Fremont	Mission/Warren/Truck Rail	3
90	City of Fremont	SR 84 Relinquished Route Upgrade	3
91	City of Fremont	Kato Road widening from Warren Ave. to Milmont	3
92	City of Hayward	Clawiter-Whitesell Interchange	2
93	City of Hayward	I-880 Industrial Parkway Interchange Phase 1	2
94	City of Hayward	I-880 Industrial parkway Interchange Phase 2	2
95	City of Hayward	I-880 West A Street Interchange	2
96	City of Hayward	I-880 Whipple Road Interchange	2
97	City of Hayward	I-880 Winton Avenue interchange improvements	2
98	City of Hayward	SR-92 / Industrial Boulevard interchange	2
99	City of Hayward	Tennyson Road Grade Separation	2
100	City of Livermore	Jack London Phase II	4
101	City of Livermore	Altamont Rail	4
102	City of Livermore	Dublin Blvd-North Canyons Connector	4
103	City of Livermore	Greenville Widening	4
104	City of Livermore	I-580 First St. interchange	4
105	City of Livermore	I-580 Greenville interchange	4
106	City of Livermore	I-580 Isabel Phase II interchange	4
107	City of Livermore	I-580 Vasco interchange	4
108	City of Livermore	Stanley-Isabel to Valley	4
109	City of Livermore	Vasco Widening	4
110	City of Livermore	El Charro Rd. to Stanley roadway expansion	4
111	City of Newark	Thornton Avenue and State Route 84 Interchange Improvements (new)	
112	City of Newark	Central Avenue Railroad Overpass	3
113	City of Newark	Mowry Avenue Railroad Overpass	3
114	City of Newark	Thornton Avenue Widening	3
115	City of Oakland	I-880: 42nd/High Street Access Improvements	1
116	City of Oakland	Lake Merritt Channel/Estuary Area/Bay Trail Connections Improvements	1

#	Sponsor	Project Title	Planning Area
117	City of Oakland	Oakland Army Base Transportation Infrastructure Improvements	1
118	City of Oakland	Oakland Coliseum Transportation Infrastructure Access Improvements	1
119	City of Oakland	SR-24 / Caldecott Tunnel enhancements	1
120	City of Pleasanton	Arroyo Mocho Trail Paving along Zone 7 channel	4
121	City of Pleasanton	I-680 Bernal Interchange improvements	4
122	City of Pleasanton	Complete Streets for Hacienda Business Park	4
123	City of Pleasanton	El Charro Road Construction	4
124	City of Pleasanton	I-580 /Foothill/San Ramon Interchange improvements	4
125	City of Pleasanton	Iron Horse Trail Bridge	4
126	City of Pleasanton	Park and Ride construction on Bernal Avenue	4
127	City of Pleasanton	Pedestrian Bridge over Arroyo Mocho for access to Hart Middle School	4
128	City of Pleasanton	I-580 Santa Rita Interchange improvements	4
129	City of Pleasanton	SR 84 widening from Pigeon Pass to 680.	4
130	City of Pleasanton	I-680 Stoneridge Drive overcrossing widening	4
131	City of Pleasanton	I-680 Sunol Boulevard Interchange	4
132	City of San Leandro	Bay Fair BART Transit Village	2
133	City of San Leandro	E. 14th St at the Hesperian Blvd/150th Avenue	2
134	City of San Leandro	East Bay Greenway – San Leandro portion	2
135	City of San Leandro	I-880 Davis Street Interchange	2
136	City of San Leandro	I-880 Marina Boulevard Interchange	2
137	City of San Leandro	Traffic Signal System Upgrade	2
138	City of Union City	Dumbarton Rail/Capitol Corridor ROW	3
139	City of Union City	East West Connector Roadway	3
140	City of Union City	I-880 Whipple -full interchange improvements, including N/B off-ramp, surface street improvements and realignment (Union City and Hayward city limits)	3
141	City of Union City	Grade Separation on Decoto Road at Oakland Subdivision	3
142	City of Union City	Pedestrian overpasses to connect jobs/housing to Intermodal Station	3
143	City of Union City	Union City BART Phase 2 /Passenger Rail Station	3
144	City of Union City	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	3
145	City of Union City	Whipple Road at I-880 to Mission Boulevard (widen to 2 lanes in both directions with full street improvments, including new bridge over BART tracks	3
146	City of Union City	Union City Intermodal, Phase 1	3
147	LAVTA	Satellite Operations and Maintenance Facility	4
148	LAVTA	Springtown to Livermore Rapid	4
149	LAVTA	Stanley/Murdell Park and Ride	4
150	MTC	Integrated Corridor Mobility I-880 project (580/80/880 to SR-237) – and South County LATIPs)	Multi
151	WETA	Construct new Operations and Maintenance Facility in Alameda	1
152			
153		SR-84 / I-680 HOV Direct Connectors	4
154		Altamont Rail Corridor Safety and Speed Improvements	3,4
155		Cross-platform transfer BART/ACE at Livermore Station	4
156		Double track UP/ACE rail line Tracy to Livermore	4
157		Extend BART to ACE/Livermore and I-580 Greenville Station	4

#	Sponsor	Project Title	Planning Area
158		I-80 San Pablo Ave. (SR 123): Extend SMART Corridor throughout entire study area	1
159		I-580 Add 4th Lane WB from Mission/East 14th off to I-880 SB off	2
160		I-580 Extend single HOV/HOT lanes EB btw Greenville and I-205/Mountain House	4
161		I-580 Extend single HOV/HOT lanes EB btw Redwood Rd. and Hacienda	2,4
162		I-580 Extend single HOV/HOT lanes WB btw I-205/Mountain House and Greenville	4
163		I-580 Extend single HOV/HOT lanes WB btw I-680 and Redwood Rd.	2,4
164		I-580 Improve I-580 HOT operations EB btw First Street and Vasco Road	4
165		I-580 Improve I-580 HOT operations WB btw Santa Rita and I-680	4
166		I-580 First Street Interchange - reconstruct	4
167		I-580 Greenville Rd. Interchange reconstruct	4
168		I-580 Hacienda Drive Interchange reconstruct	4
169		I-580 Spot intersection capacity improvements (East Lewelling & Hesperian / Castro Valley Blvd. & Foothill Blvd. / Foothill Blvd. & Grove Way / Castro Valley Blvd. & Stanton Ave. / Redwood Rd. & I-580 WB off / Castro Valley Blvd. & Grove Way/Crow Canyon Rd. / Hopyard Rd. & Owens Drive / Airway Blvd. & North Canyon Parkway)	2, 4
170		I-80 Construct EB aux lane from Ashby Ave. on-ramp to University Ave. off-ramp	1
171		I-80 Gilman Ave.: Signalize I-80 ramp intersections	1
172		I-80 Powell St.: Allow WB left turn and SB through for the WB off-ramp	1
173		I-80 Powell St.: widen eastbound off-ramp	1
174		I-80 WB Gilman Ave. off-ramp: add 3rd lane	1
175		SR 24 : EB HOV lane from the Broadway Ave. on-ramp to the Caldecott Tunnel	1
176		SR-84/Sunol Corners Intersection Operational Improvements (County-sponsored PID priority)	4
177		Transit Service Restoration and Enhancement	1
List of Projects from 2011 Outreach Efforts for which sponsors are yet to be identified			
178		I-880 Hesperian interchange improvements	
179		I-880 Industrial interchange improvements	
180		I-880 Hesperian/Lewelling Interchange	
181		Additional BART parking Capacity at upstream (SR24?) stations. Increase bus transit access to the BART Stations within the SR 24 corridor and BART system-wide operational improvements.	1
182		Union City - Capitol Corridor stop (Intermodal station.)	3
183		BART Transbay Tube (Second)	
184		BayFair Capacity Improvements ("Wye" project)	Multi
185		Ardenwood widening near Paseo Padre	**3**

#	Sponsor	Project Title	Planning Area
186		Decoto Rd (congestion relief, safety)	3
187		Express Bus service in Express Lane corridors	Multi
188		Fremont @ Peralta grade separation	3
189		Grade Separation of rail crossings at major roadways	
190		High Speed Rail/Altamont Corridor Rail	4
191		I-680 / Mission Blvd South interchange	3
192		I-680 Automall (congestion relief/safety)	3
193		I-680 NB HOT lanes	3, 4
194		I-680 pavement resurfacing south of Mission	3
195		I-80 grade separations	1
196		I-80 improvements for freeway efficiency	1
197		I-880 / Dumbarton (SR 84) interchange (congestion relief/safety)	3
198		I-680 / I-880 connector/flyover	3
199		SR 84 / I-880 interchange	3
200		I-880 grade separations	Multi
201		I-880 HOT lanes	Multi
202		I-880 Industrial NB off-ramp	2
203		Intergrated Corridor Mobility	
204		Oakland Subdivision rail ROW preservation	Multi
205		Short Haul Rail improvements to reduce truck volumes on freeways	
206		SR 84 / I-680 interchange	3
207		SR 84 connector btw I-580 and I-680 (potential toll corridor)	3
208		Thornton Ave, Peralta (congestion relief, safety)	
209		Truck bypass in Central County to facilitate goods movement	2
210		Whipple Rd widening/improvements btw I-880 and Central	2
211		Bike/Ped path along I-580 to Livermore	
212		EBRPD Tassajara Creek trail	
213		Extend BART to ring the bay	
214		I-238 : Add 4th lane on I-238/Altamont for trucks	
215		I-238 to go south & traffic to go SSB to I-880 (?)	
216		I-580 Fallon/El Charro interchange improvements	4
217		I-580 Hacienda interchange improvemets	4
218		I-680 NB HOT lane	4
219		I-880 NB from Whipple in Union City – congestion management in corridor	3
220		Additional direct roads for through traffic to connect SJ Valley to Silicon Valley	3,4
221		Capacity Improvments for Goods Movements and Rail	multi
222		Cheaper BART Alternative	Multi
223		Increased Regional Rail Service	Multi
224		Improvements at Davis St (San Leandro)	
225		Downtown San Leandro Bypass	2
(partial) List of projects from 2008 CWTP for which sponsors are yet to submit applications or projects are completed and will be dropped			
226		SR 238 Corridor Improvements between Foothill Boulevard/I-580 and Industrial	
227		7th Street Grade Separation	
228		Martinez Subdivision	
229		North Airport Air Cargo Access Road Improvements, Phase 1	

#	Sponsor	Project Title	Planning Area
230		Outer Harbor Intermodal Terminal (OHIT)	
231		I-880 auxiliary lane from Whipple Road to Industrial Parkway	
232		I-880/Oak Street On Ramp Re-construction	
233		SR 84 WB HOV on ramp from Newark Blvd	
234		I-880 auxiliary lane West A to Winton	
235	~~ACTC~~	~~I-580 on- and off-ramp improvements in Castro Valley~~	
236	~~BART~~	~~New West Dublin Station~~	~~4~~
237	~~Caltrans~~	~~SR 84 WB HOV lane extension fron Newark to I-880~~	~~3~~
238	~~City of San Leandro~~	~~Washington Avenue/Beatrice Street Interchange Improvements~~	
239	~~City of Livermore~~	~~I-580 Isabel interchange improvements, Phase 1~~	~~4~~
240	~~City of Livermore~~	~~Las Positas Road Connection, Phase 2~~	
241	~~City of Hayward~~	~~Construct street extension in Hayward near Clawiter and Whitesell Streets~~	
242	~~City of Fremont~~	~~Washington/Paseo Padre Parkway Grade Separation~~	~~3~~
243	~~City of Berkeley~~	~~Ed Roberts Campus at Ashby BART Station~~	
244	~~Caltrans~~	~~I-880 / SR 262 reconstruct interchange and widen I-880 from SR 262 (Mission Blvd.) to the Santa Clara county line from 8 lanes to 10 lanes (8 mixed fow and 2 HOV lanes)~~	~~3~~
245	~~City of Alameda~~	~~Stargell to 5th Ave Improvements~~	~~1~~
246	~~Caltrans~~	~~I-238 widening between I-580 and I-880 from 4 lanes to 5 lanes, auxiliary lanes on I-880 between I-238 and "A" St~~	~~2~~

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Working Draft: 2012 CWTP - Initial List of Programs (based on Call for Projects Initial List, Outreach Activities and 2008 CWTP)					
#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
1	AC Transit	Additional Fleet Vehicles To Support Improved Transit Service		2	5,6,7,9,10,11,12
2	AC Transit	Bus Enhancements (includes Farebox upgrade with CAD/AVL and Clipper, Automatic Passenger Counters, Internal Text Messaging) - IT systems		2	5,6,7,9,10,11,12
3	AC Transit	CAD/AVL Upgrade (includes radio/communications for mobile and fixed end) - IT systems		2	5,6,7,9,10,11,12
4	AC Transit	Facilities Greening (effluence and emmissions) - environmental program		2	5,6,7,9,10,11,12
5	AC Transit	Frequent Transit Network-to support SCS density		2	5,6,7,9,10,11,12
6	AC Transit	Greening of Vehicles - environmental program		2	5,6,7,9,10,11,12
7	AC Transit	Night Owl Network to support SCS density		2	5,6,7,9,10,11,12
8	AC Transit	neighborhoods		2	5,6,7,9,10,11,12
9	AC Transit	Supplemental School Bus Service to support SCS density		2	5,6,7,9,10,11,12
10	AC Transit	Telegraph/International/E.14th ped improvments (non pavement)		2	5,6,7,9,10,11,12
11	AC Transit	Weekend Network to support SCS density		2	5,6,7,9,10,11,12
12	AC Transit	Ecopass programs for targeted developments		2	
13	AC Transit	Upgrades)		2	
14	AC Transit	Site hardening (card key access, etc.) - Safety and security		3	
15	AC Transit	Complementary Paratransit Service		9	5
16	AC Transit	Livable Communities/Complete Streets Treatments/ADA		9	5
17	AC Transit	Neighborhood Circulator to Targeted Developments		9	
18	AC Transit	Alternative Fueling Facilities (D3, D6, CMF) - environmental program		13	
19	AC Transit	HOT lane express service		2,3,7	14,16,19
20	ACTC	Bicycle and pedestrian projects and programs	multi	1	1,2,3,
21	ACTC	Iron Horse Trail Completion		1	1
22	ACTC	Transit enhancements funded by transit center development funds	multi	2	5,6,7,9,10,11,12
23	ACTC	Arterial Performance Initiative Program	multi	5	13,15,20
24	ACTC	Soundwalls	multi	7	14,16,19
25	ACTC	TOD Improvement program	multi	9	5, 2
26	Alameda County	San Lorenzo Creek Trail	2	1	
27	Alameda County	Sidewalk improvements (Stanton Ave, Somerset Ave, etc.)		1	
28	Alameda County	Crow Canyon Road Safety Improvements Project	2	5	
29	Alameda County	Vasco Road Safety Improvements Project Phase II	4	5	
30	Alameda County	Lake Chabot Road Safety Improvement Project (Castro Valley to San Leandro)	2	5	
31	Alameda County	Lewelling Blvd. / Hesperian Blvd Intersection	2	5	
32	Alameda County	Patterson Pass Road Safety Improvements Project		5	
33	Alameda County	Oakland)	2	5	

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
34	Alameda County	Redwood Road/A Street Improvements (I-580 to HCL)	2	5	
35	Alameda County	East Lewelling Boulevard Phase II	2	5	
36	Alameda County	Hesperian Blvd Streetscape Improvements Project	2	5	
37	Alameda County	I-580 Fairmont Blvd Ramps	2	5	
38	Alameda County	Tesla Road Safety Improvements Project	4	5	
39	Alameda County	Pavement Rehab		6	
40	Alameda County	High Street Bridge Replacement Project	1	8	
41	Alameda County	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project	2	8	
42	Alameda County	Estuary Bridge Operations		8	
43	Alameda County	Park Street Bridge Replacement Project	1	8	
44	Alameda County	Castro Valley BART TOD		2, 9	5,6,7,9,10,11,12
45	Alameda County	Altamont Pass Safety Improvements Project	4	5,7	
46	Alameda County	I-238 E. 14th/Mission Blvd Exit Ramps	2	5,7	
47	Alameda County	Castro Valley Streetscape Improvements Project Phase II	2	5,9	
48	Alameda County	E. 14th / Mission Blvd. Streetscape Improvements Project Phase II & III	2	5,9	
49	BART	Alameda County Station Capacity Expansion (vertical circulation, emergency vertical circulation, platform expansion to meet future capacity needs.)	Multi	2	
50	BART	Alameda County Station Modernization (renovation/replacement of vertical circulation, fare collection, station site/architecture, etc.)	Multi	2	
51	BART	Alameda County Station Reliability (train Control and traction power)	Multi	2	
52	BART	Alameda County System Capacity Expansion (train control, traction power and central control improvements to meet future capacity needs)	Multi	2	
53	BART	Rail Vehicle Capacity Expansion (vehicle purchase)	Multi	2	
54	BART	Alameda County access/ TOD related improvements	Multi	2,9	
55	BART	Station Access projects		9,11	
56	Caltrans	I-880 Oak St on-ramp reconstruction	1	5	
57	Caltrans	SR-84 WB HOV on-ramp from Newark Blvd,	3	5	
58	Caltrans	Truck Parking Facilities in North County	1	12	
59	City of Alameda	Bike and Ped Infrastructure	1	1	1,2,3,
60	City of Alameda	West End Transit Hub		4	4
61	City of Alameda	O&M/ITS	1	3,5	
62	City of Alameda / Alameda County	Estuary Bridges Seismic Retrofit and Repair		8	21
63	City of Alameda / Alameda County	Fruitvale Avenue Rail Bridge Seismic Retrofit		8	21
64	City of Alameda / Alameda County	Fruitvale Avenue Roadway Bridge Seismic Retrofit		8	21
65	City of Berkeley	Bicycle Plan Implementation	1	1	1,2,3,

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
66	City of Berkeley	Berkeley Ferry Terminal Access Improvements	1	2	
67	City of Berkeley	I-80 Corridor Transit Service	1	2	
68	City of Berkeley	Complete Streets: Roadway Network Improvements	1	5	4
69	City of Berkeley	Complete Streets: Streetscape Improvements & Pedestrian Plan Implementation	1	5	4
70	City of Berkeley	I-80 Aquatic Park Soundwall	1	7	
71	City of Berkeley	Transit-Oriented Development Access Infrastructure	1	9	
72	City of Berkeley	Parking Value-Pricing Parking/TDM Program	1	11	26,27,29,30
73	City of Dublin	Bike and Pedestrian Program	4	1	1,2,3,
74	City of Dublin	Iron Horse Bicycle, Pedestrian and Transit Route Project	4	1	1,2,3,
75	City of Dublin	Local Streets and Roads Maintenance Program	4	6	24
76	City of Dublin	Dublin TOD : West Dublin and downtown Dublin Program	4	9	
77	City of Dublin	Transit Oriented Development: Downtown Dublin Roadway and Pedestrian Enhancement Improvement Program	4	5,9,11	26,27,29,30
78	City of Emeryville	Bike/ped Expansion	1	1	1,2,3,
79	City of Emeryville	Bike/ped Enhancements	1	1	
80	City of Emeryville	Transit Enhancements	1	2	5,6,7,9,10,11,12
81	City of Emeryville	Community based transportation plan (CBTP)	1	4	1,2,3,
82	City of Emeryville	Lifeline Transportation	1	4	4
83	City of Emeryville	Parking program	1	11	4
84	City of Emeryville	Rail Safety (new program or local street safety)	1	5,12	26, 27
85	City of Fremont	Bay Trail Gap Closures in Fremont	3	1	1,2,3,
86	City of Fremont	Sullivan Road Undercrossing Ped/Bike Safety & Improvements	3	1	1,2,3,
87	City of Fremont	Expansion of Bicycle and Pedestrian Facilities and Programs	3	1	1,2,3,
88	City of Fremont	Fremont Blvd. Streetscape -bike/ped improvements	3	1	
89	City of Fremont	Pedestrian and Bicycle Access Way from Downtown to Fremont BART	3	1	

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
90	City of Fremont	Improved Bus Service on Fremont Blvd.	3	2	
91	City of Fremont	Vargas Road Safety Improvement Project	3	5	13
92	City of Fremont	Safety improvements at UPRR	3	5	
93	City of Fremont	Local Street and Road Maintenance and minor improvement funding	3	6	24
94	City of Fremont	Continuing funding for Paratransit Services Run by the City of Fremont	3	9	5
95	City of Fremont	Sidewalk and Intersection ADA Ramp Improvements city-wide	3	9	5
96	City of Fremont	Downtown Pedestrian Streetscape	3	1,5	
97	City of Hayward	Bike-Pedestrian Enhancements	2	1	1,2,3,
98	City of Hayward	Tennyson Road Pedestrian/bike bridge	2	1	1,2,3,
99	City of Hayward	C Street – Grand to Filbert	2	5	13,15,20
100	City of Hayward	C Street – Watkins to Mission	2	5	13,15,20
101	City of Hayward	Cannery Pedestrian Bridge	2	5	13,15,20
102	City of Hayward	Dixon Street – Valle Vista to Industrial	2	5	13,15,20
103	City of Hayward	Main Street – D Street to McKeever	2	5	13,15,20
104	City of Hayward	South Hayward BART Transit Village		9	4
105	City of Livermore	Bike/Ped Master Plan Improvements	4	1	1,2,3,
106	City of Livermore	Road Maintenance	4	6	24
107	City of Livermore	Traffic Signal Op	4	6	24
108	City of Livermore	PDA Enhancement	4	9	
109	City of Livermore	Downtown Parking	4	11	26,27,29,30
110	City of Newark	Bay Trail Gap Closures (4)	3	1	1,2,3,
111	City of Newark	Bike Education Training Program (69)	3	1	1,2,3,
112	City of Newark	Bike Lanes (10)	3	1	1,2,3,
113	City of Newark	Bike/Ped Enhancements	3	1	1,2,3,
114	City of Newark	Bike/Ped Expansion	3	1	1,2,3,
115	City of Newark	Cedar Boulevard Pedestrian and Bicycle Railroad Crossing	3	1	1,2,3,
116	City of Newark	Health living, walking, bike promotion (29)	3	1	1,2,3,
117	City of Newark	Ped/Bike Local Network Gap Closures(8)	3	1	1,2,3,
118	City of Newark	Walk to school promotion (33)	3	1	1,2,3,
119	City of Newark	SR-84 /Thornton Avenue interchange Improvements	3	5	13,15,20
120	City of Newark	Traffic Calming near schools (43)	3	5	13,15,20
121	City of Newark	Local Streets and Roads O&M	3	6	24
122	City of Newark	Maintenance Programs (25)	3	6	24
123	City of Newark	Non-Capacity Increasing Local Road Rehabilitation	3	6	24
124	City of Newark	Dumbarton TOD Transportation Infrastructure Improvements	3	9	5
125	City of Newark	Dumbarton TOD/Bay Trail Connectivity Pedestrian and Bicycle Railroad Crossing	3	9	5
126	City of Newark	Safe Routes to School expansion (42)	3	11	26,27,29

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
127	City of Newark	Safe Routes to School (65)	3	11	26,27,29
128	City of Newark	Truck impacts on local streets (41)	3	5,12	26,27
129	City of Newark	Other Programs identified in CWTP-TEP process	3	varies	
130	City of Oakland	Bicycle and Pedestrian Safety and Enhancements: Streetscapes	1	1	1,2,3,
131	City of Oakland	Transit: Streetcar on Broadway	1	2	5,6,7,9,10,11,12
132	City of Oakland	Local Streets and Roads Rehabilitation: Paving, Emergency Repair	1	5	5,6,7,9,10,11,12
133	City of Oakland	Local Road Safety Program: Railroad Crossings, Street Realignments	1	5	13,15,20
134	City of Oakland	Local Streets and Road Operations: Citywide Intelligent Traffic System (ITS), Signal Operations	1	5	13,15,20
135	City of Oakland	Transit Enhancements: Transit Villages (PDAs)	1	9	
136	City of Oakland	Parking Management: Parking Meter Enhancements	1	11	26,27,29,30
137	City of Oakland	SMART Growth/TOD: Transit Villages at BART Stations including but not limited to: Coliseum (replacement parking and station area improvements); MacArthur (replacement parking and station area improvements); and West Oakland (replacement parking, station area improvements and bike/pedestrian access)		4,9	4
138	City of Oakland	Goods Movement: Truck Facilities, Truck Route Rehabilitation*	1	5,12	26,27
139	City of Pleasanton	Pedestrian Gap Closure Projects over 580 and 680 - program	4	1	1,2,3,
140	City of Pleasanton	Local Bridge Repair and expansion - Bernal Bridge - program	4	8	21
141	City of San Leandro	Bay Fair BART Transit Village		9	2
142	City of San Leandro	Downtown San Leandro TOD	2	9	5
143	City of San Leandro	Downtown San Leandro TOD		9	5
144	City of Union City	Union City Blvd bikes lanes	3	1	26,27
145	LAVTA	Bus Stop Improvements	4	2	
146	LAVTA	Fixed-route expansion	4	2	
147	LAVTA	Fleet Rehab	4	2	
148	LAVTA	Wine shuttle	4	2	
149	LAVTA	Paratransit expansion	4	3	
150	LAVTA	Livermore Transit Center improvements	4	2,9	
151	Port of Oakland	Port operation - manage a queuing system for trucks		12	26,27
152	WETA	Implement ferry service between South San Francisco and Alameda/Oakland	1	2	
153	WETA	Provide ferry service between Alameda/Oakland and San Francisco, and between Harbor Bay and San Francisco	1	2	
154	WETA	Provide ferry service between Berkeley/Albany and San Francisco	1	2	
155		Pleasanton to Dublin bicycle connection		1	
156		SR-92 /Hesperian - Bike Connection		1	
157		Stoneridge Drive to Livermore Trail		1	
158		Bicycle/Pedestrian Improvements on Stanley Blvd		1	1,2,3,
159		Pedestrian and Streetscape Improvements in Cherryland/Ashland		1	1,2,3,

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
160		Bike and Pedestrian Improvements		1	1,2,3,
161		Bike access impvmt Fremont Blvd and I-680 @ Automall	3	1	1,2,3,
162		Sidewalk/bike path gap closer to Cal State Hayward		1	1,2,3,
163		W. Winton/Southland corridor for bikes and cars - congestion relief		1	1,2,3,
164		Addition of Bike Lanes and Congestion Relief in Highland and Magnolia Ave. areas		1	1,2,3,
165		San Leandro Bike/Ped plan - implementation		1	1,2,3,
166		San Leandro Blvd. Bike/Ped improvements		1	1,2,3,
167		Alameda Creeek Trail improvements	3	1	1,2,3,
168		Alameda Creek (trail?) ped/bike bridge UC - Coyote Hills	3	1	1,2,3,
169		Bay Trail Completion		1	1,2,3,
170		Bike - Better connectivity on bike trails.		1	1,2,3,
171		Bike - Nurture/encourage a bicycle culture		1	1,2,3,
172		Bike - Safe bicycle storage away from home		1	1,2,3,
173		Bike access on transit		1	1,2,3,
174		Bike access on transit - improvements		1	1,2,3,
175		Bike and pedestrian railroad crossings and overcrossings for pedestrians.		1	1,2,3,
176		Bike Education Training Program		1	1,2,3,
177		Bike facilities overall improvements		1	1,2,3,
178		Bike lane to San Francisco	1	1	1,2,3,
179		Bike lanes		1	1,2,3,
180		Bike lanes - make safer		1	1,2,3,
181		Bike lanes and trails gap closure		1	1,2,3,
182		Bike sharing facilities		1	1,2,3,
183		Bike trails		1	1,2,3,
184		Bike/walk to transit		1	1,2,3,
185		Bike: Roads designed and maintained for bike with bike lanes		1	1,2,3,
186		Bikes - Parking certainty for bicyclists - many retail areas lack bike parking		1	1,2,3,
187		Bikeshare program		1	1,2,3,
188		Developed bike connection to the Bay Trail		1	1,2,3,
189		Grade separation and safe crossings for bike/pedestrians		1	2
190		I-880 Bike/ped overcrossings in south county	3	1	1
191		Improve pedestrian/walking infrastructure		1	2
192		Lighted crosswalks		1	2, 13
193		Ped/bike local network gap closures		1	1
194		Sidewalk improvements citywide		1	2
195		UP line – leverage for greenway - bike ped		1	1
196		Pedestrian access on transit - improvements		1	5
197		New bus to BART (W/Dublin)	4	2	

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
198		Increase transfer time for AC transit (?)		2	5,6,7,9,10,11,12
199		Maintenance Facilities Improvements		2	5,6,7,9,10,11,12
200		Restore AC Transit services to pre-2010 levels, especially for East Oakland		2	5,6,7,9,10,11,12
201		Transit Priority Measures/Speed Protection (includes Bay Bridge Related Improvements)		2	5,6,7,9,10,11,12
202		BART - 24 hr service		2	5,6,7,9,10,11,12
203		BART - Eliminate time of day restrictions for Bikes on BART		2	5,6,7,9,10,11,12
204		BART station enhancement - amenities/cleanliness		2	5,6,7,9,10,11,12
205		Bathrooms on BART		2	5,6,7,9,10,11,12
206		AC Transit GPS		2	5,6,7,9,10,11,12
207		Accessible Transportation		2	5,6,7,9,10,11,12
208		Audible announcements at transit stops		2	5,6,7,9,10,11,12
209		Bus stop amenities: Benches and shelters		2	5,6,7,9,10,11,12
210		Connectivity of transit – seamless transfers		2	5,6,7,9,10,11,12
211		Considering Key System as model (historical transit network) (editorial)		2	5,6,7,9,10,11,12
212		Consistent information about transit Service changes: how to be informed of these ahead of time		2	5,6,7,9,10,11,12
213		Coordinated transit pass across all transit providers.		2	5,6,7,9,10,11,12
214		Create a free Eastmont Mall connection to Walmart and BART.		2	5,6,7,9,10,11,12
215		Create a joint rail transit district that includes ACE, Caltrain and BART in the five counties that ring the Bay.		2	5,6,7,9,10,11,12
216		Deviated route shuttles		2	5,6,7,9,10,11,12
217		Electric trolley buses		2	5,6,7,9,10,11,12
218		Escalators - enhanced transit station infrastructure		2	5,6,7,9,10,11,12
219		Improve access to bus stops		2	5
220		Info for transit transfers		2	5
221		Lighting - enhanced transit station infrastructure		2	9
222		Local connections to BART - improve		2	5, 2
223		Next bus information at more bus stops.		2	5
224		NextBus real time info		2	5
225		Regional rail - increase		2	5, 6, 7, 10, 11
226		Restoration of cancelled bus routes		2	11
227		Restoring transit frequency and reach to previous service levels		2	11
228		School buses		2	10
229		Secure funding for transit operations		2	10
230		Transit - Better information and advertising on transit and transportation availability		2	5
231		Transit - Improving PM and (night) Owl transit service		2	11
232		Transit - Provide better bus arrival information		2	5
233		Transit - Safety on bus and at bus stops and all transit		2	7
234		Transit system education to make system more user-friendly		2	5
235		Travel Training		2	28 ?
236		Travel training, information		2	28 ?

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
237		Free bus passes for school-aged children (better transit)		2	
238		Transit service - make it more targeted		2	?
239		Restrooms - enhanced transit station infrastructure		2	X
240		Paratransit - tie funding to efficiency		3	5
241		Paratransit with GPS that locates person – locator software on cell phone.		3	6
242		Bus driver training - customer service skills		3	
243		Bus driver training (wheelchair securing)		3	
244		Bus enhancements: wifi and cupholders		3	
245		Express bus service - extended hrs of service for later work schedules		3	5,6,7,9,10,11,12
246		Funding for accessible transportation programming		3	
247		Funding of transit in the Tri-Valley (continuation)		3	
248		Group trips - Accessible Transportation		3	29
249		Increase bus service frequency in South County (1/2 hr)		3	11
250		Restructure transit service including good feeder service, extended transfer time		3	11
251		Transit - Operation and maintenance for		3	11
252		Transit connectivity - transfers btw systems		3	11
253		Transit ops - reliable/on-time buses		3	11
254		Transit Real time info		3	6
255		Transit: need cross-town service to rely on local/interior service.		3	11
256		Transit agency mergers for efficiency		3	X
257		CBTP Projects		4	4
258		Comprehensive City Street Upgrades		5	5,6,7,9,10,11,12
259		Citywide ITS	1	5	13
260		San Leandro streets, especially along San Leandro Blvd/David and Nelson		5	13,15,20
261		Traffic Signal System Upgrade		5	13,15,20
262		Wayfinding signage to destinations (San Leandro Marina) and transit - program		5	2
263		Arterials and local circulation - improve		5	13,15,20
264		Better coordination between freeway and local streets		5	13,15,20
265		Better signal timing/synchronization, especially at night and mid-day - roads		5	13,15,20
266		Intelligent/Adaptive intersections.		5	18
267		Local street maintenance - funding for		5	24
268		Railroad track crossings made safer/easier for bikes and peds.		5	13
269		Rehab of Major Arterials, Complete Streets, access to transit, signal synchronization, spot improvements		5	13, 15, 20, 2
270		Road crossings for pedestrians and drivers - make safer		5	13
271		Rural roads safety improvements		5	13
272		Rural roadway improvements to accommodate bike and pedestrians		5	13, 2
273		Signal interconnect		5	13

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
274		Signal timing (TSP)		5	13
275		Speed reduction (road)		5	13
276		Traffic calming near schools		5	13
277		E. 14th corridor - Enhance safety		5	5,6,7,9,10,11,12
278		Maintenance of local streets and roads.		6	24
279		Downtown San Leandro bypass.		7	14,16,19
280		Freeway Service Patrol		7	14,16,19
281		I-80 south interchange signage	1	7	16
282		I-880 Operations Improvements		7	14
283		Maintenance of regional serving roadways		7	14
284		Ramp metering - improve		7	18
285		Each tow truck should have a wheelchair lift on it – include in expanded "Freeway Service Patrol" - accessible transportation		7	19
286		Paratransit for AC Transit, BART, non-mandated city programs, service gap coordination	multi	9	5
287		Supporting existing compact development and infrastructure - sustainability		9	X
288		Education on transit use for parents and youth, including disabled youth.		10	28
289		Healthy living,walking, bike promotion		10	28
290		Multi-lingual access/education		10	28
291		511 (improve user-friendliness)		11	29, 28
292		Clipper Cards - expand to include payment for taxi service		11	29
293		Crossing guard program		11	29
294		Employer- alternative work shifts		11	29
295		GHG reduction programs		11	29
296		GHG reduction projects	multi	11	29
297		Guaranteed Ride Home Program		11	29
298		Incentives for alternatives to driving		11	29
299		Parking and Transportation Demand Management		11	29, 30
300		Parking programs (demand mgmt, pricing, unbundling)		11	30
301		Parking system management - improvements		11	30
302		Pricing - programs to induce behavior change		11	30
303		Safe Routes to School		11	29
304		Shuttle stops closer to home e.g. FLEX San Leandro		11	29
305		Shuttles - employer, TOD, local		11	29
306		Shuttles developed in coordination w/ private institutions		11	29
307		Streetcar EBOT		11	29
308		TDM		11	29
309		Pre-paid transit supporting TOD/employers		11	?
310		Transit civility education program		11	7 ?
311		Port - Demand responsive truck loading and unloading at the Port		12	26,27
312		Port of Oak - change to 24 hr facility	1	12	26,27
313		Address truck impacts on local streets		12	26,27

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
314		Goods movement/ truck technology	multi	12	26,27
315		Truck congestion relief in neighborhoods		12	13, 26, 27
316		Alternative Fuel stations - comprehensive network of		13	
317		UP property development at proposed (where- San Leandro?) multi-modal station - addressing the potential impacts		13	?
318		Jobs closer to home		13	X
319		Support urban growth boundaries		13	X
320		Alternative and sustainable fuel sources - use of		13	
321		Share the road driver education re: bikes and peds		1, 10	28
322		Signage - improve		1, 2, 5, 7	2, 5, 16
323		Maintenance programs		1, 2, 6, 7	3, 11, 20, 24
324		Improve connections between neighborhoods and transit stations.		1,2,3	5
325		Flexible transportation system for an aging/changing population		1,2,9	
326		Walk to school promotion		10, 1	28
327		Public awareness about public transit - increase		10, 11	5, 28, 29
328		Shuttles: to get folks to/from transit:		11, 2	29
329		Shuttles for seniors - Accessible Transportation		11, 2, 5	4, 5, 28
330		Transit system connectivity - improve		2 E305	?
331		Transit - Better PR/Marketing about the overall system		2, 10	5, 28
332		Transit education and marketing		2, 10	28
333		Transit Education and outreach		2, 10	28
334		Transit riding incentives - Increase		2, 10	28
335		Combo of Fixed Route Service and Flexible service (Like King County, WA, Dial-a-ride) - post case study on ACTC website?		2, 11	29
336		Smaller buses during non-commute hours and less traveled routes		2, 11	29
337		Transit - Improving the safety and frequency of "last mile" transit connections		2, 11	11, 29
338		Transit - More customized transit service for each area – tailored to user needs		2, 11	11, 29
339		Transit connectivity -first and last mile		2, 11	11, 29
340		Maintaining buses and operations as priority over expansion (editorial)		2, 3	11
341		Transit funding - increase		2, 3	11
342		Seniors Transportation (edu/access)		2, 5	5, 28, 4
343		I-80 Re-stripe WB 80 to SB 880 connector from 3 to 4 lanes	1	2,3,11	
344		Bus stop enhancements (esp low income areas)		2,4	5,6,7,9,10,11,12
345		Bus stop safety/security improvements		2,4	5,6,7,9,10,11,12
346		Beyond ADA transportation - Accessible Transportation		2,4,9	5,6,7,9,10,11,12
347		Dial-a-ride: Tehachapi - post case study on ACTC website?		3, 11	29
348		Improved transportation options for seniors and people w/ disabilities - Accessible Transportation		3, 4	11, 4
349		Paratransit needs to be coordinated between agencies and seniors		3,10	28

#	Sponsor	Name of the Program	Planning Area	CWTP Program Category #	MTC Program Category #
350		Door to door program - Accessible Transportation		3,11	29
351		San Leandro Arterials/AC transit		3,5	11
352		Complete Streets		5, 1	13, 2
353		Complete streets with bike lanes developed		5, 1	13, 2
354		New roads include bike lanes, “complete streets”		5, 1	13, 2
355		Truck routing - improve		5, 12	13
356		ITS		5,7	18
357		Quiet zones near heavy and commuter rail (UP, ACE, BART)		5,7,12	16
358		Regional gas tax - development of		NA	X
359		Equitable distribution of transit funding $$ (editorial)		NA	
360		SR 262 (Mission Blvd.) Bicycle/Pedestrian Access Improvements	3		
361		SR 84 (?) - Niles Canyon Rd (safety improvements)	3		

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Working Draft: Proposed CWTP 2012 Program Categories	
Proposed New Program Categories	
1	Bicycle and Pedestrian Program – Expansion, Enhancements and Facilities Rehabilitation
2	Transit and Enhancements & Expansion
3	Transit and Paratransit Operations
4	CBTP Implementation
5	Local Road Improvements
6	Local Streets and Roads O&M
7	Highway, Freeway Safety and Non-Capacity Improvements
8	Bridge Improvements
9	Transportation and land Use Program (or PDA Program)
10	Planning and Outreach
11	Transportation Demand & Parking Management
Potential Program Categories	
12	Goods movement
13	PDA Non-Transportation

Notes

1 For the purpose of Call for Projects for the CWTP, if a project or a program meets both of the following criteria, it is considered a project under a programmatic category rather than a capital project if :

- The project or program has no anticipated air quality impact and therefore modeling the project or program is not necessary (example project – interchange improvement without capacity enhancement)
- The scope of the project or program is not significantly large (example – on street bicycle and pedestrian improvements)

2 All proposed new categories need to be coordinated with regional programs to determine if funding sources are available to develop and fund these types of improvements.

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Working Draft Proposed CWTP 2012 Program Categories
Revised 04/05/11

	Proposed Program Categories & Descriptions for CWTP 2012[1]		Current MTC Program Category & Description
1	**Bicycle and Pedestrian Program – Expansion, Enhancements and Facilities Rehabilitation** *Bicycle and Pedestrian Capital and Maintenance Improvements and Education and Safety Programs* Subcategories: • Countywide bike plan network • Countywide ped plan network • Local bike and ped plan networks Maintenance subcategories: • Class I Multi-use Paths • Bikeways • Bike Support infrastructure (racks on buses, bike lockers, signage, etc) • Sidewalks Ped support infrastructure (benches, crosswalk striping, etc) Bicycle and Pedestrian Program Subcategories: • Ped access to transit	**1** **3** **2**	**Bicycle/Pedestrian Expansion** New facilities, expansion of existing bike/pedestrian network **Bicycle/Pedestrian Facilities Rehabilitation** **Bicycle/Pedestrian Enhancements** Enhancements, streetscapes, TODs, ADA compliance, mobility and access improvements

[1] For the purpose of Call for Projects for the CWTP, if a project or a program meets both of the following criteria, it is considered a project under a programmatic category rather than a capital project if :

- The project or program has no anticipated air quality impact and therefore modeling the project or program is not necessary (example project – interchange improvement without capacity enhancement)
- The scope of the project or program is not significantly large (example – on street bicycle and pedestrian improvements)

	Proposed Program Categories & Descriptions for CWTP 2012[1]		**Current MTC Program Category & Description**
	• Bike access to transit • Bike Parking		
2	**Transit Enhancements & Expansion** Transit capital rehabilitation Rehabilitation program Vehicle expansion Safety and security, System capacity Station and stops	**5** **11** **6** **7**	**Transit Enhancements** (ADA compliance, mobility and access improvements, passenger shelters, informational kiosks) & **Transit O&M** (ongoing non-capital costs, preventive maintenance) **Transit Management Systems** (Translink, Transit GPS tracking systems, i.e., NextBus (NextBus uses Global Positioning System (GPS) receiver on AC Transit Buses to transmit speed and location data – converts data to wait time for riders)), **Transit Safety and Security Improvements** (security cameras), **Transit Station Rehabilitation, Transit Vehicle Rehabilitation/Replacement/Retrofit, Transit Operations Support** (purchase of operating equipments such as fareboxes, lifts, radios, office and shop equipment, support vehicles)
3	**Transit and Paratransit Operations** Operations expansion – existing and planned		
4	**CBTP** Implementation • Alameda Community Based Transportation Plan – June 2009 • Central Alameda County CBTP– Cherryland, Ashland and South Hayward – June 2004 • West Oakland Community Based Transportation Plan – May 2006	**4**	**Lifeline Transportation** Community Based Transportation Plans projects and programs such as information/outreach projects, dial-a-ride, guaranteed ride home, paratransit, non-operational transit capital enhancements (i.e., bus shelters). Does not include fixed route transit projects

	Proposed Program Categories & Descriptions for CWTP 2012[1]		**Current MTC Program Category & Description**
	• Central and East Oakland CBTP– December 2007 • South and West Berkeley CBTP – June 2007		
5	**Local Road Improvements**	**13**	**Local Road Safety** (shoulder widening, realignment, non-coordinated signals)
		15	**Non-Capacity Increasing Local Road Intersection Modifications and Channelization**
		20	**Non-Capacity Increasing Local Road Rehabilitation** (pavement resurfacing, skid treatments)
6	**Local Streets and Roads O&M**	**24**	**Local Streets and Roads O&M** (ongoing non-capital costs, routine maintenance)
7	**Highway, Freeway, Safety and Non-Capacity Improvements**	**14**	**Highway Safety** (implementation of Highway Safety Improvement Program, Strategic Highway Safety Program, shoulder improvements, guardrails, medians, barriers, crash cushions, lighting improvements, fencing, increasing sight distance emergency truck pullovers
		16	**Non-Capacity Increasing State Highway Enhancements** (noise attenuation, landscaping, roadside rest areas, sign removal,

	Proposed Program Categories & Descriptions for CWTP 2012[1]		**Current MTC Program Category & Description**
			directional and information signs),
		19	**Freeway/Expressway Performance Management** (Non-ITS elements, performance monitoring, corridor studies)
8	**Bridge Improvements**	**21**	**Non-Capacity Increasing Local Bridge Rehabilitation/Replacement/Retrofit**
9	**Transportation and Land Use Program** (or PDA Program), Transportation Improvements at transit hubs (PDAs), including multi-modal access (bus, pedestrian and bike)	**5**	**Transit enhancements** ADA compliance, mobility and access improvements, passenger shelters, informational kiosks
10	**Planning and Outreach** Planning, marketing and outreach	**28**	**Regional Planning and Outreach** Regionwide planning, marketing and outreach
11	**Transportation Demand & Parking Management** Range of TDM programs including Guaranteed Ride Home, Safe Routes to School, Safe Routes to Transit, Travel Choice, Walk/Bike Promotions and Parking Management including parking cash out, variable pricing	**29** **30** **26**	**Transportation Demand Management** **Parking Management** Parking cash out, variable pricing, etc. **Regional Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting regional air quality and climate protection strategies)

Working Draft Proposed CWTP 2012 Program Categories
Revised 04/05/11

	Proposed Program Categories & Descriptions for CWTP 2012[1]		**Current MTC Program Category & Description**
		27	**Local Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting regional air quality and climate protection strategies)
	Potential New Program Categories[2]		**Current MTC Program Categories for MTC**
12	**Goods Movement (Non-Capital)** Improvements for goods movement by truck and coordinated with rail (and air)	**26** **27**	**Regional Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting regional air quality and climate protection strategies) **Local Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting regional air quality and climate protection strategies)
13	**PDA-Non-Transportation** Improvements at PDAs that are not transportation, such as sewer and stormwater upgrades		**?**

[2] All proposed new categories need to be coordinated with regional programs to determine if funding sources are available to develop and fund these types of improvements.

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Attachment A.2
Programmatic Categories

Programmatic categories are groups of similar projects, programs, and strategies that are included under a single group for ease of listing in the RTP/SCS. Projects within programmatic categories must be exempt from regional transportation conformity. Many projects which address the concerns of communities, such as pedestrian bulbouts, bicycle lanes, transit passenger shelters, ridesharing, etc. are often taken into account in a programmatic category. Therefore individual projects of this nature do not need to be specified. Projects grouped in a programmatic category are viewed as a program of multiple projects. Projects that add capacity or expand the network are not included in a programmatic category. Projects that do not fit within the identified programmatic categories are listed separately in the RTP/SCS. Programmatic categories to be used include, but are not limited to the following:

1. **Bicycle/Pedestrian Expansion** (new facilities, expansion of existing bike/pedestrian network)
2. **Bicycle/Pedestrian Enhancements** (enhancements, streetscapes, TODs, ADA compliance, mobility and access improvements)
3. **Bicycle/Pedestrian Facilities Rehabilitation**
4. **Lifeline Transportation** (Community Based Transportation Plans projects such as information/outreach projects, dial-a-ride, guaranteed ride home, paratransit, non-operational transit capital enhancements (i.e. bus shelters). Does not include fixed route transit projects.)
5. **Transit Enhancements** (ADA compliance, mobility and access improvements, passenger shelters, informational kiosks)
6. **Transit Management Systems** (TransLink®, Transit GPS tracking systems (i.e. Next Bus))
7. **Transit Safety and Security Improvements** (Installation of security cameras)
8. **Transit Guideway Rehabilitation**
9. **Transit Station Rehabilitation**
10. **Transit Vehicle Rehabilitation/Replacement/Retrofit**
11. **Transit O&M** (Ongoing non-capital costs, preventive maintenance)
12. **Transit Operations Support** (purchase of operating equipment such as fareboxes, lifts, radios, office and shop equipment, support vehicles)
13. **Local Road Safety** (shoulder widening, realignment, non-coordinated signals)
14. **Highway Safety** (implementation of Highway Safety Improvement Program, Strategic Highway Safety Program, shoulder improvements, guardrails, medians, barriers, crash cushions, lighting improvements, fencing, increasing sight distance, emergency truck pullovers)
15. **Non-Capacity Increasing Local Road Intersection Modifications and Channelization**
16. **Non-Capacity Increasing State Highway Enhancements** (noise attenuation, landscaping, roadside rest areas, sign removal, directional and informational signs)
17. **Freeway/Expressway Incident Management** (freeway service patrol, call boxes)
18. **Non-Capacity Increasing Freeway/Expressway Interchange Modifications** (signal coordination, signal retiming, synchronization)
19. **Freeway/Expressway Performance Management** (Non-ITS Elements, performance monitoring, corridor studies)
20. **Non-Capacity Increasing Local Road Rehabilitation** (Pavement resurfacing, skid treatments)
21. **Non-Capacity Increasing Local Bridge Rehabilitation/Replacement/Retrofit**
22. **State Highway Preservation** (Caltrans SHOPP, excluding system management)
23. **Toll Bridge Rehabilitation/Replacement/Retrofit**
24. **Local Streets and Roads O&M** (Ongoing non-capital costs, routine maintenance)
25. **State Highway O&M** (Caltrans non-SHOPP maintenance, minor 'A' and 'B' programs)
26. **Regional Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting regional air quality and climate protection strategies)
27. **Local Air Quality and Climate Protection Strategies** (outreach programs and non-capacity projects specifically targeting local air quality and climate protection strategies)
28. **Regional Planning and Outreach** (regionwide planning, marketing, and outreach)
29. **Transportation Demand Management** (continuation of ridesharing, shuttle, or vanpooling at current levels)
30. **Parking Management** (Parking cash out, variable pricing, etc.)

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Performance Measures for the Alameda Countywide Transportation Plan

Alameda County Goal/Outcome	Proposed Measures for Alameda County CWTP Scenario Analysis
(1) Multimodal	Percent of all trips made by alternative modes (bicycling, walking, or transit)
(2) Accessible , Affordable and Equitable for people of all ages, incomes, abilities and geographies	**Accessible:** Share of households (by income group) within 30-minute bus/rail transit ride and 20-min auto ride of at least one major employment center and within walking distance of schools (Source: adapted from Caltrans Smart Mobility Framework)* This measure also serves as a proxy for economic vitality. Share of households (by income group) near frequent bus/rail transit service** (Source: adapted from Alameda CTC CMP process and the Transit Capacity and Quality of Service Manual) **Affordable:** Covered by breaking out accessibility metrics by income group. **Equitable:** Equity covered by breaking out metrics by geographic areas of the county. Measures marked with an asterisk will be reported for major jurisdictions as possible given the limitations of analytical tools. Income equity covered by breaking out accessibility measures by income group.
(3) Integrated with land use patterns and local decision-making	*See "Accessible" measure.* Transit riders / revenue hours of service (Source: consultant proposal)***
(4) Connected	*See "Reliable and efficient" measures.*
(5) Reliable and efficient	**Efficiency:** Average per-trip travel time for automobile, truck, and bus/rail transit modes (Source: Modified from RTP process). This measure also serves as a proxy for economic vitality. **Reliability:** Ratio of peak to off-peak travel time for automobile, truck, and transit modes (Source: consultant proposal)
(6) Cost-effective	Transit riders / revenue hours of service (Source: consultant proposal)***
(7) Well-maintained	Pavement Condition Index (PCI) on local roadways. (Source: Alameda County CMP, RTP process)* Transit asset age (Source: RTP process)
(8) Safe	Injuries and fatalities from all collisions, including pedestrians and bicyclists (Source: Alameda CMP, RTP)*
(9) Supportive of a clean and healthy environment	Per-capita CO2 emissions from cars and light-duty trucks (Source: RTP process)* Average time traveling by foot and bicycle per day (Source: RTP)* Quantity of fine particulate emissions (Source: modified from RTP)*

* As possible given constraints of analysis tools, results will be provided by for geographic sub-areas of the county to assess geographic equity issues.
**Defined as being within one half mile of rail and one quarter mile of bus service (acceptable walking distances defined in the Transportation Research Board's 2003 Transit Capacity and Quality of Service Manual, Part 3) operating at LOS B or better (headways of <14 minutes) during peak hours.
***Measure requires further review to ensure it can be calculated given constraints of Alameda CTC travel demand model.

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ALAMEDA COUNTYWIDE TRANSPORTATION PLAN (CWTP)

Project and Program Evaluation and Land Use Scenario Development (Sustainable Communities Strategy) Process

LAND USE SCENARIO DEVELOPMENT

TRANSPORTATION PROJECTS AND PROGRAMS

	March 2011	April	May	June	July	August	September	October/November	December 2011
PUBLIC REVIEW	CAWG, TAWG, Steering Committee, Public Outreach, Other ACTC Committees Review	Scenario IVS+		Detailed Scenarios	Draft Locally Preferred Scenario		Refined Locally Preferred Scenario		Preferred SCS
STAFF	MTC/ABAG Release Initial Vision Scenarios ACTC/MTC Call for Projects/ Programs Application Online	Refine IVS Scenario into IVS+ Scenario Select Scenario IVS+ Submit Initial RTP Constrained List to MTC 4/29 Sponsors Submit Projects/ Programs 4/12 Develop County/ Regional Tiered Projects List	Develop Detailed Scenarios Submit Final RTP List to MTC 5/26 Develop Draft Packages/ Programs/ Projects	Submit Scenario Comments to ABAG MTC/ABAG Release Detailed SCS Scenarios MODEL RUN #1	Draft Locally Preferred Scenarios Develop Preliminary CWTP Tiered List Based on Model Results	MODEL RUN #2	Refine Locally Preferred Scenario Submit Comments to ABAG on Preferred Scenario First Draft CWTP and Preliminary TEP List	Second Draft CWTP and TEP List (Steering Committee)	(Board Retreat) Preferred SCS MTC/ABAG Release Preferred SCS Scenario MODEL RUN #3 Draft CWTP and TEP List (Board Retreat)
PUBLIC REVIEW	CAWG, TAWG, Steering Committee, Public Outreach, Other ACTC Committees Review	Package Themes	Draft Packages		Preliminary CWTP List		First Draft CWTP and Preliminary TEP List		Draft CWTP and TEP

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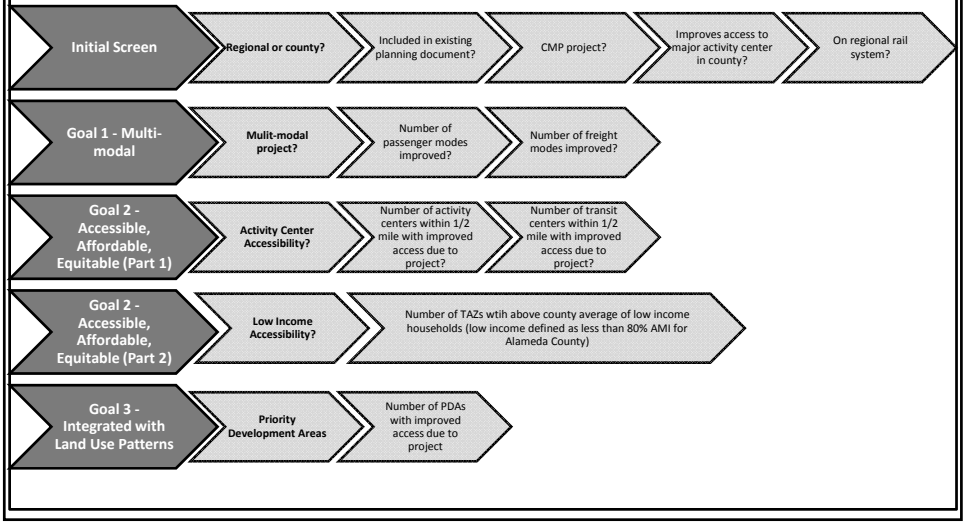
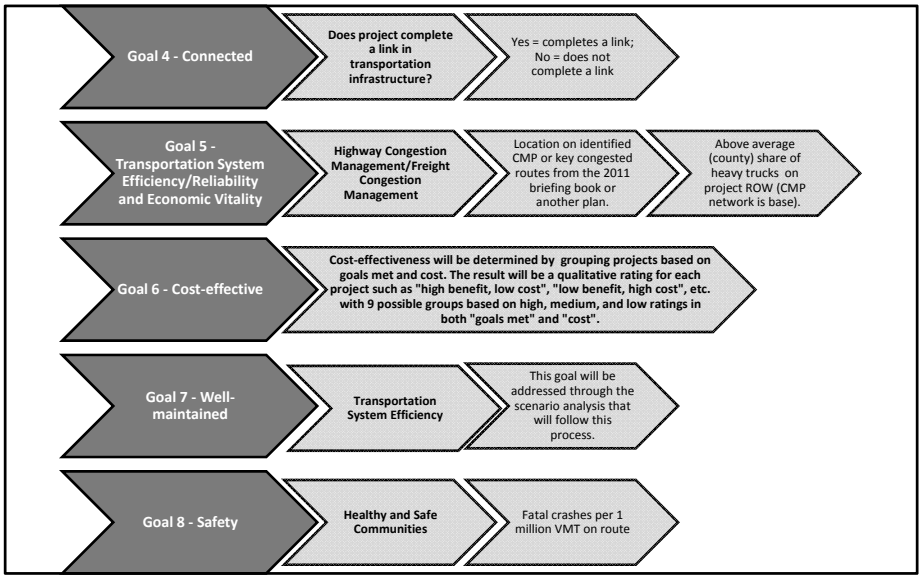
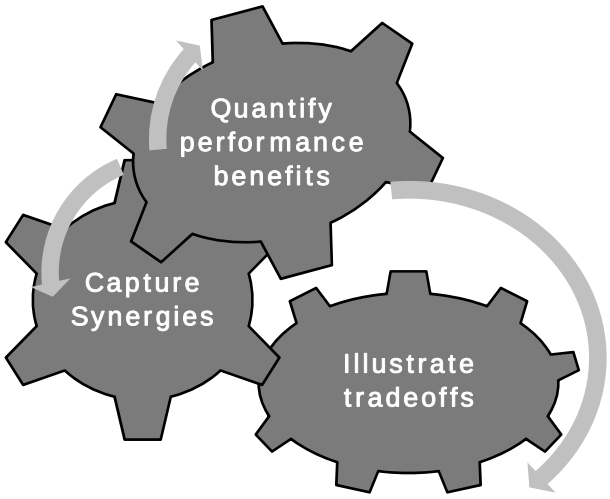
Project Screening Process



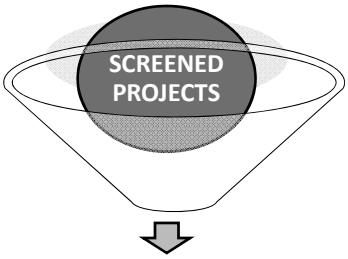
Project Screening Process (cont'd)



Why Develop Packages?



Proposed Package Themes



Baseline	Maintenance/ Ops (40% projects/60% programs)	Capital Projects (60% projects/ 40% programs)	Unconstrained	Land Use

Guidelines for Developing Packages

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M E M O R A N D U M

To: Community Advisory Working Group (CAWG) and Technical Advisory Working Group (TAWG) and CWTP-TEP Steering Committee

From: Bonnie Nelson, Nelson\Nygaard

Date: March 25, 2011

Subject: Transportation Issue Papers

The transportation issue papers are intended to provide a bridge between the big picture needs/issues/priorities discussions that have been the topic of much of our discussions and outreach to date and the next stages of the Countywide Transportation Plan (CWTP) and Transportation Expenditure Plan (TEP) development that will occur over the next few months. These issue papers provide case studies and additional background on key issues for the CWTP as well as providing a framework to think about how to approach transportation in the Plans.

The issue papers are intended to stimulate thinking and discussions around some of the important and challenging issues that we are facing in development of these Plans. Ultimately, we hope these can spur innovative thinking about project and program packaging and evaluation as we prioritize projects for both the CWTP and refine our list of projects for the Regional Transportation Plan.

The following six draft transportation issue papers are located on the Alameda CTC website at http://www.alamedactc.org/app_pages/view/816.

- Sustainability Principles
- Innovative Funding Opportunities
- Transit Integration and Sustainability
- Transportation Demand Management and Parking Management
- Goods Movement
- Land Use and the Countywide Transportation Plan

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ISSUE PAPER: SUSTAINABILITY PRINCIPLES

INTRODUCTION

This report outlines principles of sustainability and how they could be implemented in Alameda County through the Countywide Transportation Program (CWTP). Key conclusions include:

- A sustainable transportation system is one that meets the needs of the present without compromising the needs of future generations. This can include both an environmental dimension (e.g. ensuring protection of air quality and minimizing climate change impacts) and a financial dimension (ensuring future generations aren't financially burdened by choices made today). Sustainability can also include the concepts of equity and economic health.
- Sustainability is increasingly becoming a fundamental principle by which transportation agencies and local governments guide their operations, policies, and investment decisions. The passage of greenhouse gas legislation in California (AB 32 and SB 375) has created an additional impetus to focus on improving sustainability by reducing greenhouse gas emissions that contribute to climate change and sea level rise.
- The CWTP can support sustainability principles by focusing investments on environmental protection and cost-effective use of transportation resources. Examples of cost-effective strategies include transportation demand management (TDM) and systems management strategies (such as Intelligent Transportation Systems, or ITS) that enhance mobility while reducing environmental impacts and infrastructure costs. New investments should be targeted to support efficient travel patterns, in part by concentrating high capacity services in corridors that can support that type of investment, and focusing regionally on alternatives to increasing auto vehicle miles traveled.
- Sustainability cannot be achieved just through transportation actions, but must be linked with decisions in other sectors, especially land use and environmental planning. "Sustainable communities" include compact, walkable neighborhoods that provide good transportation options and minimize the need for driving.
- The Alameda County Transportation Commission (CTC) can further support sustainability by tracking sustainability metrics over time; ensuring that CWTP investments yield expected outcomes; ensuring the CTC applies sustainability principles to its daily operations; and by creating grant programs that foster innovative approaches to improving sustainability.

The goals of this white paper are to:

- Define sustainability and explain how it applies to transportation;
- Provide examples of how other transportation agencies and their plans have supported sustainability principles; and
- Identify specific ways in which the CWTP can support sustainability principles.

What is Sustainability?

Sustainability means meeting the needs of the present without compromising the ability of future generations to meet their own needs.[1] An expanded definition is based on three sustainability principles – environment, economy, and social systems, which include quality of life and equity (see Figure 1): *"Sustainability means meeting human needs for the present and future, while preserving environmental and ecological systems, improving quality of life, promoting economic development, and ensuring equity between and among population groups and over generations."*[2]

Figure 1 Three Dimensions of Sustainability

Source: Caltrans

Sustainability also commonly includes the notion of fiscal prudence. Sustainable transportation investment decisions are those that avoid disproportionately burdening future generations and endangering the financial health of public agencies.

Although sustainability can be achieved many different ways and through many different types of investments, the role of community design, not just transportation systems, is key. Some define sustainable communities as compact, walkable neighborhoods that provide transportation options and minimize the need for driving. Such communities weave together all the dimensions of sustainability. Sustainable community design maximizes connectivity to jobs and other destinations, supporting the local economy. Communities that support walking and bicycling not only improve air quality and reduce energy use and GHG emissions, but also improve public health through opportunities for "active transportation" and recreation. This in turn supports fiscal sustainability by reducing health care costs. The importance of sustainable transportation and community design is underscored by the involvement of organizations such as the Robert Wood Johnson Foundation, which has documented these linkages in briefs such as "Linking Policies to Prevent Climate Change and Childhood Obesity,"[3] and provides tools and resources to promote healthy communities.

Why Does Sustainability Matter?

Two issues related to sustainability are particularly important in Alameda County: climate change and financial resource limitations. Climate change is of great concern throughout California and in Alameda

[1] World Commission on Environment and Development 1987. *Our Common Future.* Oxford University Press, Oxford, p 41.
[2] Working definition from research in progress for NCHRP Project 8-74, Sustainability Performance Measures for State Departments of Transportation and Other Transportation Agencies.
[3] http://www.leadershipforhealthycommunities.org/

County specifically, not only because it threatens human health and natural ecosystems, but because it endangers infrastructure and communities in low-lying areas such as Oakland Airport and the Port of Oakland that will be affected by sea-level rise. Proactive response to these threats is critical for Alameda County, and is also required by recent greenhouse gas legislation (SB 375) mandating the Bay Area Metropolitan Transportation Commission to work with local governments to demonstrate that the Regional Transportation Plan will meet greenhouse gas reduction targets.

Financial sustainability is another key issue for the CWTP. Due to the economic recession, tax revenues have declined and may continue to do so. Federal funding is uncertain due to the delayed reauthorization of federal transportation legislation (SAFETEA-LU). The CWTP must respond to these challenges by focusing on cost-effective investments that support improved environment, quality of life, and economic health while protecting the future financial stability of Alameda County and its constituent cities.

GOALS & AVAILABLE STRATEGIES

Existing Efforts

Alameda County and its constituent cities are already taking steps towards supporting sustainability for the transportation system and other aspects of public agency operation:

- Environment/Sustainability is identified as one of five priorities in the County's Strategic Vision, adopted by the Board of Supervisors in 2008.
- The County is currently engaged in creating a Community Climate Action Plan, which addresses transportation, land use, building energy, water, waste, and green infrastructure for unincorporated communities.
- In May 2010, the *Alameda County Climate Action Plan for Government Services and Operations* was adopted, with a goal of a 15 percent GHG reduction in County government emissions by 2020. The County also has various initiatives related to ecosystem protection, energy efficiency, green buildings, conservation planning, recycling/waste reduction, and water protection.
- Several cities within Alameda County have undertaken their own Climate Action Plans.

Future Strategies

How can Alameda County and its cities do more to ensure the sustainability of the transportation system? The following general approaches can be followed.

- **Prioritize cost-effective investments in sustainability.** Maximizing sustainability outcomes such as climate change and air pollution reduction within financial constraints requires aggressive pursuit of the most cost effective sustainability strategies. Management and operations strategies including Intelligent Transportation Systems and travel demand management should be undertaken to maintain and improve mobility and accessibility while minimizing fiscal burden and social and environmental impacts.
- **Invest in technology to support sustainable futures.** The County and constituent cities can think beyond traditional transportation infrastructure planning to consider how to meet future transportation needs with sustainable technologies. This should include technologies to promote efficient travel patterns and system operations, as well as advanced vehicle and fuel technologies that can reduce energy use and GHG emissions.
- **Support integrated planning.** To reduce greenhouse gases and ensure cost-effective use of resources, planning efforts should be coordinated with local governments as well as other county and state agencies. For example, transit should be planned to serve the highest-density areas and these areas should be designed to support multi-modal access to transit. Bicycle and pedestrian investments should be targeted in areas where land uses support bicycling and walking. In Alameda County, the CWTP should be consistent with the regional Sustainable

Communities Strategy, the East Alameda County Conservation Strategy, the County's Climate Action Plan, and other regional and County planning efforts focused on sustainability. Additionally, County transportation investments should be coordinated with efforts to identify infrastructure vulnerable to the impacts of sea-level rise.

- **Integrate sustainability metrics into County activities.** Ongoing tracking of sustainability related-performance measures will help the County assess whether it is moving towards or away from a more sustainable system, whether specific objectives or targets are being met, and where improvement is needed.
- **Exercise fiscal constraint.** Achieving the outcomes described above should not come at the expense of over spending the transportation program, or require such costly investments that they cannot be realistically funded. Best management practices should be applied to maintain the existing transportation system (including highways, transit, and non-motorized facilities) in a state of good repair, at the lowest long-term cost.

CASE STUDIES

Three case studies are presented here – the City of Portland, Oregon,the City of Alexandria, Virginia, and Fruitvale Transit Village. The first two case studies illustrate a multi-sector sustainability effort undertaken by a municipal government, including sustainable transportation as well as coordinated land use and environmental planning. The third case study illustrates how a partnership between a community-based organization and public agencies created an inner-city transit-oriented development that met the needs of local residents and supported environmental and social sustainability through infill development and a community-based process.

Case Study #1 – Portland, Oregon

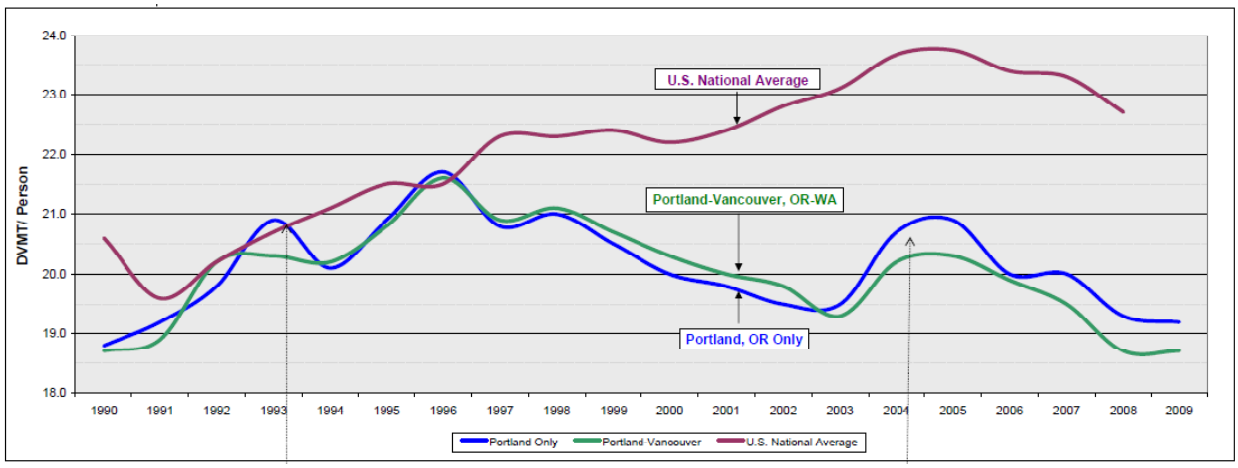
The City of Portland, Oregon has been pursuing sustainability for decades with a focus on integrated transportation and land use planning. The city's policies have completed a regional focus on growth management, led by Portland Metro, the regional government. The City has integrated sustainability functions into its planning department, which is now titled the Bureau of Planning and Sustainability. The mission of the Bureau is to create a "prosperous, equitable, and healthy city." The City's Planning and Sustainability Commission advises City Council on the City's long-range goals, policies and programs for land use, planning and sustainability. The Bureau's 2011 – 2013 Strategic Plan outlines six goals, which include the following elements directly related to transportation:

- Affordable housing and transportation options;
- Healthy, walkable and bikeable, and prosperous "20-minute neighborhoods" that encourage and enable Portlanders to meet their daily needs locally; the concept is that most life needs can be fulfilled within 20-minutes of home.
- Green streets and boulevards throughout the city; and
- Reducing greenhouse gas emissions through urban design and complete neighborhoods.

A 1994 study found that residents in areas with good transit and mixed land use walked for 27 percent of trips and took transit for 12 percent, compared with outlying neighborhoods in the region with poor transit or land use where the combined walk and transit mode share was under 8 percent. VMT per capita in these core neighborhoods was less than half that in outlying areas. Supported by these data, the city has coordinated transportation and land use planning to achieve conditions that support reductions in vehicle travel. Through its land use and transportation plans, including the Comprehensive Plan and the Transportation System Plan (TSP), city policies and investment priorities have supported transit-oriented development (TOD), infill, and neighborhood revitalization. The TSP focuses on reducing automobile travel and providing alternative modes that will help sustain air quality and other environmental resources. Likely due to city and regional transportation and growth management

policies, per capita VMT in the Portland metro area, which was about the same as U.S. average VMT in the mid-1990s, has declined to about 15 percent lower than this average (Figure 2).

Figure 2 Daily VMT Per Person, Portland, OR (Metro) vs. U.S.



Source: David Horowitz, Metro Regional Government, Portland, OR, based on FHWA Highway Performance Monitoring System Data. See: library.oregonmetro.gov/files//1990-2009_dvmt-portland-us.pdf

City codes establish *minimum* densities for mixed-use areas where transit service is provided or planned in the future. Tools such as density bonuses, transfer of development rights, and tax abatements have been used to facilitate transit-oriented development (TOD) around the region's growing light rail system, which now includes four lines covering 52 miles. Major infill projects such as the Pearl District and South Waterfront, coordinated with the introduction of streetcar service, have added over 8,000 new housing units to the downtown area.

The City has also invested heavily in pedestrian improvements as well as bicycle facilities and other supportive infrastructure and outreach programs. The TSP's modal plans include a Pedestrian Plan and a Bicycle Plan. The city now has in place 324 miles of bike lanes, bike boulevards, off-street paths, and cycle tracks (Figure 3). As a result, Portland has the highest bicycle mode share – 6 to 8 percent – of any large city. An extensive traffic calming has made neighborhoods more livable and improved pedestrian safety.

Figure 3 A "Bike Box" in Downtown Portland

Finally, Portland has taken an aggressive approach to maximizing the efficiency of the existing roadway system. The TSP includes a plan that addresses TDM and parking, and a plan for transportation system management (TSM). The TDM plan includes parking management measures, such as elimination of parking minimums downtown and reductions in transit station areas; as well as support for transportation management associations. A TSM policy calls for giving preference to transportation improvements that "use existing roadway capacity efficiently and improve the safety of the system." Measures include synchronizing signals, access management, transit signal priority, and ITS along major corridors. A city-wide program to develop coordinated signal timings at 135 signals has been estimated to reduce GHG emissions by 50 metric tons of carbon per signal per year.[4]

Lessons learned from Portland's experience include:

- **Sustainability requires long-term commitment. The City's successes as measured in terms of VMT per capita, bicycle mode shares, and other factors are a result of over 30 years of local and regional planning.**
- **Use policies and investments to support infill and neighborhood revitalization. Portland has used transportation funds to improve the quality of life in its urban neighborhoods through measures such as streetscaping, traffic calming, and bicycle boulevards.**
- **Coordinate development with transit. Portland has adopted transit-friendly land use policies and zoning measures such as high floor-area ratios, density bonuses, by-right mixed-use development, and parking reductions in locations with rail or frequent bus service.**
- **Focus on operations as well as demand.** Low-**cost efficiency measures such as traffic signal improvements have saved travelers time as well as reducing energy use, GHG emissions, and air pollution.**

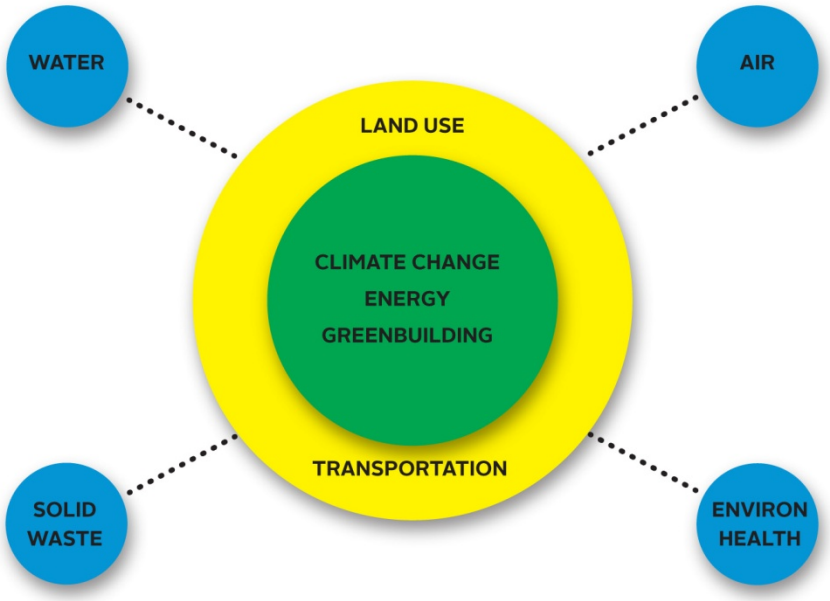
Case Study #2 – City of Alexandria, Virginia

Alexandria is the seventh largest city in the Commonwealth of Virginia, with a population of about 140,000. Sustainability is considered a shared responsibility across the City's governmental structure, but the Office of Environmental Quality in the Department of Transportation & Environmental Services has lead responsibility for this topic. Many Alexandria neighborhoods are compact, walkable, high-income suburbs of Washington D.C., and the city government operates its own bus system as well as being served by regional rail.

[4] Peters, J.; R. McCourt and R. Hurtado (2009). *Reducing Carbon Emissions and Congestion by Coordinating Traffic Signals.* ITE Journal, April 2009.

Beginning in 2007, the City worked with Virginia Tech to develop a definition of "sustainability" that provides the foundation of Alexandria's efforts to define itself as an "eco-city." The City views sustainability as having three components – ecological, economic, and social. The City has developed an Environmental Action Plan 2030 (EAP) that provides the foundation for incorporating sustainability principles into all the City's programs and plans. The Plan identified the challenges of climate change and energy/peak oil as the primary policy and political drivers over the next 20 years. As illustrated in Figure 4, these primary issues will also greatly influence the need to address related issues, such as water and air quality, land use planning, and transportation.

Figure 4 Key Issues in Alexandria, VA Environmental Action Plan



Source: City of Alexandria, VA (2008). *Environmental Action Plan 2030.*

The transportation principles and goals in the EAP are shown below:

> *Transportation - Encourage modes of transportation that reduce dependence upon the private automobile by promoting mass transit and pedestrian- and bike-friendly transportation networks. The city will integrate transportation options with land use decisions in order to ensure a healthy environment while continuing economic growth.*

- Goal 1: Move aggressively toward a culture of city streets that puts "people first" by implementing development and transportation projects consistent with the following level of precedence: pedestrians, bicyclists, public transportation, shared motor vehicles, and private motor vehicles.
- Goal 2: Educate individuals and organizations on the availability of transportation alternatives that will reduce dependency on single occupancy vehicles.
- Goal 3: Improve and expand an integrated rapid transportation system that includes intercity passenger rail, heavy rail, trolleys, streetcars, and buses.
- Goal 4: Develop a city-wide environmentally sustainable comprehensive parking strategy.

The plan also identifies nine broad strategies for supporting cross cutting connections among important sustainability-related topics, such as land use, transportation, open space, energy and environmental health. For example, these include:

1. Establish a city-wide network of high quality, affordable, and accessible eco-sustainable neighborhoods and villages with optimal densities to balance land use and transportation policies with open space, green infrastructure, and energy efficient building policies.
2. Develop a holistic city transportation system that puts the health, mobility, and accessibility of "people first" by implementing development and transportation programs and projects consistent with the following level of precedence: pedestrians, bicyclists, public transportation, shared motor vehicles and private motor vehicles.

With the EAP in place, the City of Alexandria is working to incorporate the concepts of sustainability into its Master Plan and Area Plans as they are updated. For example, the North Potomac Yard Small Area Plan includes a transportation network with a Metrorail station, dedicated high capacity transit corridor, buses, shuttles, car sharing, and bicycle facilities. An aggressive Transportation Management Plan will be required and parking will be managed, shared, priced, and designed to reduce car trips. The Plan is designed to allow employees and residents access to essential services within a five minute walk. The measures are expected to keep auto mode share in the area at less than 50 percent.

Lessons learned from Alexandria's experience include:

- **Take a holistic approach to sustainability. The City has identified actions for each of its program areas including transportation, air quality, water resources, environmental health, energy, land use and open space, and solid waste. Performance targets for other areas, including environment, energy, and land use, relate to transportation.**
- **Transportation and land use strategies are inseparable. This is evident, for example, through the City's policies that call for land use patterns that support accessibility by all modes, and integrating transportation options with land use decisions.**
- **Performance targets should be considered aspirational. Some of the performance targets in the EAP represent a major change in behavior, but the City included them because citizens encouraged them to push for changes.**

For more information, see: http://alexandriava.gov/Eco-City

Case Study #3 – Fruitvale Transit Village

Fruitvale Village, a transit-oriented development project in Oakland, California, that broke ground in 1999, illustrates how a community-based process can revitalize an economically-depressed area and provide access to public transportation. Fruitvale, an ethnically diverse neighborhood of approximately 53,000 people, with just over half of its residents identifying themselves as Latino, is located southeast of downtown Oakland. It is a low-income community, with an average household income of $36,266.[5] At the time the project began, Fruitvale was also seen as a high-crime area.

Fruitvale Village is a multi-phase development. To date, Phase 1 has been completed, with an area of 257,000 square feet, including the following components:

- Retail space (40,000 square feet);
- Commercial space that houses community services including a clinic, library, senior center, and the Unity Council's headquarters (114,000 square feet);
- Mixed-income housing (47 units); and
- 150-car parking garage in addition to parking for BART.

[5] 1990 U.S. Census. Retrieved from http://www.fhwa.dot.gov/environment/ejustice/case/case6.htm

The project began in 1991, when the local transit authority, Bay Area Rapid Transit (BART), announced plans to build a multi-layered parking structure next to the existing Fruitvale station (Figure 5).

Figure 5 Parking Lot Before Fruitvale Transit Village Development

Source: Federal Highway Administration.

The community opposed BART's parking design due to fears of increased traffic and pollution as well as the creation of a barrier between the Fruitvale station and the community. Based on the strong opposition to the project, BART withdrew its proposal. The Unity Council, a community development corporation created in 1964, was central to the success of this project as the organization entered into a partnership with BART to create a project plan through a community-based process.

Many years of work contributed to this project's success. In 1992, the Unity Council won a Community Development Block Grant to create an alternative plan for Fruitvale station. An economic study commissioned by the Unity Council found that businesses were leaving the area and that a real estate development near the transit station could help combat the vacancy problem.[6] Over the next several years, the Unity Council participated in other fundraising efforts and led the visioning and planning process. Partnerships between the Unity Council and BART as well as with other entities were central to the success of this project. In 1993, the Unity Council and the University of California at Berkeley's National Transit Access Center (UC NTRAC) held a community design symposium to help illustrate how community members' ideas could be translated into design elements for the transit station. By the time the project broke ground in 1999, many partners had contributed to the effort including: The Unity Council, National Transit Access Center, University of California at Berkeley, Bay Area Rapid Transit District (BART), City of Oakland, Metropolitan Transportation Commission (MPO for Bay Area), Federal Transit Administration, U.S. Department of Housing & Urban Development, and U.S. Environmental Protection Agency.[7]

[6] Oakland City Magazine. (2005.) "The Fruits of Village Unity." Retrieved from http://www.unitycouncil.org/download/article_reviving_fruitvale.pdf

[7] Federal Highway Administration. "Fruitvale Transit Village Project." http://www.fhwa.dot.gov/environment/ejustice/case/case6.htm

Figure 6 View of Fruitvale Transit Village from Above

Source: Federal Transit Administration.

Lessons learned from Fruitvale Transit Village include:

- Partnerships are powerful tools that can help overcome legal, financial and regulatory barriers. In the case of Fruitvale Transit Village, contributions on the part of the Unity Council, the City of Oakland, and BART helped tackle issues such as development rights, fundraising and zoning changes necessary to prepare for the project construction.
- Community-based organizations can be allies to government agencies when discussing neighborhood-level issues and projects. Because these organizations have close ties to a community, they can identify community members' needs and anticipate their reactions to a particular issue or proposal.
- Providing retail space near transit provides more than just economic benefits. In this inner-city area that struggled with crime, more foot traffic in the transit village and to the surrounding commercial districts has helped create a feeling of safety and the addition of shops in the area has given people more incentive to use BART.
- Achieving support from the community on a transit project has helped improve many aspects of the community, not just transportation. In Fruitvale, crime rates have decreased, retail vacancy is less than 1 percent and the area provides a large source of city sales tax revenue for Oakland.[8]

[8] Oakland City Magazine. (2005.) "The Fruits of Village Unity." Retrieved from http://www.unitycouncil.org/download/article_reviving_fruitvale.pdf

CHALLENGES

This section discusses the most significant challenges that transportation agencies have faced in incorporating sustainability principles into transportation planning and programming. Case studies of a dozen transportation agencies for NCHRP Project 8-74, which is focused on sustainability performance measurement at transportation agencies, indicated the following challenges were most significant:

- **Turning goals into measurable actions** – Many agencies are able to identify, agree upon and set goals that include concepts of sustainability, but are finding it more difficult to implement programs that will help lead to these goals. Identifying ways to effectively track progress towards these goals is also challenging.
- **Outside agency scope** – Achieving sustainability requires the cooperation of many agencies and entities with a range of responsibilities.
- **Measurement at the project level** – Sustainability impacts are often easier to measure at a regional scale, and more difficult to measure on a project by project basis. For example, regional travel demand models currently do not provide meaningful energy or air quality calculations for small scale projects.

Additional challenges for Alameda County include:

- **Integrating land use and transportation planning.** SB 375 is intended to encourage integration of land use development with transportation investments to reduce vehicle miles traveled and greenhouse gases. However, land use planning cycles are out of sync with transportation planning cycles, and the authority for land use and transportation planning decisions resides in separate agencies. Coordinating these is an ongoing challenge for the CWTP and beyond.
- **Trading off equity and environmental protection.** Some definitions of sustainability include both environmental protection (e.g. greenhouse gas reduction and air quality improvement) and preservation of social and geographic equity. These aspects of sustainability do not always work in harmony. The goal of achieving equitable distribution of funds among local governments in Alameda County may conflict at times with a desire to maximize the greenhouse gas reduction and air quality improvement benefits of specific types of transportation projects (particularly transit investments). This could be addressed in part by ensuring that overall investments among communities are balanced, but that investments are appropriate for each community. For example, in the context of a low-density community, signal timing improvements or incentivizing carpooling are likely to yield more cost-effective reductions in greenhouse gases than is expanding transit service.
- **Trading off mobility and energy/GHG reduction.** While reducing VMT clearly supports environmental sustainability, there is disagreement over the extent to which VMT can be reduced without negatively impacting economic growth and personal mobility. The challenge is to develop land use and transportation systems that maximize the *accessibility* of people and businesses to jobs, workforce, goods, services, and markets (i.e., the opportunities that can be reached within a given travel time) – while minimizing the *distances* that must be traveled. This can be done through compact, balanced, and mixed-use land use patterns that allow shorter trips and increase connectivity within neighborhoods, combined with improved transit, bicycle, and pedestrian infrastructure. Pricing strategies can also ensure that the capacity of the transportation system is used most efficiently to support economic growth.
- **Meeting LOS/congestion standards vs. reducing VMT.** Closely tied in with the previous issue is the question of how traffic impacts associated with new development are mitigated. California has long had in place requirements for county-level congestion management systems to meet level of service (LOS) standards as well as requirements in California Environmental Quality Act (CEQA) review to evaluate whether projects would result in exceedance of LOS standards. However, these requirements provide incentives for capacity expansion (as a mitigation

measure), rather than VMT reduction. Recognizing the potential conflict with state GHG reduction policies, the state recently issued new CEQA guidelines that shift the emphasis away from LOS and congestion standards and allow communities to set alternative goals such as trip and VMT reduction.[9] It is not yet clear what effects this change will have on sustainability outcomes, including infrastructure supply as well as travel demand.

- **Expanding the scope of transportation planning activities beyond traditional infrastructure investment.** Creative response to climate change and fiscal challenges may require re-definition of the scope of transportation planning. Many innovative and promising strategies to reduce greenhouse gas impacts may require thinking beyond concrete and paint to include planning for new technologies and programs such as electric vehicles, dynamic ridesharing, and smart parking management.

STRATEGIC INVESTMENT OPPORTUNITIES

This section discusses how the CWTP can encourage implementation of a more sustainable transportation system. The Alameda CTC, in cooperation with regional and local partners, is already engaged in a number of actions directed at increasing transportation sustainability. The Alameda Countywide Transportation Plan Draft Briefing Book (December 2010) identifies a number of projects and programs that support a sustainable transportation system. Some are led by the CTC, while others are led by other partners in cooperating with the CTC. Figure 7 shows some examples of these programs and identifies which sustainability principles (as indicated by an X) each appears to most directly support.

Figure 7 Existing Alameda County and Major Regional Transportation Programs and Sustainability Objectives

	Outcome Principles			Process and Program Principles			
Program	Environment	Economy	Equity & Quality of Life	Fiscal Constraint	Maximize Existing Efficiency	Integrated Planning	Track Performance
Regional Sustainable Communities Strategy	X		X			X	X
MTC Transit Sustainability Project				X			
New Rail Transit Projects	X	X	X				
New BRT/Bus Enhancements	X	X	X		X		
Paratransit Services			X				
Countywide Bicycle Plan	X		X				
Trade Corridors Improvement Fund		X					
ICM & SMART Corridors Projects	X	X			X		

[9] http://ceres.ca.gov/ceqa/docs/Adopted_and_Transmitted_Text_of_SB97_CEQA_Guidelines_Amendments.pdf

	Outcome Principles			Process and Program Principles			
Program	Environment	Economy	Equity & Quality of Life	Fiscal Constraint	Maximize Existing Efficiency	Integrated Planning	Track Performance
LOS Monitoring Reports & CMA Performance Reports		X					X
Local TDM Programs such as in Berkeley and Pleasanton	X		X		X		

To support sustainability in the future, the CTC can consider expanding programs similar to those listed in Table 2, particularly those which address both the environmental and financial components of sustainability. Some examples of cost-effective investment types include local TDM programs to reduce vehicle trips, local parking pricing programs, and Intelligent Transportation Systems improvements to reduce highway congestion. However, the cost-effectiveness of individual investments depends greatly on the context. The CTC can work to ensure that investments are appropriate for the context. The CTC can also help municipalities achieve economies of scale by sharing resources, e.g., by developing a TDM resource center and outreach program serving multiple communities, or developing model zoning ordinances and design guidelines for bicycle facilities and transit accessibility.

Some more specific ideas include the following:

- **The CTC could consider creation of a new pilot program category to fund innovations in transportation sustainability.** MTC's Climate Initiatives Program funds demonstration projects to test the most innovative strategies to promote changes in driving and travel behaviors. Potential projects may seek to increase the use of low-GHG alternative fuels, expand car-sharing programs, or implement low-GHG tire incentive programs or pricing demonstration projects. Alameda CTC could consider creation of a similar program to fund innovative approaches to climate change and sustainability at the county level. This could also be a means to explore possible innovative technological solutions to climate and sustainability challenges.
- **The CTC can evaluate sustainability outcomes.** For certain CWTP programs, the CTC could require project sponsors to collect data on sustainability outcomes. Before-and-after usage data on new bicycle and transit facilities, for example, could help inform which types of investments are most successful and cost-effective in which locations. The city of San Francisco, for example, evaluated before-and-after results from its pilot program to put colored bicycle lanes and bicycle boxes on Market Street in downtown San Francisco and found increased levels of bicycling after the improvements were installed.[10] The CTC can also use ongoing performance measurement to track progress towards overall sustainability goals, such as the share of trips made by bicycling, walking, transit, or carpool, by jurisdiction.
- **The CTC can study innovative solutions to sustainability challenges.** To inform future CWTP efforts, the CTC could launch a study to identify innovative sustainability solutions and emerging challenges. For example, it could study the need for future infrastructure (pavement striping, parking facilities, charging stations) to support electric vehicles, and adopt or develop model building codes that require charging stations as part of new development. It could also examine the need for modifying investment priorities to address the likely impact of climate change-related sea-level rise on low-lying transportation infrastructure.

[10] Source: San Francisco Bicycle Coalition. http://www.sfbike.org/?market

- **The CTC can be a leader in sustainability.** The CTC can ensure that county agencies and departments are meeting internal transportation-related sustainability goals through their operations, e.g., by offering employees transportation incentives, reducing or eliminating hidden parking subsidies, promoting acquisition of energy-efficient fleets, offering employees access to car-sharing vehicles, and other strategies.

ISSUE PAPER:
INNOVATIVE FUNDING STRATEGIES

INTRODUCTION

This section describes existing funding sources for transportation in Alameda County and discusses a number of potential new sources. Key conclusions include:

- Given current and projected needs, current funding is inadequate.
- Many funding sources are unreliable, either because of political challenges to renewal or because they are tied to economic cycles.
- Many sources do not allow for flexibility in their allocation to respond to need.
- Public investments generate private value that is not "captured" for the public good.
- Relatively few revenue sources are based on use of transportation facilities and services.
- Funding sources generally do not directly support policy goals, and sometimes contradict them.
- Options for increasing funding are limited, primarily due to political opposition.
- Many potential new revenue sources cannot be implemented directly by Alameda CTC without legislative or regional or district collaboration.
- New revenue sources requiring contributions from private parties or system users may be impractical or controversial.
- In developing a revenue strategy, Alameda CTC must first set priorities; these might include equity, alignment with policy goals, sustainability, alignment with need, and "buy-in" from stakeholders.

Funding Context and Issues

Finding funding for transportation construction, maintenance, operations and programs in Alameda County has become increasingly more difficult as traditional federal, state, and local funding sources have decreased. While the recession has been responsible for part of this decline, there are structural issues that predate this most recent cycle.

Historically, state and federal funding, such as gas tax revenues, accounted for a majority of transportation funding in Alameda County. At this point, however, outside sources account for less than 40 percent of the Bay Area's regional transportation revenues. Alameda County is a "self-help" county under California law, with its own dedicated sales tax for transportation. The current Measure B sales tax revenue is a primary source of funding; however, like all sales taxes, it is dependent on a growing and stable economy. Receipts declined as a result of the recession from approximately $100 million annually to about $90 million, and have now rebounded as the economy has improved, illustrating how economic volatility can affect this revenue stream . Originally projected to earn close to $2.9 billion between 2002 and 2022, the program is now expected to generate only about $2.1 billion, a nearly 30% decline. (It should be noted that revenues from Measure B are also used as matching funds to leverage other

sources of funding such as federal capital grants, and when these matching sources themselves decline or are eliminated, the problem is exacerbated.) In 2010, Alameda County voters approved another local transportation funding source, Measure F, a $10 increase in the annual vehicle registration fee. This fee, however, constitutes a comparatively minor source of funding, as it is anticipated to generate approximately $110 million over 10 years.

Transportation funding structures in Alameda County are relatively complex, as financing is derived from a wide range of sources. However, sources can typically be assigned to a few categories, and there are a few common and key characteristics that should be highlighted:

- **While most funding sources are ongoing, in recent years there has been a heavy reliance on one-time infusions.** Over the past decade, programs including the state's 2000 Traffic Congestion Relief Program, the Corridor Mobility Improvement Account created as a result of 2006's statewide Proposition 1B, and the more recent federal American Recovery and Reinvestment Act stimulus funds have been used to supplement existing sources of funding. However, such temporary sources, while of course welcome, are by their nature not sustainable.
- **Many "regular" sources of funding are not reliable or sustainable.** Even some sources of funding that are regularly renewed cannot necessarily be counted upon, for reasons of politics, the economy, or both. The recent debate in the U.S. Congress over reauthorization of the SAFETEA-LU funding act has provided a vivid illustration of such. State Transit Assistance (STA) funding for operations, which amounted to $4.4 billion as recently as 2001, was zeroed out by the end of the decade in a budget-cutting maneuver. Measure B, meanwhile, will require two-thirds approval from voters if it is to be renewed. Moreover, Measure B is a sales tax, and revenues from sales tax are dependent on consumer spending and fluctuate along with economic cycles. Similarly, property taxes are tied to assessed home values (with the notable exception that in California, under Property 13, rates for many properties cannot be increased to reflect rising values).
- **Many primary sources of funding are not flexible.** Funding agencies including the Alameda CTC generally have limited discretion to allocate transportation funds according to need, as many major funding sources carry strict restrictions. For example, federal transit funding is generally available only for capital expansions, not operations, while revenue from the state's gasoline excise tax may only be used for road or fixed-guideway transit projects. Relatively few sources of funding are available for transit operations; as a result, transit agencies tend to rely heavily on local sales and property taxes to fund operations.
- **Direct return on investment is limited.** In the early 20th century, transit projects in the United States typically were privately funded: housing developers would build streetcar lines to ensure access to their developments, the so-called "streetcar suburbs." In Japan, a similar model is still in use, as private companies construct rail lines as "loss leaders" improving access to department stores they then build adjacent to stations. (There are examples of this in America today such as the Washington Metropolitan Area Transit Authority which participates in joint development.) Yet in modern America, "value capture" of private profits made possible by public investments is rare. To be fair, indirect value capture in the form of increased sales and property or parcel taxes is a primary source of transportation funding. Yet more direct linkages in the form of tax-increment financing or business improvement districts remain relatively rare.
- **Funding sources are generally not linked to use.** There are three major forms of transportation user fees in Alameda County: gas taxes, tolls for roads and bridges, and fares for transit users. However, these account for a relatively modest share of all funding: the average farebox recovery ratio (or share of transit operating costs covered by fares) at the Bay Area's seven largest transit operators is less than 40 percent; the federal gas tax has not been increased since 1993; and only $1 of each $4 to $6 toll collected on state-owned bridges is available to transportation projects through Regional Measure 2. There have been some moves recently toward a more direct transportation funding model, as exemplified by the new High Occupancy Toll (HOT) lane on Interstate 680 within Alameda County, the first among several such lanes planned by MTC.

However, taxes and tolls, while clearly more equitable than fees levied on non-users, remain highly controversial among the general public and elected officials.

- **Funding sources are not always aligned with policy goals**. User fees can be an attractive source of transportation funding in part for reasons of equity, and partly because revenue generation can in some cases be linked directly to policy goals. However, in the current system, even where user fees exist they are sometimes not well aligned with such goals. Transit fares, while a major source of funding for operations, actually run counter to goals of reduced vehicle miles traveled (VMT) and carbon emissions, as charging a fare depresses transit usage. Gas taxes are subject to diminishing returns as fuel efficiency is improved, and tolls that are "flat," rather than demand-based, cannot be used to manage congestion.
- **While funding is declining, both need and cost are increasing.** Recent years have seen two major trends that do not bode well for the future of transportation funding in Alameda County. First, overall travel demand has been increasing. This is especially true for transit demand, a trend that is likely to only accelerate as a larger share of the population reaches retirement and as climate change concerns continue to increase. Second, transit operating costs have for some time been growing faster than inflation, a trend described in detail in the Transit Sustainability and Integration issue paper**.**
- **In general, options for increasing funding are limited.** As described above, the current system of transportation funding is constrained in terms of available revenues and restrictions on use of funds. In terms of options for increased funding, politics may prove to be the greatest constraint, both in terms of the legal barriers to raising revenues (including the two-thirds requirement for tax increases in California, a requirement expanded by the recently approved Proposition 26, which redefines as "taxes" many "fees" that have previously required only majority approval at the state level, and no public vote at the local level) as well as a national political environment that is currently focused on deficit reduction in general, and reduced "discretionary" spending. The budget recently approved by the U.S. House of Representatives would significantly reduce funding for the Federal Transit Administration's New Starts program, a key source of funding for transit capital projects. It would also reduce transportation funding in other areas, including funding for non-motorized projects.

That said, opportunities appear to exist for new "creative" sources of funding, as described in the following pages.

GOALS AND AVAILABLE STRATEGIES

One might think of revenue-related goals in the simplest terms: more money is clearly needed.

However, it is not just *increased* revenue that is necessary; it is a funding structure that is:

- More stable, reliable and thus sustainable, that is, less exposed to political and economic cycles;
- More flexible and able to respond to changing needs;
- More equitable, both in terms of the relationship between fees and benefits and impacts, as well as in a social justice context;
- More closely linked to and supportive of policy goals such as reduced VMT and greenhouse gas emissions; and
- More easily scalable to increasing demand.

Among the strategies that might be available to achieve these goals are:

- **Increased use of public/private partnerships.** Such arrangements have become more common in recent years, partly out of necessity, but also as a means of building support for investments by engaging stakeholders in a collaborative process. Private parties, of course, may be reluctant to

enter into such arrangements; however, due to the benefits that transportation investments can deliver, "win-win" scenarios often exist where both the public good and private interests can be served simultaneously. Some members of the public may be opposed to any mechanism whereby private profits are generated using public funds, even if a clear public benefit is involved. Public/private partnerships may consist of direct funding contributions to capital and operating expenses, or they may be sponsorships.

- **Increased use of value capture strategies.** In lieu of voluntary public/private partnerships, fees may be levied on private entities that stand to benefit from improved access, either in terms of increased land values or increased business. This form of funding has proven especially popular for planners of streetcar lines, which have been shown to have a significant impact on land values and development opportunities. However, it is rarely used for other types of rail projects, or bus rapid transit projects that might have a similar effect. Moreover, under Proposition 26, a two-thirds vote of the public is now required to enact fees.
- **Increased use of impact fees.** Another mechanism for ensuring that private parties who benefit from public investments in transportation infrastructure contribute to those investments is developer impact fees. So-called "nexus" fees linked to demands placed upon transportation systems by development have become relatively common in California, and there are existing fee programs in Alameda County, including the Alameda County Cumulative Traffic Impact Mitigation Fee and the Tri-Valley Transportation Development Fee. The latter applies to all new development in the "sub-region," which includes five cities and unincorporated parts of both Alameda and Contra Costa Counties, and currently ranges as high as $2,170 for a single family home and $3.89 per square foot for office space (significantly less than the San Francisco fee described under Case Studies). Enacted in 1998, it is dedicated to road projects. A new Strategic Expenditure Plan is currently in development.
- **Increased use of innovative funding mechanisms, such as loans backed by tax revenues.** A built-in problem of using tax revenues to fund construction is that the necessary revenue may not be available for some time, delaying implementation and delaying project benefits including increased revenues from related development. Some transportation agencies, of course, are able to exercise bonding authority. One alternative approach is to procure a loan or issue bonds for capital projects backed by tax revenues, allowing project timelines and benefits to be accelerated. A proposed example (Los Angeles County's 30/10 Initiative) is described under the Case Studies.
- **Increased use of revenue sources that are supportive of policy goals.** Some sources of funding can simultaneously serve as means to achieve policy ends. Most obvious are roadway user fees: congestion pricing serving to reduce peak congestion while raising revenue for investments in transportation alternatives; more typical "flat" tolls which can also raise revenues and discourage driving; taxes on vehicle miles traveled, as an alternative to traditional gas taxes; or gas taxes (although these are becoming less effective over time as technological advancements in fuel efficiency reduce the disincentive to drive). Parking fees can have the same effect. All such user fees, however, can be highly contentious and politically challenging to implement.

CASE STUDIES

Private Funding

Private funding for shuttle operations is relatively common; within Alameda County are examples including the Emery Go Round, which is funded by fees assessed through a Transportation Management Association, and Oakland's "B" Line, which is partly funded by contributions from private business organizations. However, other means exist to capture some of the value that public investment creates for private entities –ways to capture a share of the additional profits they would not have been generated otherwise.

Portland/Seattle Streetcars

The Portland Streetcar is a classic example of using nontraditional funding sources for construction of public transit. To date, construction has cost $103.15 million, of which $69.5 million, or more than two-thirds of the total funding, had come from three sources:

- $28.6 million in bonds backed by revenues from a small (20 cents an hour) short-term parking rate increase in city-owned garages;
- $21.5 million in Tax-Increment Financing (TIF); and
- $19.4 million from a Local Improvement District (LID) assessment on owners of non-owner-occupied homes near the alignment (a LID is essentially what is known in California as a Business Improvement District)

The Portland Streetcar is operated by a nonprofit organization, Portland Streetcar Inc., which derives about 5 percent of its funding ($250,000 per year) from vehicle and shop sponsorships. Sponsor packages include signs, names on brochures, and announcements on-board vehicles. Almost all sponsors are locally owned businesses, merchant groups or institutions.

For Seattle's South Lake Union Streetcar, the share of capital costs contributed by adjacent property owners through a LID was even greater: $25.7 million, or roughly half of construction costs. Reportedly, just 12 of the property owners to be assessed, or 1.5 percent, filed formal protests, well below the 60 percent required to block the assessments. The South Lake Union Streetcar similarly relies in part on sponsorships. It earned $387,000 in 2009.

Lessons Learned

- **Value capture using an improvement district can account for a significant portion of a capital project's budget, and may prove relatively uncontroversial if there is a clear, direct benefit for property owners**
- **Another innovative means of obtaining financing from private sources is to build on existing advertising models by offering sponsorships of infrastructure**

Cleveland HealthLine

While the Portland and South Lake Union Streetcars described above have been able to raise several hundred thousand dollars per year toward operating expenses by using a limited sponsorship strategy, the Greater Cleveland Regional Transit Authority (RTA), has pursued a more aggressive course, one akin to that used by major-league sports owners: it has sold naming rights to a major transit line.

RTA sold naming rights to the bus rapid transit line for a one-time fee of $12 million. The project, originally called the "Euclid Corridor" was finally named the "HealthLine" by the sponsors, the Cleveland Clinic and University Hospital, two major institutions located along the line. Fortunately, the name is geographically and logically related to the line, thus reducing any potential for confusion. (It is not clear how long the naming-rights agreement will last and such an arrangement raises an obvious question: if the name were to be changed at some point, what might the impact be on ridership?)

The fact that RTA was able to *successfully* sell naming rights for this fairly substantial sum of money may come as something of a surprise; however, it is more understandable in light of the fact that advertising already serves as a major source of revenue for many transit agencies, as transit vehicles are both highly visible and highly mobile.

Lessons Learned

- **Sponsorships may even extend to an entire transit service, and depending on the visibility of that service, may prove relatively lucrative**
- **In selling naming rights to a transit service or infrastructure , the risk of confusion for users, and attendant ridership and fare revenue impacts should be taken into account**

Loans and Bonds

America Fast Forward / 30/10 Initiative (Los Angeles)

In 2008, Los Angeles County voters approved Measure R, a 30-year, half-cent sales tax increase to fund a package of transportation improvements, including many major transit projects. Measure R received 67.2 percent of the vote in 2009 (?), surpassing the required two-thirds majority and demonstrating a broad mandate. Sixty-five percent of Measure R revenues are dedicated to transit capital and operations, and the remaining 15 percent are reserved for cities, some of which will go to transit.

Measure R is expected to generate $40 billion over 30 years. Construction, however, cannot get underway until funding is actually available. So, in order to deliver project benefits sooner, the Los Angeles County Metropolitan Transportation Authority (Metro) and Los Angeles Mayor Antonio Villaraigosa have advanced the 30/10 Initiative and America Fast Forward, companion proposals to front-load construction of a dozen key transit projects by having the federal government provide loans and bonds backed by local sales tax revenues, and to implement such a program nationwide. Completion dates for all 12 Los Angeles-area projects could be moved up from as late as 2039 to no later than 2019.

The economic and environmental logic is compelling: While a substantial initial investment would be required of the federal government, taxpayers (outside of Los Angeles County, at least) would be largely reimbursed. In exchange, Metro estimates that:

- 160,000 jobs would be created in construction, operations and maintenance
- 521,000 fewer pounds of mobile source emissions would be generated annually
- 10.3 million fewer gallons of gasoline would be used annually
- there would be an additional 77 million annual transit boardings
- annual VMT would be reduced by 191 million miles

Additionally, the Los Angeles Economic Development Corporation has estimated that Measure R projects with a total cost of $34.7 billion would generate significant benefits for the regional economy, including $68.8 billion in private section revenues and over a half-million jobs. An additional $9.3 billion in tax revenue would be generated, including $6.6 billion for the federal government.

According to program descriptions available on Metro's website, the federal government would incur limited costs. The 30/10 Initiative calls for both Transportation Improvement Bonds (TIBs) requiring a federal subsidy to cover the interest, as well as Transportation Infrastructure Finance and Innovation Act (TIFIA) Direct Loans that would require a subsidy of $200 million on a $2.3 billion loan. Congressional approval would be required. A fact sheet for the America Fast Forward program further notes that tax code incentives could reduce borrowing costs for bonds. As the fact sheet states:

> *The federal government has four types of broad policy tools it can use to stimulate infrastructure investment: grants, regulatory streamlining, credit assistance and tax code incentives. Grant funding has been the traditional federal tool (but) the magnitude of the nation's transportation investment needs far exceeds available resources. .. (C)redit assistance and tax code incentives, when used as innovative project finance tools, promote two important federal policy objectives: a) stimulating investment through leveraging pledged state and local revenue streams or user charges; and b) limiting budgetary costs.*

The concept underlying the 30/10 Initiative and America Fast Forward is reflected in President Obama's proposal for a National Infrastructure Bank that could provide such assistance to other regions, including the Bay Area. However, given current Congressional priorities, the likelihood of such a program being enacted prior to the 2012 elections would appear to be limited. Nonetheless, the Fast Forward program has reportedly received the support of the U.S. Chamber of Commerce, the AFL-CIO, and more than 60 mayors.

Lessons Learned

- **Issuing bonds or obtaining loans backed by approved sales tax revenues can accelerate project benefits at relatively little cost**
- **Such a program can serve to reward "self-help" communities, and to encourage others to make similar investments**
- **Significant political barriers exist to implementation of such a program on the federal level**

User Fees

Replacement of gas taxes with Vehicle Miles Traveled, or VMT fees is an idea that has been long discussed in transportation circles in California. Following is a description of a pilot program conducted in Oregon. The primary source for this case study is the 2007 project report, "Oregon's Mileage Fee Concept and Road User Fee Pilot Program."

Mileage Fee Concept and Road User Fee Pilot Program (Oregon)

Program Background. In 2001, the State of Oregon passed legislation which created the Road User Fee Task Force. Responding to the challenges presented by the existing transportation funding system – ever-diminishing revenue that can no longer support existing and proposed infrastructure due to stagnant gas tax rates and increasingly fuel-efficient vehicles – the Task Force was asked to develop concepts for a new, long-term, and stable revenue source for Oregon's transportation system.

The Oregon Mileage Fee Concept was designed by the Task Force and a partnership of the Oregon DOT, Oregon State University, and Portland State University. The fee program was ultimately tested on a pilot basis, known as the Road User Fee Pilot Program, which sought to study the feasibility of both a mileage-based fee and congestion pricing. The program was funded by a $2.1 million grant from FHWA and $771,000 in matching funds from the state.

Pilot Overview. The pilot program began in March 2006 and ran for one year. In the study, there were 299 motorists (with 285 vehicles) from 221 households within the greater Portland area. Program participants were offered $300 per vehicle for their participation, with compensation provided after completion of certain project milestones. In each vehicle an "on-vehicle" device was installed, which used GPS technology to count the number of miles driven within a given zone.[1] Study participants were instructed to refuel their vehicles at two gas stations that had been outfitted with wireless readers to download mileage data and calculate the cost of the gasoline, including the mileage fee.

The first five months of the study were the control period, in which participant mileage was recorded, but drivers continued to pay the existing gas tax. In short, the control period was used to establish a baseline of travel behavior for the participants. Beginning in month six, the participants were broken into two groups: a "VMT" group, which ceased to pay the gas tax and instead paid a 1.2 cents per mile fee; and a "rush-hour" group, which also no longer paid the gas tax and instead paid 10 cents per mile from 7-9 AM and 4-6 PM and .43 cents per mile at all other times. It is important to note that the per-mile fees for the pilot program were explicitly set to be *revenue-neutral.* In other words, they were set to generate as much revenue as the existing 24-cent per gallon gas tax.[2] As described below, the per-mile rate is one of the key policy questions related to mileage-based fees.

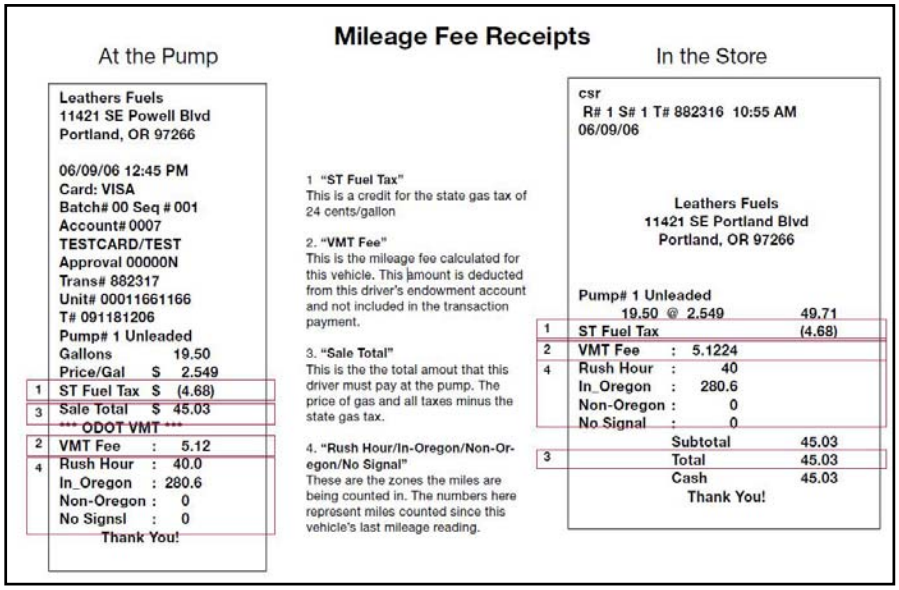
Pilot Program Evaluation and Key Findings. A number of key findings emerged from the pilot program related to program design, implementation, effects on participant travel behavior, and participant experience. These are briefly outlined below:

[1] Only miles driven within Oregon were recorded.

[2] For example, the 1.2 cents per mile fee was determined by dividing the existing gas tax by the average fuel efficiency (in 2004). 24 cents per gallon / 20 miles per gallon = 1.2 cents per gallon.

- **Transparency of fee/ Ease of use:** The program was largely successful in ensuring transparency of the fees and making payment as easy as possible. First, the on-vehicle dash display shows the zone in which a vehicle is traveling and miles traveled. Second, the payment process was designed to be as simple and as familiar as possible for users. The participants would refuel at one of two stations that had been outfitted with wireless readers,[3] which would access the on-board equipment and calculate the number of miles driven since the last fueling. At payment the number of miles traveled per zone and the total mileage fee was itemized on the receipt, and shown in comparison to the cost of the gas tax (see Figure 1).

Figure 1 Sample Receipts for Mileage Fee Fuel Purchase[4]



- **High accuracy and easily integrated:** The mileage system accurately calculated the mileage traveled and accurately completed the needed financial transactions. Furthermore, the technology was easily integrated with existing systems, allowing non-test vehicles to also fuel at the pumps.
- **Privacy protection:** One of the highest priorities for the pilot program was to ensure participant privacy, and pilot program showed that this goal is easily achievable. First, the program technology did not allow for the transmission of vehicle location and no location points were stored within the GPS equipment. Second, the transmitters were only short-range and, therefore, did not allow "tracking." Finally, under the proposed, full-scale program, ODOT would not install, maintain, or physically access the equipment within in each vehicle, as this would be done by the vehicle manufacturers themselves. The only data that ODOT would collect at the pump would be a vehicle ID number, miles traveled in each zone, amount of fuel purchased, and location of fuel purchase.
- **Ease of enforcement and minimal fee evasion:** As designed, the program is easy to enforce and hard to evade. First, payment at the pump is an enforcement mechanism in and of itself because a motorist must pay the fee in order to fuel their vehicle. Second, hacking of on-vehicle and pump

[3] The wireless readers at the fueling stations were designed to continue to allow non-study participants to continue fueling and pay the existing gas tax.

[4] Whitty, J. M. (2007). *Oregon's Mileage Fee Concept and Road User Fee Pilot Program.* Salem: Oregon Department of Transportation.

equipment can be mitigated through design and encryption. Third, tampering of equipment of abnormal mileage readings could be detected and flagged for auditing. Furthermore, the mileage fee system offers little incentive to evade the mileage fee because the per-mile fees are comparable to the existing gas tax. Finally, any effort to drive to another state to avoid the tax would likely prove to be not only cost-neutral, but also impractical.

- **Ease of collection and administration:** In Oregon taxes on fuel are paid to the state "up front" by a limited number of distributers before gasoline ever reaches a gas station. Those fees are passed on and recouped by the distributers through the gas retailers, and, ultimately, the motorist. This process would continue under the mileage-based fee system with periodic accounting checks to ensure accurate payments.
- **Program costs:** In 2003, estimated capital costs were $33 million. It is unclear what setup costs would be at this time, but ongoing improvements in GPS and wireless technology have likely resulted in significant per unit cost reductions. Annual operating costs (in 2003) were $1.6 million, which represents less than 3 percent of projected mileage fee revenue collected at the pump.
- **Phasing:** As designed, the Oregon mileage-based fee would be phased in over time as only "vehicles equipped with appropriate technology installed prior to first sale…would pay the mileage fee." Retrofitting existing vehicles was determined to be cost-prohibitive. As a result, many motorists would continue to pay the gas tax. It is estimated that it would take approximately 20 years before all Oregon vehicles were equipped with the proper technology and paying a mileage-based fee.
- **Adaptability to congestion pricing:** The pilot program proved to be highly adaptable to congestion pricing schemes. The technology was able to calculate fees based on specific zones and times of day, yet additional technology and system improvements are likely required before it could be used to implement a comprehensive congestion pricing scheme.
- **Travel behavior:** The mileage and congestion-based fees had some specific impacts on the travel behavior of participants.
    - The "VMT" group showed a 12% reduction in total miles traveled per day, despite the fact that the mileage fee was equivalent to the existing gas tax. The study showed that enhanced information about travel behavior alone led to voluntary changes in travel behavior.
    - Relative to the "VMT" group, the "rush-hour" group had a 22% reduction in peak-period travel.
    - Households within four blocks of transit reduced their rush-hour miles by an additional .742 miles per day.
- **Participant Experience:** In all, program participants reported a positive experience with the mileage-based system. Approximately 91% of program participants indicated that they would have been willing to continue with the mileage-based system. The primary complaints with the system, such as having to purchase fuel at one of two stations, were program-specific and not applicable with a fully scaled and improved program.

By numerous measures, Oregon's experience with a mileage-based fee proved to be a success. The pilot program clearly indicates that a mileage-based fee is a viable alternative to the gas tax. However, the Oregon experience also demonstrates that there a number of remaining issues that must be resolved before the program can be expanded. These lessons are important to highlight as Alameda County and the Bay Area grapple with the region's own transportation funding challenges.

First, the Oregon pilot program was the result of more than a decade of effort to address the gasoline tax. The study of the mileage-based fee and implementation of the pilot program required strong leadership from both the Governor and the State Legislature. State legislation was required to establish the Road User Fee Task Force and move forward with the mileage-based fee. It is clear that any

implementation of a similar program in the Bay Area will require strong leadership from local, regional, and state officials to overcome likely political opposition and resistance to change.

Second, despite evidence to the contrary, privacy concerns continue to be the primary criticism of any mileage-based fee. The increasing ubiquity of smartphones and other GPS-enabled technology would seemingly mitigate any such criticisms, but it is clear that privacy concerns must be addressed if the public is to accept a mileage-based fee. Any effort in the Bay Area to adopt such a funding structure should prioritize effective and clear messaging around this issue. The Oregon experience demonstrates that if the technology and concept is understood, public concerns can be alleviated.

In addition, the Oregon pilot program was explicitly designed to be revenue neutral and the program set per-mile rates equal to that of the existing gas tax. Clearly, the rate structure is one of the most crucial policy questions surrounding mileage-based system. If the Bay Area moves forward with such a funding concept, it will have to evaluate rate structures that respond to the region's numerous transportation goals: revenue generation and fiscal sustainability, congestion reduction, VMT reduction, mitigation of climate change, and equity and fairness.

The Oregon program also demonstrates that a mileage-based fee system is not a "quick fix." The Oregon Task Force determined that the retrofitting of existing vehicles with a mileage-based technology was cost-prohibitive. Instead, any statewide program would be phased in over time, an estimated 20 years, as only new vehicles with pre-installed GPS technology would pay the mileage fee. In short, Alameda County and the Bay Area should not view such a funding scheme as a quick solution to the region's funding challenges as any significant amount of revenue generated from a mileage-based fee is likely many years away.

Lessons Learned

- **A mileage-based fee appears to be a viable alternative to existing gas taxes.**
- **However, there would be significant political obstacles to implementation.**
- **Public concerns about invasions of privacy, even if unwarranted, would have to be addressed.**
- **It may prove much easier to adopt such a program if it is revenue-neutral; however, it would then serve only as a means to achieve policy objectives (reduced VMT), and not as a tool for raising revenues.**
- **In order not to be cost-prohibitive, such a program would have to be phased in over a long period, as new cars are outfitted with the necessary technology.**

SFpark (San Francisco) and Old Town Pasadena Parking Benefit District

Like the Oregon Mileage Fee, San Francisco's SFpark Parking Demand Management (PDM) program has been designed to be revenue-neutral. The program will set prices for metered parking spaces based on demand, and with a maximum price of $6 per hour, it is projected that revenue from meters will increase. However, in addition to reducing vehicle miles traveled, peak period congestion and conflicts with other users of the street (as the need for motorists to "circle" looking for parking would be reduced), one of the program's core objectives is to make it *easier* to find parking and avoid tickets. This would be done in part by increasing availability of legal spaces, but also by providing real-time information on availability, relaxing time limits, and providing more payment options, including credit and debit cards as well as prepaid parking cards. This is expected to reduce revenues from meter, loading zone, double-parking and other violations.

For this reason, market-based pricing of parking may not result in additional revenues. However, market-based pricing programs in other cities such as Pasadena have been used to generate additional revenues which were then reinvested in the surrounding area. In the Old Pasadena Parking Meter Zone, meter revenues have been used to fund a range of streetscape improvements, enhanced maintenance, security and marketing. The program generates about $80,000 per block annually, and the area's resurgence since the program's implementation in 1993 has been widely documented: sales tax revenues increased

roughly 250 percent within six years, while revenue at a nearby mall with free parking declined. Such a "parking benefit district" or PBD may also be used to fund other types of transportation improvements.

It should be noted that market-based parking pricing programs provide an excellent example of a revenue source that is both equitable and aligned with policy goals. Market-based pricing is not only a user fee; it is a user fee that is set according to demand, and not arbitrarily. Moreover, prices can vary not just by location, but by time of day – meaning that market-based pricing can serve as a form of congestion pricing reducing peak demand on the system. Indeed, SFpark prices will vary by time of day, with a goal of achieving 20 percent availability in all locations at all times during which meters are in operation, thereby reducing the amount of "circling" by motorists attempting to find a space.

Lessons Learned

- **Market-based pricing of public parking can serve as a mean to improve convenience for motorists, while reducing VMT, peak congestion and conflicts with other users.**
- **Market-based pricing can also be used as a means to raise revenues; however, this may be more politically palatable if revenues are reinvested in the immediate area.**
- **As a demand-based program of user fees, market-based pricing is both an equitable strategy and one that is well aligned with policy objectives.**

Impact Fees

San Francisco Municipal Transportation Agency (SFMTA) Revenue Generation Tools

Like transit agencies across the country and in Alameda County, including AC Transit, the SFMTA has struggled to overcome significant budget deficits in recent years. The origins and causes of the financial challenges facing SFMTA are complicated and varied, yet generally involve familiar factors: a combination of declining tax revenues due to the poor economy; increasing labor, operating, and capital costs; and state operating funds being diverted to California's general fund. As a result, the SFMTA has had to close its budget deficits through several fare increases and service reductions. In addition to the immediate impacts of reduced service and higher fares on riders, the ongoing budget deficits have prevented the SFMTA from completing capital projects and implementing the recommendations of its first comprehensive service evaluation in decades, the Transit Effectiveness Project (TEP). While the SFMTA has an approved budget through June of 2012, it still faces systemic budget challenges. In fact, the latest budget outlook estimates that SFMTA faces a $1.6 billion shortfall over the next 20 years. Moving forward, SFMTA must generate an additional $50 million in revenue and reduce costs by an additional $30 million each year to balance its budget.

In response to these long-term budget deficits, the SFMTA has begun to explore and/or refine specific revenue-generation concepts as a means to systemically address its funding shortfalls.[5] This case study highlights the most applicable of these funding concepts, yet it is important to emphasize that Alameda County will need to thoroughly evaluate these measures in the context of its own transit and regulatory environment. Nevertheless, these concepts offer additional "food for thought" as the Alameda CTC moves forward with developing a transportation plan that seeks to ensure a financially sustainable transit system in Alameda County.

Transportation Impact Mitigation Fee (TIMF). The California Environmental Quality Act (CEQA) requires that public agencies determine if a proposed project will have a "significant" impact on the environment. A project's environmental impact must be evaluated in a number of different areas, including transportation impacts, with "significance" determined by a number of predetermined thresholds. CEQA allows local jurisdictions to establish their own metrics and significance thresholds. However, with regards to transportation, most jurisdictions use well-established Level of Service (LOS)

[5] In addition, SFMTA is also evaluating a number of cost savings measures, such as bus-stop consolidation and labor savings through ongoing negotiations with unions. For the purposes of this case study, however, the primary focus is on the specific revenue generation concepts.

thresholds. Level of Service is a measure of the amount of delay (calculated in seconds) for a vehicle at an intersection, with a "grade" assigned (A through F) based on the length of delay. For example, an intersection with an A "grade" has less than ten seconds of delay per vehicle, while an intersection with an F "grade" has greater than 80 seconds of delay. Typically, when an intersection reaches a D "grade," measures are employed to "mitigate" that delay, such as roadway widening or adjusting signal timing.

San Francisco has begun to realize the deficiencies of using LOS as the only metric for evaluating a project's transportation and environmental impacts. For example, the application of LOS is imperfect in dense, urban environments given the variety of modes and limited mitigations available (widening roadways in San Francisco has very restricted applicability). In addition, LOS measurements have the potential to prioritize better "performing" projects over others that have additional environmental benefits. For example, a mitigation measure or project that adds a lane of traffic would likely improve an intersection's LOS. However, adding that travel lane could actually induce additional vehicle travel and emissions, while increasing vehicle speeds, which would negatively impact the safety of bicycles and pedestrians.

Furthermore, LOS thresholds are inconsistent with the city's *Transit First Policy* because LOS prioritizes vehicle travel over other modes; and LOS measurements provide a very narrow representation of environmental impacts and ignore the full impacts of additional vehicle trips. As such, the city has begun to explore an alternative way in which to more holistically and equitably assess transportation impacts under CEQA.

What has emerged is a new approach that replaces the LOS threshold with a new impact measure: automobile trips generated (ATG). Under this approach, projects would no longer be evaluated under CEQA for LOS and intersection delay, but rather for how many new vehicle trips will be generated by the project. Using ATG resolves many of the issues created by LOS thresholds because ATG is a more equitable indicator of environmental impact. By calculating ATG, a project's impact on not only congestion, but also air quality, GHG emissions, the overall efficiency of the city's transportation network, traffic safety and collisions, noise, water quality, and the sociological impacts of traffic can be measured. The methodologies to determine ATG are rooted in current transportation planning processes and can be readily adapted to estimate ATG based on certain project characteristics.

Projects that do not generate any automobile trips or even reduce "automobility," and have no potential impacts in other areas, would be eligible for a negative declaration under CEQA. Projects that are shown to have a significant ATG would have to mitigate the impacts from those automobile trips by paying a per-trip impact fee, known as a Transportation Impact Mitigation Fee (TIMF). The per-trip fee would be based on the monetary costs imposed by the new trip onto the transportation network.

Revenue generated by the TIMF would be used to fund a variety of transportation projects and programs to offset the impacts of the new trips, such as site-specific improvements (signal timing, bicycle and pedestrian infrastructure, restriping, parking infrastructure, etc.). In addition, revenue could also be allocated to specifically fund SFMTA transit projects and operations as a means to reduce additional trips.

The ATG approach is currently being evaluated in San Francisco and will require an additional nexus study, environmental review, public hearings, and a citywide ordinance before the new methodology would be phased in.

Transportation Impact Development Fee (TIDF). The TIDF is a reliable, if relatively modest, source of revenue that takes advantage of the nexus between land-use development and demand for transit to justify an equitable "user fee." In short, it recognizes that transit service adds significant value to development projects and recaptures at least part of that value. It also recognizes that automobile traffic generated by new development has a significant negative impact on the speed and productivity of on-street transit services.

TIDF was originally conceived as a means of providing additional peak capacity for commuter-oriented service to the downtown commercial core. It was limited to office projects with a fee of $5 per square foot. Recognizing that downtown office projects were not the only development projects to require and benefit from additional transit service, San Francisco expanded the program in 2004 to include most non-residential projects citywide and implemented a two-tiered system of fees.

The gap between "justified" and actual fees is a reflection of the program's key limitation: if developers were to pay the full cost of providing additional transit service to their projects, many projects would no longer be economically viable. Unlike most impact fees, administrative costs and outlays have exceeded collections in many years. However, the program maintains a positive balance due to interest earned on the TIDF fund. Finally, as TIDF is limited to non-residential uses, collections decline during development cycles driven by residential projects.

Fees may be used to increase service hours or maintain the ratio between service hours and automobile and transit trips generated by uses subject to the fee, including both operating and capital expenses, as long as there is a reasonable connection to the impacts of development on transit. Expanding the fee beyond downtown office development to non-residential uses citywide allows it to be used for service outside of the peak period. Unlike other types of impact fees, there is no fixed time limit on use of fee receipts; however, the city conducts a five-year review, as required under state law that orders the city to issue "findings" about the program. These findings include certifying that unexpended funds do not exceed the amount needed to make the improvements for which the funds were exacted.

Since its inception in 1981, TIDF has generated about $120 million (including interest). Originally a $5 per square foot fee on office developers, TIDF now includes most non-residential projects citywide. Fees have also been raised and indexed to inflation, and are now $9.07 to $11.34 per square foot depending on land use type.

Additional Fees and Taxes. The SFMTA is also considering a number of other fees and taxes as a means to generate additional transit revenue that may be of some interest to Alameda County. These concepts have recently been "floated" and will likely be evaluated in much greater detail in coming months. Because these items are taxes or fees, they would likely require two-thirds approval by city residents, per Proposition 26. They include an impact fee, as well as two more conventional assessments:

- Vehicle Mitigation Impact Fee. An impact fee of $50 to $150 per registered vehicle, which is estimated to generate $24 million to $72 million a year.
- Transportation Utility Fee. Annual utility fee of $60 to $180 for each single-family household in San Francisco, which would generate an estimated $26 million to $74 million.
- Parcel Tax for Transit Purposes. An increase in the parcel tax of $100 to $200 per parcel for commercial, residential and industrial parcels. Estimated revenue would be $20 million to $39 million. (AC Transit has won passage of two parcel tax increases in recent years, both of $48, in 2004 and 2008. The combined $96 tax will remain in effect through 2019.)

Lessons Learned

- **As an alternative to traditional auto LOS evaluation of transportation impacts for mitigation, a standard of auto trips generated might be used; this would serve to reduce traffic (and generate related benefits) rather than increase capacity, as it typical of existing CEQA mitigations.**
- **As an alternative to mitigations, developments could pay a fee, which could then go into a fund for projects reducing auto trips.**
- **A nexus study and legislation would be required for implementation.**

Emeryville Transportation Impacts Alternative Strategies

As in San Francisco, an alternative approach to traditional auto LOS evaluation of traffic impacts from new development has been proposed for Emeryville. The Vehicle Trip Generation, or VTG, standard would be similar to San Francisco's ATG standard. VTG impacts would be relatively easy to measure using existing tools. Also, because auto trips are among the most significant transportation impacts, VTG could serve as a proxy for evaluating impacts on the larger multimodal system.

As recommended, the threshold for required mitigations would be one net new trip. Developers could pay a Multimodal Transportation Impact Fee, or MTIF. Alternately, they could reduce impacts, for example by implementing transportation demand management (TDM) measures.

As proposed, the MTIF would replace existing transportation impact fees. A nexus study would be necessary to assess appropriate fee levels. Payment of the fee would allow applicants to issue a mitigated negative declaration of impacts under CEQA, or to claim exemption from CEQA review.

Revenue from the MTIF, in turn, could be used to fund projects that do not, as traditional CEQA auto LOS mitigations do, expand roadway capacity. Rather, candidate projects would serve to reduce auto trips. The nexus study would need to establish to what extent projects would have to be in the immediate vicinity of a development, and to what extent they could simply reduce trips over the citywide network.

Lessons Learned

- **In addition to the benefits previously enumerated, an auto (or vehicle) trips generated standard would be simpler to administer, reducing the burden on applicants.**

Austin Transportation User Fee

The city of Austin, Texas assesses a Transportation User Fee, or TUF, as a means to fund road maintenance. The fee is included in utility bills and is relatively modest: it varies slightly depending on land use (which serves as a proxy for number of auto trips generated; for example, each acre of single-family development is assumed to generate approximately 40 trips per day), but generally amounts to about $40 per year. Notably, households can claim an exemption from the fee for either of two reasons: residents are elderly, or the household does not own a car. It is this latter exemption that makes the TUF an especially notable revenue strategy, as it is directly linked to policy objectives.

Lessons Learned

- **A household- or property-based fee for road maintenance could, by exempting car-free households, reduce the maintenance burden while helping to achieve other objectives.**

CHALLENGES

While a number of possible new revenue sources would appear to exist, a number of potential barriers to their implementation might also exist.

- **Action would be required at the local, district, regional, State or Federal level.** Alameda CTC would be unable to implement many new funding measures on its own. Some, such as market-based pricing of parking, might have to be implemented at the local level, and some, such as sponsorships for transit infrastructure or services, might have to be implemented at the district level. Measures such as a Mileage Fee would require legislation at the State level and would likely have to be implemented statewide (although under current law, the region may implement its own gas tax). An Infrastructure Bank or similar program for providing loans backed by local or regional (county, in this case) taxes would be national in scope. However, the transportation funding challenges faced by Alameda County are not unique; other large counties in California face similar issues, and might act as partners in a coordinated effort to develop new funding sources statewide. Alameda CTC could similarly work with and through MTC. Finally, Alameda

CTC could work with localities within the county to develop new revenue sources for transportation projects at the local level.

- **There might be resistance from private parties**. Private entities would likely be unwilling to contribute funding in the absence of a clear benefit or mandate. Experience from other areas does suggest, however, that they will do so if value can be demonstrated – if businesses or property owners can be convinced that they will see returns on their investments.
- **There might be resistance from voters and elected officials.** Some proposed revenue sources may prove to be highly controversial, including those with broad impacts (such as taxes on the general public, or user fees for motorists), those that would price a resource that has previously been free (such as new tolls), and those that would affect interest groups able to exert influence on elected officials. Even measures that require direct voter approval or that would be voluntary in nature, such as sponsorships, could prove controversial. Polling could be used to determine risks before committing resources to pursue new revenue sources; however, potential sources of opposition cannot always be anticipated.

STRATEGIC INVESTMENT OPPORTUNITIES

Transit Cooperative Research Program *Report 129: Local and Regional Funding Mechanisms for Public Transportation* identified the following criteria for evaluation of potential new revenue sources:

- Revenue yield, adequacy, and stability
- Cost efficiency, including administrative cost to agencies, compliance costs to taxpayers, and evasion levels
- Equity with regard to cost burden and benefits accrued across income groups, different vehicle classes, and jurisdictions
- Economic efficiency, with particular emphasis on efficiency in pricing
- Political and popular acceptability
- Technical feasibility

However, before potential new sources of revenue can be identified, Alameda CTC should also identify priorities. Selecting potential new sources of revenue to pursue should be not a simple matter of figuring out how much funding might be available and how difficult it might be to procure it. Rather, a strategy for new funding should reflect consensus values.

Following is a list of possible priorities or principles to use in determining which, if any revenue sources should be pursued. In some cases, potential new sources of revenue might reflect some, but not all priorities. However, sources to be pursued should reflect most of the values shared by stakeholders.

- **Sources should be equitable.** Sources should be equitable in two ways: first, they should be equitable from a social justice perspective; and second, they should be equitable in terms of linking assessments to benefits or impacts.
- **Sources should be linked to policy goals.** Ideally, any new revenue source would also serve to further goals such as VMT and emissions reduction, sustainable development, and social justice for disadvantaged communities.
- **Sources should be sustainable.** Sources should be both permanent and reliable, or stable. Sources that fluctuate can make long-term planning difficult and can add to costs if projects must be delayed.
- **Sources should address those areas with the most serious needs.** Ideally, any new source of funding would be fully flexible in its application, able to be used for any purpose Alameda CTC sees fit. However, if sources are to be linked to specific categories of spending, then those areas with the greatest need, such as transit operations, should be prioritized.

- **Sources should be able to win broad support from stakeholders and partners.** Finally, only those sources that seem likely to be able to achieve "buy-in" and support from those affected and/or potential allies should be pursued. This will be particularly important if the CTC decides to pursue new sources that would have to be implemented regionally or by the State.

Once these priorities have been clarified, Alameda CTC can develop a strategy for pursuing new sources, including a strategy for collaboration with partner agencies such as MTC.

ISSUE PAPER: TRANSIT SUSTAINABILITY AND INTEGRATION

INTRODUCTION

This section presents principles of transit sustainability and integration and how they may be implemented in Alameda County. Key conclusions include:

- "Sustainability" and "integration" consist of interconnected elements of financial sustainability, high-quality customer service and environmental benefit.
- Opportunities would appear to exist to better coordinate fares, schedules and possibly branding among multiple operators, improving system connectivity and legibility through inter-operator agreements, an "umbrella" oversight body, or agency mergers.
- The county and region could improve the long-term financial standing of the transit system by prioritizing capital improvements that served to improve cost-effectiveness of operations, as well as connectivity.
- It might be possible to improve cost-effectiveness by transferring responsibility for some services to new operators, possible including cities or private entities.
- Opportunities would appear to exist to improve the cost-effectiveness of ADA complementary paratransit services, and possibly to leverage those services to provide service to the general public.
- A comprehensive Long Range Transit Plan for Alameda County might be undertaken to identify additional opportunities for greater integration and sustainability .

Why Transit Matters

The financial challenges faced by Alameda County transit operators have been at the forefront of discussions about the Alameda Countywide Transportation Plan (CWTP). BART, AC Transit and other operators have repeatedly had to cut service and raise fares; AC Transit made headlines by cutting service twice last year. This situation, however, is not new, or temporary, as long-term structural deficits in both operations and capital funding already existed. To solve this problem in a way that ensures that transit can meet rising demand and achieve equity, environmental and other goals will require a hard look at elements of the whole, interconnected system – and not just each operator individually – including service delivery structure, efficiency and cost effectiveness, connectivity and service gaps. These are components of transit sustainability and integration. There are many people who already depend on our transit services, but both demographic trends (including an aging population and a greater preference for urban living among younger generations) and growing social and environmental concerns (about climate change, energy independence and other issues) suggest that both demand and need are only going to grow.

Integration and Sustainability

Transit "integration" and "sustainability" are interrelated concepts. Transit sustainability includes social, financial, and environmental components. The definition of "sustainability" that has been developed by the Metropolitan Transportation Commission (MTC) for its regional Transit Sustainability Project (TSP) includes these three dimensions:

- **Customer:** A system that functions as an accessible, user-friendly and coordinated network for transit riders, regardless of mode, location or jurisdiction
- **Financial:** A system that can cover its operating and capital costs with a growing share of passenger fare revenues as well as reliable streams of public funding
- **Environmental:** A system that can attract and accommodate new riders in an era of emission-reduction goals, and is supported through companion land use and pricing policies

The first element of a "sustainable" transit system as defined by MTC – sustainable for the customer – also serves as a description of an "integrated" transit system, one that functions seamlessly for the customer in terms of fares, routes, transfers and information throughout the region.

Identifying the Sustainability Challenge

As mentioned above, MTC is currently conducting a Transit Sustainability Project (TSP) which is taking a comprehensive look at the short and long term sustainability of our region's transit system. The TSP provides a good launching point for discussion of transit sustainability in Alameda County because MTC is conducting a thorough analysis of the Bay Area's transit providers and its recommendations will apply to Alameda County and the county's transit operators. This MTC study of Bay Area transit services focuses on three elements of the transit system:

- Financial viability
- Service design and delivery
- Institutional (decision-making structures)

The study is also considering the role of external factors that influence the sustainability of a transit system, including land uses and transportation pricing.

The starting point for the TSP was *Transit in Transition*, a report that detailed the greatest challenges facing the Bay Area's transit system. To name a few:

- Between Fiscal Year 1997 and 2008, operating costs at the Bay Area's seven largest operators, including BART and AC Transit, increased 52 percent (in constant, non-inflation-adjusted terms), while hours of service provided increased just 16 percent, and ridership just 7 percent. (AC Transit was representative of this trend – costs increased 43 percent, service hours 15 percent and ridership 3 percent – while BART was an outlier, with a 34 percent increase in costs, 38 percent in hours and 43 percent in ridership.)
- The study revealed that Bay Area transit operators spend more on administration (approximately 20 percent) than do operators in other regions (a peer group average of approximately 14 percent). As the *Transit in Transition* report noted, there are 28 transit operators in the Bay Area, "each with its own board, staff, and operating team." The financial analysis also found that between 1997 and 2008, costs for employee "fringe" benefits grew faster (69 percent) than overall operating costs. Revenues from sales taxes, meanwhile, fluctuated, but were lower in real terms in 2008 than they had been in 1997.
- On the whole, the study projects operating deficits of $8 billion, or about 10 percent of operating costs, and capital deficits of $17.2 billion through 2033 for Bay Area operators.

The TSP has since released an "Initial Cost and Revenue Analysis." Among its findings:

- Service that is contracted out to a private entity, rather than operated under contract, appears to generally be cheaper. In Fiscal Year 2009, operating costs per hour for fixed-route service at the Bay Area's five largest bus operators ranged from $154 to $185 for service directly operated. Meanwhile, service provided under contract by LAVTA cost $92 per hour, and at another operator assessed, Fairfield and Suisun Transit, it cost $99 per hour. SamTrans, on the Peninsula, pays $171 per hour for service it directly operates, but just $111 per hour for service that it contracts out. Notably, all of these services use union operators.
- At the region's seven largest transit operators, wages and fringe benefits accounted 77 percent of all operator costs. Fringe benefits (34 percent) cost nearly as much as wages (17 percent for operators, and 26 percent for others, for a combined 43 percent).
- Among the factors in labor costs are wages and fringe benefits as well as work rules and pension obligations.

This information is not provided to suggest that contracting out always provides cost savings or that all other things are equal in contracted versus non-contracted operations. The information developed by the TSP team simply suggests that transit agencies, especially older agencies with a long history of utilizing public employees as their transit operations forces tend to have higher cost structures with higher legacy costs than many of the newer agencies with contracted work forces. It should also be pointed out that there are many other less tangible differences between these Bay Area examples. The larger and "more expensive" transit operators tend to have the toughest urban duty, operate over longer service days, operate longer weekend hours, and work their employees over split shifts and extended hours in some of the most challenging traffic environments in the Bay Area.

While the data provided above focuses on financial efficiency, a sustainable transit system is also one that has resolved or is able to successfully manage tensions between competing goals. While the TSP definition of transit sustainability includes a "customer" element, in reality, there is no such thing as a single transit "customer." Rather, there are many different customers with diverse needs, and transit services providing the greatest equity benefits are also often among the most expensive to deliver.

Moreover, in the context of the Bay Area and Alameda County, where there are multiple transit operators, developing an integrated transit system means striking a proper balance between competing objectives of local control and regional coordination. A transit system that is seamlessly integrated from a customer's point of view does not necessarily have to be a *single* system. However, as the MTC definition makes clear, it must *function* like one. (A single system or fewer systems might, it should be noted, be more financially sustainable, as "redundant" administrative costs would be reduced.)

Two other relevant studies provide insight into sustainability: San Francisco Muni's Transit Effectiveness Project (TEP) and the Santa Clara VTA's Comprehensive Operations Analysis (COA). Both of these studies sought to redesign services to increase productivity, reducing or eliminating many less-productive services in order to reallocate resources to services that have the most potential to increase transit ridership. Service reductions can improve an agency's cost-effectiveness by focusing resources on corridors that are more productive (i.e. have more riders). This can even result in increased ridership, to the extent that service is actually increased in productive corridors. The environmental component of transit sustainability, of course, stems from increased ridership – the more users, the greater the environmental benefits. However these changes can negatively impact riders on less productive corridors and any definition of transit sustainability must include not just financial and environmental elements, but also equity elements – ensuring high-quality services for all of the divergent markets that a transit provider serves. In Alameda County, AC Transit has sought to make targeted cuts in service in a way that minimizes impacts on riders and on ridership.

ELEMENTS OF A SUSTAINABLE AND INTEGRATED SYSTEM

The TSP's overarching goal of a "more robust, financially viable transit system that is both cost-effective and customer-focused" serves as a good starting point for defining how a sustainable and integrated Alameda County (and Bay Area) transit system could function.

Additional, more specific goals for a sustainable and integrated system in Alameda County could include:

- **Coordination of fares, schedules and branding.** The first two elements, in particular, are fundamental to a transit system that functions seamlessly from a user perspective. The need to pay multiple fares during the course of a single journey is an inconvenience, a possible cause for confusion, and makes transit less competitive cost-wise compared to alternatives. Transfers that are not reliably timed can also have a magnified effect on the decision to take a future trip by transit, as multiple studies have found that time spent waiting for transit *feels* significantly longer than it actually is. Common branding to create the appearance of a single system is less important so long as long as information is clear and readily accessible and rider awareness of where to wait and which vehicles to board is not compromised. MTC and transit operators have taken steps to create a "virtually" integrated system using the Clipper card program (which reduces the inconvenience of paying multiple fares). In addition, a Regional Transit Connectivity Study completed in 2006 recommended improvements to signage and other wayfinding elements at major multimodal hubs, and the use of "real-time" wait time information to reduce the anxiety associated with transit waits.
- **Physical optimization of connections.** In many cases, transfers between transit services are more onerous than need be because of placement and design of stops. It can be prohibitively expensive to retrofit existing infrastructure such as bus transfer areas at rail stations; in some cases, however, distances between stops might be reduced, and paths made more direct and obvious using relatively low-cost means such as relocation of on-street stops (this can also serve to optimize transit operations, for example by moving a stop from the near side to the far side of an intersection). Improvements to the design of stops and stations, including amenities such as shelters and real-time wait time information, can serve to enhance connectivity by reducing the psychological barriers associated with transfers. Some improvements, such as bicycle parking (or auto parking, although this can negatively impact access for other modes) can improve multimodal access, or connectivity between different legs of a trip. Nonmotorized access and connectivity can also be improved by making improvements to the surrounding area, in the form of streetscape-related improvements to the quality of the pedestrian environment or "complete streets" improvements to both the pedestrian environment and the roadway, such as bicycle lanes and improved street crossings (complete streets improvements can also improve operating conditions for transit, if traffic conflicts are reduced).
- **Avoidance of delay.** Speed is an essential element of sustainable transit service for two reasons. First, reduced travel times benefit riders and are attractive to potential riders. Second (and less well-understood) is the relationship between speed, frequency and operating cost. When travel times are reduced, more service can be provided using the same number of vehicles and operators; or, the same level of service may be provided at reduced cost. Transit vehicles operating in mixed traffic flow are vulnerable to increasing traffic congestion; slow but steady degradations of speed over time can result in a vicious cycle whereby either costs must increase or service must be reduced. Conversely, reducing delay can result in a virtuous cycle of increased ridership providing more revenue. Reducing delay also means an increase in reliability, another essential component of a sustainable system, both from a current customer service and new customer attraction standpoint. Delay can be reduced by making changes to existing routes (such as removal of closely-spaced stops or signal priority for transit) or policies (for example, eliminating fares reduces dwell time, or time spent loading and unloading at stops – although it can also contribute to financial unsustainability). Travel times can also be improved by making transit routes more direct (although this must be balanced with access requirements), or by

reducing the need to transfer, which both reduces travel times for users as well as operating costs for providers, as the time it takes to handle transfers is a factor in dwell time.

- **Service that responds to context.** Different types of riders have different needs; land use (in terms of density, design, and mixture of uses) matters greatly; and there are system design imperatives that should be adhered and responded to in designing a transit service. In practice, this will often mean addressing questions such as: What is the right-size vehicle for this service? Should this service be a community circulator and feeder, or should it provide a "one-seat" ride to a faraway destination? What are the appropriate hours and frequencies for this service? What are the goals (e.g. productivity or equity) this service is designed to achieve?

Possible Strategies

Based on these goals, a number of possible strategies might be available to improve transit sustainability and integration:

- Consider/support measures to better integrate fares and schedules, as well as branding;
- Prioritize capital projects that would improve connectivity and reduce operating costs;
- Consider transferring responsibility for provision of some services; and
- Explore alternative service delivery models for ADA paratransit service.

These strategies are further explored in the concluding section of this document, Strategic Investment Opportunities.

CASE STUDIES

The following case studies illustrate several of the concepts described above, including fare and schedule integration, local/private operation of transit services, and alternative paratransit models.

Fare and Schedule Integration

Verkersverbund (Germany and Switzerland)

A *verkehrsverbund*, or VV, is a governance model common in Germany and Switzerland. In some ways, VVs are similar to U.S. Metropolitan Planning Organizations (MPOs): they are regional transportation planning bodies that provide capital and some operating funding to local transit operators. However, VVs are stronger in other, key ways: they are able to coordinate and integrate fares and schedules, so that transfers between different operators are as seamless as possible. Transit vehicles operated by local providers may also carry the VV's branding, so that service provided by dozens of different operators appears, from the customer perspective, as though it were provided by a single entity.

In his book *The Transit Metropolis*, UC Berkeley professor Robert Cervero summarized the role of VVs as follows: "These umbrella organizations ensure that problems that commonly plague regional transit services—such as fare penalties for transferring, conflicting timetables, and interagency rivalries—are eliminated."

Munich's *Munchener Verkehrs-und Tarif-Verbund*, or MVV, is governed by an executive board including state and local representatives. The board sets service and fare policies (such as maximum headways), and it approves budgets. Day-to-day administration, however, is left to a management board consisting of staff from individual operators. This board sets actual timetables, fare zone boundaries, work rules and contract terms, and is responsible for marketing. Individual operators effectively function as contract operators, responsible for actual delivery of service.

Zurich's *Zürcher Verkehrsverbund*, or ZVV, coordinates service provided by more than 40 individual operators, including public agencies and private companies. Its governing Cantonal Transport Board sets minimum service standards, such as connectivity requirements, and it sets maximum budgets. It collects

revenues, then distributes them to operators based on a reimbursement system that takes into account the amount of service provided as well as performance criteria. The ZVV is said to have a "watchdog role" – it manages a competitive bidding process for provision of some services. Within two years of the ZVV's establishment and introduction of a single regional fare structure in 1990, ridership on feeder buses had increased 53 percent.

The potential for application of the VV model to American cities and sub-regions would depend to a great extent on the degree to which localities were willing to surrender control over service planning. While a board including local representatives could set policy, and while managers of local agencies could jointly maintain control over details of the implementation of those policies, ultimately, routes, schedules and fares would be set at the regional level. The VV model can be considered a structure that combines important efficiencies of a single regional transit provider with elements of local control.

Lessons Learned

- **Important elements of transit integration – coordination of fares, schedules and branding – do not necessarily require that a single operator provide all services.**
- **An "umbrella" transit body could have limited powers, and include subregional representation.**
- **Such a body could also perform a "watchdog" role.**

Local Transit Services Supplementing Regional Services

DASH and Metro (Los Angeles)

DASH is a bus system managed by the City of Los Angeles Department of Transportation (LADOT). DASH's 30-plus routes serve as community circulators, providing service that effectively supplements the more regional trunk services operated by the Los Angeles County Metropolitan Transportation Authority (LACMTA, or "Metro"), the primary provider of transit service in Los Angeles County. Because a dedicated sales tax accounts for a large share of DASH funding, and because the average trip on DASH is relatively short (approximately one mile), fares have historically been kept low: until recently, they were just 25 cents, although they have since been raised to 35 cents, and will soon be increased to 50 cents. Nonetheless, these are low relative to other transit operators. For this reason, strong demand has historically existed among elected representatives of Los Angeles neighborhoods for expanded DASH service.

DASH originally was an acronym for "Downtown Area Short Hop." Introduced in 1971, DASH was originally a downtown-only circulator operated by the Southern California Rapid Transit District, or RTD, the predecessor to LACMTA. In 1985, responsibility for the service shifted to the city, which then contracted out operation to a private company. Within a year, costs had been reduced by 38 percent.

LADOT owns the buses used for DASH service (30-foot models, which are more easily maneuverable and more appropriately scaled to neighborhoods than typical 40-foot buses), but contracts out operation to private companies. As of 2009, operating costs for all LADOT services (including commuter buses and other shuttles) were approximately $85 per hour or $2 per trip. By contrast, Metro bus operating costs were approximately $125 per hour and $2.40 per trip. These differences are especially notable given that because most of the high-demand transit corridors in Los Angeles are served by Metro, Metro buses are more productive than LADOT's – 51 passengers per hour, vs. 42 – and more productive services are typically more cost-effective.

DASH provides a number of benefits to users and to the City. For users, it provides coverage beyond that provided by Metro, and it adds value to the Metro system by providing "last-mile" connections from Metro rail and bus stops. Indeed, the average trip length on DASH is less than mile.

DASH also provides the City with flexibility in responding to Metro service cuts or perceived deficiencies in Metro service that the agency is unable or unwilling to address. In 2007, for example, a DASH route was lengthened to serve as a replacement for a Metro route that had been eliminated in East Los

Angeles. During the 2008 holiday season, meanwhile, downtown DASH service was extended until 3 a.m. using private funding.

Unfortunately, transfers between Metro and DASH service are no longer as convenient or "seamless" as they once were. In 2008, as part of a transition to use of smart cards in place of paper passes (and in a move that saved the agency $758,000 per year), Metro ended its longstanding practice of reimbursing LADOT for use of Metro passes on DASH buses. While rides on DASH remain relatively inexpensive, riders transferring from Metro to DASH must pay a cash fare, use a separate DASH pass, or present a regional pass costing $84 per month.

Lessons Learned

- **A municipally administered transit service may be able to supplement regional service by providing supplemental "circulator" service at relatively low cost.**
- **Such an arrangement also offers the benefit of local control over local services.**
- **While such an arrangement can contribute to transit sustainability, care must be taken to ensure that it does not negatively impact transit integration.**

Community Transit Network (Boulder, Colorado)

Boulder's Community Transit Network, or CTN, consists of seven local bus routes that are operated primarily by the Denver area's primary transit provider, the Regional Transportation District (RTD), but that are subsidized by the City.

RTD provides a baseline level of service to each city and county in its service area based on existing ridership levels; in Boulder it provides both regional and local service. Starting in the early 1990s, however, the City, in collaboration with members of the community, made a decision to fund additional, supplemental local service in order to offer residents a citywide network serving major destinations with headways of 10 minutes or less (or "walk-up" headways, so called because riders are likely to feel comfortable just arriving at the stop and waiting, rather than consulting a schedule first). New routes were also developed with more direct alignments, meaning that the CTN, while a supplemental service, has characteristics of a trunk network.

In addition to improving service for existing riders, it was hoped that the enhanced system would attract more "choice" riders. "The City gives money for a more marketable service model," GO Boulder planner Cris Jones explains. "It's not based on current use, but on our ability to sell to people who aren't using transit."

The strategy appears to have worked. Since the early 1990s, the average number of daily transit boardings in Boulder has increased from less to 20,000 to nearly 35,000 in 2009. Drive-alone mode share has decreased by 15 percent, and the number of vehicle miles traveled (VMT) within Boulder has remained relatively constant.

Boulder provides its share of CTN funding from a local sales tax measure. Several of the CTN routes were launched using federal grants supplemented with local matches. Boulder County and the University of Colorado-Boulder (CU-Boulder), both through its administrative budget and through student fees, also contribute funding.

The City "pays a premium," as Jones put it, for a dedicated fleet of uniquely branded vehicles (the routes feature colorful names such as "HOP" and "SKIP") with amenities including on-board music and automated stop announcements.

Recently, RTD funding and policy issues have threatened CTN service. According to a March 2010 statement on the City's website, "Both current budget problems as well as apparent RTD priorities suggests that RTD has very little commitment to provide service levels above its regional standard. This means that we cannot count on RTD to maintain current service levels and that maintaining or adding to the CTN will require additional local dollars to buy up or support our desired level of service."

Additionally, "(a)s the City of Boulder and RTD have faced budget shortfalls, differences became apparent in how the two organizations approach providing bus-based transit. RTD's apparent priority for bus-based transit service became more focused on providing 'coverage' for 'transit dependent riders,' while the City of Boulder has maintained its focus on providing transit for the 'choice rider' as well as for transit-dependent customers. … RTD has had significant problems operating high frequency services in a consistent dependable manner and to the standards established for the CTN." The statement goes on to note that the City and its partners "will need to consider … potentially different operational and governance approaches." This statement would appear to suggest that Boulder may be moving away from its model of a partnership with the regional transit provider to a model closer to that of Los Angeles DASH, which is an entirely separate system both operationally and administratively.

Lessons Learned

- **Municipalities might also supplement regionally provided service by paying for higher levels of service on existing routes.**
- **Such a strategy might give the municipality leverage to work with the operator to redesign local services to achieve local objectives.**
- **However, in the event of funding shortfalls, and/or if transit agency and municipality objectives diverge, such a partnership may become untenable.**

Bay Area Shuttles: Emery Go-Round (Emeryville), "B" Line (Oakland), and Palo Alto Shuttle

The Emery Go-Round is an existing Alameda County example of local shuttle service that effectively augments and supplements regional transit services. The Emery Go-Round fills a "last mile" gap between Emeryville and the MacArthur BART Station (in fact, the distance between the station and Emeryville City Hall is 1.1 miles), and while several AC Transit routes operate within Emeryville, they are primarily regional Transbay routes.

The Emery Go-Round was initially administered by the City and funded using a public/private partnership. However, it is now administered by the Emeryville Transportation Management Association (TMA) and funded using fees paid by all commercial and industrial property owners in Emeryville. In 2010, Emery Go-Round operating expenses were approximately $2.4 million. The service is free to the public.

In return for their contributions, local businesses receive the benefit of increased access: in 2009, Emery Go Round ridership was approximately 1.3 million. The service is also significantly more cost-effective to operate than AC Transit's services: about $1.50 per trip, vs. nearly $5 per trip for AC Transit (in 2009, according to the National Transit Database).

Oakland's new Broadway shuttle, known as the "B" or "Free B", also supplements existing AC Transit services and serves as a "last mile" link from 19th and 12th Street BART to Jack London Square. Since its inception in August of last year, ridership has been trending upwards, from a daily average of around 1,300 to more 1,900 in October. The City is now seeking to expand the weekday-only service to Friday and Saturday evenings.

The City of Oakland administers the service, and AC Transit operates it under contract. It is funded by what project manager Zach Seal calls "a very robust public-private partnership." While its primary funding source is a two-year, $1 million grant from the Bay Area Air Quality Management District, a number of public and private entities are contributors, including the Oakland Redevelopment Agency, the developers of Jack London Square, the Downtown Oakland Association, the Lake Merritt-Uptown Association, The Uptown Apartments and the Water Emergency Transportation Authority (WETA). Its total annual budget is approximately $730,000.

While the service remains relatively new, it already appears to be reaping economic benefits for Oakland. According to Seal, at least three new businesses, including the 60-employee solar design firm Sungevity, have relocated to Jack London Square in part due to the shuttle, and business at the restaurant Home of

Chicken and Waffles is up 15 percent, an effect the owner has attributed to increased foot traffic brought about by the shuttle.

Finally, in Palo Alto not one but two shuttle systems serve to supplement service provided by the countywide operator, the Santa Clara Valley Transportation Authority (VTA). Stanford's Marguerite system consists of a total of 13 routes serving students, staff and members of the public, including routes connecting Caltrain stations to the Stanford Research Park, a general office park. Additionally, the City of Palo Alto administers two routes serving other areas of the city. A number of partners help to fund the Marguerite, including the City, Stanford Shopping Center, the Palo Alto Medical Foundation, the Bay Area Air Quality Management District and the Peninsula Corridor Joint Powers Board, or JPB, operator of Caltrain. The JPB also provides funding for City shuttle service. Both services are fare-free.

In 2007, VTA completed a Comprehensive Operations Analysis, or COA, resulting in a number of changes to its service in Palo Alto. Unsatisfied with some of the changes, the City partnered with VTA and others on a joint study of VTA Community Bus and Palo Alto Shuttle services. As a result of the study, VTA service was modified to better complement the City shuttle service and satisfy community concerns, including concerns about service to a local high school, and there was only a slight impact on VTA operating costs.

Lessons Learned

- **Local economies can benefit from supplemental local service.**
- **Such services can be funded using a public-private partnership.**

Microsoft (Seattle)

In addition to shuttle services administered by cities or civic institutions, private institutions such as hospitals, nonprofit community-based organizations, business groups such as a Business Improvement District or Transportation Management Association, or through a public-private partnership, major employers can supplement transit agency services by providing private shuttles for their own employees. Such services are typically provided as part of a Transportation Demand Management or TDM program, or as an employee benefit/recruiting tool. In Alameda County, Bishop Ranch operates a shuttle system, as do major Bay Area employers such as Google and Genentech. Google's system, a company representative told the *New York Times* in 2007, is so extensive that it is "basically … a small municipal transit agency."

Because such services tend to be proprietary, only limited information is available to the public. However, some information is available about an extensive private system in the Seattle area, the Connector service provided by Microsoft for its employees. The Connector system consists of 21 routes operating throughout the Puget Sound region and serving more than 3,000 daily riders, of whom 60 percent have been found to have formerly commuted to the Redmond campus by single-occupant vehicle (SOV). Public benefits from the system are extensive, including an annual reduction in greenhouse gas (GHG) emissions of 3,100 tons. This finding reflects local findings from a 2010 study by the San Francisco County Transportation Authority (SFCTA), which concluded that regional private shuttles operating in San Francisco were responsible for annual reductions of 8,000 to 9,000 tons of CO2 and 20 million vehicle miles traveled.

A key issue related to such services that must be resolved is the use of public facilities by private entities. To reduce conflicts at stops between private shuttles and public buses, and to mitigate community concerns including idling and operations on neighborhood streets, private employers and public agencies must closely coordinate their efforts. The 2010 SFCTA study was initiated in response to just such issues, and recommended greater collaboration between public and private stakeholders. In the Seattle area, the Seattle Department of Transportation (SDOT) has worked with Microsoft and affected communities to ensure that Connector buses can use loading zones, including newly designated loading zones, rather than public bus stops (Microsoft pays SDOT annual per-vehicle fees to offset the costs of this program). King County and other public bodies have also worked to ensure access to curb stops. Connector

shuttles have been allocated space at regional transit centers and park-and-rides operated by Sound Transit and King County Metro, including two bays at the Overlake Transit Center adjacent to Microsoft's Redmond campus. Finally, Microsoft and public agency staff coordinate to ensure that Microsoft routes complement rather than compete with public services; there is a benefit for employers in such coordination, as many also pay to subsidize transit passes for their employees.

Lessons Learned

- **Private companies may provide transit service for their employees as a condition of project approval or as an employee benefit.**
- **Such services can offer significant benefits for the public at little or no cost.**
- **However, such services can place demands on public infrastructure; in these cases, public officials should work collaboratively with employers, recognizing both the potential benefits for the public as well as the impacts**

Alternative Demand-Responsive Models

Pittsburgh Route-Deviation Paratransit

Unlike many localities, which reserve paratransit for people with disabilities, Pittsburgh operates a network of fixed-route shuttles that deviate off the route in response to demand. One example is the Airport Corridor Transportation Association (ACTA) Employer Shuttle, which picks up suburban passengers from a designated stop every 20 minutes but strays from the route (within 1.5 miles) to drop people at their destination. These free-fare shuttles are primarily geared toward commuters and students, but serve people with disabilities and, importantly, were designed with the disability community in mind. As employee shuttles, the shuttles are partially funded by employers. The ACTA worked with developers and businesses to optimize routes and stops to efficiently transport employees and customers from bus stops to their locations off the fixed-route paratransit loop. Once on the vehicle, passengers arrange for a pick-up time to return to the bus stop.

Additionally, in neighborhoods without conventional transit, Pittsburgh operates Community Buses and the Elder Express. The two circulate neighborhoods on a fixed route and schedule in small vehicles. The services link passengers to major trip generators and to the fixed-routes of conventional transit for access to services, jobs, and schools. The principal users of the services are low-income people, including students and seniors, and commuters. There is no charge for the service, although riders must apply to obtain a free pass.

These flexible services offer a way to provide coverage in low-demand areas with dispersed origins and destinations at a reasonable cost and can reduce or eliminate the expense of separate, exclusive paratransit service for people with disabilities. In some settings, the cost savings from providing combined service for people with disabilities and the general public can be crucial in making transit service economically viable. Combining service for people with disabilities and other riders theoretically helps consolidate demand density and promotes economies of scale. While paratransit savings have not been realized in Pittsburgh, fixed-route ridership has increased.

Finally, the transportation agency, the Port Authority of Allegheny County, has instituted an educational campaign in Pittsburgh area high schools to overcome some of the reticence to use feeder paratransit and flexible-route paratransit shuttles. Prior to entering the workforce, the agency trains 16-21 year-old high school students with disabilities to access feeder paratransit and other fixed-route transit. This travel instruction serves to increase transportation independence among disabled students.

Lessons Learned

- **One alternative to traditional curb-to-curb ADA complementary service is "deviated fixed-route" service that may also be used by the general public.**

- **Such services should be designed to include quality accommodations for persons with disabilities.**
- **If such services are also employer shuttles, it may be possible to fund them using a public-private partnership.**
- **Fixed-route circulator services may be able to reduce demand for ADA complementary services, and reduce overall costs.**
- **Educational efforts can be used to increase use of fixed- or deviated fixed-route services by persons with disabilities.**

Vancouver Connector Paratransit

Operating demand-responsive, stand-alone paratransit service is costly: it's not unusual for paratransit trips to cost an agency 10 times more than a fixed-route trip. Feeder paratransit circumvents the provision of costly, comprehensive paratransit service. Instead of providing curb-to-curb service on a single, dedicated paratransit vehicle, feeder paratransit serves the much shorter, curb-to-fixed-route transit stop trip. In Vancouver, British Columbia, feeder service evolved as a way to provide long trips between the suburbs and central Vancouver that otherwise would be too expensive or time consuming due to roadway congestion. Prospective riders phone to request a paratransit ride and are assigned a feeder paratransit trip if:

- The requested destination would require a lengthy paratransit trip; or
- The requested trip occurs during peak hours; or
- The rider asks for a feeder trip

While feeder paratransit was initially unpopular among riders due to the transfer between the paratransit vehicle and conventional transit, focus group participants who use feeder service preferred feeder to direct paratransit service on a number of measures (travel time, schedule convenience, service availability, sense of independence). On the other hand, direct paratransit scored better on personal effort and comfort level.

The upside for Custom Transit, the Vancouver paratransit operator, is that feeder trips cost less than half as much as a similar trip exclusively on paratransit, including account planning, booking, and operating costs. On an average paratransit trip of 12 miles, only 4.9 miles were on feeder paratransit. The average trip time was 41 minutes, not including wait time. Overall cost savings from reduced paratransit mileage was estimated at $139,000, or roughly 1.3% of the annual paratransit budget at the time.

As the Vancouver case shows, in highly-transit served areas with frequent fixed-route service, connector paratransit can substantially reduce costs without inhibiting the mobility of people with disabilities.

Lessons Learned

- **Demand-responsive service for persons with disabilities feeding into regular trunk services can serve as a cost-effective alternative to traditional ADA complementary service.**
- **However, any such service would have to satisfy ADA requirements including an ADA-compliant path between the fixed-route stop and destination.**
- **While there would be impacts for users, trunk services provide certain advantages, including speed, frequency, span, and a sense of independence for users.**

King County, Washington Community Access Transportation

Formerly known as the Community Partnership Program, King County Metro's CAT program includes two components: a "Vanworks" program under which Metro pays for vanpools provided by community organizations to clients eligible for Metro's ADA program, and who are traveling to work sites; and an "Advantage Vans" program, described below.

As of 2009 the program included 76 vans loaned to 26 community agencies, all of which have agreed to provide at least 50 one-way trips per month to individuals eligible for Metro's ADA program, Access Transportation. Metro provides maintenance (through a contract with Veolia) and, for agencies that provide at least 100 one-way trips per month to Access-eligible individuals, up to $10,000 per month in operating expenses. Assuming that all of the trips provided by CAT partners to Access-eligible customers would have been taken on Access, Metro has calculated that the CAT program produced $2.7 million in avoided operating costs in 2009, after subtracting out the cost of operating the CAT program. Even if only half of the CAT trips by Access-eligible customers would have been taken on Access, the net savings would still have been $926,000. Staff activities include:

- Monitoring performance of required maintenance to ensure that vehicles are properly maintained, and sometimes troubleshooting issues that arise between the CAT partners and Metro's maintenance provider
- Inspection of driver records to ensure that training has been conducted, drivers have required licenses, and that checks of driving history and background have been conducted and maintained
- Inspecting vehicles to verify their condition
- Reviewing reports to ensure that they are being done properly, so that the reported trip information is reliable and that reimbursed expenses are proper
- Indentifying additional partners and setting up agreements with them

Lessons Learned

- **Another alternative to traditional ADA complementary service is to offer subsidies (including vans and maintenance) to community-based organizations to provide ADA trips**
- **Such programs should include performance standards and regular performance monitoring of participating CBOs**

CHALLENGES

While a number of possible opportunities clearly exist to make the transit system in Alameda County more sustainable and integrated, so, too, do a number of challenges. Obstacles include:

- **Limited funding.** As the recent budget difficulties experienced by AC Transit, BART and other operators have made painfully clear, the existing model for funding transit services within the county is not sustainable. Sales taxes, a primary component of transit operating funds, in particular are highly unreliable, tied directly as they are to economic cycles. Furthermore, the current model does not establish any linkage between revenues and environmental or equity objectives. While San Francisco's model for funding transit service is not a sustainable funding model (Muni, too, has suffered through severe budget crises in recent years), some funding does come directly from parking fee and fine revenues, discouraging overreliance on autos while providing support for transit alternatives.
- **Lack of physical integration of services.** Existing transit infrastructure in Alameda County is not always amenable to integration. For example, within Downtown Oakland BART stations, the Jack London Amtrak station and the ferry terminal at the opposite end of Jack London Square are several blocks apart. Even where services provided by different operators connect – typically, at BART stations – those connections are not always optimized or made clear. AC Transit has recently established a hub at the Uptown Transit Center on 20th Street just west of Broadway in Downtown Oakland, near a portal to the 19th Street Oakland BART station; however, the Center is just around the corner from the portal and thus just out of sight, and signage indicating the connection or providing directions remains inadequate. This complex, including both the BART station and Transit Center, should be viewed by both agencies as an integrated hub rather than

adjacent facilities. Elsewhere in the county, significant investments are under way or planned to better integrate services, including the Union City Intermodal and Livermore BART projects.

- **Multiple operators.** Within the Alameda County, there are seven major transit operators, not including shuttle services provided by cities or TMAs. This has the same effect on a county level that MTC has identified at the regional level: separate and arguably "redundant" administrative structures and relatively high administrative costs. Additionally, it presents challenges for integration of services. MTC's Clipper Card program has gone some distance toward "virtual integration" by reducing barriers associated with separate fare structures, and its Regional Connectivity Study has pointed the way toward clearer passenger information related to connecting services at multi-agency hubs such as BART stations. Nonetheless, county operators continue to charge separate fares, and while some effort is made to coordinate schedules (for example, by timing connecting bus services to meet BART trains), there is no body responsible for ensuring schedule coordination. A third issue associated with multiple operators is redundancy; one of the issues the TSP will be examining is to what extent services operated in the same corridor by different providers might serve overlapping markets, and as such, how "redundant" they might be. For example, AC Transit's Transbay bus lines are designed to complement rather than duplicate BART service; however, does it make sense for AC Transit to operate "one-seat" service to San Francisco rather than providing feeder connections to BART stations? Similarly, in Union City AC Transit and Union City Transit service overlaps in the Alvarado/Niles corridor.
- **Diverse needs.** Just as Alameda County is a sprawling, diverse place, encompassing a range of communities from urban to suburban, old to new, and from very poor to very wealthy, its transit providers must serve diverse travel markets. One key tension common to transit agencies everywhere but especially relevant in Alameda County is between "choice riders" (so called because they may choose to drive instead) and "transit-dependents." While there may be more transit-dependent riders in relatively low-income areas of North County, and more choice riders in higher-income areas in the South and East County, a range of riders with distinct needs can be found throughout the county.
- **Disincentives to use transit.** Finally, transit patronage is in large part a factor of the relative ease of driving and parking. This is the case in terms of both supply and costs: When roadways are free and uncongested, and when parking is cheap and available, strong incentives exist to drive. Conversely, congestion, tolls, and higher parking fees can all serve to encourage transit use. In Alameda County a range of conditions exists. Notably, however, in more urban areas, on-street parking is generally priced well below market rates, and roadways within the county are not tolled. Continued investment in expansion of roadway capacity would also serve as a disincentive to transit use.

STRATEGIC INVESTMENT OPPORTUNITIES

Given all of the above, what opportunities for a more sustainable, integrated transit system might exist for implementation through the Alameda Countywide Transportation Plan and Transportation Expenditure Plan? The opportunities identified here should be viewed as concepts and as ideas that might serve as a starting point for further discussion; a determination of their ultimate feasibility would require much more extensive analysis than can be provided here.

- **The Alameda CTC could encourage a regional discussion on establishment of an "umbrella" body with limited powers to coordinate fares and schedules.** Mergers of major transit agencies in Alameda County and the Bay Area would appear unlikely in the near term for a variety of reasons, including concerns about local control of transit decision-making processes. Even an oversight body such as a European-style *verkehrsverbund* might be difficult to establish. However, the Transit Sustainability Project will be considering institutional structures, and may recommend either consolidations of some agencies or some alternate means of greater

integration. A previous MTC effort, the 2007 Regional Rail Plan, recommended consideration of a regional rail authority empowered to negotiate with freight railroads for use of their rights-of-way for passenger services, and as part of that effort, a number of models for greater structural integration of transit service provision were explored, including "federation" models such as Chicago's Regional Transit Authority or more powerful regional rail authorities. In any case, there would clearly be some benefits to partial, if not full consolidation; there would also be disadvantages in terms of local control. Agreement on a single regional fare structure, for example, could prove to be difficult, even if staff and board members from existing transit agencies jointly set such a policy. Alternately, cost-sharing arrangements such as the existing Fast Pass arrangement between BART and Muni in San Francisco might be used to reduce transfer penalties, or joint tickets or passes could be issued for trips requiring travel on services provided by two separate agencies (for example, a joint BART/AC Transit fare instrument). The Clipper Card and Regional Connectivity programs will provide greater "virtual" integration over time, potentially reducing the need for stronger measures. Nonetheless, these ideas seem worthy of further study, despite the significant political obstacles to implementation. For any such structure to be implemented, there would have to be significant "buy-in" from affected communities and policymakers.

- **The Alameda CTC could place an emphasis on prioritizing funding for transit capital projects that would serve to improve connectivity and reduce operating costs, especially in the near term.** Emphasis on projects that result not in new services, but in improvements to the speed and reliability of existing services, can serve to save money over time by reducing operating costs. Given the current and long-term challenges to financial sustainability faced by county transit operators, such a policy would appear prudent, especially in the near term until other funding sources could be found. Moreover, a strategy of prioritizing capital investments that could serve to improve existing transit services might offer a greater return on investment for the county than regular operating subsidies. An example is AC Transit's East Bay Bus Rapid Transit project, which the agency has projected would result in a slight increase in costs, but only because significantly more service would be provided; cost-effectiveness as measured in terms of cost per trip would be improved substantially. The project would also result in thousands of new transit trips per day, despite capital costs of approximately $14 million per mile, low relative to rail projects. Other examples are the packages of relatively modest improvements, such as stop consolidations, recommended by AC Transit staff as part of "mini-comprehensive operations analyses" conducted for the agency's two busiest corridors, the Lines 1 and 1R and Lines 51A and 51B corridors (indeed, the latter was formerly simply the Line 51 corridor; splitting the route to improve reliability was a key recommendation of the study). An additional example can be found in South County, where Union City Transit ridership increased and operating costs decreased following a reorganization of routes to improve speed and reliability. Such projects may not have the political appeal of new service, yet they can prove to be much more cost-effective ways to "buy" increased ridership. Such projects might also include measures to improve connectivity, ease transfers and better integrate services, such as relocations of stops.
- **The Alameda CTC might build on the TSP by funding/leading further study of opportunities for municipal/private provision of transit services currently provided by public agencies.** Through its examination of service design and delivery and institutional decision-making structures, the TSP will be considering issues such as redundant services and the appropriate roles different services within the larger system. One possible avenue for investigation is whether responsibility for services that can be, and often are, provided by cities or Transportation Management Associations rather than regional operators ought to be transferred from the latter to the former; or, to put it more directly, whether cities and businesses may be better positioned to provide "circulator" or "feeder" services, leaving regional transit providers to focus on longer-distance "trunk" services. Experience has shown that local entities can often provide this service more cost-effectively, and can gain a greater measure of control and security over their continued existence and quality. For example, opportunities would appear to exist to improve local services currently provided by AC Transit simply by transferring responsibility for their

provision. "Simple," of course, is something of a misnomer, as there would be barriers to such a strategy, not least of which would be funding. However, AC Transit service is relatively expensive to provide: approximately $156 per hour for fixed-route bus services in 2009, according to the National Transit Database. By contrast, the cost per hour to provide Emery Go Round service that same year appears to have been approximately $66 per hour, based on an operating budget of $2.1 million and a total of 32,000 hours provided (LAVTA's cost per hour for fixed-route service was approximately $92 in 2009, and Union City Transit's was $66). Gaining control over service would also amount to a clear benefit for communities providing service currently provided by AC Transit, a not-insignificant benefit given AC Transit's repeated recent rounds of service reduction. And, AC Transit itself would stand to benefit, as it could focus on its more productive "trunk" services. However, such cost savings are typically achieved by contracting service to a non-union operator, which may prove politically unpalatable, and if cities were to provide service currently provided by AC Transit, an equitable mechanism would need to exist for them to transfer funds currently provided to AC Transit to the local service instead. Alternately, TMAs or private companies might provide service; however, there would either need to be strong TDM mandates to do so, and/or the service would need to be subsidized through a public-private partnership.

- **The Alameda CTC could work with transit providers to identify more cost-effective means of providing ADA paratransit service, based on the outcomes of the TSP.** Traditional Americans with Disabilities Act complementary paratransit service is very expensive to provide. Paratransit providers in Alameda County have experimented with some alternate models, such as taxi subsidies. Other models may be available, however, that would allow for more cost-effective delivery of ADA services. Moreover, some might be leveraged to provide demand-responsive service to members of the general public, as described in the case studies.
- **The Alameda CTC might take the lead in organizing a Long Range Transit Plan for the county.** The MTC TSP will result in recommendations for a more integrated and sustainable transit system within Alameda County. Additionally, there are policy changes that could be made in the near term, without benefit of a comprehensive plan, such as transfer of responsibility for provision of some services and a greater focus on operating cost in prioritization of funding for capital projects. However, the county's transit system is vast, complicated and highly diverse. The scale of the challenges faced by the county in this area, when combined with the scope of funding challenges confronting transit operators (see "Innovative Funding Practices" paper), suggests that a holistic, focused examination of the transit system within the county should be undertaken. Areas of analysis for such a study might include: connectivity between major upcoming projects such as Livermore BART, Altamont Rail, Dumbarton Rail and Santa Clara BART; opportunities for improved regional express bus service (including an examination of alternatives to the existing AC Transit Transbay model); and opportunities for more cost-effective delivery of services beyond those identified by the TSP.

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ISSUE PAPER: TRANSPORTATION DEMAND MANAGEMENT (TDM) AND PARKING MANAGEMENT[1,2]

EXECUTIVE SUMMARY

This issue paper outlines the key principles of transportation demand management (TDM) and parking management, and how they may be implemented in Alameda County. Key conclusions include:

- TDM and parking management include a wide variety of different demand measures that can be designed to influence travel behaviors in a variety of urban and suburban contexts.
- TDM and parking management have been shown to be highly effective at achieving the transportation vision, goals, and objectives of the new Countywide Transportation Plan, most notably the need to reduce vehicle trips in light of new statewide regulation.
- Determining a specific role for the Alameda CTC is one of the biggest challenges in regards to TDM and parking management. TDM and parking management are often implemented at the local level, yet there likely remains a robust regional role for the Alameda CTC to play in terms of guidance and oversight, direct program administration (such as Alameda County's Guaranteed Ride Home program), and technical assistance for local jurisdictions.
- The Countywide Transportation Plan presents a unique opportunity to guide a growing regional movement that emphasizes demand-side solutions to the county's transportation challenges. The Countywide Transportation Plan is also well-positioned to support the efforts of municipalities to further innovate and utilize these strategies to achieve a shared vision for a sustainable and efficient transportation network. Initial concepts include:
    - Provide dedicated funding to the Guaranteed Ride Home (GRH) program, the Alameda CTC's primary TDM program.
    - Develop a comprehensive TDM program in which the Alameda County GRH program is expanded.
    - Develop Countywide TDM and parking management guidelines.
    - Create a robust technical assistance program to help jurisdictions implement TDM.
    - Initiate a TDM and/or parking certification program for.

[1] For purposes of this paper TDM and parking management are largely discussed as separate strategies. However, parking management by itself can also be categorized as one of many TDM tools.

2 Certain concepts and specific language in this paper were adapted from a previous Nelson\Nygaard report: "Regional Parking Strategies for Climate Protection," Metropolitan Transportation Commission, January 2010.

- Ample precedent exists for the Alameda CTC to refer to in its efforts to establish countywide TDM and parking management policies and programs. The case studies included in this issue paper include:
  - San Mateo C/CAG Trip Reduction Guidelines
  - San Francisco Commuter Benefits Ordinance
  - National Capital Region Transportation Planning Board Technical Assistance Program and the D.C. Performance Based Parking Pilots
  - Massachusetts Downtown Initiative (MDI)
  - GreenTRIP Certification Program

INTRODUCTION

The Alameda CTC *Countywide Transportation Plan and Transportation Expenditure Plan Briefing Book* provides an overview of transportation demand management (TDM) and parking management, identifies best practices, and highlights what Bay Area jurisdictions and agencies are currently doing to utilize these strategies. This issue paper builds on the information provided in the *Briefing Book* to describe how TDM and parking management can be supported through the Countywide Transportation Plan and Transportation Expenditure Plan.

The development and implementation of the new Countywide Transportation Plan and Transportation Expenditure Plan are occurring within the context of a changed economic, regulatory, and social environment in which the concept of creating a more sustainable way of living through transportation and land use investments has become a primary focus. The passage of AB 32 and SB 375 requires that Alameda County take a different approach to transportation planning – one that aggressively addresses the impact of greenhouse gas emissions by reducing vehicle miles traveled (VMT). Managing travel demand through TDM and/or parking management techniques offers cost effective and proven approaches to reducing VMT, by leveraging existing investments, and can complement investments in transit systems and other alternatives to driving. This issue paper further illustrates the efficacy and importance of TDM and parking management, while offering a potential framework for ways in which the Alameda CTC might facilitate supportive TDM and parking management policies.

The *Briefing Book* also addressed the related field of Transportation Systems Management, or TSM, at some length. TSM measures seek to improve the efficiency of road networks using technology-based solutions such as ramp metering and user information systems. By contrast, TDM measures seek to reduce demands on existing roadway and parking capacity using incentives and disincentives designed to influence travel choice. While TSM measures have an important role to play in developing a comprehensive transportation strategy, they are already well understood and widely used in Alameda County, while TDM strategies remain largely the purview of private employers. For this reason, this paper focuses on TDM and parking management.

What is TDM and Parking Management?

As discussed in the *Briefing Book*, TDM and parking management strategies represent a new, and increasingly prevalent, approach to transportation planning. This approach seeks to address transportation challenges, such as congestion and the need for adequate parking, not with traditional supply-side solutions, but rather with projects and programs that manage travel *demand*. Supply-side solutions focus on increasing roadway capacity or building more parking, an approach that has been criticized for creating additional congestion through "induced demand,"[3,4,5] exacerbating parking inefficiencies,[6] and contributing to a number of other public health and social impacts related to driving.[7] As discussed below, research shows that TDM and parking management have had demonstrable and cost-effective success in influencing people's core travel choices and behaviors, thereby reducing vehicle trips, congestion, and vehicle emissions; while improving mobility, accessibility, and the efficiency of local and regional transportation networks.

TDM strategies are diverse and vary depending on the context, but typically fall into the following categories:[8]

- **Financial incentives,** such as subsidized transit passes, parking cash-out programs, commuter checks, or guaranteed ride home programs;
- **Shared vehicle services,** such as shuttles or carpools/vanpools;
- **Alternative commute scheduling,** such as telecommuting or compressed work weeks;
- **Promotional activities,** such as travel marketing programs, travel training, or on-site transportation coordinators;
- **Infrastructure,** such as car or bicycle sharing services, secure bicycle parking, or on-site amenities (lockers, showers, etc.);
- **Parking management** is a broad topic, but typically includes demand-responsive pricing of curb spaces, "unbundling" of parking costs from rents and leases, reduced or eliminated minimum parking requirements, use of new meter technologies to allow multiple forms of payment and dynamic pricing, district-based parking management, shared parking strategies, and the use of parking revenue to support other mobility programs.

It is important to note that TDM and parking management usually take place at the local level with local jurisdictions approving TDM ordinances, establishing transportation conditions of approval and setting parking policy. Similarly, execution of TDM strategies also typically happens at the local, and often at the project level, as municipalities, employers, developers, and public or private institutions assume responsibility for ensuring that TDM programs and parking management efforts are implemented. However, parking and demand management can have regional impacts. This is discussed in greater detail below.

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[3] Hansen, M., & Huang, Y. (1997). Road supply and traffic in California urban areas. *Transportation Research Part A: Policy and Practice,* 31(3), 205-218.

[4] Goodwin, P. (1996). Empirical evidence on induced traffic: A review and synthesis. *Transportation, 23,* 35-54.

[5] Cervero, R. (2003). Road Expansion, Urban Growth, and Induced Travel: A Path Analysis. *Journal of the American Planning Association, 69* (2), 145-163.

[6] Shoup, D. (2005). *The High Cost of Free Parking.* Planners Press, American Planning Association.

[7] American Public Health Association. (2010). *The Hidden Health Costs of Transportation.* Washington D.C.: American Public Health Association.

[8] For a complete description and list of these strategies, please refer to the *Briefing Book.*

BENEFITS OF TDM AND PARKING MANAGEMENT

The Countywide Plan must balance a multitude of competing priorities within a highly competitive funding environment. Because TDM and parking management have been shown to be effective transportation planning tools in a variety of urban and suburban contexts, it is likely that these concepts can play an important role in ensuring that the Countywide Plan meets its goals and objectives. Some of the key benefits are:

- **Congestion and trip reduction:** Numerous studies demonstrate the effectiveness of TDM and parking management strategies in reducing vehicle trips and VMT. These include, but are not limited to:
    - *Pricing of parking:* "Market-based" parking pricing strategies seek to achieve availability targets (typically, 15% of spaces) by setting prices based on demand. A 2005 study showed that a 10% increase in parking charges reduces vehicle trips by 1-3%, depending on demographic, geographic, travel choice and trip characteristics.[9] Figure 1 shows how minimum employee parking charges affected VMT, trips taken, and trip delay in four California regions. In the San Diego region, a $3 employee parking charge reduced VMT by 2.4% and trip delay by 7%.[10] Parking fees and pricing programs can also:
        - Reduce vehicle emissions from cars circling around looking for a parking space;
        - Generate funds for alternative modes, like bicycle and pedestrian improvements, and
        - Discourage people from driving, and encourage them to take alternative modes.

Figure 1 Impacts of Employee Parking Fees

Region	Price	VMT	Trips	Delay
Bay Area	$1	-0.8%	-0.9%	-2.7%
	$3	-2.1%	-2.4%	-7.0%
Sacramento	$1	-1.0%	-1.1%	-2.5%
	$3	-2.6%	-2.8%	-6.5%
San Diego	$1	-0.9%	-1.0%	-2.5%
	$3	-2.4%	-2.6%	-7.0%
South Coast	$1	-0.9%	-1.1%	-2.9%
	$3	-2.5%	-2.8%	-8.5%

Source: Harvey and Deakin, 1997, Table B.7, in 1991 U.S. dollars; Accessed at VTPI, http://www.vtpi.org/tdm/tdm26.htm

[9] Erin Vaca and J. Richard Kuzmyak (2005*), Parking Pricing and Fees,* Chapter 13, TCRP Report 95, Transit Cooperative Research Program, Transportation Research Board, Federal Transit Administration (www.trb.org/publications/tcrp/tcrp_rpt_95c13.pdf). Accessed on Victoria Transport Policy Institute, http://www.vtpi.org/tdm/tdm26.htm

10 Greig Harvey and Elizabeth Deakin (1997), "The STEP Analysis Package: Description and Application Examples," Appendix B, in Apogee Research, *Guidance on the Use of Market Mechanisms to Reduce Transportation Emissions,* USEPA (Washington DC; www.epa.gov/omswww/market.htm). Accessed on Victoria Transport Policy Institute, http://www.vtpi.org/tdm/tdm26.htm

- *Subsidized transit passes:* Passes purchased in bulk at a discount can be provided free to users (such as residents of an area, students at a university, or other groups) or at a discount. Figure 2 shows the drive-alone and transit mode splits before and after subsidized transit pass implementation in different locations. These programs all led to reductions in driving alone, as well as a 3-16% increase in transit use.

Figure 2 Mode Shifts Achieved with Free or Discounted Transit Passes

Location	Drive to work		Transit to work	
Municipalities	**Before**	**After**	**Before**	**After**
Santa Clara (VTA)[11]	76%	60%	11%	27%
Bellevue, WA[12]	81%	57%	13%	18%
Ann Arbor, MI[13]	N/A	(4%)	20%	25%
Universities				
UCLA[14] (faculty/staff)	46%	42%	8%	13%
Univ. of Washington[15]	33%	24%	21%	36%
Univ. of British Colombia[16]	68%	57%	26%	38%
Univ. of Wisconsin, Mil.[17]	54%	41%	12%	26%
Colorado Univ. (students)[18]	43%	33%	4%	7%

[11] Santa Clara Valley Transportation Authority, 1997.

12 1990 to 2000; http://www.commuterchallenge.org/cc/newsmar01_flexpass.html.

[13] White et. al. "Impacts of an Employer-Based Transit Pass Program: The Go Pass in Ann Arbor, Michigan."

[14] Jeffrey Brown, et. al. "Fare-Free Public Transit at Universities." *Journal of Planning Education and Research* 23: 69-82, 2003.

[15] 1989 to 2002, weighted average of students, faculty, and staff; From Will Toor, et. al. *Transportation and Sustainable Campus Communities*, 2004.

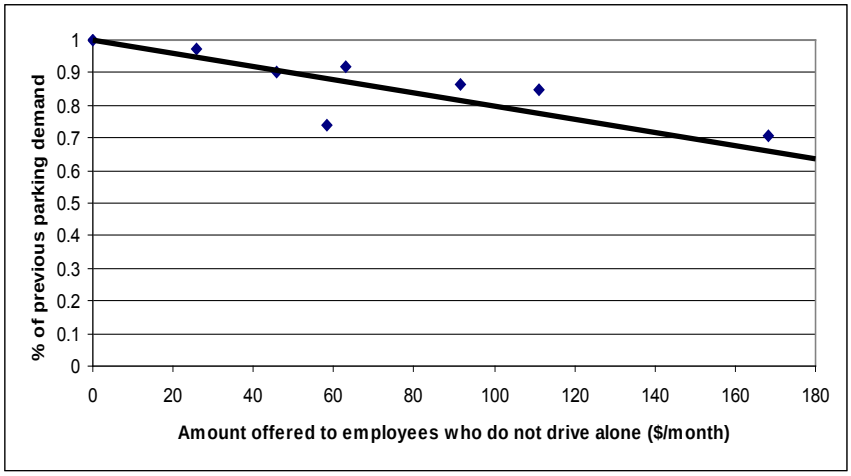
[16] 2002 to 2003, the effect one year after U-Pass implementation; From Wu et. al, "Transportation Demand Management: UBC's U-P ass – a Case Study", April 2004.

[17] Mode shift one year after implementation in 1994; James Meyer et. al., "An Analysis of the Usage, Impacts and Benefits of an Innovative Transit Pass Program", January 14, 1998.

[18] Six years after program implementation; Francois Poinsatte et. al. "Finding a New Way: Campus Transportation for the 21st Century", April, 1999.

- *Parking Cash Out:* Parking cash out is a TDM program that provides a subsidy to employees who choose to commute by alternative modes rather than making use of on-site parking. The primary benefit of parking cash out programs is their proven effect on reducing auto congestion and parking demand. Figure 3 illustrates the effect of parking cash-out at seven different employers located in and around Los Angeles. Additionally, a 1997 demonstration program including Alameda County and the Cities of Oakland, Pleasanton and Albany showed great promise: in the county, Oakland and Albany, 16-20% of participants changed their commute behavior (in Pleasanton, participation declined, but the existing program there had already grown substantially since implementation). Incentives consisted of Commuter Check transit vouchers or cash incentives ranging from $1.50 to $2.50 per day. All of the program sites were within one-quarter mile of transit and offered BART connections.

Figure 3 Effects of Parking Cash Out on Parking Demand[19]



- *Ridesharing:* Ridesharing programs nationally have been shown to reduce daily auto commute trips to specific worksites by 5-15% if they consist solely of educational efforts, and up to 30% if combined with cash incentives such as parking cash out or vanpool subsidies.[20] Furthermore, because rideshare passengers tend to have relatively long commutes, mileage reductions can be relatively large. Rideshare programs have also been shown to reduce commute VMT by up to 8.3%, total regional VMT by up to 3.6%, and regional vehicle trips by up to 1.8%.[21]

[19] Source: Derived from Donald Shoup, "Evaluating the Effects of Parking Cash-Out: Eight Case Studies," 1997. Based on the cost in 2005 dollars.

[20] Reid Ewing (1993), *TDM, Growth Management, and the Other Four Out of Five Trips.*

[21] Apogee (1994), *Costs and Cost Effectiveness of Transportation Control Measures; A Review and Analysis of the Literature,* National Association of Regional Councils (www.narc.org). Accessed at VTPI, http://www.vtpi.org/tdm/tdm34.htm

TDM Resource Center (1996), *Transportation Demand Management; A Guide to Including TDM Strategies in Major Investment Studies and in Planning for Other Transportation Projects,* Office of Urban Mobility, WSDOT (www.wsdot.wa.gov).

- *Carsharing:* Carsharing programs are short-term, members-only rental arrangements in which cars can be obtained on short notice (typically, by making a reservation online) from various unstaffed locations using cards or fobs. Research demonstrates that each carsharing vehicle takes nearly 15 private cars off the road – a net reduction of almost 14 vehicles.[22] Additionally, the average reduction in vehicle ownership in North American cities with carsharing programs was 20%. Finally, a UC Berkeley study of San Francisco's City CarShare found that members drive nearly 50% less after joining. The study also found that when people joined the carsharing organization, nearly 30% reduced their household vehicle ownership and two-thirds avoided purchasing another car.[23]
- *Guaranteed Ride Home Program:* A GRH program provides "commuter insurance" for employees, in the form of vouchers allowing participants who do not drive to work to make a limited number of free (excepting tips and gas) after-work trips via taxi or rental car under certain conditions. In Alameda County's GRH program, these include medical emergencies, unscheduled overtime, or times when a rideshare vehicle is unavailable (because the vehicle has broken down or the driver had to leave early or stay late). One survey found that 59% of rideshare and transit users said GRH was a factor in their decision not to drive[24]. GRH programs are also relatively inexpensive: another study found average costs of less than $5 per employee, per year[25].

- **Quick results and longer-term impacts:** Capital projects can take years to design, clear environmental review, and construct. TDM and parking reform efforts can be implemented on a relatively fast timeline. Moreover, impacts from these programs and projects are often immediate. TDM programs have been shown to have immediate effects on travel behavior and mode choice, while implementation of parking reforms, such as dynamic pricing, can result in instantaneous changes to parking availability and local congestion related to "cruising" for parking. Finally, many of the behavioral impacts result in long-term and systemic changes. As described above, as an example, the use of car sharing has been shown to fundamentally reduce household vehicle ownership and travel behavior.
- **Cost-effective:** TDM programs and parking reform efforts are cost-effective, a crucial factor for the Countywide Transportation Plan to consider in the context of competing priorities.[26] First, TDM strategies can be implemented quickly, have relatively small up-front capital costs, and relatively low ongoing operating costs. Second, TDM programs can leverage existing infrastructure investments, such as transit service or high occupancy vehicle (HOV) lanes. For example, as shown in Figure 2, substantial mode shifts to transit can be achieved through transit pass programs, thereby increasing transit ridership and making transit systems themselves more cost-effective. Third, TDM programs can leverage the resources of the private sector. Many TDM programs, such as new shuttle services, financial incentives, ridesharing services, and marketing, are actually funded by private employers and institutions. Finally, effective parking management can be an additional source of revenue for local jurisdictions, although this aspect of parking management should be managed carefully, as discussed below.

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[22] Transportation Research Board (2005), *Carsharing: Where and How it Succeeds,* Transit Cooperative Research Program Report 108. http://onlinepubs.trb.org/Onlinepubs/tcrp/tcrp_rpt_108.pdf

[23] Cervero, R., & Tsai, Y.-H. (2003). *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts.* University of California at Berkeley, Institute of Urban and Regional Development, Berkeley.

[24] K.T. Analytics (1992), TDM Status Report; Guaranteed Ride Home, Federal Transit Administration, USDOT (www.fta.dot.gov/library/planning/tdmstatus/FTAGUAR2.HTM).

[25] Comsis Corporation (1993), Implementing Effective Travel Demand Management Measures: Inventory of Measures and Synthesis of Experience, USDOT and Institute of Transportation Engineers (www.ite.org). Available at www.bts.gov/ntl/DOCS/474.html.

[26] For example, see the cost effectiveness of TDM in Portland for reducing GHG. Portland Bureau of Transportation. "Technical Memorandum #2: Strategies for Reducing GHG Emissions." July 2010. Prepared by Nelson\Nygaard Consulting Associates.

- **Politically viable:** Whether it is carpooling, using the company shuttle, utilizing commuter checks, or even riding a bicycle to work, large numbers of people already participate in a TDM program. In fact, many public and private employers highlight their TDM efforts and commute benefits as a means to attract employees. Consequently, these programs appear to be a politically viable option for additional funding and expansion throughout the County.

  Parking management, however, can be more politically challenging, as parking policy decisions tend to generate vociferous debate, as seen in the City of Oakland in the summer of 2009 when the City raised parking rates and lengthened meter hours in several commercial districts. However, if "done right" in terms of program design and responsiveness to community concerns, the implementation of dynamic pricing and other parking reforms can result in strong support from the public and local business community. Experience in Redwood City, Pasadena, and numerous other jurisdictions has shown that clear articulation of policy goals such as parking availability, as well as reinvestment of additional revenue back in the community in the form of infrastructure improvements or complementary mobility strategies, can overcome the typical public objections to changes in parking policy.

- **Region-wide applicability and flexibility:** TDM and parking management strategies are adaptable to local conditions, needs, and policies. As an example, clearly, the parking challenges facing Berkeley are quite different that those in Hayward or Pleasanton. However, the core philosophies and methodologies behind each of the strategies remain the same, and can be tweaked or refined to meet the goals and objectives of different municipalities.
- **Pro-market:** Most municipal codes require that developers build more parking than the market warrants, thereby artificially distorting the market for parking. Parking reforms, such as reduced, maximum or eliminated minimum parking requirements, can improve the efficiency of the regional economy in general. In particular, reducing parking requirements reduces the overall cost to build new housing and commercial developments, especially in transit-rich and walkable locations.

CHALLENGES

One of the Alameda CTC's primary challenges is to determine exactly what its role will be in regards to TDM and parking management. Currently, the Alameda CTC does play a direct, but limited role in these areas. For example, the Alameda CTC currently administers the County's Guaranteed Ride Home program. However, parking management is typically under the control of local jurisdictions, while many TDM programs are implemented at the project level. Moving forward with the development of the Countywide Transportation Plan it is crucial that the Alameda CTC find the appropriate balance between regional involvement and local implementation.

One potential countywide role would be to support smart parking and transportation demand management at the local level through technical assistance and incentive programs. There are a number of challenges at the local level that a countywide program could assist cities to overcome. Many of these are driven by the fact that local governments are increasingly constrained by limited budgets. Many cities simply do not have the capital or staffing resources to expand their TDM efforts or engage in comprehensive parking reform.

First, technical assistance directed at helping cities design TDM programs, write TDM ordinances and conditions of approval, and tailor strategies to local conditions could be a worthwhile role for the Alameda CTC. Second, any successful TDM program requires ongoing enforcement and evaluation. Traditionally, enforcement and evaluation efforts for TDM programs fall to local jurisdictions, and private entities. However, local jurisdictions often lack the resources to continually monitor TDM programs, while private developers and employers do not always prioritize the ongoing implementation of their TDM efforts. There is also potential for the Alameda CTC to provide a universal framework for program development, implementation, and ongoing management. For example, the Alameda CTC could fund a countywide evaluation of existing TDM and parking management efforts, which would likely involve developing a universal and consistent reporting format and/or contracting for a single evaluator. The Alameda CTC could also help develop model TDM ordinances, thereby helping to reduce the concern some communities

might have that higher parking rates, for example, would drive development to the next city or town. Finally, the Alameda CTC could develop countywide guidelines similar to those used in San Mateo County, which would then be implemented at the local level.

Parking reform efforts are resource intensive. Their success depends on a process that is well-designed, highly transparent, supported by robust data, and responsive to public input. However, many cities have not comprehensively reviewed their parking codes in years or decades, while even fewer have conducted a recent inventory of their existing parking supply or gathered data on parking demand. Consequently, even cities that have clear policy direction and political will to address parking challenges lack the required data to make informed and transparent decisions. The need for parking technical assistance is substantial, and, potentially offers the most appropriate role for the Alameda CTC in regards to parking management. As discussed in the case studies below, other regional agencies throughout the country have had success in supporting locally-driven TDM and parking reform efforts through technical assistance programs.

CASE STUDIES

San Mateo C/CAG Trip Reduction Guidelines

The San Mateo City and County Association of Governments (C\CAG) serves as the state designated Congestion Management Agency for San Mateo County. As such, C/CAG is responsible for preparing a periodic Congestion Management Program for the County. To comply with Air District Regulation 13, Rule 1, C\CAG developed a set of guidelines for the implementation of the land-use component of the congestion management program that includes TDM requirements for new development[27]. Whereas many other Congestion Management Agencies have retreated from TDM requirements in the face of opposition from employers and developers, the flexible nature of the program implemented in San Mateo County has led to continued success and innovation.

As required in county Congestion Management Programs, C/CAG guidelines must be followed for all projects that are projected to generate a net increase of 100 or more peak hour vehicle trips, and local governments are encouraged to apply the guidelines to all projects that the jurisdiction believes may have an impact on local or countywide traffic conditions.

Rather than requiring or prescribing specific actions by local governments, the C/CAG guidelines provide a framework and a recommended set of options for achieving vehicle trip reduction goals. Local governments are responsible for ensuring that the developer, property-owner, and/or tenant will "reduce demand for all new peak hour trips projected to be generated by a development [and] can select one or more of the options that follow," or may propose other methods for mitigating vehicle trips. C/CAG recommended options include:

1. Reducing the scope of the project
2. Accepting a one-time payment from the project sponsor of $20,000 per peak hour trip to fund ongoing TDM implementation (if a jurisdiction collects its own transportation impact fee, the "portion used to mitigate the impacts of the project's traffic will count as credit toward the [required] reduction in trips.")
3. Adopt CMA guidelines for projects
4. Require the developer and subsequent tenants to implement a package of TDM programs that have the capacity to fully reduce demand for new peak hour trips (the developer/tenants are not held responsible for the extent to which these programs are actually used)
5. Negotiate with C/CAG staff for other acceptable ways to mitigate trips

[27] City and County Association of Governments of San Mateo County (C/CAG), "Guidelines for Implementing the Land Use Component of the Congestion Management Program, " as amended by the C/CAG Board of Directors, September, 2004. Note that Air District Regulation 13, Rule 1: Employer Trip Reduction Requirements was suspended in 1996, following passage of SB 437.

These C\CAG guidelines are not meant to limit choices, and note specifically that "it is up to the local jurisdiction, working together with the project sponsor to choose the method(s) that will be compatible with the intended purpose of the project and the community that it will serve."

Project sponsors and tenants that are required to implement TDM programs may choose a combination of complementary TDM measures from a checklist developed by C/CAG. Each of the TDM strategies has been assigned a peak hour vehicle trip reduction value that is based on evidence from transportation-related academic and professional research and the best professional judgment of C/CAG staff. TDM measures include the parking related measures, as shown in Figure 4 below.

In addition to these measures, C\CAG offers to credit each employer/tenant with reduction of up to three peak hour trips for conducting a twice-yearly survey of employees, to examine their travel patterns and assess performance of specific TDM measures and the program as a whole. Although individual commuters are not subject to monitoring and enforcement of TDM provisions by cities or other outside agencies, and developers/property owners and their tenants are not responsible for actual participation rates, or trip reduction performance, employers are accountable to local governments for program implementation.[28] This combination of auto-enforcement and accountability can serve as a model for implementation of a flexible but results-oriented regional parking reform agenda.

Figure 4 C/CAG San Mateo County TDM Checklist

TDM Measure	Trip Reduction Credit
Charging employees for parking	Two peak-hour trips will be credited for each parking spot charged out at $20 per month for one year. Money shall be used for TDM measures such as shuttles or subsidized transit tickets.
Implementation of a parking cashout program	One peak-hour trip will be credited for each parking spot where the employee is offered cash payment in return for not using parking at the employment site.
Encourage shared parking	Five peak hour trips will be credited for an agreement with an existing development to share existing parking
Participate in/create/ or sponsor a Transportation Management Association	Five peak hour trips will be credited
Coordinate TDM programs with existing developments/employers	Five peak-hour trips will be credited

Lessons Learned

- **One possible role for the county would be to develop guidelines which could then be implemented by cities.**
- **A "menu" of options for achieving trip reduction targets can offer flexibility and contribute to employer acceptance.**
- **TDM trip-reduction impacts can be quantified using available research and professional judgment.**
- **Offering trip-reduction credits for surveys is a way to collect data and ensure ongoing monitoring.**

[28] C/CAG TDM guidelines state that, "the developer/tenants will not be held responsible for the extent to which these programs are actually used [but] the developer shall pay for a monitoring program for the first three years of the development. The purpose of the monitoring program is to assess the compliance of the project with the final TDM plan."

San Francisco Commuter Benefits Ordinance

In January 2009, San Francisco's Commuter Benefits Ordinance (Ordinance 199-08) went into effect. Under this local ordinance, all employers with 20 or more employees are required to offer a commuter benefits program to their employees. This ordinance promises to contribute to reduced parking demand, reduced VMT, and ultimately reduced greenhouse gas emissions in the Bay Area by seeking to make more comparable the subsidies and benefits available to commuters using all modes of transportation (similar to parking cashout).

The federal government currently allows employees to deduct up to $230 per month from their paychecks, pre-tax, to pay for transit and vanpool expenses. Under the Commuter Benefits Ordinance affected employers are now required to allow their employees to participate in the existing federal government's program as described above. Employees who work an average of at least 10 hours per week while working for the same employer within the previous calendar month are eligible.

Employers have three options for providing commuter benefits to their employees and may offer a combination of options 1 and 2:

1. **Pre-tax Transit:** Under existing Federal Tax Law 132(f), employers set up a program that allows employees to use up to $230 a month in pretax wages to purchase transit passes or vanpool rides.
2. **Employer Paid Transit Benefits:** Employer pays for workers' transit fares on any of the San Francisco Bay Area mass transit systems or reimburses workers for their vanpool expenses. Reimbursements for transportation expenses must be of at least an equivalent value to the purchase price of a San Francisco MUNI Fast Pass.
3. **Employer Provided Transit:** Employer offers workers free shuttle service on a company-funded bus or van between home and place of business.

Employers can administer the benefit themselves by purchasing transit tickets or vouchers that can be redeemed for passes, tickets, and vanpool expenses each month and distributing them to employees or employers may hire a third-party administrator to manage their program.

The Department of the Environment may issue employers a fine for non-compliance. The current fee structure is: $100 for a first violation, $200 for a second violation within the same year, $500 for each additional violation within the same year.

Lessons Learned

- **The San Francisco program offers another example of a flexible approach to achieving TDM objectives.**

National Capital Region Transportation Planning Board Technical Assistance Program and the D.C. Performance Based Parking Pilots

The National Capital Region Transportation Planning Board (TPB) is the federally designated Metropolitan Planning Organization (MPO) for the District of Columbia and surrounding jurisdictions in Maryland and Virginia. In addition to its core responsibilities as an MPO, TPB provides a variety of technical assistance programs to its local partners, such as congestion monitoring, travel forecasting, traffic counts, and surveys of personal travel behaviors. Technical assistance is funded by formula as each jurisdiction is allocated a flexible technical assistance budget.

In recent years, the District Department of Transportation (DDOT) in D.C. has begun to focus on parking management as a means to address severe parking challenges. In particular, the DDOT wanted to utilize variable pricing of parking as a means to: 1) ensure adequate parking for residents; 2) encourage turnover as a means to support local business; and 3) promote non-automotive transportation and reduce congestion. Parking challenges and congestion related to high demand for curbside spaces in the Capitol

Hill/Ballpark and Columbia Heights neighborhoods was particularly acute, and these two areas were targeted for a performance-based parking pilot program.

The first step in implementing the pilot program was to gather a robust data set on existing parking conditions that would enable the DDOT to accurately set meter rates to achieve desired occupancy and turnover rates. The resource challenges presented by the data collection effort, however, were immense. The study area for the Columbia Heights zone was 43 blocks, while the study area for the Capitol Hill/Ballpark zone was 145 blocks. Furthermore, the DDOT wanted to collect data for a variety of parking conditions, especially around the Washington Nationals ballpark where data was needed for days/nights when the Nationals were playing and days/nights when the Nationals were not in town. Data was also needed for a combination of days, nights, weekdays, and weekends.

The data collection effort involved the use of License Plate Reader (LPR) technology, which involves outfitting data collection vehicles with LPR cameras and laptops to count vehicles, record license plates, and cross-check with vehicle registrations ($7,500 to $10,000 installation costs per vehicle). The raw data is then used to generate occupancy and turnover rates by block. The LPR technology requires two individuals to conduct the counts, one to drive and one to monitor the data collection software. Data collection and analysis was managed by staff at TPB. DDOT was required to submit a formal letter requesting technical assistance. TPB provided a draft scope of work and budget, which DDOT had to then review, modify, and approve. The approximate budget for the data collection and analysis was $150,000 to $200,000 per pilot area.

The pilot program just completed its second year of data collection, and while there have been challenges, both MPO and DDOT staff indicate that the partnership has been a success and resulted in positive outcomes. More specifically, the data collection has enabled the DDOT to obtain an accurate inventory of its on-street spaces, determine occupancy and turnover rates, and highlight “hot spots” of high demand and parking congestion. The data has also enabled the DDOT to initiate dynamic pricing, as well as adjust district boundaries. For example, the DDOT has proposed both increases and decreases to parking meter rates as a means to achieve its target occupancy rates. The pilot zones have also generated additional parking revenue, which has since been allocated to a variety of projects within each zone, such as streetscape work, sidewalk improvements, additional bike sharing stations, wayfinding signage, as well as additional transportation studies. Finally, the data collection vehicles offer a means by which to “piggyback” enforcement onto the data collection efforts. While not a focus of this effort, the LPR technology could also be tailored to enforcement of parking regulations.

When evaluating the pilot projects, TPB and DDOT staff highlighted some of the challenges they encountered. First, the LPR technology is expensive, thereby limited by the number of data collection vehicles. This can be problematic with study areas over a certain size. Second, the LPR camera and software is effective, but does have its deficiencies. For example, the LPR camera and software have trouble reading dirty license plates and plates from certain states. In addition, the technology requires ongoing maintenance to ensure accurate data collection. The software is updated frequently and costs approximately $3,000 per year. Another drawback is that the data collection vehicles must be driven slowly (5-10 miles per hour) in order to get accurate readings, which makes data collection challenging for larger study areas.

Another challenge is that the data is not “real-time.” Given the volume of data records obtained by the LPR technology it does take a significant amount of time to analyze and “scrub” the data. At its fastest, the data analysis for the two pilot projects could take two months, but for the first two years of the pilot project it has taken 9-12 months. It is likely that the turnaround time for the data analysis will improve in recent years as TPB staff becomes more familiar with the analysis process. The DDOT believes that as the pilot programs continue they will be able to obtain quarterly data to make additional pricing adjustments.

The Performance Based Parking Pilots in D.C. highlight the potential for a technical assistance partnership between a regional agency and a local jurisdiction. While there are some challenges to overcome, this partnership model and the use of LPR technology appear to be crucial to effective parking management in the future.

Lessons Learned

- **Another useful role for county or regional bodies is to provide technical assistance in areas that may be difficult for cities for financial or other reasons.**
- **Parking management requires robust data collection.**
- **License plate reader technology enabling parking data collection can be expensive, and its purchase and use by cities would likely be prohibitive.**

Massachusetts Downtown Initiative (MDI)

The Massachusetts Downtown Initiative (MDI) is a program of the State of Massachusetts' Department of Housing and Community Development (DHCD). As part of DCHD's Division of Community Services, the MDI is a core component of DCHD's various technical assistance programs. Its primary mission is to assist local jurisdictions in revitalizing their downtowns through workshops, "desktop" technical assistance with DCHD planning staff, an on-call consultant database, and an annual grant program to fund downtown planning processes. The MDI is managed by one dedicated DCHD staff member and has a three-year budget of approximately $300,000.

While the MDI stresses a "holistic" approach to downtown revitalization that includes both economic and community development needs, parking management has become a primary focus of the initiative in recent years. In 2007, MDI hosted a workshop for municipal planners, city staff, and elected officials to provide an overview of parking management practices and how they could benefit and support downtown revitalization. The workshop focused on parking theory, best practices, and implementation of parking reforms. The workshop was viewed as a success by program participants and MDI staff. As a result, MDI now hosts an annual parking workshop, where parking management theory and best practices are highlighted, but the primary focus is on the practical challenges of implementation, such as legal authority, new technology, and funding. The popularity of the workshop also resulted in the creation of a dedicated "parking" category within MDI's annual technical assistance grant program.

Since 2008, MDI has awarded $10,000 in on-site technical assistance to several jurisdictions in Massachusetts. For example, a 2009 the grant was awarded to the Town of Needham, where a parking study resulted in a set of parking recommendations that included shared parking arrangements to manage existing supply, better management of on-street parking through pricing, zoning changes, and the creation of an in-lieu fee program. In 2010, work in the Town of Lexington resulted in a similar set of recommendations, including the establishment of variable pricing to meet newly defined availability goals, improved parking information, access improvements to existing parking supply, and establishment of a shared parking program.

In addition to the immediate project outcomes, the MDI technical assistance program has catalyzed additional parking work – grant recipients have allocated additional local resources to the implementation of the parking recommendations, while several local jurisdictions have funded independent parking studies. Finally, the MDI's recent work in parking management has enabled the MDI to support one of its top priorities – the creation of downtown business improvement districts (BIDs). The MDI program manager has capitalized on the increasing awareness of the nexus between effective parking management and downtown economic vitality to facilitate the development of BIDs new within several downtowns.

Lessons Learned

- **Another approach to technical assistance would be to offer workshops for local staff and officials.**
- **Yet another approach would be to offer grants for on-site technical assistance.**
- **Grants can serve as a catalyst for additional local investment.**

GreenTRIP Certification Program

GreenTRIP is a certification program which seeks to reward residential projects located within "infill" development areas that reduce vehicle trips and associated greenhouse gas emissions in the San Francisco Bay Area. The program was initiated by TransForm, a non-profit that focuses on Bay Area transportation issues. Eligibility requirements include:

- Primarily multi-family housing with a maximum of 20% single family homes,
- Minimum 50 units,
- Minimum project density of 20 units/net acre,
- Project cannot violate a jurisdiction's urban growth boundaries,
- Project is within the nine-county Bay Area.

Developers submit their projects for consideration by filling out a detailed application form that requires the developer to provide a host of project information, including size, number and type of units, number and type of parking, trip reduction strategies, transit proximity, and other TDM measures. The project is then evaluated according to specific project characteristics and project location, as opposed to a single set of universal standards that do not take into account local context (for example, parking can range as high as 1.5 spaces per unit).

If a project is approved and certified, the GreenTRIP program is designed to support the development of the project to see that it is actually built. More specifically, the developer is provided with a number of benefits, including:

- Letters of support to appropriate agencies and decision-making bodies
- Testimony at public hearings
- Customized project reports, including traffic models
- Customized press releases
- Tailored technical assistance to help implement TDM and parking strategies

The GreenTRIP program recently completed its pilot phase in which five new residential projects were awarded certification.[29] The outcomes of these five projects are substantial. For example, the reduction in parking in one project allowed the developer to save $3.9 million in construction costs, allowing for construction of 30 more affordable units. In addition, the five GreenTRIP projects will result in the distribution of more than 2,000 subsidized transit passes and over $7 million will be paid by the developers to VTA and AC Transit over the next 40 years.

Lessons Learned

- **An existing incentives-based strategy within the county encourages development that reduces trips by offering public support, customized publicity and reports, and technical assistance.**
- **Developers can reduce costs substantially by reducing the amount of parking in their developments, savings which can then be used to generate additional housing or other uses.**

[29] Three of these initial projects were located in Alameda County: South Hayward BART Affordable Family & Senior Housing, The Crossings in San Leandro and Parker Place in Berkeley.

STRATEGIC INVESTMENTS

The Countywide Transportation Plan presents a unique opportunity to guide a growing regional movement that emphasizes demand-side solutions to the county's transportation challenges. The Countywide Transportation Plan is also well-positioned to support the efforts of municipalities to further innovate and utilize these strategies to achieve a shared vision for a sustainable and efficient transportation network. Outlined below are some concepts for specific actions that the Alameda CTC could take, and programs that the Countywide Plan could include, to support TDM and parking management. This list is not exhaustive, but offers an initial framework for moving forward.

1. **Provide dedicated funding to the Guaranteed Ride Home (GRH) program, the Alameda CTC's primary TDM program.**

   The Alameda County GRH Program is currently administered by the Alameda CTC. When a registered employee uses an alternative means of transportation to get to work, they are guaranteed a means of getting home should they have medical emergency or unexpected changes to their work schedule. Twelve years of employee and employer surveys to enrolled participants have shown that employees' assurance that they have a "back-up" way to get home is often incentive enough to encourage them to not drive alone. This program has eliminated approximately 180,000 vehicle round trips per year since its inception.

   Since its inception, the Alameda County GRH program has been funded exclusively through grants from the Bay Area Air Quality Management District's Transportation Fund for Clean Air (BAAQMD-TFCA) and has been free of charge to employers and employees in Alameda County. Despite the fact that GRH has been highly competitive in the TFCA program over the past twelve years, being reliant on a sole funding source may not be sustainable, particularly in today's fiscal climate.

   Given the program's continued success in eliminating vehicle trips, the Alameda CTC could expand this program by including the GRH program within the next Countywide Transportation Plan either alone or as part of an overall TDM Program as described below. A dedicated revenue source would help to diversify GRH's funding sources while ensuring greater program stability. Furthermore, additional funding would enable the Alameda CTC to expand its outreach and marketing of the program to additional employers, as one of the biggest obstacles to higher use of the GRH program is simply lack of information about the program's existence. Locally, other counties such as Contra Costa, San Francisco, and San Mateo fund their guaranteed ride home programs through similar provisions that enable sales tax funds to be used for TDM programs.

2. **Expand the Alameda County GRH program into a comprehensive countywide TDM program.**

   This concept was one of the primary recommendations of the "Performance Evaluation of the ACCMA (now Alameda CTC) Guaranteed Ride Home Program," adopted by the Board in 2009[30]. The full recommendation is included below:

   > "We recommend that the CMA expand the GRH program into a comprehensive TDM program. Of all the GRH programs we examined, the CMA program is the only one that is not operated as part of a comprehensive program that includes other TDM or commute alternative efforts. Expanding the program would allow the CMA to broaden the range of commute alternative services it provides to residents of Alameda County while fulfilling the Travel-Demand Management Element of its Congestion Management Program. It would also work toward meeting the objectives of AB 32 and SB 375, state legislative mandates to reduce emissions of greenhouse gases. Additional commute alternative services that the CMA could offer include ridematching, financial incentives for carpooling and vanpooling, discounted transit passes, personalized transit itineraries, subsidized bicycle parking racks and lockers,

[30] Prepared by Eisen Letunic.

bicycle commuting maps and promotions and other marketing strategies. To fund these additional services, the CMA should investigate the county's sales tax for transportation, the TFCA and funding sources from other public agencies."[31]

Best practices show that a well-balanced and comprehensive TDM program, which offers a variety of measures which support each other, will be more effective than a TDM program built around a single trip reduction measure. Many TDM measures are mutually supportive and offer an excellent opportunity to leverage the trip reduction effects of other measures. A sample of potential TDM measures that the Alameda CTC could also fund include additional ridematching services, subsidized transit passes, bicycle infrastructure at work places, and additional marketing and promotion. The County's GRH program has thus far been successful at reducing vehicle trips. Through additional dedicated funding, the Alameda CTC could build on the success of this program by incorporating other TDM measures that are mutually supportive.

3. Develop Countywide TDM and parking management guidelines.

Given the countywide transportation oversight and planning responsibilities of the Alameda CTC, the agency is well-positioned to provide guidance to local jurisdictions. The development of countywide guidelines has several potential benefits. First, though some Alameda County cities have already been aggressively developing TDM programs and parking reform efforts, others have not implemented such strategies. A set of countywide guidelines could help cities begin to "tackle" those questions, and ensure that jurisdictions integrate best practices. (See Case Study San Mateo C/CAG)

Of course, the question of how those guidelines are applied and implemented is also crucial. On the one hand, "guidelines" could remain just that – a set of regional advisory statements or "best practices" that local jurisdictions could refer to as they move forward with developing their own TDM or parking management policies and programs. On the other hand, regional "guidelines" could also be tied to regional funding allocations to ensure that local jurisdictions follow them and meet certain targets. One Bay Area precedent that illustrates this dynamic is MTC's 2005 Transit-Oriented Development (TOD) Policy for transit expansion projects, discussed in greater detail in the case studies. (See Case Study MTC TOD Policy)

It is beyond the scope of this paper to answer these questions and develop a specific set of such guidelines. However, based on best practices in TDM and parking management it is recommended that any set of guidelines related to TDM and parking management emphasize some, or all, of the following core characteristics.

- *Outcome based,* with specific performance targets. Performance-based strategies with specific project-level, corridor-level or regional targets promise to be the most effective and politically viable, and the easiest to implement and administer. Performance-based strategies will facilitate more locally-appropriate solutions and can tap into the innovation and entrepreneurship of the public, private and non-profit sectors to a greater extent than strategies that prescribe specific implementation methods.
- *Effectiveness* at achieving regional goals.
- *Well-balanced and comprehensive.* Experience has shown that the most effective TDM programs are ones that have varied and mutually supportive demand management measures. For example, a TDM program that includes both subsidized transit passes and a guaranteed ride home program has the potential to reduce vehicle trips to a greater degree than one of those measures by itself. In short, TDM programs should offer as broad a choice to employees and travelers as possible in order to encourage a variety of travel behaviors and populations.

[31] Alameda County Congestion Management Agency. "Performance Evaluation of the ACCMA Guaranteed Ride Home Program," February 27, 2009.

- *Flexible,* so implementers can "play or pay." Some employers – particularly those with labor contracts and multiple work sites – are limited in the changes they can make to their existing parking and commuter benefits programs at all their work sites. Some jurisdictions will be more willing to reform parking codes and management policies than others.
- *Non-punitive,* so that stakeholders are not penalized for compliance with previous parking policies. For buildings that were constructed to meet local minimum parking standards, any new parking taxes, fees, or regulations should be calculated based on audited parking utilization rates. Limits on the expansion or reconstruction of existing parking lots are appropriate if audits reveal excess supply.
- *Politically viable.* As discussed before, parking decisions are one of the more high-profile components of local land use decisions. As is often the case with proposed policy changes, there are many stakeholders with different perceptions of the problem and potential solutions. Local businesses often believe that free and available public parking is crucial to their economic health, banks often refuse to lend to development that does not meet traditional parking requirements, and elected officials may understand the need to manage parking supply, but may not fully understand the linkage between managing parking and managing congestion. Implementing parking management strategies depends on extensive education and outreach with many stakeholders.
- *Effective marketing and public outreach.* As local experience has demonstrated, the manner in which TDM programs, and parking management policies in particular, are rolled out is crucial to their success. If the public perceives that such policies and programs have been developed without community input, it is very likely they will actively reject such measures, irrespective of their intent. Therefore, any countywide TDM and parking policy should require a local jurisdiction to demonstrate a proactive communication strategy with opportunities for education to, and feedback and input from the public.
- *User friendly.* Furthermore, TDM programs and parking management must be easy for the public to understand and use. Policies and their objectives should be clearly articulated and supported by data, while new technologies (such as parking meters) should be designed for straightforward public consumption.
- *Financially feasible and cost-effective.* Prioritize strategies that are low cost or no cost and provide the biggest "bang for the buck" should be encouraged.
- *Easy and efficient to administer.* Difficulties with implementation, administration, and enforcement highlight the importance of considering the implementation steps of all relevant stakeholders in program design. Strategies that are easy and efficient to administer (a) will be transparent and simple to understand for the public and implementers; (b) will be supported with proper funding and targeted technical assistance; (c) will have clearly defined roles and responsibilities for stakeholders, including enforcement agencies; (d) provide a clear nexus; and (e) be accountable, with periodic monitoring and evaluation. Those responsible for enforcement need to be funded, staffed and informed of additional responsibilities.

Individual jurisdictions or groups of jurisdictions could also initiate local or subregional programs. These would ideally include opportunities to measure success so that they might serve as a pilot for future countywide and regional efforts.

4. **Create a robust technical assistance program.**

Perhaps the most obvious and crucial role that the Alameda CTC could fill in regards to TDM and parking management is in the area of technical assistance. For the most part, Alameda County jurisdictions understand the concepts of TDM and parking management, and would like to, at a minimum, gain a better understanding of how these strategies could address local challenges. Meanwhile, some cities are ready to implement new TDM and parking management policies, yet are unable to move forward without additional resources.

The types of technical assistance that the Alameda CTC could provide are numerous. Outlined below are a number of potential "categories" of technical assistance concepts, many of which are illustrated in greater detail in the case studies.

- *Information clearinghouse:* As TDM and parking management play an increasingly important role in improving the region's transportation network, it is crucial that elected officials, staff, developers, financial institutions, employers, and the public have a shared understanding what TDM and parking management are, how they can benefit their communities, and how they can be implemented in a local context. In order to facilitate this dialogue, the Alameda CTC could fund a number of "shared learning" activities (see Case Study: Massachusetts Development Initiative). These include:
    - A full-time position at Alameda CTC to coordinate and monitor TDM and parking management efforts throughout the county.
    - A regional TDM and parking management sub-committee that could serve as an advisory body to both the Alameda CTC and local jurisdictions. The sub-committee would be comprised of local and regional staff, as well as individuals representing developers, financial institutions (lenders), employers, local business, and the public.
    - TDM and parking management workshops and trainings that emphasize key concepts, best practices, but, more importantly, the practicalities of implementation.
    - On-site assistance, such as one-day charrettes that evaluate a well-defined local challenge and outline potential solutions.
    - Development and distribution of easy-to-understand reference materials.
    - Marketing and promotional materials for local and regional TDM programs.
    - A list of on-call TDM and parking management consultants to assist local governments.
    - Model ordinances.

  MTC and Alameda CTC have already undertaken a number of these technical assistance programs as part of the campaign on regional parking reform and local assistance for Priority Development Areas.[32] For example, MTC currently hosts parking fundamentals workshops and in 2007 put on a regional parking "seminar," which had over 125 participants. Furthermore, MTC funds six customized "Parking Advanced Implementation Labs" that are designed to assist local jurisdictions with a "particular actionable policy." One of these labs focused on parking at the San Leandro BART station. Finally, MTC recently developed a parking "Toolbox/Handbook": *Reforming Parking Polices to Support Smart Growth: Parking Best Practices & Strategies for Supporting Transit Oriented Development in the San Francisco Bay Area.* The handbook helps local jurisdictions define what type of area they are and identifying parking strategies that are likely to be effective in this type of area. It describes the various strategies and provides examples of best practices from around the region and country.

  Additionally, the Alameda CTC, through its Transit Oriented Development Technical Assistance Program (TOD TAP), has funded two parking studies, a shared parking study at MacArthur BART and a parking and stormwater study at Coliseum BART, in Oakland.

  Alameda CTC continues to fund technical assistance activities that complement other regional efforts. The Alameda CTC could expand the TOD TAP program to further focus on local parking needs in Alameda County, supplement MTC's activities or continue to work with MTC to ensure some of its efforts continue to be directly tailored to the experiences of Alameda County jurisdictions, such as the San Leandro parking labs example. One possibility would be

[32] http://mtc.ca.gov/planning/smart_growth/parking/

for Alameda CTC to fund additional MTC "parking labs" specifically within Alameda County. Alternatively, individual jurisdictions could implement programs within their cities or subregionally within the County, again, serving as pilots for the County.

- *TDM and parking management grant programs:* The success of TDM and parking management efforts depends on a planning process that is well-designed, highly transparent, supported by robust data, and responsive to public input. In addition, capital expenses for TDM programs (such as carsharing or on-site amenities) and parking management (new meter and sensor technology) are also substantial. To help overcome these basic resource challenges, the Alameda CTC could expand its technical assistance grant program to include:
    - Planning grants:
        - Development of local TDM and commute benefits ordinances (see Case Study: SF Commuter Benefits Ordinance).
        - Development of project-specific TDM programs.
        - Parking studies to revise local parking codes and/or develop parking ordinances for jurisdictions to adopt, develop district-based management, etc. (see Case Studies: Massachusetts Development Initiative and National Capital Region Transportation Planning Board Technical Assistance Program and DC Performance Based Pilots).
        - Parking impact fee studies.
        - Data collection and analysis (see Case Study: National Capital Region Transportation Planning Board Technical Assistance Program and DC Performance Based Pilots).
    - Capital grants:
        - On-site transportation coordinators for employers or institutions of a certain size.
        - Installation of on-site amenities, such as secure bicycle parking, lockers/showers, etc.
        - Acquisition and installation of parking meters (for curb parking) and parking access and revenue control systems (for off-street lots).
        - Purchase and operation of enforcement vehicles and license plate recognition systems, parking stall occupancy sensors, or handheld enforcements (see Case Study: National Capital Region Transportation Planning Board Technical Assistance Program and DC Performance Based Pilots).
    - Monitoring, enforcement, and evaluation grants:
        - Local monitoring and enforcement of TDM ordinances and project-specific TDM programs.
        - "Follow-up" evaluations of planning or capital grants to measure outcomes of studies and resulting policies, programs, and projects.
        - Travel demand surveys.
        - Data collection and analysis.

Alameda CTC's current TOD TAP program is funded by MTC's Transportation and Land Use Program and the transportation sales tax. This program does not require a local funding match. The details and requirements of an expanded grant program merit additional research and planning. If the Alameda CTC were to move forward with such a program it would likely need to address some key program parameters. First, eligibility requirements would have to be determined. Currently, local jurisdictions are eligible for the TOD TAP program but private and public developers, employers, and institutions would also benefit from such technical assistance. Second, it would have to be determined if County dollars would leverage local and private dollars by requiring a local match.

Finally, how such an expanded grant program is funded is a fundamental, yet complicated question. It is beyond the scope of this paper to identify a specific funding mechanism or the details of allocations. The most obvious choice, and the one in which the Alameda CTC has the most influence over, is through the local sales tax measure. More specifically, Alameda CTC could consider expanding the funding category within the next Countywide Plan and Transportation Expenditure Plan that allocates a certain percentage of the local sales tax measure to TDM and parking management. Moving forward, this is an issue that must be addressed in much more detail.

5. **Initiate a TDM and/or parking certification program.**

Much as the Leadership in Energy and Environmental Design (LEED) certification program administered by the U.S. Green Building Council has spurred a sustainable building boom, a TDM and/or parking certification program could help achieve widespread regional adoption of TDM programs and parking reforms. Such a program could bestow recognition upon communities and individual employers and developers who lead the way forward as the first to implement policy and program reforms.

- Such a program would establish policy and program reform targets for local governments, developers, and employers that vary based on the transit accessibility of their location and for employers by their industry sector (e.g. regional medical clinics would have different standards than offices housing professional service firms).
- Through a coordinated marketing strategy, regional agencies would highlight the successful implementation of parking reforms by certified cities, projects, and employers, articulating the connection between parking policies and climate change.
- Local governments may also consider requiring communities to meet certain certification standards in order to receive planning assistance, infrastructure, or service funds.

As stated earlier, TransForm, a Bay Area non-profit focused on regional transportation issues, recently created GreenTRIP, a certification program for residential infill projects within the nine-county Bay Area. This certification program rewards residential projects that seek to reduce vehicle trips and greenhouse gas emissions through TDM and parking management. Alameda CTC may wish to explore ways in which to partner with TransForm to see how this program could be expanded, applied to commercial developments, or tailored to specific contexts with Alameda County. The biggest challenge for the GreenTRIP program is expanding its reach and ensuring that developers, local agencies, and decisions makers are aware of the benefits of the program. One option is to require GreenTRIP certification in certain locations, such as Alameda County's priority development areas (PDAs).

ISSUE PAPER: GOODS MOVEMENT-RELATED ISSUES AND BEST PRACTICES

SUMMARY OF KEY ISSUES AND STRATEGIES

This paper identifies key issues, best practices and recommendations for future investments designed to improve goods movement in Alameda County and to inform the 2011 Alameda Countywide Transportation Plan (CWTP) and future plans. Key conclusions include:

- Goods movement is critical to the economy of Alameda County. Goods movement–related businesses provide thousands of regional jobs and millions of tax dollars to the County. A 2006 report estimated that over 120,000 goods movement related jobs (including manufacturing, wholesale, and construction) were located along the I-880 corridor alone.[1] Goods movement can also have negative side effects on County's communities and natural environment–including safety, noise, congestion, and air quality impacts–that must be minimized.
- A number of regional and local studies have identified key freight infrastructure needs in the County as well as strategies to reduce environmental impacts. Some actions are already being taken to implement these projects and strategies and the County should continue to support these in the CWTP and future countywide plans.
- The key to long-term success in freight system planning is continuous regional collaboration among local jurisdictions and transportation partners such as economic development organizations, air districts, community groups, groups that represent business and industry concerns, and other private sector partners. Alameda CTC can help institutionalize this collaboration to support ongoing improvement to the county and regional freight system.

INTRODUCTION

Why Goods Movement Matters to Alameda County

Goods movement is very important to Alameda County, as the County serves as a key transfer point for goods carried by truck, rail, water and air, and is home to a growing population and thriving industrial base. Many previous studies, including the 2004 MTC Regional Goods Movement Study and the Alameda CTC's 2008 Truck Parking Feasibility and Location Study, have found that goods movement industries play a critical role in the economy, both locally in Alameda County and regionally. Over 37 percent of Bay Area economic output is in manufacturing, freight transportation, and warehouse and distribution businesses. The Port of Oakland in 2005 directly and indirectly supported more than 28,000 jobs, $2 billion in personal income and approximately $208 million in state and local taxes.[2] In addition, a 2006

[1] *Defining Goods Movement Businesses / Industries With Demand for Central Corridor Locations (Report 3A).*The Bay Area Goods Movement / Land Use Project Phase II. MTC, 2007.
[2] Port of Oakland Website: http://www.portofoakland.com/newsroom/pressrel/view.asp?id=34

report[3] estimated that over 120,000 goods movement related jobs (including manufacturing, wholesale, and construction) were located along the I-880 corridor.

Freight movement can also bring negative community and environmental impacts. Growing freight volumes can strain the county's overburdened and often outdated infrastructure[4], and can exacerbate other pressing transportation-related issues in the region like safety, air quality, traffic congestion, and environmental justice. These issues must be addressed as part of goods movement planning.

GOALS AND STRATEGIES: THE IDEAL FREIGHT SYSTEM AND TODAY'S GOODS MOVEMENT SYSTEM DEFICIENCIES

Alameda County's multimodal goods movement system is a key component of the economic engine of the San Francisco Bay Area region. The system includes highway and roadway infrastructure, marine and air ports, rail facilities, long and short-term truck parking facilities, and intermodal connectors. These were all described in the Briefing Book prepared for this study. In summary, the key elements include:

- Interstates I-80, I-580, I-238 and I-880 are all major truck routes, and are supported by a number of local and regional corridors, circulators, and connectors;
- Two Class I railroads serve Alameda County–the Union Pacific (UP) connecting with Roseville and the Burlington Northern Santa Fe (BNSF) to Stockton;
- Intermodal connectors (truck and rail) that provide mobility to Port of Oakland marine and air cargo facilities (such as the Martinez Subdivision).
- The Port of Oakland is the fifth busiest container port in the country, importing goods to distribute throughout the County, State, and Nation, as well as exporting billions of dollars of agricultural product from the San Joaquin Central Valley. In addition, it is home to the largest air cargo facility in Northern California.

The Ideal Freight System

To maximize the potential of these transportation assets, Alameda CTC should ensure each of these modes is able to operate seamlessly and efficiently. Alameda County's ideal freight system would include the following features:

- **Provide international connectivity and serve international markets.** The Bay Area is an important U.S. international gateway for marine and aviation goods movement and Alameda County serves as one of the few ports of entry through the Port of Oakland and the Oakland International Airport. In 2008, $39 billion of merchandise trade passed through the Port of Oakland – or 2 percent of the value of the total U.S. international waterborne trade[5]. In addition, the Oakland air cargo facilities handled almost 500,000 metric tons of air cargo in 2009[6], making it the 12th busiest air cargo airport in the nation. The region currently handles over $30 billion in air cargo exports and $10 billion in marine cargo exports[7], much of this comprised of agricultural products from the San Joaquin Valley to key trading partners in the Pacific Rim and Europe. Air and marine sectors are both anticipated to grow. Even considering the global economic recession

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*3 Defining Goods Movement Businesses / Industries With Demand for Central Corridor Locations (Report 3A).*The Bay Area Goods Movement / Land Use Project Phase II. MTC, 2007.

[4] In particular, roads and road surfaces that were not built to withstand heavy-duty trucks, this may be used by trucks bypassing congestion or to access areas with businesses and industrial facilities.

[5] America's Freight Transportation Gateways. FHWA Research and Innovative Technology Administration (RITA), 2009.

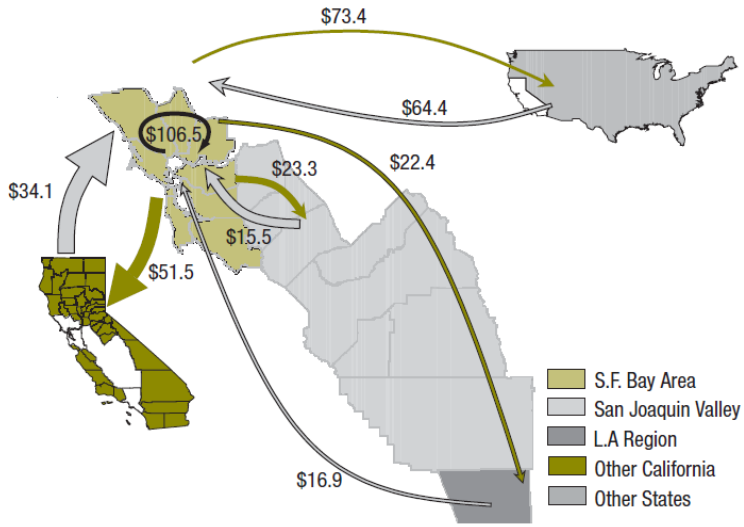
[6] Airport Council International – North America. 2009 North American Final Rankings. http://www.aci-na.org/stats/stats_traffic

[7] Regional Goods Movement Study for the San Francisco Bay Area, MTC (2004)

and declining imports and exports from 2007-2010, the Port of Oakland by 2030 is still anticipated to more than double its current incoming cargo (from 2.3 million Twenty-Foot Equivalent Units (TEU)s in 2010 to 5.1 TEUs in 2030).[8] However, in order to realize these increased freight volumes, critical infrastructure, capacity, and maintenance projects must be completed. These include the Outer Harbor Intermodal Terminal (OHIT) capacity enhancement project, as well as intermodal connector improvements such as the Martinez Subdivision[9] in Oakland.

- **Serve local distribution and domestic markets.** The goods movement system must be designed to serve not only the local distribution market (goods to the consuming public in Alameda County and the Bay Area), but it also serves the larger domestic market in California and states beyond. The 2008 Truck *Parking Facility Feasibility and Location Study* found that Bay Area trucking is dominated by local trips that are 50 miles in length or less. This regional focus is evident in Figure 1, which shows that the vast majority of trade circulates within the Bay Area.

Figure 1 Value of Trade Flows In and Out of the Bay Area (in Billions)[10]



- **Provide intra-regional and inter-regional connectivity.** Intra-regional and inter-regional corridors provide critical trade linkages between Alameda County and the rest of the country, as well as to regional distribution facilities and agricultural industries located in the San Joaquin Valley. These links must be maintained and modernized to provide last-mile connectivity to warehousing/distribution facilities, ports, and industry.
- **Minimize environmental and community impacts**. Transportation investments should support livability and sustainability. Air quality impacts of freight and noise pollution can also be minimized through technology application and policy development, including strategies as recommended in the 2008 *Truck Parking Facility Feasibility and Location Study to* provide electric hook-ups for freight vehicles, and full implementation of the 2010 Clean Trucks program[11]. The County's problems with illegal truck parking must be addressed, potentially

[8] SF Bay Area Containerized Cargo Outlook. The Tioga Group, Inc., 2009
[9] The Martinez Subdivision is a project that would add two additional mainline rail tracks on the Union Pacific rail line between the Port of Oakland rail terminals and the City of Richmond. This section is used by over 60 Amtrak, UP and BNSF trains daily, and can be very congested.
[10] Regional Goods Movement Study for the San Francisco Bay Area, MTC (2004)
[11] The Port of Oakland is implementing clean truck regulations consistent with the California Air Resources Board (CARB) Drayage Truck and Statewide Truck and Bus Regulations. As of January 1, 2010, a Port drayage ban is in

through the accommodation of more truck parking facilities in local land use redevelopment processes. The 2008 *Truck Parking Facility Feasibility and Location Study* recommended several such redevelopment opportunities, including investigating what transportation infrastructure improvements would be needed to accommodate a truck parking facility near the I-880 and Industrial Parkway interchange[12]. In addition, there are ways to integrate goods-movement land uses into the urban fabric in a manner that minimizes the impacts of freights on the community. Some of these "Best Practices" will be highlighted as case studies later in this white paper.

- **Preserve transportation system mobility and safety.** The county's transportation system must serve both freight and passenger users. The point of intersection of these two uses can present challenges to overall system mobility and safety. Parallel arterials in strategic locations to enable alternate routing in the case of congestion or closure will provide system resiliency. The addition of truck-only lanes, managed lanes, truck parking facilities and rail grade separations may also improve operations in congested commuter corridors. One proposed project that would balance these needs is the 7th Street Grade Separation project, which will eliminate conflicts between trucks and trains at a major access intersection to the Port of Oakland, while improving the safety of pedestrian, bicycle and automobile movements[13].
- **Provide multimodal linkages and options.** The county's multimodal transportation system must provide linkages between truck, rail, water and air modes for seamless and efficient transport/transfer of goods. The system must also provide shippers with a variety of cost and time sensitive options that are viable means of transporting goods. These linkages could include a system of designated truck routes that provide connectivity to key regional destinations like international ports, local warehousing/distribution facilities and industry.
- **Provide tools to inform users.** Alameda County already benefits from the use of the 511.org Intelligent Transportation System (ITS) that provides real-time status of road conditions and incident detection. There are other potential uses for ITS systems, for example the ability to communicate with truck drivers the status of supply and demand for truck parking slots when there are a limited number of spaces in a given area. The use of ITS systems should be maintained and expanded in order to help shippers and carriers more effectively plan and manage their trips. Gaps and Needs for the Freight System

Where are the gaps/most salient needs in the locally-serving system?

As highlighted in recent studies by the MTC, Alameda CTC and the Port of Oakland, current infrastructure and operational gaps in the intermodal goods movement system include:

- Limited capacity at the Port of Oakland;
- Intermodal connections to the Port of Oakland;
- Capacity, safety, and bottleneck issues on I-880, I-580, I-238 and I-80;
- Lack of a local truck route system, creating congestion and safety concerns as truck traffic mixes with general traffic and uses neighborhood streets–an initial step could include continued study of the I-580 truck ban and defining connections between local and regional truck routes;
- Lack of sufficient truck parking facilities, leading to illegal truck parking and overnight stops;
- General degradation of some freight facilities, particularly the impacts on pavement from the movement of heavy-duty trucks;
- Safety and congestion issues at rail at-grade crossings;

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effect for all trucks that do not meet the CARB emissions requirements. The requirements will be renewed and updated to reflect new emissions requirements on January 1 2012, 2013, and 2014.

[12] 2008 *Truck Parking Facility Feasibility and Location Study: Final Report,* ACCMA, December 2008.

[13] 2007 TCIF Funding Nomination for the 7th Street Grade Separation and Roadway Improvements, http://www.portofoakland.com/pdf/tcif_01.pdf

- Growing competition between freight and passenger rail in the Capitol Corridor and Altamont Pass; and
- Concerns over the potential impacts of climate change on the County's infrastructure. For example, sea level rise could have significant impacts on the existing and future transportation infrastructure–including rail, road, and air cargo facilities.

These gaps will be exacerbated in the future as freight volumes continue to grow. Truck counts on the three major freeways are projected to increase substantially by 2026,[14] with truck counts reaching 20,000 trucks / day on some segments of I-80, 35,000 trucks / day on some portions of I-580, and almost 40,000 trucks / day on some portions of I-880[15]. Containerized cargo movements through the Port of Oakland are expected to more than double by 2030,[16] and cargo airlines aircraft operations are forecasted to increase by 25% from 2007 to 2035.

What parts of the freight transportation system support national and international trade and where are the gaps/most salient needs in the national and international system?

Seaports and airports are major international gateway facilities, with the local roadways, railways and inter-coastal waterways providing critical last-mile connectivity for international goods movement. The Port of Oakland's marine and air cargo facilities are perhaps the most visible components of Alameda County's international trade infrastructure. There are gaps and needs specific to the national/ international freight system, as highlighted in recent studies by the MTC, Alameda CTC and the Port of Oakland:

- **Dredging.** The Port of Oakland must maintain a 50 foot mean low water depth to ensure it can continue to serve international container traffic. While efforts have been made in previous years to dredge, there remain berths at the port that do not have 50 foot clearance.
- **Port intermodal connectors.** The Port of Oakland relies on efficient rail and truck connections to move its inbound and outbound cargo. Some projects, like the Martinez Rail subdivision project (which would add additional rail capacity between the Port of Oakland rail terminals in West Oakland and extend to the City of Richmond) are anticipated to help grow the capacity of the rail system (which currently handles 30 % of incoming cargo at the Port17).
- **Air cargo facilities.** Air cargo plays a critical role in regional and international goods movement; tonnage is expected to more than triple between 1998 and 2020 and international tonnage is expected to almost quintuple.18 Adequate intermodal connections to air cargo facilities, and sufficient air, highway and rail capacity are necessary to accommodate this growth.
- **Roadway and Railway Chokepoints.** Constraints and bottlenecks on the main truck and rail corridors are impediments to national goods movement. These include physical and operational impediments along the Class I rail lines, rail yards, I-580, I-80/I-880 and I-238.

What other challenges exist with the County's freight system?

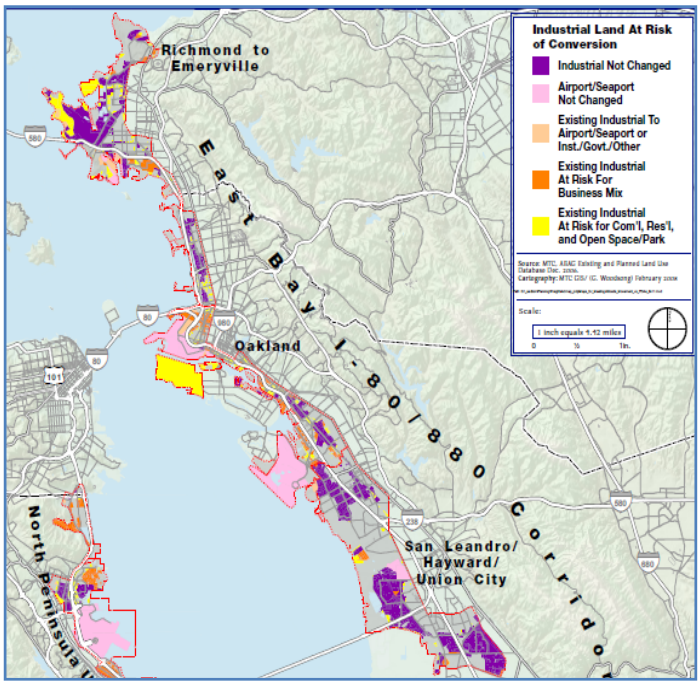
Though not specific to international trade, several other issues affect the County's freight system. As highlighted in recent studies by the MTC and Alameda CTC, these include:

Land Use. Land use and real estate market trends in the Bay Area are reducing the supply of land and building space for goods movement businesses in Alameda County and the region, while the demand for goods movement services continues to grow. Real estate markets are pushing land to higher value uses and competition for centrally-located land can make it difficult for port-related businesses to remain in

[14] MTC, Regional Goods Movement Study for the San Francisco Bay Area, 2004
[15] 2005 Caltrans Truck Counts
[16] MTC, Goods Movement Update, 2009
[17] 2007 TCIF Funding Nomination for the Martinez Subdivision and Rail Improvements
[18] Regional Goods Movement Study for the San Francisco Bay Area, MTC (2004)

proximity to the port. As shown in Figure 2[19], areas of industrial land use are at risk for being converted to higher, more profitable uses like commercial or residential uses, or uses that are not necessarily compatible with industrial uses, like parks or other open space. Additionally, older areas being used for goods movement are in need of modernization and infrastructure improvements to more effectively serve growing industrial demand. For example, many older developments do not include sufficient truck loading areas, leading to trucks occupying bus stops or blocking traffic whenever they must park to load or off load their goods.

Figure 2 Industrial Land Uses at Risk of Conversion Along the I-880 Corridor



Air Quality. Goods movement has a significant impact on the environment, in particular on air quality. This may be attributed to a variety factors including truck idling due to congested roadways or at port entry gates, trucks or train engines that are not using low-emitting, clean engines, or the use of truck transport in cases where lower-emitting rail or water modes could be used. For example, The Port of Oakland and UP provided information on their local operations for a California Air Resource Board (CARB) study to estimate the health risks from diesel exhaust in West Oakland. The results show that the estimated lifetime potential cancer risk for residents of West Oakland from exposure to diesel emissions is about 1,200 excess cancers per million population.[20] Though air quality concerns are a County-wide concern, localized "hot spots" like West Oakland remain a challenge.

Other Community Impacts. Safety concerns, local congestion and noise have disproportionately impacted those communities located near goods movement infrastructure. A key attributing factor to these negative community impacts is the lack of truck parking in the County. When truck parking facilities are not available, and truck drivers need to take required rest, a trend is to park where they are able. This oftentimes includes parking on freeway ramps, city streets or in neighborhoods adjacent to areas of industrial or freight activity. Idling trucks in these situations contribute to air quality concerns (previously noted) and noise pollution.[21] This issue is exacerbated by a lack of truck routes, which can

[19] This figure is a cropped version of one produced by MTC and Hausrath Economics, Inc. Produced for the *Goods Movement / Land Use Project for the San Francisco Bay Area,* MTC (2008).
[20] http://www.arb.ca.gov/ch/communities/ra/westoakland/westoakland.htm
[21] Truck Parking Facility Feasibility and Location Study, Alameda County Congestion Management Agency (2008)

lead to safety and pavement condition concerns when trucks travel through residential areas. Air quality and noise are also issues in areas adjacent to rail and port facility operations.

Responding to climate change and sea level rise. Global sea levels are projected to rise as little as 8 inches and as much as 4 feet by the end of this century[22], with evidence suggesting that 6.5 feet represent an upper bound that is very unlikely to be exceeded. Research performed by the Bay Conservation and Development Commission[23] found that sea level rise could seriously impact existing and future regional transportation infrastructure in Alameda County. Using a timeline of 2040-2060, this report estimated that 58 miles of Alameda County's existing road and rail infrastructure would be at risk from sea level rise, with an additional 40 miles of future (planned) transit and road facilities also at risk[24].

CASE STUDIES: ADDRESSING CRITICAL FREIGHT ISSUES

Alameda CTC and Bay Area stakeholders have already undertaken studies to address a variety of the goods movement impacts and needs identified above. This section presents additional case studies from other regions that have been working to address freight issues similar to those experienced in Alameda County. The case studies focus on integrating freight and land use in an urban setting, and illustrate how careful planning can help to prevent impacts with other non industrial land uses.

Case Study #1: Puget Sound Regional Council – Integrating Freight-Intensive Land Uses with Manufacturing and Industrial Centers (MIC) and Regional Growth Centers

The Puget Sound Regional Council in Seattle, Washington, is committed to preserving freight-intensive land uses–including industrial and manufacturing facilities and distribution facilities–within the regional footprint. Doing so has proven to have regional benefits of economic development, jobs, tax benefits, and easy access to goods to service a rapidly growing regional population. One way that the region is accomplishing this is through the designation of nine Manufacturing and Industrial Centers (MICs) and Regional Growth Centers under VISION 2020, (now VISION 2040) and Countywide Planning Policies.

- The MICs include the majority of land that can be characterized as serving goods-dependent industries. Figure 3 shows the locations of the MICs, which include the region's major freight generating facilities such as the Ports of Seattle and Tacoma, warehousing in the Kent Valley and Boeing's manufacturing plant in Everett. Though not exhaustive of all freight related land use activities, the MICs capture the majority of land that can be characterized as serving goods-dependent industries.
- Regional Growth Centers which represent a large portion of the concentrated demand for freight in terms of local deliveries. The clustering of all of these locations is particularly important since the closer proximity of manufacturing/industrial land uses to their markets means less time and money required to transport goods, as well as associated impacts from freight transportation.

Designating these areas as MICs helps to separate them from other land uses and prevent future conflicts, and keep goods movement related uses closer to their markets as a way to reduce the cost of freight transportation. Residential development within the MICs is intentionally limited to avoid land use conflicts. Population within the MICs is anticipated to grow by roughly 33% by 2040, compared to a regional population growth forecast of 42% between 2006 and 2040. By 2040 (Figure 3), most of the growth will focus on intensification of use within the existing locations.

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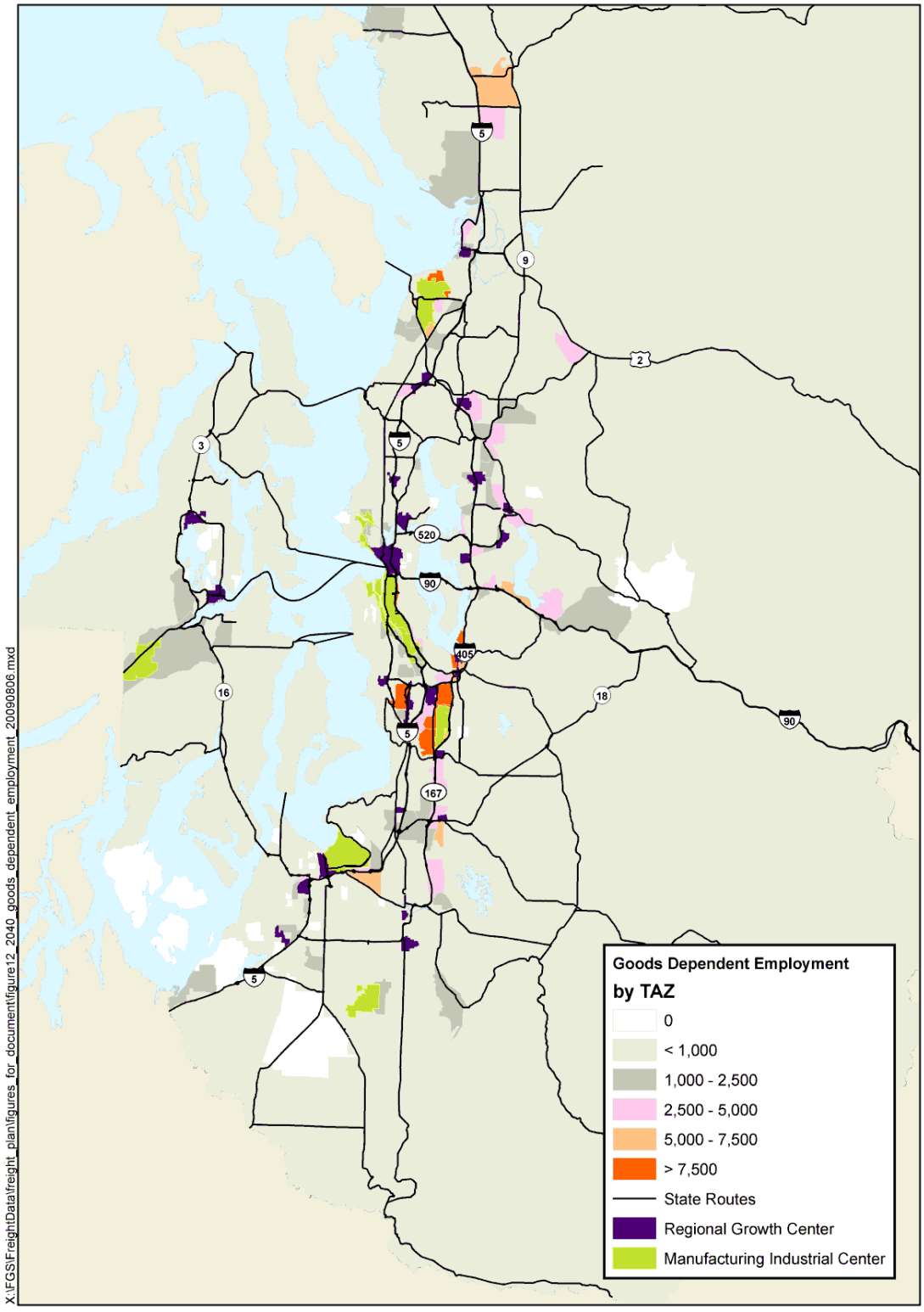
[22] U.S. Global Change Research Program (USGCRP) (2009), *Global Climate Change Impacts in the United States*, T. R. Karl, J. M. Melillo, and T. C. Peterson, (eds.), Cambridge University Press, New York.
[23] *Adapting to Rising Tides* Project. The San Francisco Bay Conservation and Development Commission (BCDC). Ongoing as of March, 2011.
[24] *Shoreline Areas Vulnerable to Sea Level Rise: 2040-2060.* MTC Map of the Month: June 2009. http://www.mtc.ca.gov/maps_and_data/GIS/maps/monthly/Sea_Level_Rise_8x11.pdf

Lessons Learned

Some of the features of the PSRC Manufacturing and Industrial Centers and Regional Growth Centers could offer lessons learned for the Alameda CTC, including:

- The PSRC recognized the importance of locating goods movement industries (MICs) near to the markets that they serve (Regional Growth Centers). This link is already fairly well understood in Alameda County- for example The *2008 Truck Parking Facility Feasibility and Location Study* found that most Bay Area trucking services are dominated by local trips that are 50 miles in length or less. However, recognizing clusters of suppliers and markets would make this link more explicit.
- The PSRC has made it a policy to protect and retain industrial land within urbanized areas. The MICs are the outgrowth of this policy that has been introduced in a series of Regional Transportation Plans and policies.
- The PSRC is taking a 30-year look at potential future land use conflicts. The MICs are intended to minimize future land use conflicts. They create clusters of industrial land development in certain locations where adequate buffers (such as parks, tree stands, or other natural features) can be instituted to shield some of the unwanted impacts of freight facilities (light and noise pollution, etc) from other land uses.

Figure 3 2040 PSRC Region's Manufacturing and Industrial Centers (MICs) with Goods Dependent Employment Concentration Overlay[25]



[25] PSRC- VISION 2040 Freight Strategy

Case Study #2: City of Chicago – Preserving Freight Land Uses

The City of Chicago is facing freight-related land use issues similar to Alameda County and has adopted strategies to link freight and land use. The resurgence of Chicago's residential housing market is putting increasing pressure on much of Chicago's industrial base, especially in close-in areas near downtown. Many prime industrial sites are being converted into expensive residential lofts and condominiums– leading to tension between uses and loss of the city's manufacturing/jobs base.

In response to this problem, the City conducted a study that identified 24 industrial corridors (Figure 4), a designation that commits the City to continue compatible land use and maintain infrastructure that facilitates industrial activity in those corridors. In 10 of these, Planned Manufacturing Districts (PMD) were identified. PMD is a special zoning designation for a defined geographic area that limits the types of development that may occur in the area to industrial activity and other compatible land uses. Industrial tax increment finance (TIF) districts have been established to support transportation improvements, financed by tax revenues from development.

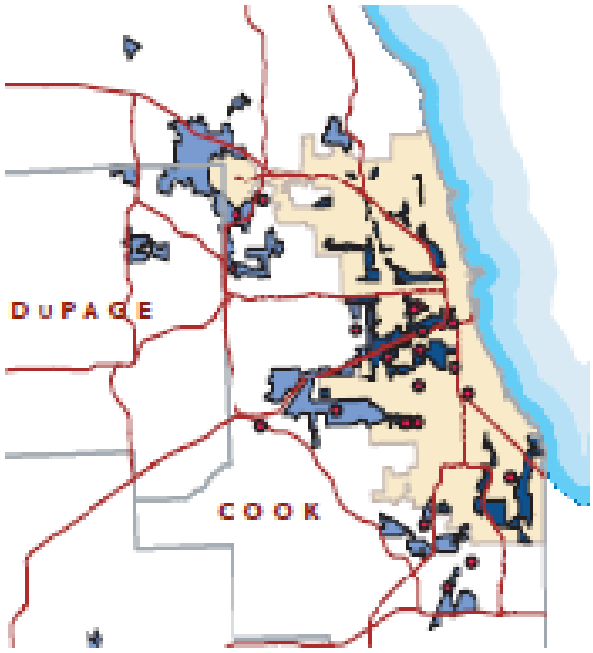
Creating industrial corridors with compatible land uses may help to retain industrial land uses in the urban regions of Alameda County, near the markets and businesses that they serve. It would also be a strategy to guide future mixed-use development in a manner that reduces the negative impacts of freight while maximizes the benefits.

Lessons Learned

Some of the features of the City of Chicago could offer lessons learned for the Alameda CTC, in particular in locations where there are competing land uses. Some lessons include:

- **The City of Chicago designated industrial corridors that recognized existing clusters of goods movement businesses and activities.**
- **The City tied development goals and standards to the industrial corridors. In fact, the designation commits the City to continue compatible land use and maintain infrastructure that facilitates industrial activity in those corridors.**
- **The City developed a new zoning designation limits the types of development that may occur in the area to industrial activity and other compatible land uses.**
- **The City is using innovative finance mechanisms (TIFs) to support transportation improvements in the corridors financed by taxes on new development.**

Figure 4 Existing and Proposed Freight Centers in Chicago and its Suburbs



Source: Chicago Metropolis 2020: The Metropolis 2020 Freight Plan: Delivering the Goods, 2004

CHALLENGES TO ACHIEVING THE IDEAL FREIGHT SYSTEM

A number of challenges must be overcome to improve the County's freight system. Some of these include:

- **Institutional relationships.** Many of the region's freight assets, including railroads and port facilities, are owned and operated by the private sector or quasi-public agencies, including the railroads and port authorities. Municipal governments exert authority over land use, which impacts regional freight demand. Coordination is required between the public and private sectors as well as across different levels of government, including state, regional, county, and municipal. Business representative organizations, such as the East Bay Economic Development Alliance (EDA), the Bay Area Council and the Silicon Valley Leadership Group (SVLG) are other important partners to include in any coordination efforts. Some collaborative efforts have been undertaken to identify key investment priorities and combine public and private funding sources; it is essential that these continue.
- **Limited funding for infrastructure investment.** Major capacity enhancements especially—whether highway, rail, or port—are costly. Freight projects compete against other projects in the County and region for limited transportation dollars and are often not given as a high a priority because of this.
- **Lack of public understanding of what freight is, and how it benefits communities and businesses.** Freight is a derived demand, and exists to carry goods and services to the communities and businesses that need them. Almost everything that people use on a daily basis is carried, at some point, by a truck, railroad, or cargo airplane. However, this link is not always understood by community members. This can lead to public opposition to, or lack of support for, the inclusion of freight in the public planning process.

- **Tradeoffs among different objectives.** Retaining industrial land in an urban region can be challenging. High land prices, competition for land, and perceived and real negative externalities from industrial land uses can often force industrial uses to be pushed to the periphery of urban regions. On the other hand, projects to expand port, highway, or railroad capacity may result in negative impacts on neighborhoods, for example, by leading to more truck or rail traffic, noise and light pollution or requiring land acquisition. The challenge is maintain the capacity for goods movement and distribution without causing harm to the communities that they serve.
- **Uncertainty regarding future needs.** The recent recession has led to declines in container traffic and the Oakland Airport has lost traffic to other airports in the region. While goods and passenger movement are expected to increase again as the economy recovers, this does illustrate the difficulty in accurately predicting future demand and therefore investment needs.

STRATEGIC INVESTMENT OPPORTUNITIES

Strategies and recommendations included in this section include best practices from other regions that could be implemented in Alameda County and elements of existing plans developed by regional and local agencies including the Metropolitan Transportation Commission, Alameda CTC, and the Port of Oakland. The plans include infrastructure investments and policies that can be implemented by Alameda CTC through the Countywide Transportation Plan or in future plans. Some potential opportunities include:

Infrastructure Investments

- **Continue to look for opportunities to implement the Trade Corridors Improvement Fund (TCIF) Program.** The TCIF program identifies near-term projects to address critical freight needs throughout the state, including in the Bay Area[26]. In developing the TCIF program, MTC partnered with other regional planning agencies in the Central Valley and identified two high priority interregional goods movement corridors: 1) I-80, known as the Central Corridor; and 2) I-880/238/580, known as the Altamont Corridor. These two corridors carry the highest volume of goods in the Bay Area, and serve major goods movement and industrial interests in the region. Investment in these corridors together ensures the future viability and growth of the Port of Oakland as a trade gateway for both imports and exports, and also strengthens the economic interconnections of the Sacramento and San Joaquin Valley regions with the Bay Area. MTC and its partner agencies, including Alameda CTC, have focused efforts on developing a comprehensive program of rail and highway projects along these two trade corridors. Figure 5 identifies projects within Alameda County nominated for funding through the Northern California Trade Corridors Coalition application for TCIF funding. The total costs of these projects would be $690 million, with $451 million to be provided through the TCIF program.

[26] Voters approved the Highway, Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 in November, 2006. Known to most as "Proposition 1B", this program provided for $2 billion to be transferred to the Trade Corridors Improvement Fund (TCIF) for infrastructure improvements along corridors that have a high volume of freight movement. Funds need to be appropriated by the Legislature for allocation by the California Transportation Commission.

Figure 5 TCIF Improvements in Alameda County

Freight System Issue	TCIF Project Solution
Limited capacity at the Port of Oakland	Complete the Outer Harbor Intermodal Terminal (OHIT) extension project
Intermodal connections to the Port of Oakland	Implement the Martinez Subdivision Rail Improvements
I-880 and I-580 Capacity, safety, and bottleneck issues	I-880 Reconstruction, 29th & 23rd Avenues, Oakland I-580 Eastbound Truck Climbing Lane
Safety and congestion issues at rail at-grade crossings	Complete the 7th Street Grade Separation Project

- **Continue to look for opportunities to implement projects identified through other recent efforts,** including the 2008 *Truck Parking Feasibility Study,* the 2008 *Countywide Transportation Plan,* and other County and regional efforts. Numerous efforts have been completed in recent years by the Alameda CTC, the Metropolitan Transportation Commission (MTC) the Port of Oakland, and other regional partners. These efforts include numerous recommendations to increase the safety, capacity and efficiency of the County's multimodal freight system. They also provided the foundation for this white paper. Specific sources containing projects and recommendations include (but are not limited to):
    - *Truck Parking Facility Feasibility and Location Study*, Alameda County Congestion Management Agency (2008)
    - *Countywide Transportation Plan 2008*, Alameda County Congestion Management Agency (2008)
    - *Goods Movement/Land Use Project for the San Francisco Bay Area*, MTC (2008)
    - *Regional Goods Movement Study for the San Francisco Bay Area*, MTC (2004)
    - *Port of Oakland Strategic Plan*, FY 2011–2015 (2010)

- **Support the implementation of operational and capacity enhancements at the Port of Oakland.** Efficiency upgrades to the Port will allow for operational improvements throughout the region, as well as increased benefits including jobs and tax revenue. Several improvements to expand port capacity have already been identified as part of the TCIF discussed above, including the Oakland Global Trade and Industry Center; the Martinez Subdivision; marine terminal facility improvements, and expansion of trade and logistics facilities on more than 100 acres of the former Oakland Army Base adjacent to marine terminals.
- **Recognize the capacity and operational needs of air cargo facilities, and air cargo's important role in the region's freight system**. In 2009, MTC began working with its planning partners on an update to the 2000 Regional Airport System Plan. The implementation of this plan will ensure that the air cargo system is able to efficiently meet this growing demand. Air cargo plays a critical role in regional and international goods movement; tonnage is expected to more than triple between 1998 and 2020 and international tonnage is expected to almost quintuple.[27] Alameda CTC can work with MTC to determine how to support the recommendations in this plan.
- **Address the issue of illegal truck parking throughout the County.** Alameda CTC, and its partners, should work to reduce the incidence of trucks parking in illegal locations throughout the County. One way to achieve this is to implement the recommendations from the 2008 *Truck Parking Facility Feasibility and Location Study*, which identified infrastructure improvements and

[27] Regional Goods Movement Study for the San Francisco Bay Area, MTC (2004)

policy recommendations including potential truck parking sites for further study, and ways to accommodate truck parking in local land use development and redevelopment processes.

- **Define a local truck route system.** Currently, the County lacks a local truck route system. This introduces the potential of truck-related incidents on local streets, creates safety concerns when trucks traverse through residential areas, and exacerbates the County's problems with illegal truck parking. Several recent studies, including the 2008 *Truck Parking Facility Feasibility and Location Study* and the *MTC Goods Movement Study* recommended the development of coordinated city/county truck route plans. The Alameda CTC could work to identify such a system as part of this or subsequent countywide transportation plans. Truck route development would have to occur in coordination with Caltrans and the California State Highway Patrol, since there are issues of enforcement and patrolling associated with any restricted system. In addition, it would be useful to consult the best practices of truck route implementation and enforcement prior to any truck route planning. Lessons from other States suggest that there are many issues to consider, including effective truck signage, interagency coordination, outreach and education, and capital improvements[28]. In addition, the different types of truck routes would need to be considered. Some areas (for example around intermodal terminals) will see high volumes of heavy-duty trucks, and will require significantly more robust pavement than other types of truck routes.
- **Increase the capacity, efficiency and safety of the County's key truck and rail facilities, including I-880, I-80,I-580, I-238, and the UP and BNSF Class I rail lines.** These facilities are crucial to support local, regional, national, and international goods movement. With passenger and freight volumes both anticipated to grow significantly, existing issues with safety, bottlenecks, and congestion will grow unless mitigation measures are adopted. Some measures that can be taken include the implementation of the I-880 corridor strategy including capacity improvement, interchange upgrades, chokepoint removal, connectivity to parallel arterials and ITS technologies. Other operational options, such as the potential of restricted truck operation hours on major highways, could also be investigated for their potential congestion reduction benefits. Infrastructure projects including the recommendations from the 2008 *Truck Parking Facility Feasibility and Location Study* should continue to move towards implementation. The Alameda CTC can work to ensure that projects addressing these issues are incorporated into this or subsequent Countywide Transportation Plans. In addition, actions need to be taken to build more capacity or increase the operational capabilities of key goods movement corridors also serving passenger trains, in particular in the Capitol Corridor and Altamont Pass corridors, as well as the Port of Oakland 7th Street Grade Separation Project, Martinez subdivision project, and associated Outer Harbor intermodal Terminal (OHIT) development.

Policy and Institutional Recommendations

Policy and institutional recommendations to support local, regional, national and international goods movement, while supporting livable and sustainable communities, are summarized in the following bullets:

- **Alameda CTC, and the MTC region, could consider implementing a standing roundtable discussion to bring together public and private freight stakeholders on a frequent basis.** A good example of this is the Puget Sound Regional Freight Mobility Roundtable. The roundtable meets once a month and serves as a public-private forum to define freight mobility needs and recommendations in the region. The roundtable includes freight carriers of all modes; major regional shippers; the ports; and state, local, and Federal agencies, and groups that represent business interests in the Puget Sound region. Efforts like the roundtable have shown that the key to long-term success in freight system planning is continuous regional collaboration among local jurisdictions. It provides a forum to ensure that all parties work together to implement

[28] *New Haven Truck Route Study.* South Central Regional Council of Governments, June 2007. http://www.scrcog.org/toc_files/NHTruckStudy_Final.pdf

infrastructure improvements and policy recommendations. Though this type of coordination had occurred many times in the MTC region, it is usually tied to a single project (such as the 2004 Goods Movement Study) or other one-time effort (such as the TCIF program) rather than a sustained, ongoing effort.

- **Continue the collaborative approach to apply for strategic goods movement projects that benefit a number of public and private-sector stakeholders.** This approach was successful during past efforts to apply for State and Federal Funding sources, including TIGER grants and the TCIF program. This would work well in coordination with the recommendation for an ongoing regional freight roundtable or other standing effort to bring together public and private freight stakeholders
- **Create a policy for the preservation and integration of freight-intensive land uses in the urban core.** Many regional partners recognize that goods movement industries bring a wide variety of benefits to Alameda CTC and the entire MTC region. However, there is no coordinated effort to preserve industrial land uses within the urban core. One way to move towards such a strategy may be the opportunities provided by the Sustainable Communities Strategy (SCS) under SB 375- which requires Metropolitan Planning Organizations (MPOs) to designate land uses that will contribute to VMT reduction (generally through densification). If residential and commercial areas are targeted for densification, it may accommodate growth while reducing the pressure on industrial land to relocate or convert to other uses. In addition, the Alameda CTC should work with MTC to implement recommendations from MTC's *Goods Movement / Land Use Project for the San Francisco Bay Area,* including:
    - Work with municipalities to implement recommended land use policies, including preserving industrial lands in key locations and allowing transitions to other uses elsewhere as suitable.
    - Ensure that new warehousing/distribution sites in suburban areas include site layout and street design to reduce conflicts and provide greater efficiency.
    - Take proactive steps to minimize off-site impacts and improve the physical environment in industrial areas that border neighborhoods.

- **Move towards a "green" freight system.** The CTC can ensure the recommendations of existing studies related to greening the freight system are implemented. For example, the Alameda CTC can continue to implement some of the findings from the 2008 *Truck Parking Facility Feasibility and Location Study,* including the recommendation to provide trucks with a means to turn off their engines while waiting or parked so that emissions (from idling) are minimized[29].
    - The Alameda CTC can also continue to support the efforts of other regional partners. For example, the Port of Oakland's Maritime Air Quality Improvement Plan (MAQIP) adopted in 2008, which set a goal of reducing the health risk related to exposure to diesel particulate matter emissions associated with maritime operations by 85% from 2005 to 2020. The Port is also working to implement the 2010 Clean Trucks program, which replaces older, heavily-polluting trucks, is a promising approach and could be expanded in the future. Finally, the Port has begun to institute "cold ironing" on its berths- which essentially provides grid-based electric power to docked vessels, allowing them to turn off their engines while idling. In February 2011, the Port was approved for $5 million from the BAAQMD's Mobile Source Incentive Fund (MSIF) to aid the implementation of this project[30].
    - Other partner agencies include the Bay Area Air Quality Management District, which (among many other programs) works to provide incentive funding for projects that

[29] 2008 *Truck Parking Facility Feasibility and Location Study: Final Report*, ACCMA, December 2008.
[30] Professional Mariner. *Port of Oakland Wins $5 Million in Funding for Dockside Cold Ironing*. February 5, 2011. Retrieved from: http://www.professionalmariner.com.

improve air quality, reduce air quality health impacts, and protect the global climate[31]. One sample project in Alameda County is the Air Districts' work to promote and incentivize commuter alternatives to solo driving.

[31] http://www.baaqmd.gov/Divisions/Strategic-Incentives.aspx

ISSUE PAPER: INTEGRATION OF LAND USE AND TRANSPORTATION

INTRODUCTION

This transportation issue paper focuses on the need to encourage high density land use within areas of Alameda County that are well-served by existing and planned transit, as well as building a walkable and bikable land use pattern that can have the potential to be more effectively served by other transit improvements that may occur in the future. The paper explores some of the key factors that should be taken into consideration as Alameda County addresses the challenges of integrating land use and transportation planning in this update of the Countywide Transportation Plan. Key recommendations of the paper are:

- Identify ways to support the development of existing and new Priority Development Areas (PDAs) and Growth Opportunity Areas (GOAs), and begin now to identify resources to provide incentives for jurisdictions willing to accept higher levels of growth;
- Identify and develop walkable and bikable places beyond the identified PDAs and GOAs to reduce the Vehicle Miles Traveled (VMT) for existing and future residents and workers;
- Fund programs to improve the performance of walkable and bikable places both within and outside PDAs and GOAs, and develop strategies to fill in the funding gaps not covered by other existing and future regional, state or federal funding programs;
- Identify strategies to incentivize the preservation of open space and support local agriculture on remaining farmland within the county in support of broader preservation and economic goals, and to support focusing of future development into infill areas.
- Address CEQA challenges caused by the proximity of many potential infill sites to generators of particulate pollution such as freeways and major arterials, as well as the conflict between local congestion impacts of infill development with the regional benefits of reduced driving; an element of this will include harmonizing regional air quality policies with land use policies with Alameda County.
- Identify impacts of sea level rise and resulting rise in tide levels on location of planned PDAs and other dense urban areas.
- Develop programs, such as an Alameda County Great Avenues and Boulevards Program, to support further change to major roadway corridors in the county that remove barriers to walking and bicycling in PDAs, GOAs, and other potential walkable and bikable places.
- Work towards refining Development Impact Fees and creating Community Benefit Districts to support implementation of utility and transportation infrastructure for PDAs, GOAs, and walkable and bikable places in Alameda County.

The goal of integrating land use and transportation is a key focus of this update of the Alameda Countywide Transportation Plan and development of the new Transportation Expenditure Plan (CWTP-TEP). It is also a major topic of the parallel process to update the Regional Transportation Plan (RTP). Projects, programs and studies identified in these Plans that support this goal will be a primary focus of transportation and other infrastructure investments in Alameda County. There are many reasons to encourage high density land use

within areas that are well served by existing and planned transit, and in those areas that are or can be bikable and walkable. Creating walkable and bikable places that can also support transit investment makes the most of limited financial, land, and other resources. It also provides for better utilization of infrastructure investments; preserves open space, farmland and critical environmental areas; provides greater opportunities to create livable, healthy communities; and, last but not least, it helps to meet the region's goals for reducing greenhouse gas emissions per SB 375 requirements and other goals such as reducing traffic congestion.

In order to meet Alameda County's and the San Francisco Bay Area's goals of reducing traffic congestion, improving air quality, and reducing greenhouse gas emissions, Alameda County will need to shift travel behavior from a reliance on driving alone to increasing use of other travel modes, such as bus, train, biking and walking. One way that Alameda County and the region are working to meet this goal is to encourage land use development around transit hubs and to encourage bikable and walkable communities through the CWTP-TEP and the update of the RTP. These Plans are vehicles for planning and directing investments towards transportation system improvements that support increased land use density around transit hubs and walkable and bikable communities throughout Alameda County.

In addition, the regional planning agency, ABAG, is partnering with the regional transportation agency, MTC, and other regional agencies to plan and implement the "FOCUS" strategy; an important part of their implementation strategy is the Sustainable Communities Strategy (SCS) that is being planned as part of the RTP update (see box on following page). The FOCUS strategy includes ABAG designated areas, called Priority Development Areas (PDAs), which concentrate development and transportation investments to accommodate future population growth in the Bay Area. MTC is anticipated to continue to focus funding in the PDAs throughout the Bay Area, including the 35 currently identified in Alameda County. In addition to the existing PDAs, Alameda County Transportation Commission (Alameda CTC) is committed to supporting development of new PDAs and encouraging using alternative travel modes in Growth Opportunity Areas (GOAs) and other potential walkable and bikable places. Growth Opportunity Areas (GOA) have identified by local jurisdictions during the development of the Initial Vision Scenario by ABAG. These areas may be in the process of becoming PDAs, or have different criteria to pursue sustainability focused on employment or rural characteristics[1]

LAND USE CONTEXT

Given the range of existing land use patterns in Alameda County, some of which are challenging to serve effectively with transit due to their lower intensity and more dispersed rural and suburban patterns, integrated land use and transportation planning needs to focus not just on access to high-quality transit but also on walking and biking. Furthermore, with the need to preserve open space and support the remaining farms and wineries as viable parts of the county's economy, it also is imperative that suburban and rural communities be transformed with a more compact walkable and bikable land use pattern that minimizes the need for further expansion Planning and implementing development that supports increased transit, walking and bicycling, as well as strategies that reduce the number and length of auto trips are key ways to reduce greenhouse gases and vehicle miles traveled (VMT) and create communities with a range of travel choices.

[1] *ABAG, MTC. Bay Area Plan: Initial Vision Scenario for Public Discussion. March 11, 2011. Page 89*

The effort to identify Priority Development Areas (PDAs) under the regional FOCUS program (see box) is an important component in integrating land use and transportation planning efforts by the regional agencies. Similarly, the Sustainable Communities Strategy (SCS), as part of ABAG and MTC's 2013 RTP, being developed in cooperation with local jurisdictions, would also influence how future land use patterns could support more healthy and economically viable communities by reducing greenhouse gases (GHG) and preserving existing open spaces and natural habitats. The issue paper discusses what it means for the jurisdictions in Alameda County to focus future growth in infill areas such as PDAs and GOA and how the Alameda CTC can support the focused growth; the issues that challenge implementation of these land use patterns (e.g. existing policies, standards, and jurisdiction practices; development issues such as property acquisition and infrastructure costs; issues of community support that can impact entitlement; etc.); and what the Alameda CTC can do to encourage implementation of these land use patterns through the CWTP-TEP. It is also important to recognize that high density developments at transit hubs require not only transportation investments, but also utility infrastructure, public open space, and land use investments. These interconnected funding needs presents policy challenges of spending transportation dollars on land use, both for Alameda CTC and for MTC.

Priority Development Areas in the context of Alameda County and The Countywide Transportation Plan

MTC and ABAG are working together as part of the regional "FOCUS" effort to link transportation and land use. ABAG, as the regional land use agency, has reviewed and designated 35 PDAs in Alameda County as of March 2011 as areas to focus future growth. PDAs fall into two categories – planned and potential. Planned PDAs[2] have

FOCUS and the Sustainable Communities Strategy

FOCUS is a regional development and conservation strategy that promotes a more compact land use pattern for the Bay Area. It unites the efforts of four regional agencies (ABAG, MTC, BAAQMD & BCDC) into a single program that links land use and transportation by encouraging the development of complete, livable communities in areas served by transit, and promotes conservation of the region's most significant resource lands[1]. It is a voluntary, incentive-based program, which allows local governments to identify infill sites near transit as Priority Development Areas (PDA), which are them eligible to receive targeted incentives from all four regional agencies for existing and future projects. The PDAs are the primary future urban infill areas in Bay Area communities. Local governments' have estimated that PDAs could accommodate up to 56 percent of the projected population growth by 2035 according to the last Regional Transportation Plan.[1] The effort has resulted in the identification of 120 PDAs by different local agencies in the San Francisco Bay Area, of which 35 are in Alameda County.

The Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP) is mandated by Senate Bill (SB) 375 as a means to achieve desired reductions in VMT to in turn reduce GHG emissions. Once those plans and strategies are in place, SB 375 may also influence streamlining CEQA requirements for certain projects that implement the region's Sustainable Communities Strategy. MTC has begun working towards developing a SCS for the Bay Area that will be part of their current RTP 2013 update. The identified FOCUS PDAs are a crucial part in developing the SCS as communities look to reduce VMT by increasing access to transit through intensification of uses and housing density within PDAs. The recently prepared Initial Vision Scenario (IVS) is a land use scenario for the San Francisco Bay Area that identifies locations where future population growth can be accommodated. The scenario indicates that the identified PDAs, with the addition of some further infill and growth opportunity areas (GOAs) that were identified by local jurisdictions in consultation with ABAG and MTC, has the potential to accommodate as much as 70% of the regions' growth by 2035, based on the IVS growth allocation, in 3% of the region's land area.

an approved community plan and are eligible to compete for capital infrastructure funds and technical assistance. Potential PDAs have not yet completed a community plan and are eligible to compete for funding to complete such plans. The 35 Alameda County PDAs are well positioned to compete for funding from the region given the relatively rich level of transit service in these areas.

MTC supports PDAs through the Transportation for Livable Communities (TLC) grant program, Station Area Planning Program and Technical Assistance Program. Together, these grant programs fund plans to develop PDAs, studies to overcome technical challenges at PDAs, and the design and construction of capital improvements. Funded projects in PDAs bring new vibrancy to downtown areas, commercial cores, neighborhoods, and transit corridors, enhancing their amenities and ambiance and making them places where people want to live, work and visit; and therefore help to attract private investment to PDAs.

Grants through MTC's Transportation for Livable Communities (TLC) program, which now will be only granted to projects within PDAs,[3] could fund streetscape projects, as well as non-transportation infrastructure improvements such as sewer upgrades. They may also fund transportation demand management projects, such as carshare and parking management strategies; and density incentives such as direct TOD funding for land banking or site assembly.[4] This continuing focus on funding improvements within PDAs is a key regional strategy. In addition, there are still gains that can be made in reducing VMT and greenhouse gas emissions outside of PDAs in Growth Opportunity Areas and other walkable and bikable places; this is a potential funding opportunity for Alameda CTC.

The regional assistance and funding resources, and Alameda CTC's Transit Oriented Development Technical Assistance Program (TOD TAP), have been extensively utilized in past transit related or transit supportive projects independently, and have included $43 million of TLC funding for transportation capital projects in Alameda County in the past decade.[5] Through their programs, MTC is focusing on providing larger land use planning grants than they funded when the program was initiated in 2005 for transit supportive projects. Furthermore, with the development of the SCS underway, there may be further integration and streamlining of the available regional funding resources, which could result in a more focused funding priority based upon the effectiveness of projects in reducing green house gases.

The prioritization for funding and supporting PDAs by MTC will be subject to an assessment of which PDAs provide the most benefits in achieving the SCS goals, as outlined below. The assessment framework of PDAs under the SCS process provides a glimpse of the potential criteria by which MTC and ABAG may assess PDAs for funding in the future. The assessment process will evaluate PDAs on the basis of the following criteria[6]:

- Location - Transit access, type and frequency, as well as proximity to existing jobs within 30 minutes by transit and auto
- Planned Growth – Change in total housing units, planned housing density, and the share of affordable units planned in the PDA as well as percent of RHNA allocation accommodated in the PDA
- Readiness for Implementation - Adoption of zoning code amendments, Specific Plans, General Plans, Programmatic EIR for primary PDA plan adopted. Ease of entitlements and number of approved and entitled units under pipeline projects
- Creation of Complete Communities – Variety of housing choices and costs compared to earnings of jobs within a 30 minute commute. Walkability and access to parks and schools.

Beyond funding and customized technical assistance[7] programs of the regional FOCUS partnership, PDAs included in the Sustainable Communities Strategy would benefit from a unified approach in establishing CEQA analysis methods and mitigation strategies for these areas that reduce regional air emissions. A

[3] http://www.mtc.ca.gov/planning/smart_growth/tlc/#2
[4] *ibid*
[5] http://www.mtc.ca.gov/planning/smart_growth/tlc/#1
[6] *Adams, Gillian; Kurella, Sailaja; Trivedi, Therese. "PDA Assessment Input into the Sustainable Communities Strategy Vision Scenario". OneBayArea Memorandum to ABAG Regional Planning Committee. November 23, 2010 available at* http://www.abag.org/abag/events/agendas/r120110a-Staff%20Report:%20%20PDA%20Assessment%20-%20SCS%20Vision%20Scenario.pdf
[7] http://www.bayareavision.org/initiatives/technicalassistance.html

streamlined CEQA approach in these areas could make them a more attractive investment opportunity for private real estate development meeting the demand for housing and employment close to transit stations. This could pave the way for a public-private investment in these areas. The county and local jurisdictions could find opportunities to leverage the PDA designations, and the resulting investment interest, to finance infrastructure capacity improvements that would help accommodate higher densities within the PDAs.

It is likely that funding from, or passed through, MTC will be directed to support the PDAs that are assessed as being most effective in meeting the SCS assessment criteria listed above. The Alameda CTC could develop its assistance programs through its transportation plan to help PDAs within the county to become more competitive in the regional evaluation. The Alameda CTC could also help fill funding "gaps" left by these regional and other funding programs to provide robust support for PDAs and other walkable and bikable places in the county.

CHARACTERISTICS OF WALKABLE AND BIKABLE PLACES

The PDAs and on-going SCS process are the result of a commitment to reduce global warming in California as well as to support local economies and protect the environment through a "Smart Growth" approach that focuses on access to transit, or Transit Oriented Development (see box).

PDAs and GOAs are places in the Bay Area that have the potential to become vibrant communities with travel choices. This requires a combination of infill development and revitalization as well as investment in transit service and access to transit stops and stations and in bicycling and pedestrian improvements. Transit-oriented developments (TOD), as well as most of the areas in PDAs, are typically located within a 1/2 mile walking distance to transit. But there is potential for the communities in Alameda County to see even greater VMT reduction by looking at opportunities in addition to PDAs—creating walkable and bikable places.

The actual distance a person will travel is affected by a number of variables, trip purpose, age and health of the person, the quality and convenience of the trip, etc. The extent of areas that can support non-vehicular travel expands even further when bicycling is factored into the discussion. In order to maximize the potential for non-vehicular travel the following characteristics have to be reflected in the land use development pattern:

Safe and Comfortable Street Environment: A network of Complete Streets providing a safe and equitable design for all modes of transportation is essential to encourage walking and biking along corridors, and within neighborhoods and centers. Pedestrian and bicycle supportive infrastructure, such as wide sidewalks; improved crossings; adequate space within the street for bicycles, including well marked bicycle lanes and paths; adequate lighting along pedestrian routes; bicycle parking facilities and benches along pedestrian paths; and traffic calming measures also help increase the safety for bicyclists and pedestrians. A safe and comfortable infrastructure encourages more walking and biking.

A Connected Street Network Providing Multiple and Convenient Routes: A well connected circulation network is essential for pedestrian and bicyclists, and also can make a safer transportation system for vehicles. It allows for variety of routes to destinations within and between centers and neighborhoods to help disperse traffic, and allows for more direct routes between destinations as pedestrians and bicyclists are more sensitive to distance as their maximum speed is relatively low. A well connected network can also provide choices in terms of the quality of environment, for example a bicycle commuter may chose a street with higher traffic volumes if it is more direct and there are fewer unsignalized streets to cross, while lower traffic levels are more important for a child riding a bicycle to school.

Places to Conveniently Walk or Bike To: A multitude of destinations and amenities within a convenient distance. Convenient distances between destinations are enhanced by compact land use patterns and, as previously mentioned, connected street network. Some examples of convenient distances are:

- 10 minutes to a transit stop—1/2 mile walk or a 2 mile bike ride;
- 15 minutes to employment or a transit stop for a commute trip—3/4 mile walk[8] or a 3 mile bike ride;
- 10 to 15 minutes to everyday amenities such as grocery stores, neighborhood retail, parks, libraries and schools—1/2 to 3/4 mile walk or a 2 to 3 mile bike ride.

Residential density, employment intensity, and urban design quality are all ingredients that can increase the distance that one is willing to walk and they are key ingredients for walkable and bikable centers and neighborhoods.[9] [10] Higher densities and mix of uses within a walkable area increase the activity level along public streets, creating a place bustling and exciting to spend time in, and providing customers to businesses.[11] Additionally, this also increases the efficiency of bus and other modes of transit by increasing the number of potential riders within walking distance of stops.

Community Building Concepts of Smart Growth and TOD

Smart Growth envisages a more efficient way to build and maintain towns and cities. It strives to building urban, suburban and rural communities with housing and transportation choices near jobs, shops and schools, creating healthy communities with strong local businesses. This approach supports local economies and protects the environment. Smart Growth strives to achieve efficiencies in building and maintaining towns and cities by:

- Encouraging compact building design;
- Creating a range of housing choices;
- Developing walkable mixed land use neighborhoods with a variety of transportation choices;
- Fostering distinctive, attractive communities with a strong sense of place;
- Making development decisions predictable, fair and cost effective;
- Preserving open space, farmland, and critical environmental areas; and,
- Strengthening and directing development towards existing communities.[1]

As part of Smart Growth strategies to provide compact development with transportation choices, Transit-Oriented Development (TOD) is a specific strategy that strives to create compact mixed use communities within a convenient walking distance (~ one half mile) of transit stations. The Center for Transit-Oriented Development (CTOD) utilizes a performance-based definition, wherein they believe that projects should also:

- Increase "location efficiency" so people can walk and bike and take transit
- Boost transit ridership and minimize traffic
- Provide a rich mix of housing, shopping and transportation choices
- Generate revenue for the public and private sectors and provide value for both new and existing residents
- Create a sense of place

Furthermore, TOD is really about creating attractive, walkable, sustainable communities that allow residents to have housing and transportation choices and to live convenient, affordable, pleasant lives -- with places for kids to play and for parents to grow old comfortably.[1]

[8] *Transit Use at Transit-Oriented Developments in Portland, Oregon, Jennifer Dill; Transportation Research Record: Journal of the Transportation Research Board, No. 2063, Transportation Research Board of the National Academies, Washington, D.C., 2008, pp. 159–167.*
[9] *Transportation Authority of Marin; Marin TPLUS Pedestrian and Transit-Oriented Designed Toolkit. September 2007. County of Marin, California. Page 41.*
[10] *Bursting the Bubble: Determining the Transit-Oriented Development's Walkable Limits, Transportation Research Record: Journal of the Transportation Research Board, No. 1992, Transportation Research Board of the National Academies, Washington, D.C., 2007, pp. 28–34.*
[11] *ibid*

The PDAs, and other growth areas that have been identified in the Initial Vision Scenario of the Bay Area SCS process, are just a portion of development in Alameda County. Even if the majority of future development can be directed to these Smart Growth/TOD places, large areas of existing development outside of the PDAs have the potential to evolve in ways that can also support reduced VMT. Jurisdictions can identify community centers, neighborhoods, districts and corridors outside the PDAs that reflect some of the characteristics listed above. Primarily, they can identify inter-connected circulation networks of older street car neighborhoods, or areas with either a multitude of destinations within walking distance or higher intensities/densities and mix of uses that do not fall within transit corridors or a transit station walkshed[12]. The LEED® ND rating system that integrates the principles of smart growth, urbanism, and green building design provides a comprehensive set of evaluation parameters that could also be utilized as a tool to identify areas with potential to support reduced VMT.

Lessons for Alameda County: Setting priorities of investment in non-PDA, or growth opportunity, areas should focus on the best opportunities in reducing VMT, as well as other factors, such as open space preservation, economic vitality, public health, and other sustainability factors. As mentioned above, the LEED® ND rating system provides evaluation parameters that could be used to help identify appropriate non-PDA opportunities through the communities in Alameda County. Developing well connected compact, sustainable developments that maximizes already existing infrastructure would initially encourage more walking and biking trips, while setting up the area as 'TOD-ready'[13] for future transit expansion projects. These could include investments in centers, neighborhoods or districts that have existing interconnected circulation frameworks or existing circulations systems that could be enhanced to be more interconnected, and provide improved access to a mix of convenient destinations. Investments could focus on improving the quality and safety of the pedestrian and bicycling environment, enhancing the connectivity of the transportation network; providing new commercial, service, and civic destinations; and infill to incrementally increase household and employment density.

LAND USE OBJECTIVES

The Alameda Countywide Transportation Plan and Transportation Expenditure Plan Vision and Goals provide the starting point for a set of more specific objectives regarding the implementation of land use that will reduce VMT and support the transportation goals of the CWTP and TEP. It is the combination of the "premier transportation system" identified in the Alameda CTC Vision Statement with appropriate land uses that will create "a vibrant and livable Alameda County." Appropriate land uses can particularly help in achieving the vision for sustainability, transit operations, public health, and economic opportunity as identified in the Vision Statement.

The land use patterns within Alameda County can support the goals of the Alameda Countywide Transportation Plan. The matrix on the following page outlines some possible land use objectives for the CWTP, and relates each to the goals that have been established for the CWTP.

The Alameda Countywide Transportation Plan and Transportation Expenditure Plan (CWTP-TEP) can be most effective in influencing the creation of land use patterns and a general built environment that achieves the land use objectives described below by complementing and supporting the policies and programs that exist and that are being proposed by regional agencies and the local jurisdictions within the county, and by identifying and filling policy and program gaps. In addition, the Alameda CTC can advocate for new and refined policies and programs, at the local, regional, and state levels, that support the goals and objectives of the CWTP and TEP.

A range of potential strategies are discussed at the conclusion of this issues paper that would support enhancement to the walkable and bikable places in Alameda County, including PDAs and SCS GOAs. Each of these strategies is evaluated for whether it helps achieve these objectives.

[12] *Walkshed: the area that can be conveniently reached on foot from a geographic point.*
[13] *Transportation Authority of Marin; Marin TPLUS Pedestrian and Transit-Oriented Designed Toolkit. September 2007. County of Marin, California. Page 41*

Table 1: Relationship between Countywide Transportation Plan Goals and Land Use Objectives

Objectives and Goals that are related to each other are highlighted in the adjacent matrix

LAND USE OBJECTIVES	CWTP GOALS: Increase Multimodal Travel	Accessible, Affordable, and Equitable Housing	Transit Investment Integrated with Land Use Patterns and local decision-making	Connected Street Network	Reliable and Efficient Regional Transportation Systems	Creating a Safe Pedestrian Environment	Supportive of a Clean and Healthy Environment
Encourage a land use pattern that provides a variety of destinations within walking and bicycling distance	■						■
Encourage a built environment that provides an interesting and vibrant street environment that provides interest and comfort for pedestrians and bicyclists as well as providing "eyes on the street" for improved safety.[14]	■					■	■
Encourage a pattern of major employment centers and employment in general with convenient transit access and nearby mixed use and residential areas		■	■				
Support walkable residential neighborhoods in proximity to schools.		■	■				■
Support the creation and maintenance of housing, affordable to a range of households, with PDAs and other TOD opportunities		■	■				
Encourage preservation of valuable agricultural lands in the county to provide produce and other agricultural products within proximity of urban development					■		■
Encourage the creation of a connected street network providing multiple and convenient routes for all modes within and between neighborhoods and centers, and the regional transportation system				■	■		■

[14] *"Eyes on the street" is the idea that an active street and a street where people in adjacent buildings are able and willing to watch activity on the street, will be a safer street. The concept was posited by Jane Jacobs in The Life and Death of Great American Cities. For more on this concept, see - http://streetswiki.wikispaces.com/Eyes+On+The+Street*

CASE STUDIES

The following case studies provide examples of land use planning and policy efforts from around the country that have been implemented to achieve Smart Growth goals and objectives. These can provide some ideas that the Alameda CTC could utilize in its identification of strategies

Grand Boulevard Initiative – Corridor-wide Caltrans exceptions for improvements to El Camino Real

Grand Boulevard Initiative (GBI) is a regional collaboration of 19 cities, counties and regional agencies and other public and private parties united in revitalizing and improving the El Camino Real Corridor running from Daly City (where it is named Mission Street) and ending near the Diridon Caltrain Station in central San Jose (where it is named The Alameda). Currently the street environment is not friendly or safe to transit users, pedestrians and bicyclists and the development that lines the corridor is outdated strip commercial development. The initiative's goal is to improve the performance, safety and aesthetics of the Boulevard by rethinking the corridor's potential for housing and development, while balancing the needs of autos with transit, biking and walking. It is a shared vision that links transportation and land use through regional level planning.

Several smart growth principles of the initiative could be useful for potential future ordinances for the Alameda CTC. The first guiding principle is the GBI aims to target housing and job growth in strategic areas along the corridor particularly along transit and to support TOD development around station areas. This growth would be in accordance of city goals and would seek to encourage a greater range of housing affordability and business opportunities. The targeted growth is also planned to be compact mixed-use development and contain high quality architecture and urban design. [15]

There are also strategic principles with regard to the street environment, transportation planning and parking policy. The corridor is envisioned to have pedestrian-oriented environments with a balanced multimodal corridor design. It seeks to strengthen pedestrian and bicycle connectivity along the corridor and to manage parking assets as needed. Street design would also include guidelines for improving transit stops and to implement transit-preferential street treatments such as signal priority and HOV/Bus-only lanes. GBI's is also focused on creating standards that encourage context sensitive design practices when developing projects within the corridor. Currently, the GBI's land use and design review committee is implementing context sensitive design practice and guidelines that it will be the basis for granting of "design exceptions"[16] by Caltrans. [17]

The GBI planning and public participation process and the concept of negotiating a menu of design exceptions that can be applied to multiple improvement projects has great potential for Alameda County, see discussion in Strategic Investment Opportunities Section.

Recommendation for Alameda County: Alameda County includes a number of major urban roadways that are state highways and other major arterials that have been designed to meet or exceed Caltrans' standards, which have the potential for improved transit service and a more pedestrian-friendly environment that could better support infill development. A context-sensitive solutions approach for planning, design, and public participation, similar to the GBI process and the concept of negotiating a menu of design exceptions that can be applied to multiple urban roadways improvement projects could be of great value to Alameda County communities. See discussion in Strategic Investment Opportunities Section.

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[15] *"About Us: Grand Boulevard Initiative." Grand Boulevard Initiative. Web. March 2011. < http://www.grandboulevard.net/about-us/grand-boulevard-initiative.html>.*

[16] *Design Exception by Caltrans pertains to changing highway design standards (primarily lane widths) in context of the Urban setting of the highway, making them more amiable for pedestrian and bicyclists to cross.*

[17] *Belmont Redevelopment Agency. Status Report on "Transforming El Camino Real/Grand Boulevard" Project. Meeting of 1/8/2008.*

State Investment, Maine

There are other such programs in which state and local agencies direct funding in ways that are more related to direct investment by the state or agency in development. In 1999, the Task Force on State Office Building Location, Other State Growth-related Capital Investment and Patterns of Development (referred to as the Task Force) was created in Maine's legislature. The basic duties of the Task Force, were to address sprawl and promote smart growth development. In addition to creating suggested proposals for private development, the Task Force also looked at the role and development of state office buildings. The Task Force required the Bureau of General Services, the state agency that provides oversight to public improvements and construction, to develop site selection criteria to give preference to locate state facilities in downtowns, and or designated growth areas in communities. [18] The task force also recommended the creation of a Downtown Leasehold Improvement Fund that would provide the necessary capital improvements, such as bicycle and/or pedestrian improvements. The initial funding to establish this program was an $800,000 one-time appropriation.

Recommendation for Alameda County: Similarly, Alameda County jurisdictions should support the Smart Growth goals of PDAs by giving preference to building facilities within PDAs, directly focusing the development of government buildings or other commercial developments that maybe financed by local jurisdictions, within these areas. In other words, "practicing what they are preaching". If land use policies support private investment in new businesses, commercial and residential development within PDAs, then governments should focus appropriate facilities investments in PDAs and other locations that support access by transit, walking, and bicycling.

Priority Funding Areas, Maryland

In 1997, the Maryland Department of Planning passed the "Smart Growth and Neighborhood Conservation Acts" which established Priority Funding Areas (PFAs) legislation. The intent of this smart growth legislation was to direct future development into established communities that were supported by existing or planned public services and infrastructure. It also aimed to protect and preserve Maryland's natural resources by reducing development pressure on the areas with the most valued natural resources. Types of growth related funding that was affected by the legislation included State funding for roads, water and sewer plants, economic development and other growth related needs.

There are certain criteria and guidelines that local governments use to determine PFAs. These criteria include previous designation as neighborhood revitalization areas, enterprise zones or existing industrial land. Local governments may also designate a PFA if they meet certain water and sewer infrastructure capacities and zoning. There are also certain levels of residential densities and capacities that must be met for an area to be eligible for PFA designation. The goals of PFAs were more generally focused on compact growth and containing urban sprawl with less focus on transit access compared to the Bay Region's PDA program. Communities that existed prior to 1997 and are served by existing utilities must have average residential densities greater than or equal to 2 units per acres. Areas outside the existing communities, and either have and/or planned utility service, must have average build-out densities greater than or equal to 3.5 units per acre. [19] Areas must also be located inside the Washington Beltway and the Baltimore Beltway, the interstate highway that extends around Baltimore, Maryland and Washington, DC.

[18] *Office of Policy & Legal Analysis, State of Maine. Final Report of the Task Force on State Office Building Location, Other State Growth-related Capital Investment and Patterns of Development. January 2000*

[19] *Maryland Department of Planning. Priority Funding Areas, How to Revise and Update. August 2009.*

Maryland's PFAs have been in existence for more than a decade and despite widespread acclaim, little is actually known about whether PFAs are effective at containing urban growth and have produced their intended effects. In fact, the National Center for Smart Growth Research and Education found that in a review of Maryland's smart growth performance measures such as multifamily housing construction, housing affordability, per capita VMT, and compact development, Maryland has not measurably gained ground over the last decade when compared with the rest of the nation. [20] Researchers from the University of Maryland found similar results in a 2009 article on managing growth in Maryland with PFAs for the Journal of American Planning. Researchers concluded that the PFAs did not produce the results that they were intended for. Some conclusions resulting from this analysis include a modification in the criteria for determining PFAs. The Research suggested that while using criteria such as existing densities, municipal boundaries, and transportation and infrastructure capacities is useful, it creates boundaries that vary across the state and not well suited to manage urban growth. The research also recommended that Maryland should develop and use long-range plans that strategically consider where future growth should occur. Researchers also found a lack of integration of the PFAs into local planning, and finally found that state agencies did not effectively implement their budgetary systems to monitor or guide the spatial allocation [21]of funds.[22] Other specific refinements that have been recommended include:

- Incorporating public participation in the definition of PFAs and how to implement them
- Integrating PFAs more effectively with local plans
- Recognize the limitation that the funds allocated to PFAs may be too small to make a significance difference in market demands for growth type and location.

These reviews do provide useful recommendation for smart growth programs, but it cannot prove that the Maryland PFAs program did not prevent sprawl from getting much worse. In fact real change in smart growth implementation does take time, and a study in 30 years might produce different results.

Recommendation for Alameda County: Several lessons can be taken from the definition of the PFA program and research regarding its implementation and results:

The PDA program is one of the several approaches that need to be taken in order to change the travel behavior of the County's residents. Adequate investments in PDAs alone will not get the County to its GHG reduction goals. The PDA program should be complemented with several other VMT reduction strategies such as:

- Incorporating the actual cost of parking into development costs;
- Creating walkable and bikable places outside PDAs; and,
- Preserving open space and farmland through more compact rural and suburban development.

In addition, the PDA program would benefit from a monitoring program that measures the success of implemented projects in terms changing travel behavior of people living or working within the PDAs over time, providing opportunities to learn and improve future PDA growth. Identifying pilot PDAs with a range of different conditions and investment strategies could be carefully monitored over a period of time, providing the Alameda CTC and MTC with detailed analysis of what approaches are more successful in different conditions.

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[20] Moore, Terry & Sartori, Jason. "Indicators of Smart Growth in Maryland." The National Center for Smart Growth Research and Education at the University of Maryland". January 2011.

[21] Prioritizing PFA funding by location efficiencies or other criteria

[22] Lewis, Rebecca , Knaap, Gerrit-Jan and Sohn, Jungyul (2009) 'Managing Growth With Priority Funding Areas: A Good Idea Whose Time Has Yet to Come', Journal of the American Planning Association, 75: 4, 457 — 47.

CHALLENGES

Impact of Changes to Redevelopment Agencies on Local Jurisdictions Economic Development Goals

Redevelopment agencies can be an important implementation tool for encouraging and supporting infill development and revitalization of places that are already developed but that are underutilized.

The recent development of the State's Governor's recommendation of abolishing all of the state's redevelopment agencies as part of the strategy to balance the state's budget is expected to have significant impacts on economic development goals for communities throughout the state. Older cities, have regularly utilized redevelopment funds to finance community improvement projects that make existing neighborhoods attractive for private investments. Redevelopment projects are often a source of revitalizing local economies not only with construction jobs, but also attracting other businesses into communities, raising the tax base for the community. At least a portion of the funds must also be utilized to provide for affordable housing. The loss of redevelopment agencies will result in communities re-strategizing their approach to encourage infill and revitalization of existing neighborhoods. This possibly would impact the ability of communities to attract investments into PDAs or other infill sites, making it harder for cities to achieve the SCS goals. It may also encourage development in new growth areas where private development may find it easier to invest in new infrastructure without dealing with issues of capacity and other environmental issues related to infill and inner city areas.

Recommendation for Alameda County: Alameda CTC could work with the redevelopment agencies in the county to monitor the situation and decision making process in Sacramento that could eliminate or evolve the powers of redevelopment agencies. Opportunities to support tax increment financing through TOD Benefit Districts or other means may provide an opportunity to continue focusing economic energy on PDAs, GOAs, and other walkable and bikable opportunities in the county even if the powers and financial strength of redevelopment agencies are weakened.

Potential impacts of Rising Sea Levels and CEQA analysis of GHG, particulates, and broader air quality and transportation impact issues to infill and TOD opportunity sites

Rising Sea Levels

The Bay Area is already working to reduce greenhouse gas emissions, but mitigation alone will not be adequate to address impending sea level rise and other climate change impacts. The Bay Area must consider adaptation actions that will reduce the vulnerability of the built and natural environment to the effects of climate change. The bay is rising and this is projected to continue. In fact, today's flood is expected to be the future's high tide. Areas that currently flood every ten to twenty years during extreme weather and tides will begin to flood regularly. These areas are home to over 160,000 residents, critical infrastructure, diverse habitats, and valuable community resources around the region.[23]

The San Francisco Bay Conservation and Development Commission (BCDC) is collaborating with National Oceanic and Atmospheric Administration Coastal Services Center (NOAA CSC) to identify strategies for community-based adaptation planning to address these challenges and develop a process for implanting them.[24] The identification of infill sites and investment within PDAs in Alameda County communities will need to consider how the rising sea levels would impact development, and if intensification in some areas may not be feasible considering the severity of the impact of rising tides levels and potential flooding impacts.

[23] *Adapting to Rising Tides: Bay Area Communities Working Together.* http://risingtides.csc.noaa.gov/
[24] *ibid*

Air Quality and Particulate Emissions

In June 2010, The Bay Area Air Quality Management District (BAAQMD) approved new thresholds of significance for toxic air contaminants and fine particulate matter. These thresholds set very strict, low limits for acceptable exposure to toxic air contaminants (TAC) and fine particulate matter ($PM_{2.5}$) from including both fixed sources (diesel generators, dry cleaners, etc.) and mobile sources (freeways, rail lines, major roads, etc.) –for residents and other users of a new development. For example, a project within 1,000 feet of a freeway would not meet the air quality thresholds due to proximity to air emission from traffic that exceeds 20,000 average daily vehicle trips (ADT). These new thresholds make the development of many PDA locations in Alameda County more challenging [25] due to many transit systems and stations being along or within freeways or surface streets that reach the threshold levels of 20,000 ADT. Challenges can include – triggering the need for full EIRs which increase time, uncertainty, and cost; and the unknown issues that can arise through definition of mitigation measures which can also affect cost and project feasibility. Since the adoption of these new guidelines, significant concerns have been raised by stakeholders regarding the potential impact of these new guidelines on the development of infill and affordable housing, and potential conflict with the regional and statewide efforts to encourage more compact development in already urbanized areas.

The Alameda CTC could work towards developing strategies or approaches that could help resolve these issues by -

- Recommending strategies that incentivize better building technologies, site configurations, and other design and management solutions to minimizing exposure of sensitive populations (i.e.; children, seniors, asthmatic individuals, etc.) to air contaminants within PDAs,
- Advocating for alternatives to the approved thresholds, such as PDA sites be evaluated individually for air quality by the BAAQMD and taking into consideration regional air quality costs and benefits of development within PDAs. Based upon the result, evaluate PDAs for intensity and type of development, and
- Reviewing BAAQMD's on-going efforts to define CEQA analysis methods and environmental mitigation tools to maximize their utility for PDAs and other non-PDA walkable and bike-able projects, in order to support implementation in Alameda County.

STRATEGIC INVESTMENT OPPORTUNITIES

This section includes a number of specific recommendations as to how the Alameda CTC can encourage better integration between land use and transportation.

Create an Alameda County Great Avenues and Boulevards Program

Alameda County includes a number of major urban roadways that are state highways, which have the potential for improved transit service and infill development. Several of these have been identified through the FOCUS and SCS processes as PDAs and Growth Opportunity Areas—the San Pablo Avenue (SR 123) Corridor and the Telegraph Avenue-International Boulevard-Mission Boulevard Corridor (which is partially SRs 77, 185, and 238). Other urban roadways that are state routes and that in many cases create barriers to walkable and bikable communities in Alameda County, include: Ashby Avenue (SR 13), SR 84 in Fremont, and Mission Boulevard in Fremont (SR 262). The creation of a Great Avenues and Boulevard program on these roadways throughout the county could result in communities that promote travel choices. These same design standards and design approaches would be applicable to other high speed and high volume urban arterials that are not state highways.

[25] *"CEQA Thresholds of Significance and Community Risk Reduction Plans." Center for Creative Land Recycling, September 2010*

Develop investment mechanisms to improve pedestrian and bicycling infrastructure

Cities in Alameda County have the benefit of several old streetcar neighborhoods that lend themselves to be walkable and bikable places, and identified PDAs and GOAs only include a portion of these neighborhoods. With PDA's being the focus of regional agencies investment strategies, there is a need for a program that would help finance improvements within these older neighborhoods and other non-PDA areas which would help encourage residents to reduce auto trips. The Alameda CTC could help cover this 'gap' by developing a funding program for non-PDA areas to improve pedestrian and bicycle infrastructure, including both old streetcar neighborhoods and other areas with potential to be successful walkable and bikable places. Funding assistance for non-transportation of infrastructure improvements (increasing utilities and service capacity) in support of desired higher intensity land uses could be incorporated into the Alameda CTC's assistance program. The Alameda CTC could also develop an assistance program that helps refine local Development Impact Fee regulations and helps in the creation of Community Benefit Districts to support the implementation of utility and transportation infrastructure for PDAs and other walkable and bikable places within the County..

Develop a CEQA Mitigation Toolkit

With the BAAQMD approving new thresholds of significance for toxic air contaminants and fine particulate matter, the CEQA requirements for infill development, particularly TOD projects will become more rigorous, adding to the costs of revitalization of existing developments with more lengthy and uncertain environmental review and mitigation measures. The CEQA process could be streamlined to encourage partnership between local jurisdictions and private investors through an environmental mitigation toolkit or menu that would help in guiding infill projects systematically and efficiently through the CEQA process. This program can hopefully be developed by working with BAAQMD, and other agencies and interest groups, to better meet the needs of Alameda County's infill opportunities.

Public-Private Partnerships

Supporting the creation of joint public-private partnerships, partnering with local ULI chapter to expand upon the TOD Marketplace Concept to bring property owners, developers, planners, and financers together to talk about and activate infill development opportunities throughout the county. Consider targeting a portion of Alameda TEP funding to support model public-private partnerships in the implementation of PDAs, GOAs, and other walkable and bikable areas.

Best Practices Clearing House

Provide a "clearing house" for local best practices – this could be similar to TAM's TPLUS Toolkit, but could be a web-based resource of best practices in supporting walkable and bikable places, and overcoming the variety of challenges to implementing Smart Growth practices in Alameda County. This could draw from the experiences of TAWG and CAWG members and be expanded to include other agencies as well as stakeholders. This could also include model street design standards, parking standards, and parking management strategies.

Development Impact Fees and Community Benefit Districts

Support Refinement of Development Impact Fees and Creation of Community Benefit Districts to support implementation of utility and transportation infrastructure for PDAs and walkable and bikable places in Alameda County.

The following matrix shows the potential strategies and the land use objectives that these strategies could help to achieve:

Table 2 Potential Land Use Strategies and the Objectives They Address

Potential Strategies (the matrix below highlights the objectives that are related to each of the potential strategies)	Objective #1 Variety of destinations within walking distance	Objective #2 Safety and comfort for walking and biking	Objective #3 Major Employment with access to transit	Objective #4 Walkable neighborhoods in proximity to schools	Objective #5 Housing affordability in PDAs and other TODs	Objective #6 Multi-modal connected street networks
Fill funding gaps for advanced planning, public involvement, and CEQA clearance	■		■	■	■	■
Work with utilities and other agencies to fund non-transportation infrastructure improvements in support of desired land use	■		■		■	
Fill funding gaps for walking and biking improvements in target land use areas	■	■	■	■		■
Create a toolkit for CEQA analysis and mitigations measures in support of desired land use	■		■			■
Create model street design standards, parking standards, and parking management strategies			■		■	■
Provide a "clearing house" for local best practices	■	■	■	■	■	■
Support refinement of development impact fees and creation of community benefit districts		■			■	■
Identify potential walkable and bikable places (outside of PDAs and SCS Growth Areas)	■		■	■	■	■
Support the creation of joint public-private partnerships to desired land uses and infrastructure	■		■		■	■
Create an Alameda County Great Avenues and Boulevards Program (discussed in more detail elsewhere)	■	■	■	■	■	■

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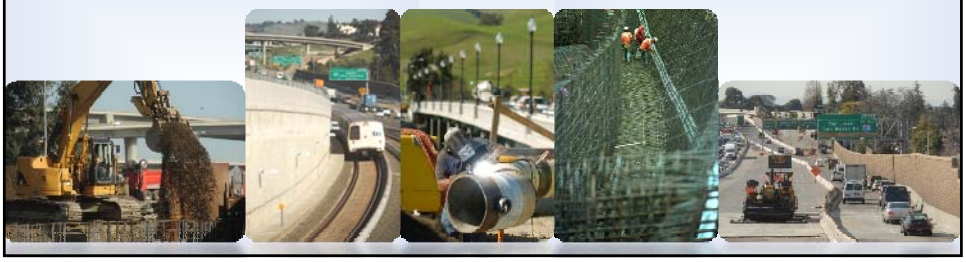
Alameda Countywide Transportation Plan & Transportation Expenditure Plan

Transportation Issues & Strategies for Investment

Presentation to CAWG & TAWG

April 2011



Presentation Overview

- Introduction
- Best Practices & Strategies for Investment:
  - Transit Sustainability and Integration
  - Transportation Demand Management and Parking Management
  - Innovative Funding Opportunities
  - Integration of Land Use and Transportation
  - Sustainability Principles
  - Goods Movement

Purpose of Issue Papers

- Provide framework to think through key issues for the CWTP
- Stimulate innovative thinking on challenging but important topics
- Papers include:
  - Additional background beyond Briefing Book
  - Best practice case studies
  - Key challenges
  - Strategic investment opportunities
- Feeds into project packaging and prioritization and development of RTP, CWTP & TEP

Transit Sustainability & Integration

Context:

- Acute recent transit operator financial challenges
- Long term structural deficits (operational and capital)
- Large existing transit dependent population hurt by service cuts
- Demand for transit projected to grow significantly
- Connectivity, service gaps are key identified needs
- Sustainability includes financial sustainability, high-quality customer service and environmental impacts

Transit Sustainability & Integration

Case Studies:

- Fare and Schedule Integration
  - Verkersverbund (Germany and Switzerland)
- Local Transit Services Supplementing Regional Services
  - DASH and Metro (Los Angeles)
  - Community Transit Network (Boulder, Colorado)
  - Bay Area Shuttles: Emeryville, Oakland, and Palo Alto
  - Microsoft (Seattle)
- Alternative Demand-Responsive Models
  - Pittsburgh Route-Deviation Paratransit
  - Vancouver Connector Paratransit
  - King County, Washington Community Access Transportation

Transit Sustainability & Integration

Strategies:

- Integration opportunities include:
  - Better coordination of fares, schedules and branding
  - Improving system connectivity
  - Possible inter-operator agreements, "umbrella" oversight body, or agency mergers
- Prioritize capital improvements that improve cost-effectiveness of operations
- Explore cost-effectiveness of private or city operators
- Consider alternative service delivery model for paratransit
- Comprehensive Long Range Transit Plan for Alameda County

TDM & Parking Management

Context:

- TDM & Parking Management aims to influence travel behavior to reduce vehicle trips
- Key strategy to meet requirements of SB 375
  - Reducing greenhouse gases & vehicle miles traveled
  - Complements land use strategies
- Shown to be highly effective at achieving the transportation vision, goals, and objectives of the Countywide Transportation Plan
- Largely implemented at local level
- Need to define countywide strategies to support and incentivize

TDM & Parking Management

Case Studies:

- San Mateo C/CAG Trip Reduction Guidelines
- San Francisco Commuter Benefits Ordinance
- National Capital Region Transportation Planning Board Technical Assistance Program and the D.C. Performance Based Parking Pilots
- Massachusetts Downtown Initiative (MDI)
- Bay Area GreenTRIP Certification Program

TDM & Parking Management

Strategies:

- Alameda CTC role could be guidance, oversight, administration, or technical assistance, e.g.:
  - Dedicated Funding for Guaranteed Ride Home
  - Comprehensive Countywide TDM program
  - Countywide TDM & Parking Management Guidelines
  - Technical Assistance Program to help jurisdictions with implementation
  - Parking/TDM certification program

Innovative Funding Opportunities

Context:

- Current funding is inadequate
- Funding sources are unreliable & inflexible
- Public investments generate private value that is not "captured" for the public good
- Few sources are based on use
- Funding sources often do not support policy goals, and sometimes contradict them
- Limited options for increasing funding

Innovative Funding Opportunities

Case Studies:

- Private Funding
  - Portland/Seattle Streetcars
  - Cleveland HealthLine
- Loans and Bonds
  - American Fast Forward, 30/10 Initiative (Los Angeles)
- User Fees
  - Mileage Fee Concept & Road User Fee Pilot (Oregon)
  - SF*park* & Pasadena Parking Benefit District
- Impact Fees
  - SF MTA Revenue Generation Tools
  - Emeryville Transportation Impacts Alternative Strategies
  - Austin Transportation User Fee (Texas)

Innovative Funding Opportunities

Strategies:

- New "innovative" opportunities do exist:
  - Public/Private Partnerships
  - Value Capture Strategies
  - Impact Fees
  - Loans backed by tax revenues
  - Sources supportive of policy goals
- Alameda CTC must first set priorities, e.g. equity, alignment with policy goals, sustainability, alignment with need, or "buy-in" from stakeholders

Integration of Land Use & Transportation

Context:

- Need to support high density land use in areas well-served by existing and planned transit (e.g. PDAs)
- Create & improve walkable and bikable places
- Preserve open space and agriculture/farmland
- Challenges:
  - Funding gaps
  - CEQA barriers to infill development
  - Impacts of sea level rise
  - Need for supportive infrastructure
  - Changes to Redevelopment
  - Regional Air Quality Policies
  - Lower intensity, disperse existing land use patterns

Integration of Land Use & Transportation

Case Studies:

- Grand Boulevard Initiative (El Camino Real Corridor, Bay Area)
- State Investment, Maine
- Priority Funding Areas, Maryland

Integration of Land Use & Transportation

Strategies:

- Fill funding gaps for:
  - Pedestrian and bicycling infrastructure
  - Advanced planning, public involvement, and CEQA clearance
  - Utility and transportation infrastructure
- Alameda County Great Avenues/Boulevards Program
- Incentives for jurisdictions that accept higher growth
- Develop a CEQA Mitigation Toolkit
- Public-Private Partnerships
- Best Practices Clearing House (e.g. model street design)
- Development Impact Fees & Community Benefit Districts

Sustainability Principles

Context:

- A sustainable transportation system is one that meets the needs of the present without compromising the needs of future generations
- Increasingly becoming principle by which many public agencies guide operations, policies, and decisions
- Cannot be achieved through transportation actions alone, e.g. health, land use
- Tracking sustainability metrics over time helps gauge progress

Sustainability Principles

Case Studies

- Portland, Oregon
- Alexandria, Virginia
- Fruitvale Transit Village

Sustainability Principles

Strategies:

- Prioritize cost-effective investments
- Technology
- Integrated planning
- Integrate sustainability metrics into investments
- Exercise Fiscal Constraint

Investment Opportunities:

- New pilot program category to fund innovations in sustainability
- Evaluate sustainability outcomes
- Study innovative solutions to sustainability challenges
- Alameda CTC can be a leader in sustainability

Goods Movement

Context:

- Critical to economy: jobs and tax dollars
- County is key transfer point for goods
- Freight movement can have negative community and environmental impacts
- Past studies have identified needs & impacts
- Some challenges: capacity, intermodal connections, local truck route system, truck parking, degradation of facilities, safety, congestion, competition

Goods Movement

Case Studies:

- Puget Sound Regional Council – Integrating Freight-Intensive Land Uses with Manufacturing and Industrial Centers and Regional Growth Centers (Seattle, WA)
- Chicago, IL – Preserving Freight Land Uses

Goods Movement

Strategies:

- Implement past programs/recommendations:
  - Trade Corridors Improvement Fund Program
  - 2008 Truck Parking Feasibility Study
  - MTC Regional Goods Movement Project/Study
  - Port of Oakland Strategic Plan
- Operational and capacity enhancements: water and air cargo
- Address illegal truck parking issues
- Identify local truck route system
- Increase capacity, efficiency, safety of truck and rail facilities
- Ongoing regional multi-party coordination forum
  - Collaborative approach for attracting funds
- Preservation of freight-intensive land uses
- Move towards "green" freight system

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Telephone Survey of Alameda County Voters

Presentation of survey findings

Prepared for

Alameda County Transportation Commission (ACTC)

March 24, 2011

EMC Research, Inc.
436 14th Street, Suite 820
Oakland, CA 94612
(510) 844-0680
EMC #11-4391

Methodology

- Telephone Survey of Alameda County Voters
- 813 completed interviews
- Overall Margin of error ± 3.4%
- Conducted March 6 - March 14, 2011
- Interviews conducted by trained, professional interviewers in English, Spanish & Cantonese
- Results weighted to reflect likely voter population distribution in November, 2012

Region	# of interviews	Margin of Error (±)	Weighted % of Population
Central Alameda Co.	170	7.5%	21%
East Alameda Co.	121	8.9%	15%
North Alameda Co.	376	5.1%	46%
South Alameda Co.	146	8.0%	18%

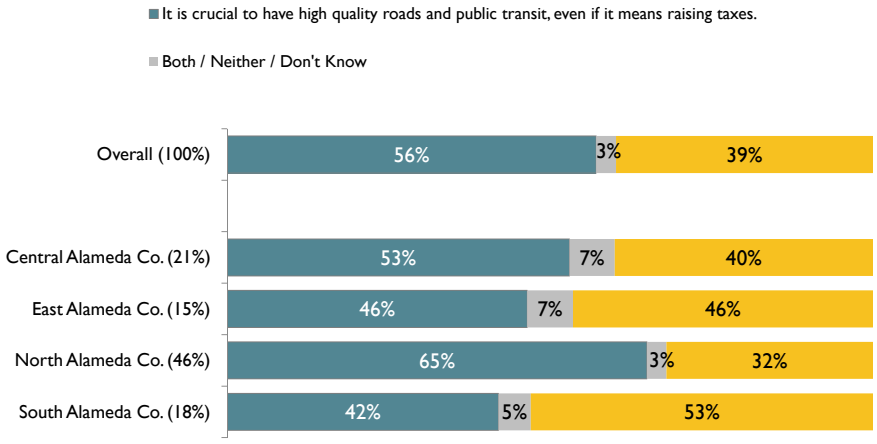
As with any opinion research, the release of selected figures from this report without the analysis that explains their meaning would be damaging to EMC. Therefore, EMC reserves the right to correct any misleading release of this data in any medium through the release of correct data or analysis.

Please note that due to rounding, percentages may not add up to exactly 100%

Issue Environment

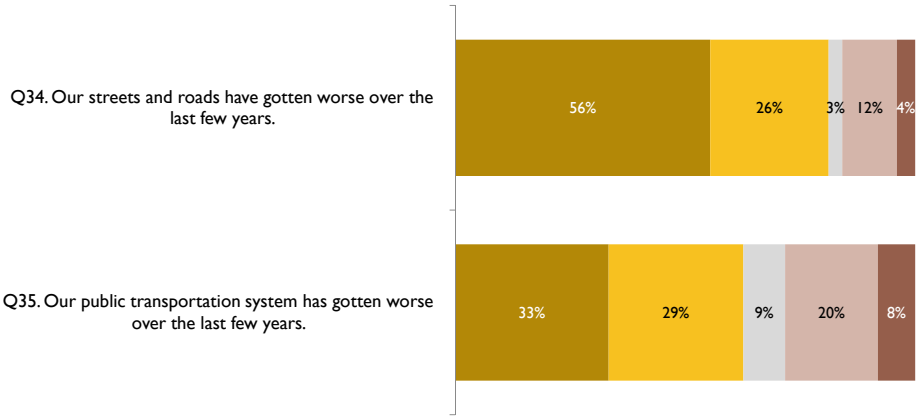
High Quality Roads & Public Transit Are Crucial

Which of the following is closer to your opinion (Q32)



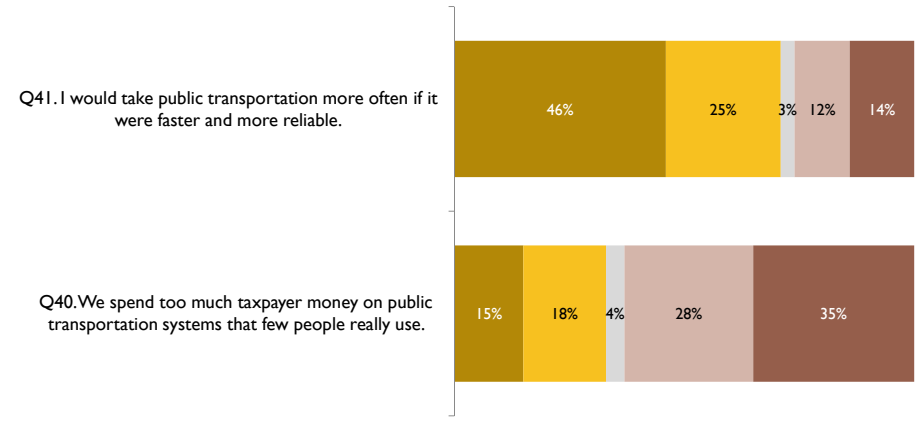
The Majority Agree That Streets/Roads & Public Transportation Have Gotten Worse

Please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements about Alameda County (Q33-44)



There is Support for Public Transportation

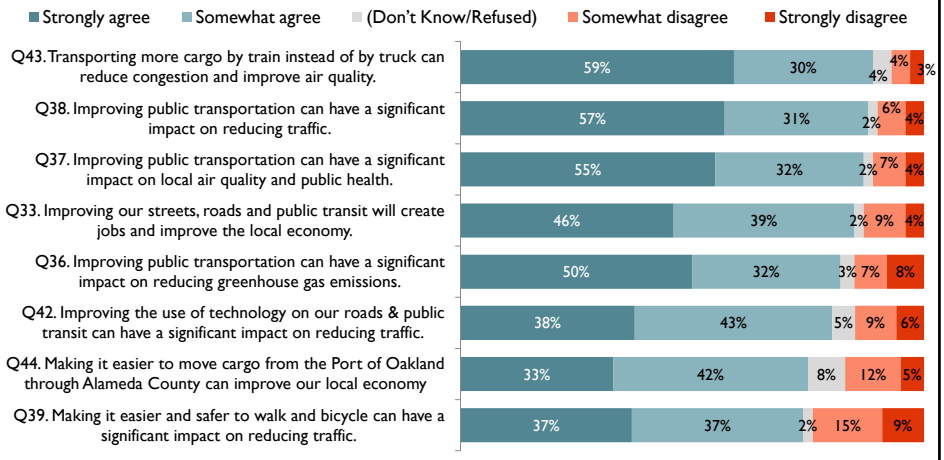
Please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements about Alameda County (Q33-44)



Attitudes on Projects & Improvements

7

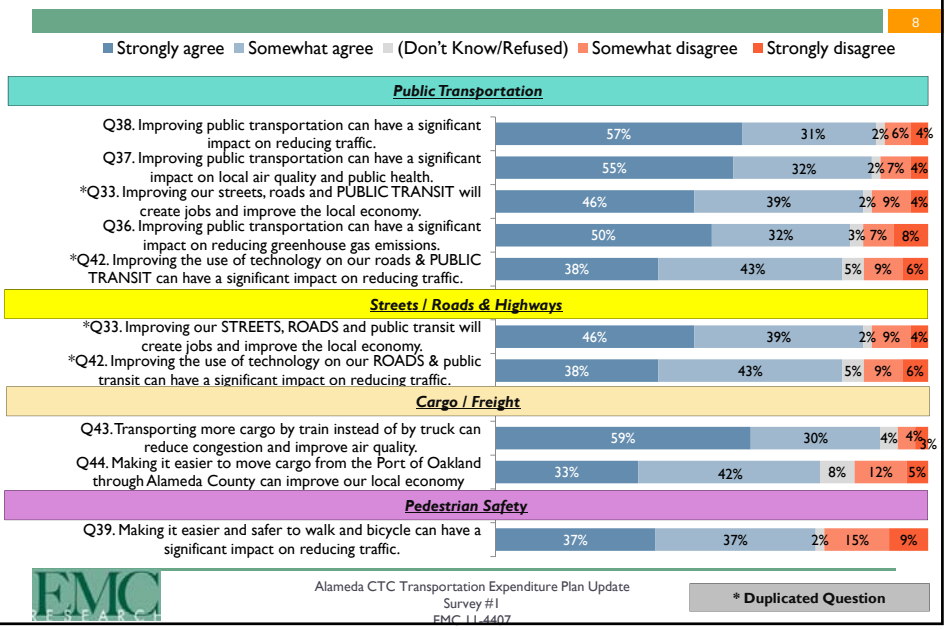
Please tell me if you strongly agree, somewhat agree, somewhat disagree, or strongly disagree with each of the following statements about Alameda County (Q33-44)



Alameda CTC Transportation Expenditure Plan Update
Survey #1
EMC 11-4407

Attitudes by Improvement Type

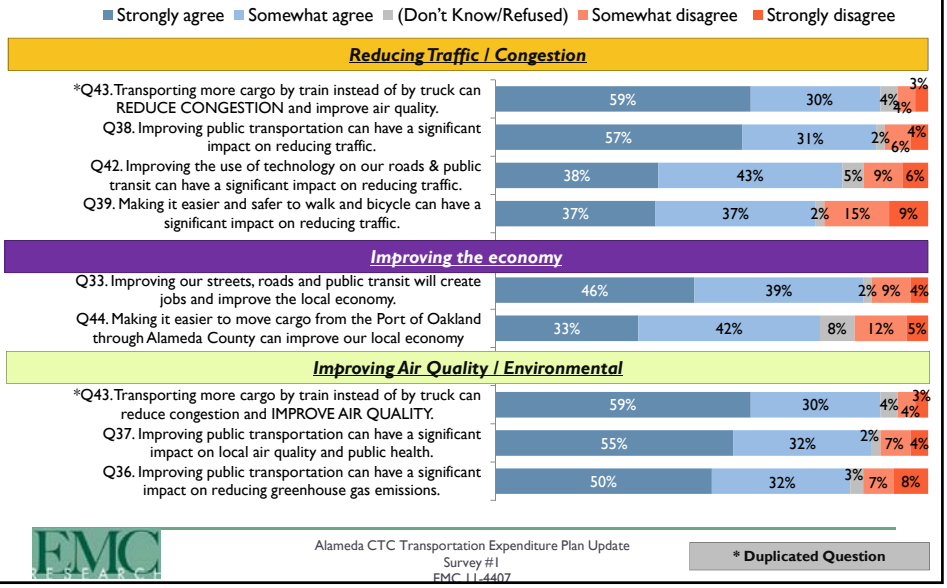
8



Alameda CTC Transportation Expenditure Plan Update
Survey #1
EMC 11-4407

* Duplicated Question

Attitudes by Potential Effect



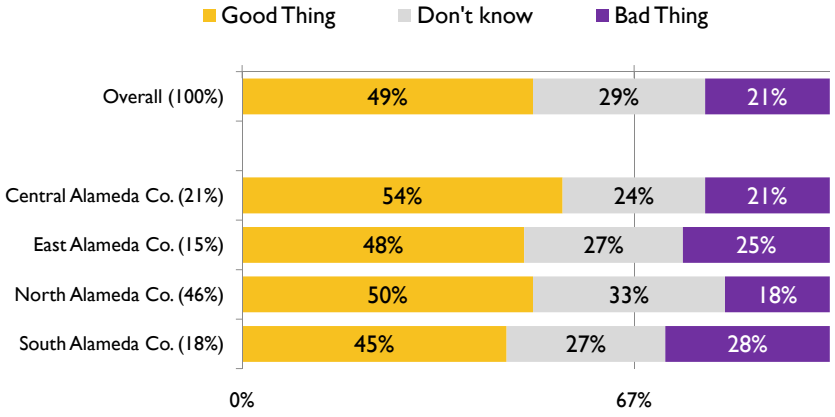
* Duplicated Question

Measure B Renewal

A Plurality Believe Measure B Has Been a Good Thing

11

As you may know, voters in Alameda County approved Measure B in 2000, a half cent sales tax that funds road and transit projects and programs all across Alameda County. In general, would you say Measure B has been a good thing for Alameda County, or a bad thing for Alameda County? (Q6)



A Renewal Wins More Than Two-Thirds (72%)

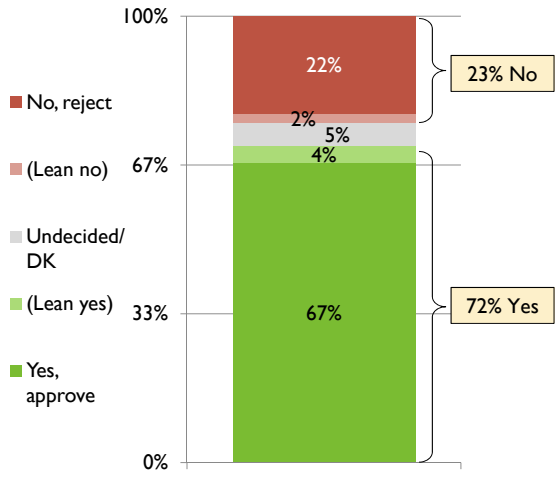
12

There may be a measure on the ballot next year in Alameda County that would

- *extend the existing half cent transportation sales tax to*
- *address an updated plan for the county's current and future transportation needs.*

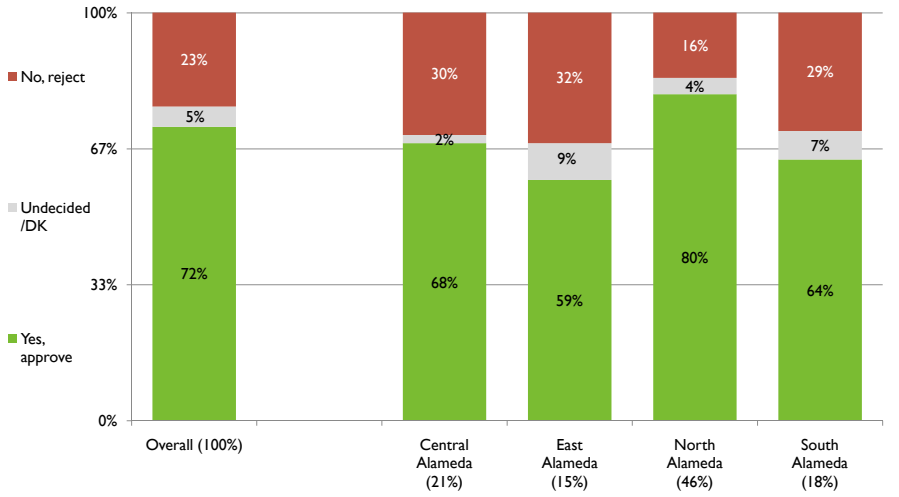
The money from this measure:

- *could only be spent on the voter-approved expenditure plan*
- *all money from this measure would stay in Alameda County and could not be taken by the state.*



There is No Opposition Above 1/3 in Any Region

13



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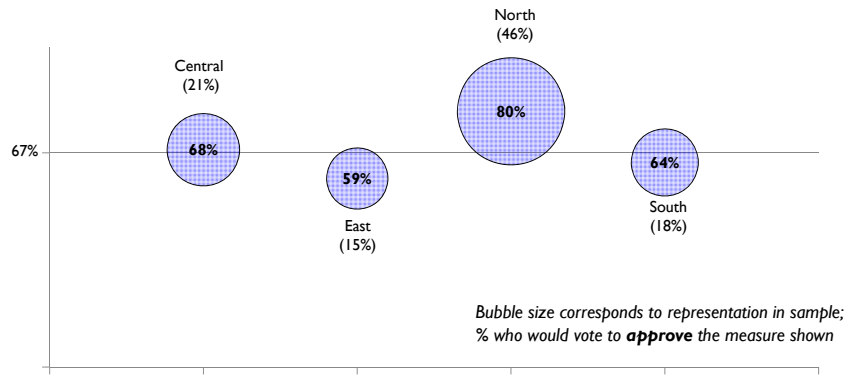
EMC 11-4407

Vote by Region: The North Drives Support above 2/3rds

14



Alameda CTC Transportation Expenditure Plan Update
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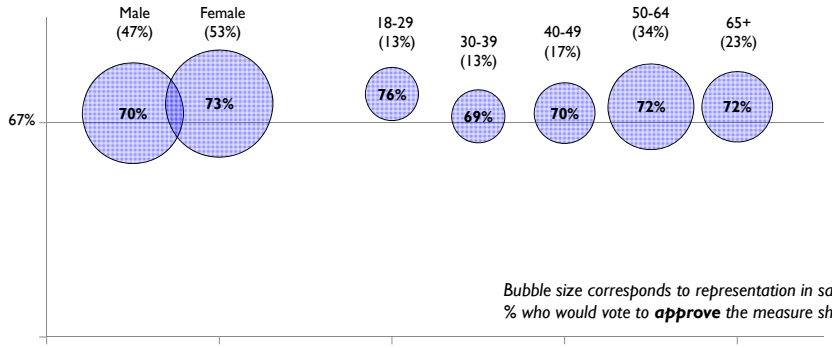
EMC 11-4407

Vote by Gender & Age: All Above 2/3rds

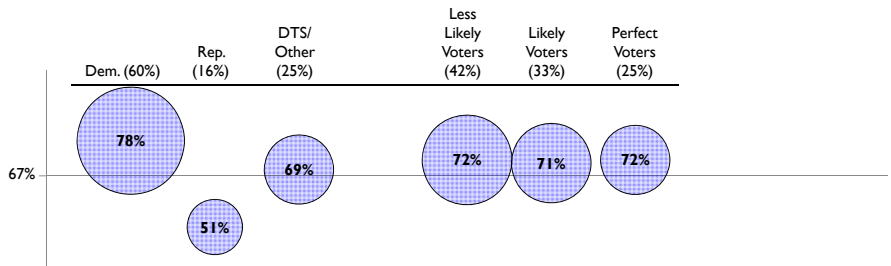
15



*Bubble size corresponds to representation in sample; % who would vote to **approve** the measure shown*

Vote by Party & Vote History: Republicans Are The Only Group Below Two-thirds (51%)

16

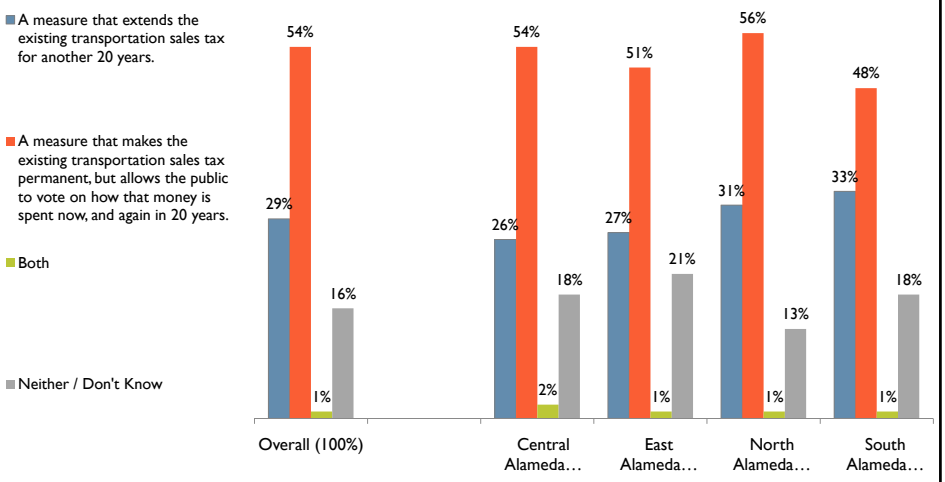


*Bubble size corresponds to representation in sample; % who would vote to **approve** the measure shown*

A Majority of Voters (54%) Prefer Making the Existing Sales Tax Permanent

17

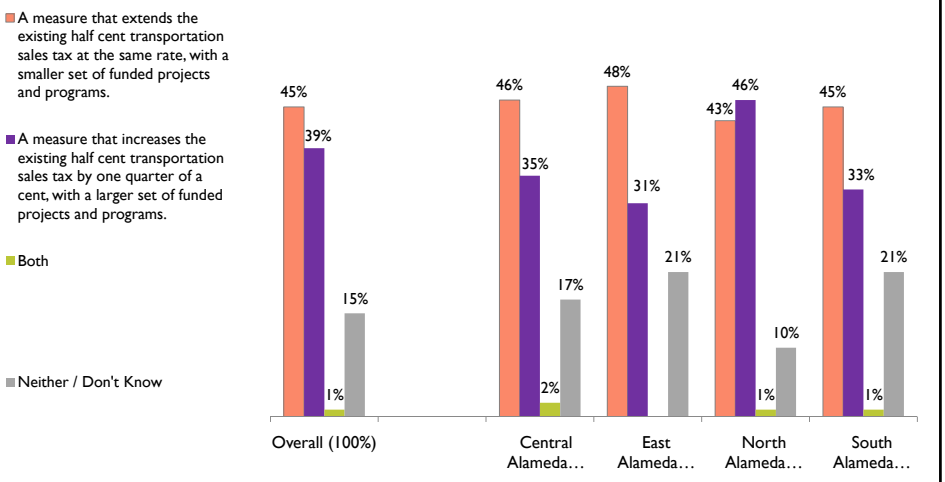
Which you would prefer? (Q30)



45% Prefer Extending the Existing Half Cent Sales Tax at the Same Rate

18

Which you would prefer? (Q31)

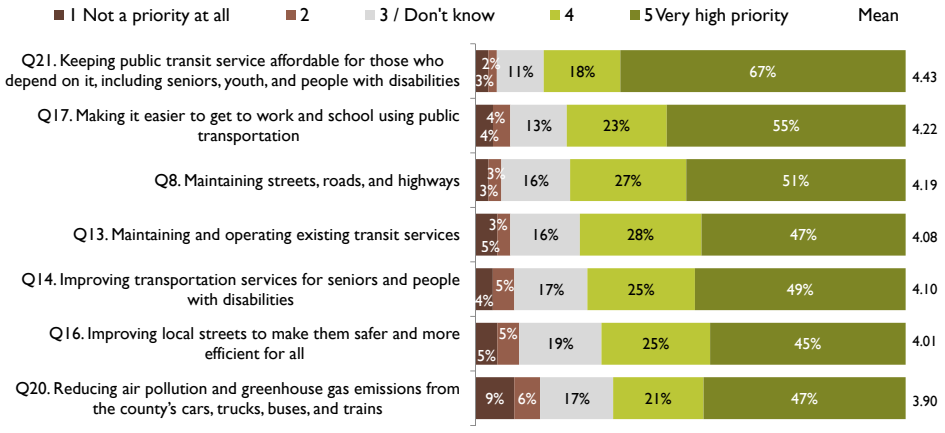


Potential Programs & Projects

Program Priorities (Slide 1 of 2)

20

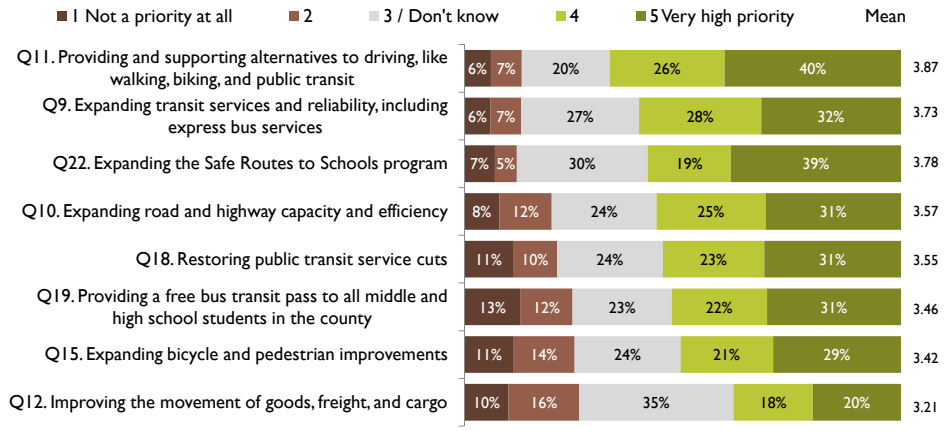
Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



Program Priorities (Slide 2 of 2)

21

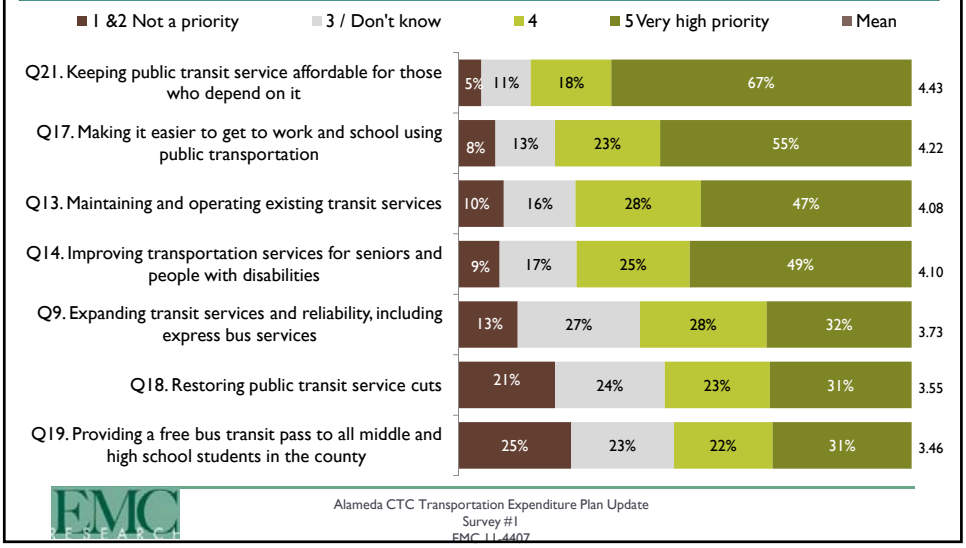
Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



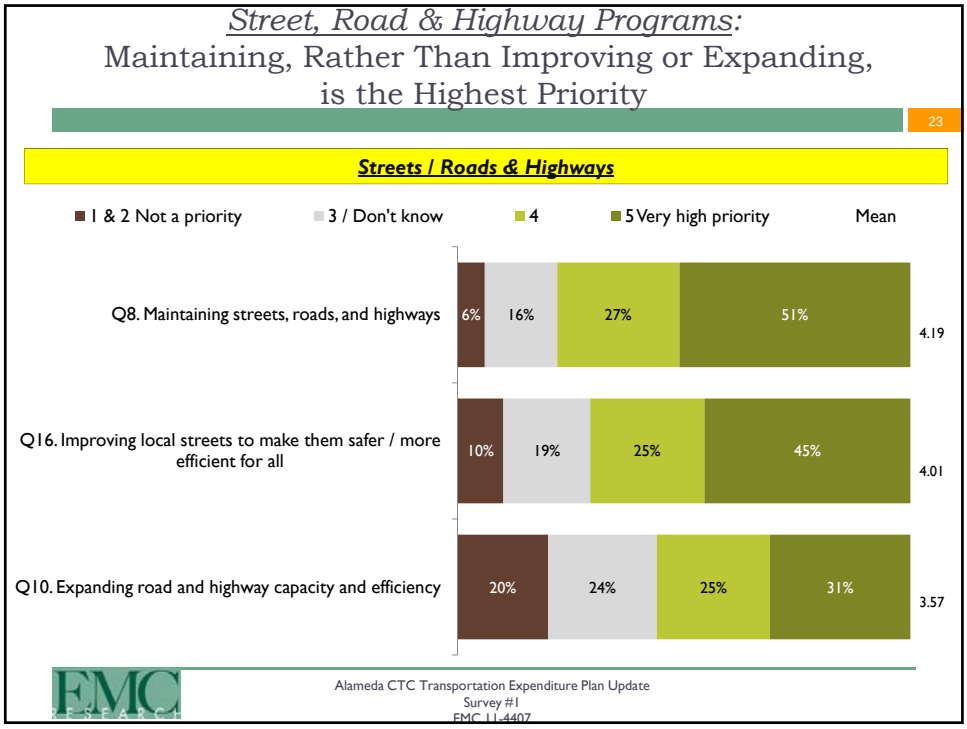
Public Transportation Programs: Keeping Public Transit Affordable & Making it Easier to Take are the Highest Priorities

22

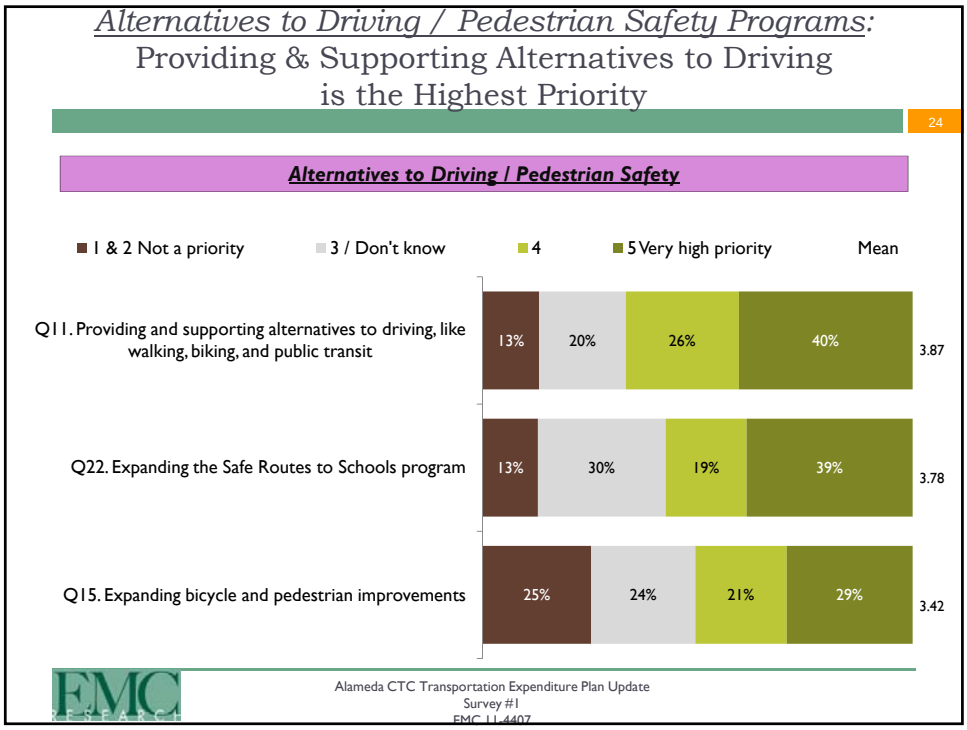
Public Transportation



Street, Road & Highway Programs: Maintaining, Rather Than Improving or Expanding, is the Highest Priority



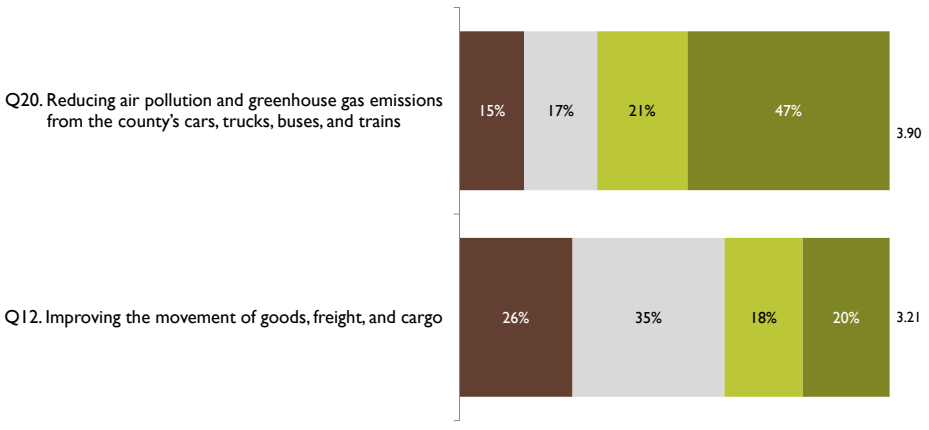
Alternatives to Driving / Pedestrian Safety Programs: Providing & Supporting Alternatives to Driving is the Highest Priority



Air Pollution / Freight & Cargo: Reducing Air Pollution From County Vehicles is the Highest Priority

25

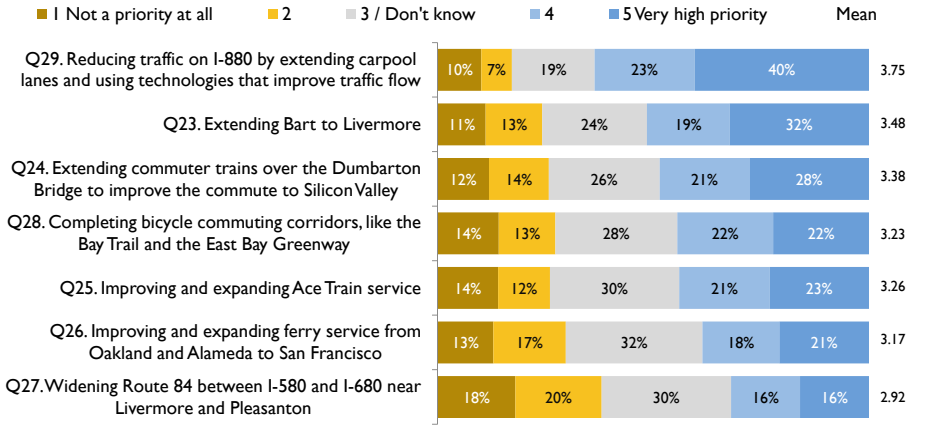
Air pollution & Cargo / Freight



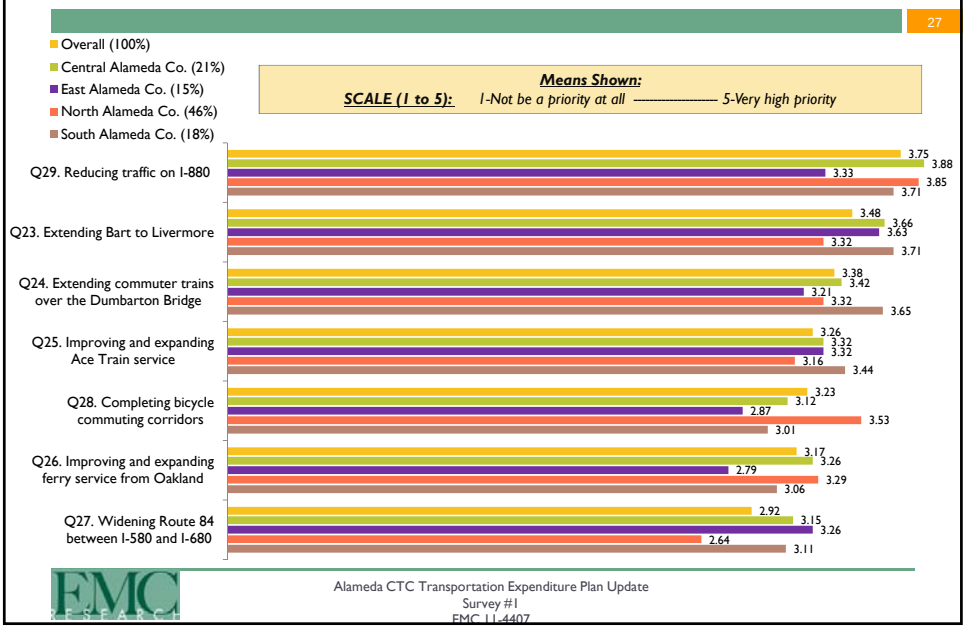
Projects: The Nimitz is Still Nasty

26

Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



Projects Across Regions



Projects Across Regions (alternate view)

28

Means Shown

SCALE (1 to 5): 1-Not be a priority at all ---------- 5-Very high priority

Program / Project	Overall (100%)	Central Alameda Co. (21%)	East Alameda Co. (15%)	North Alameda Co. (46%)	South Alameda Co. (18%)
Q29. Reducing traffic on I-880 by extending carpool lanes and using technologies that improve traffic flow	**3.75 ***	**3.88 ***	3.33 *	**3.85 ***	**3.71 ***
Q23. Extending Bart to Livermore	3.48 *	3.66 *	**3.63 ***	3.32 *	3.58 *
Q24. Extending commuter trains over the Dumbarton Bridge to improve the commute to Silicon Valley	3.38 *	3.42 *	3.21	3.32 *	3.65 *
Q25. Improving and expanding Ace Train service	3.26	3.32	3.32 *	3.16	3.44
Q28. Completing bicycle commuting corridors, like the Bay Trail and the East Bay Greenway	3.23	3.12	2.87	3.53 *	3.01
Q26. Improving and expanding ferry service from Oakland and Alameda to San Francisco	3.17	3.26	2.79	3.29	3.06
Q27. Widening Route 84 between I-580 and I-680 near Livermore and Pleasanton	2.92	3.15	3.26	2.64	3.11

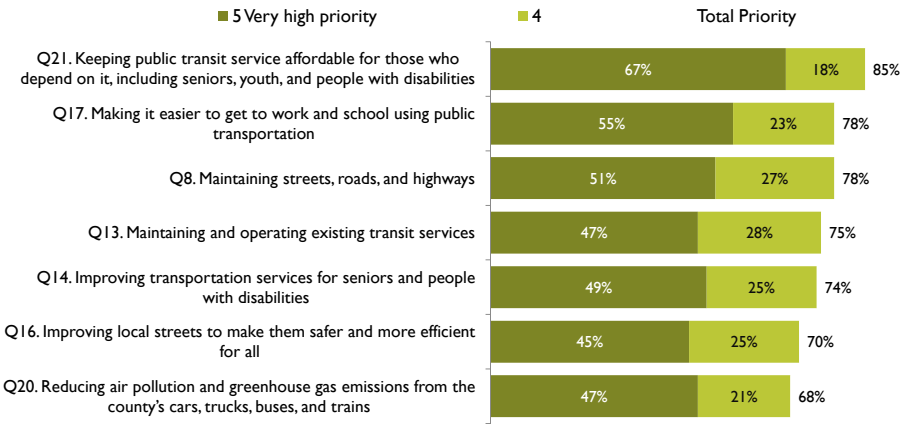
Alameda CTC Transportation Expenditure Plan Update
Survey #1
EMC 11-4407

*** Indicates Top 3**

Programs & Projects: Combined Priorities

Countywide Programs That Are a Priority For More Than 2/3rds of Voters

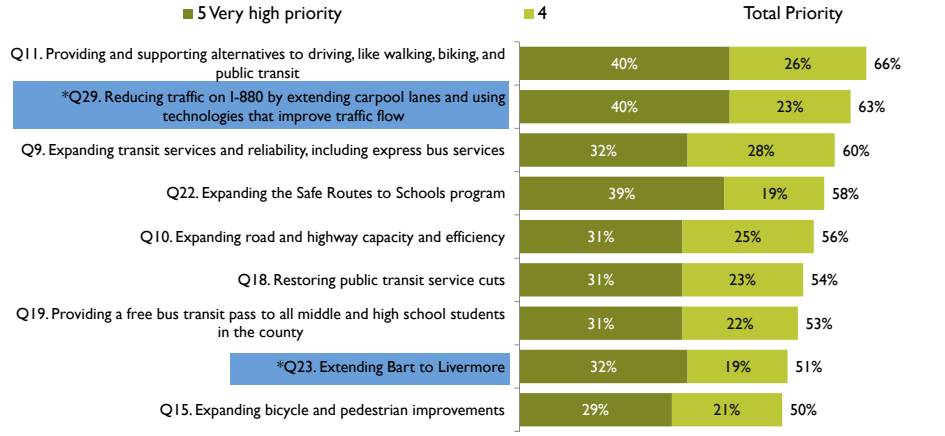
Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



Lower Countywide Priorities

31

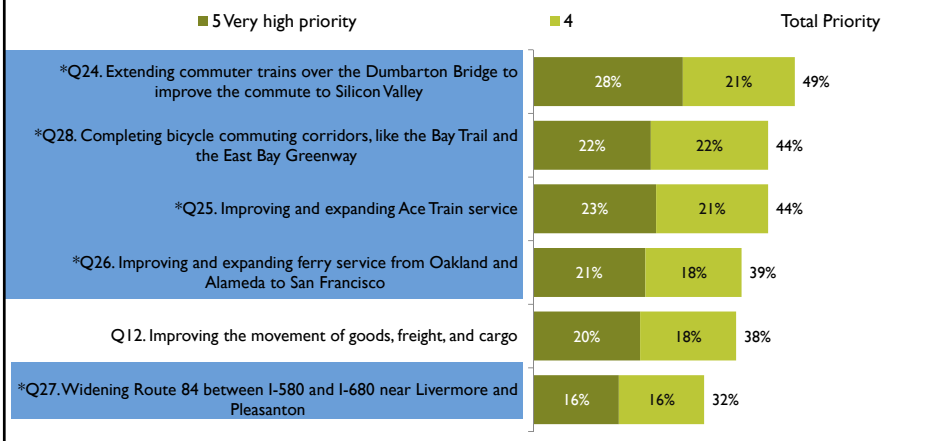
Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



Countywide, Most Projects Have Less Priority Than Programs

32

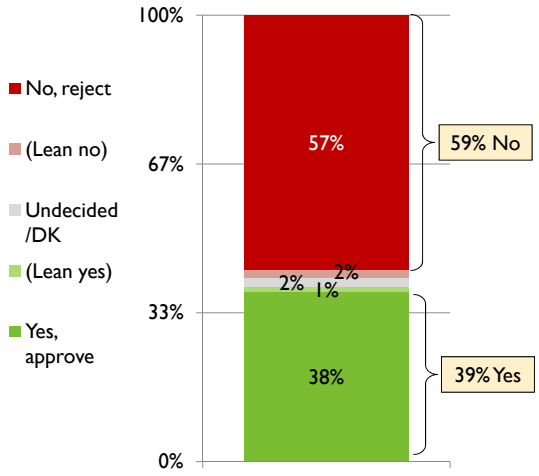
Now I'd like to read you a list of projects and programs that could be funded by this ballot measure. For each one, please tell me how a high a priority it should be. Please use a scale from one to five, where one means it should not be a priority at all and five means it should be a very high priority (Q8-29)



Gasoline Tax Measure

Majority Oppose Gasoline Tax

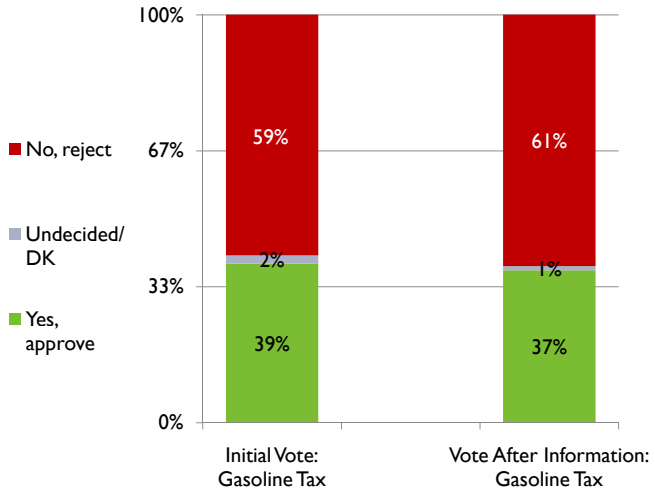
There may be a measure on the ballot in a future election that would increase the tax on gasoline in the Bay Area by 10 cents per gallon. This measure would pay for maintenance of local streets and roads as well as improvements to public transportation, such as BART. If this measure were on the ballot today, are you likely to vote yes to approve it, or no to oppose it? (Q45)



More Information Led to More Opposition

35

Supporters of this measure say that it makes sense to tax gasoline because it would pay for improvements that benefit everyone throughout the region, like better roads and more reliable public transit. Opponents of this measure say it will place an unfair burden on people with long commutes to work or school, and local governments should make better use of existing taxes before asking for more.



Alameda CTC Transportation Expenditure Plan Update
Survey #1
EMC 11-4407

ALAMEDA County Transportation Commission
1333 Broadway, Suites 220 & 300 ▪ Oakland, CA 94612 ▪ PH: (510) 208-7400
www.AlamedaCTC.org

MEMORANDUM

DATE: March 29, 2011

TO: Technical Advisory Working Group

FROM: Tess Lengyel, Manager of Programs and Public Affairs
Beth Walukas, Manager of Planning

SUBJECT: Update on Outreach Activities

Recommendations
This item is for information only.

Summary
This memo provides an update to outreach activities in relation to the update of the Countywide Transportation Plan (CWTP) and development of the Transportation Expenditure Plan (TEP). This update reflects the changes to the outreach approach as approved by the Steering Committee on January 27, 2011.

The overall approach to the first phase of outreach for the CWTP-TEP development includes identification of project and program needs and education and involvement of the public, elected officials and stakeholders through the following efforts:

- Five evening community workshops throughout the County
- A toolkit for broad engagement of groups that may not be able to attend the workshops
- On-line questionnaire
- Poll
- On-going agency public outreach

Community Workshops
The fifth and final community workshop was held in Dublin on March 24th. Workshops have been conducted throughout the County aimed at educating Alameda County residents, business members and elected officials about the transportation plans development and to receive input on projects and programs that could be included in the plan. These meetings have been advertised in newspapers throughout the County, broadly distributed through email and are on the Alameda CTC website.

A follow-up round of workshops will be held in the fall of 2011 to provide an opportunity for review and comment on the draft plans.

Workshops Outcomes to Date

Supervisorial District 4 workshop (Oakland): February 24th

attendees (signed in)	53
comment forms received	24
evaluations received	23

Supervisorial District 1 Workshop (Fremont): February 28th

attendees (signed in)	35
comment forms received	4
evaluations received	13

Supervisorial District 2 Workshop (Hayward): March 9th

attendees (signed in)	36
comment forms received	11
evaluations received	7

Supervisorial District 3 Workshop (San Leandro): March 16th

attendees (signed in)	38
comment forms received	9
evaluations received	8

Supervisorial District 5 Workshop (Dublin): March 24th

attendees (signed in)	26
comment forms received	2
evaluations received	5

Total Workshop Attendees: **188**

Workshop results, including key themes and evaluation findings will be included in a separate, forthcoming summary.

Outreach Toolkit Trainings Presentations

The Outreach Toolkit allowed broad engagement throughout the county on project and program needs that could be included in the plans, beyond that which can be reached with the public workshops. Members of Alameda CTC's Community Advisory Committees, the Community Advisory Working Group, Technical Advisory Working Group, staff and Commission members used the toolkit to gather input. Outreach Toolkit trainings and general presentations have been made to the following advisory groups:

Date	Advisory Group
January 20th	CAC
January 20th	PAPCO
February 3rd	CAWG
February 8th	TAC
February 10th	TAWG
February 10th	BPAC
February 24th	Steering Committee

95 toolkits were distributed at the CAWG, TAC, TAWG, BPAC and Steering Committee presentation toolkit trainings. Additional toolkits have been downloaded from the website by advisory group members.

Additional training for the use of the toolkit was held on Friday, February 18th, and a short instructional video about the Outreach Toolkit and how to use it was posted to the project website on Friday, February 18th for those members unable to attend previous trainings.

Completed Outreach Activities

To date, MIG, Alameda CTC's Outreach Consultant, has received completed Outreach Toolkit materials including session reporting forms and questionnaires from the following groups.

Group	Participants
Extending Connection (United Methodist Church)	35
Fremont Freewheelers Bicycle Club	11
Union City Planning Commission	8
United Seniors of Oakland (Transportation Committee)	6
Hope Collaborative, Built Environment Group	22
Oakland BPAC	15
West Berkeley Senior Advisory Council	9
City of Newark Senior Advisory Committee	13
Pleasanton Senior Ctr./Paratransit Lead Staff	8
City of Newark Senior Advisory Committee	13
Eden Area Local Organizing Committee	7
Sierra Club - Southern Alameda County Group	9
Union City City Council Audience	10
West Oakland Senior Center	20
Pleasanton Bicycle, Pedestrian and Trails Committee	10
San Leandro Youth Advisory Committee	17
Dumbarton Bus Riders	7
San Leandro Engineering and Transportation Department	16
Friends of Emeryville Senior Center	11
Pleasanton Senior VIP Club	72
AFSCME, Local 3916	50
Friends of Albany Services	11
San Leandro Senior Commission	11
City of San Leandro	6
San Leandro Human Services Commission	9
Ctiy of San leandro	5
Service Review Advisory Committee (East Bay Paratransit)	20
Pleasanton Chamber or Commerce- Vision2015 Forum	10
Saint Mary's Center	26
AC Transit Accessibility Advisory Committee	6
City of Emeryville's Commission on Aging	13
Oakland City Commission on Aging	8
Sierra Club - TriValley Group Exec. Cmte.	5

Oakland Yellowjackets	10
Wheels Accessible Advisory Committee	8
Newark Rotary Club	20
East Bay Bicycle Coalition	25
Alameda County Public Health Nurses	19
North Oakland Senior Center	12
Residents of Allen Temple Arms	35
Service Learning for Leaders	19
TOTAL Participants	**646**

In addition to these materials, MIG collected completed questionnaires at the CAC and PAPCO meetings. Overall MIG has received **532 completed paper questionnaires.**

Planned Outreach Activities
Advisory group members have identified and committed to make presentations during March at the meetings of the following organizations:

Group
Genesis
Corpus Christi Church
Alameda County on Aging
Oakland Metropolitan Chamber
Albany Strollers and Rollers
Maxwell Park NCPC
City of Berkeley
ACCE (Alliance for Californians and Community Empowerment
APEN (Asian Pacific Environmental Network)
BOSS (Building Opportunities for Self Sufficiency)
EBAYC (East Bay Asian Youth Center)
LIFETIME
Pueblo
City of Alameda Transportation Commission

Online Questionnaires
The online questionnaire is now closed. There were **698 responses.**

Poll
Three polls will be conducted from March 2011 through spring 2012. Polling questions were identified through the CAWG, TAWG and Steering Committee. The Steering Committee reviewed, commented on and approved the survey questions for the first survey on February 24, 2011. A presentation of the survey findings was presented to the Steering Committee at its March 24th meeting.

The three surveys that are being conducted for the development of the TEP are described below as well as their implementation timeline.

Survey 1: Baseline Study
The first survey will serve as a baseline study and was completed in early March 2011 and is being presented to committees in March and April. It will be designed to capture information about what transportation projects and programs voters are interested in, as well as measuring potential support for a transportation sales tax measure. This baseline survey will provide a "starting point" that shows where the voting public currently stands on these issues.

Survey 2: Tracking and Measure Refinement Study
The second survey will serve as a tracking study, measuring any changes in attitudes and opinions from the baseline research, as well as capturing additional feedback and opinions on specific projects and programs to further refine the design of the Transportation Expenditure Plan. Building on the information gathered in the baseline study, this tracking study will provide additional input and details as we develop an efficient and effective sales tax measure. This survey will be conducted in fall 2011.

Survey 3: Final Check-In
The third survey will serve as a final check-in with voters prior to placing a measure on the ballot. This survey will be conducted shortly before the deadline for placing the measure on the ballot, with the aim of helping to make a "go, no go" decision on the measure. This survey will be conducted in spring 2012.

On-going Agency Outreach
Alameda CTC conducts regular outreach throughout the County in the form of business, local organizations, agency outreach and coordination, electronic newsletter distributions, executive director reports, web page updates, transportation forums and other public information fairs and events, as well as regular updates at Alameda CTC meetings and in meeting packets. At each of these, information is presented on the updates and development of the plans.

Presentations of Poll and Outreach Findings
Presentations of the poll and preliminary outreach findings are being made at the committee meetings in April and feedback is requested to help support expanded outreach efforts that are scheduled to be implemented in fall 2011 that will seek feedback on the draft plans.

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Alameda County Transportation Commission

Alameda Countywide Transportation Plan & Transportation Expenditure Plan

Public Participation: Initial Findings

Presentation to TAWG

April 2011

Public Involvement Overview

- Purpose
- Summary by Outreach Method
  - Workshops
  - Outreach Toolkit
  - Online Questionnaire
- Key Themes by Method
- Findings Across Methods
- Projects and Programs
- Evaluation
- Next Steps

Public Involvement Purpose

- Perform outreach for the CWTP and TEP development (More outreach in the fall)
- Perform outreach as required by MTC for the Call for Projects and Programs – and to address Title VI
- Provide information and opportunities beyond workshops – outreach toolkit
- Collect information from the public on needs, priorities and specific projects and programs
- Share this information with project sponsors who are responding to the call for projects

Participation Summary

Method	Number of Participants
Workshops	188
Outreach Toolkit	646 *Completed Surveys* 532
Online Questionnaire	693
TOTAL	1,527*

* Some individuals may have participated in more than one method.

Workshop Attendance

Workshop District/Location/Date	Number of Attendees	Comment Forms Received	Evaluations Received
District 4, Oakland February 24th	53	24	23
District 1, Fremont February 28th	35	4	13
District 2, Hayward March 9th	36	11	7
District 3, San Leandro March 16th	38	9	8
District 5, Dublin March 24th	26	2	5
TOTAL	**188**	**50**	**56**

Workshop Key Themes - Overall

- Maintenance
- Access
- Equity
- Safety
- Connectivity
- Coordination

Workshop Themes

Workshop	Maintenance	Access	Equity	Safety	Connectivity	Coordination
Oakland	X	X	X	X		
Fremont	X	X			X	X
Hayward	X		X	X	X	X
San Leandro	X	X	X	X	X	X
Dublin	X			X	X	

Workshop Evaluation

	Excellent	Good	Fair	Poor	No Opinion	No Answer
Workshop Notification	21.%	32%	27%	16%	2%	2%
Open House and Handout Materials	27%	55%	7%	4%	2%	5%
Presentation	30%	55%	7%	0%	4%	4%
Meeting Location/ Facility	48%	45%	4%	2%	0%	2%
Small Group Discussion	45%	50%	2%	0%	0%	4%
Workshop Overall	32%	61%	2%	0%	0%	5%

Workshop Evaluation

Method	Participants learned about workshop by*
E-Mail	**43%**
Friend	**30%**
Newspaper	**25%**
Website	**13%**
Other	**13%**
N/A	**2%**
Based on 56 submitted evaluation forms	

Public Involvement Overview

Method	Number of Participants
Workshops	188
Outreach Toolkit	646 *Completed Questionnaire* 532
Online Questionnaire	698
TOTAL	1,532

Outreach Toolkit

County Planning Area	Share of Countywide Population*	Total Participants
North	**42%**	**49%**
Central	**23%**	**11%**
South	**22%**	**12%**
East	**13%**	**18%**
Countywide *(Countywide organizations)*	**n/a**	**11%**
TOTAL	**100%**	**100%**
***2009 ABAG Projections**		

Outreach Toolkit

- Group Types:
  - Seniors
  - Bicyclists
  - Faith-based groups
  - Environmental groups
  - Transit riders
  - Rotary
  - Chamber
  - Community-based organizations

Findings: Needs

- Relieve street and highway congestion
- Maintain existing transit
- Expand transit
- Support commute and accessibility programs

Findings: Trade-Offs

- **Maintain streets, roads and highways**
  (vs. expanding transit service and reliability)
- Provide more alternatives to driving
  (vs. expanding highway capacity and efficiency)
- Maintain existing transit service
  (vs. improving goods movement and freight)
- **Improve transportation services for senior and people with disabilities**
  (vs. expanding bicycle and pedestrian improvements)

Findings: VMT Reduction

- Build walking and biking friendly cities
- Programs that encourage people to walk and bike

Public Involvement Overview

Method	Number of Participants
Workshops	188
Outreach Toolkit	646 *Completed Questionnaire* 532
Online Questionnaire	698
TOTAL	1,532

Online Questionnaire

Planning Area	Share of Countywide Population*	Percentage of Respondents
North	42%	62%
Central	23%	15%
South	22%	14%
East	13%	9%
Other	n/a	6.5%**
TOTAL	100%	100%

*2009 ABAG Projections
** Unclear or not Alameda County Resident

Findings: Needs

- Maintain existing transit
- Repair potholes and smooth the existing roadway
- Bike improvements

Findings: Trade-Offs

- **Expand transit services and reliability**
  (vs. maintaining streets, roads and highways)
- Provide more alternatives to driving
  (vs. expanding highway capacity and efficiency)
- Maintain existing transit services
  (vs. improving goods movement and freight)
- **Expand bike and pedestrian improvements**
  (vs. improving transportation services for senior and people with disabilities)

Findings: VMT Reduction

- Build walking and biking friendly cities
- Add service to existing transit routes
- Increase transit service in areas that don't currently have high capacity transit

Findings across Methods

Transportation Needs

Overall Findings: Highways and Roads

- Maintain existing infrastructure
- Increase safety
- Increase connectivity
- Develop Complete Streets

Transportation System Management

- Expand signal timing/synchronization
- Increase ramp metering
- Develop additional signage
- Develop intelligent/adaptive intersections

Parking and Transportation Demand Management

- Expand employer based incentives for alternatives to driving
- Expand congestion pricing
- Promote car sharing

Public Transit

- Restore Service
- Provide a transit system that is safe accessible, maintained, clean, reliable, affordable and equitable
- Coordinate service
- Target routes

Accessible Transportation

- Maintain existing paratransit programs
- Increase local shuttles and connections to community facilities

Bike and Pedestrian

- Increase safety and signage
- Enhance connectivity on bike trails
- Improve existing infrastructure
- Provide bicycle storage/parking
- Improve crossing at major roads, including grade separations

Goods Movement

- Provide for the quick and efficient movement of trucks
- Address human health impacts of truck traffic and truck idling in neighborhoods

Other

- Develop education programs on:
  - How to use transit
  - Transit civility
  - Bike/pedestrian safety (sharing the road)
- Improved marketing about the overall transit system and how to use it
- Consistent information about transit service changes
- Case studies of other transportation/transit agency transportation demand management programs

Projects

- Transit
  - Build BART to Livermore
  - Build Dumbarton Rail
- Highways and Roads
  - Improve 680/580 Interchange
  - Widen SR-84

Projects

- Bike/Pedestrian
  - Complete Bay Trail
  - Complete East Bay Greenway (Oakland to San Leandro)

Programs

- Transit
  - ECO Youth Bus Pass
  - Expanded, coordinated service
  - Station and stop amenities/improvements
  - Transit information signage
  - Shuttles
- Highways and Roads
  - Local street improvements
- Transportation System Management
  - Employer incentives for driving alternatives
  - Destination Information Signage

Programs

- Accessible Transportation
- Bike and Pedestrian
  - Safe Routes to School
  - Bike lanes
  - Intersection safety
  - Signage

Participant Characteristics by Method

Planning Area	Countywide*	Outreach Toolkit	Online Questionnaire
North	**42%**	**45%**	**62%**
Central	**23%**	**13%**	**15%**
South	**22%**	**14%**	**8%**
East	**13%**	**18%**	**9%**
Other**	**n/a**	**10%**	**7%**

***2009 ABAG Projections**
****Unclear or not Alameda County Resident**

Participant Characteristics by Method

Ethnicity	Countywide*	Outreach Toolkit	Online Questionnaire
American Indian or Alaska Native	0.4%	0.4%	2%
Asian or Pacific Islander	33%	18%	8%
Black/African American	12%	24%	9%
White/Caucasian	36%	53%	71%
Spanish, Hispanic or Latino	22%	4%	6%
Other	3%	0.4%	4%
* 2009 American Community Survey			

Participant Characteristics by Method

Household Income Level	Countywide*	Outreach Toolkit	Online Questionnaire
$0-$25,000	21%	25%	8%
$25,000-$50,000	23%	24%	17%
$50,000-$75,000	20%	13%	19%
$75,000-$100,000	14%	13%	21%
Over $100,000	22%	26%	35%
* 2000 Census			

Next Steps

- Refine and compile findings
- Develop project and program list
- Prepare final report for presentation at May Steering Committee Meeting

Key Questions

- How should Alameda CTC best use the results from this phase moving forward?

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ALAMEDA County Transportation Commission
1333 Broadway, Suites 220 & 300 ▪ Oakland, CA 94612 ▪ PH: (510) 208-7400
www.AlamedaCTC.org

MEMORANDUM

DATE: March 29, 2011

TO: Technical Advisory Working Group

FROM: Beth Walukas, Manager of Planning
Tess Lengyel, Manager of Programs and Public Affairs

SUBJECT: **Review of Sustainable Community Strategy (SCS)/Regional Transportation Plan (RTP) and Countywide Transportation Plan (CWTP)/ Transportation Expenditure Plan Information**

Recommendation
This item is for information only. No action is requested. Highlights include an update on the Association of Bay Area Governments (ABAG) process for seeking input on their recently released Initial Vision Scenario and on the implementation of the CWTP and RTP Call for Projects and Programs. Staff is developing a draft master list of projects and programs received to date, which will be distributed at the April meeting for information.

Summary
This item provides information on regional and countywide transportation planning efforts related to the updates of the Countywide Transportation Plan and Sales Tax Transportation Expenditure Plan (CWTP-TEP) as well as the Regional Transportation Plan (RTP) and the development of the Sustainable Community Strategy (SCS).

Discussion
ACTAC; the Planning, Policy and Legislation Committee (PPLC); the Alameda CTC Board; the Citizen's Watchdog Committee; the Paratransit Advisory and Planning Committee; the Citizen's Advisory Committee; and the Bicycle and Pedestrian Advisory Committee receive monthly updates on the CWTP-TEP and RTP/SCS. The purpose of this report is to keep various Committee and Working Groups updated on regional and countywide planning activities, alert Committee members about issues and opportunities requiring input in the near term, and provide an opportunity for Committee feedback in a timely manner. CWTP-TEP Committee agendas and related documents are available on the Alameda CTC website. RTP/SCS related documents are available at www.onebayarea.org.

April 2011 Update:
This report focuses on the month of April 2011. A summary of countywide and regional planning activities for the next three months is found in Attachment A and a three year schedule is found in

Attachment B. Highlights include MTC/Alameda CTC Call for Projects and Programs and the process for moving from the recently released Initial Vision Scenario to the Detailed Scenarios that are scheduled to be released in July.

1) MTC/ Alameda CTC Call for Projects and Programs

The concurrent Call for Projects and Programs was released on February 25, 2011. Project/program applications are due to Alameda CTC by **April 12, 2011**, so they can be screened and a preliminary list of CWTP projects and programs developed. A draft list of projects and programs recommended for inclusion in the RTP is due to MTC by **April 29, 2011**. The Draft list of projects and programs will be presented to Alameda CTC committees in May culminating in a public hearing at the **May 26, 2011** CWTP-TEP Steering Committee meeting with a recommendation for approval by the Commission on the same day. The final list is due to MTC on **May 27, 2011**. Staff has received input on transportation needs from the public in February and March at five public meetings held throughout the County and through the Alameda CTC administrative and advisory committee meetings. Staff is developing a master list of projects and programs received to date, which will be distributed at the April meeting.

2) Release of Initial Vision Scenario and Development of Detailed Scenarios

On March 11, 2011, ABAG released the Initial Vision Scenario representing the starting point for discussion for how to house the region's population and meet sustainability goals (Attachment 09C). The Initial Vision Scenario was presented to Alameda County elected officials at four meetings throughout the County between March 16 and March 24, 2011 and to the Technical Advisory Working Group, including the Alameda County Planning Directors, on March 18, 2011. ABAG and MTC are seeking input on the Initial Vision Scenario between now and June 2011 to use in the development of Detailed Scenarios, which are anticipated to be released in **July 2011**. In addition to providing input on the development of the Detailed Scenarios through the CWTP-TEP Committees, a public workshop, hosted by MTC and ABAG is being scheduled in **May**. Alameda CTC is working with Supervisorial Districts 1 and 2 to host a joint workshop on the SCS. The workshop is scheduled for **May 14, 2011**.

3) RTP/SCS Work Element Proposals and

MTC continues to refine their proposals and guidance for the following work elements of the RTP/SCS:

- 25-year financial forecast assumptions;
- Draft committed funds and projects policy scheduled to be adopted by MTC in April;
- Projects performance assessment approach; and
- Transit capital, local streets and roads maintenance needs, and transit operation needs approach.

4) Upcoming Meetings Related to Countywide and Regional Planning Efforts:

Committee	**Regular Meeting Date and Time**	**Next Meeting**
CWTP-TEP Steering Committee	4th Thursday of the month, noon Location: Alameda CTC	April 28, 2011 May 26, 2011
CWTP-TEP Technical Advisory Working Group	2nd Thursday of the month, 1:30 p.m. Location: Alameda CTC	April 14, 2011 May 12, 2011
CWTP-TEP Community Advisory Working Group	1st Thursday of the month, 3:00 p.m. Location: Alameda CTC	April 7, 2011 May 5, 2011
SCS/RTP Regional Advisory Working Group	1st Tuesday of the month, 9:30 a.m. Location: MetroCenter,Oakland	April 5, 2011 May 3, 2011
SCS/RTP Equity Working Group	Location: MetroCenter, Oakland	April 13, 2011 May 11, 2011
SCS/RTP Housing Methodology Committee	10 a.m. Location: BCDC, 50 California St., 26th Floor, San Francisco	April 28, 2011 May 26, 2011
CWTP-TEP Public Workshops and Initial Vision Scenario Outreach	Location and times vary District 1 and 2 SCS Workshop Initial Vision Scenario Public Meeting	 May 14, 2011 May 19, 2011

Fiscal Impact
None.

Attachments
Attachment 10A: Summary of Next Quarter Countywide and Regional Planning Activities
Attachment 10B: CWTP-TEP-RTP-SCS Development Implementation Schedule
Attachment 10C: One Bay Area SCS Planning Process

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Attachment A: Summary of Next Quarter Countywide and Regional Planning Activities (April through June)

Countywide Planning Efforts

The three year CWTP-TEP schedule showing countywide and regional planning milestone schedules is found in Attachment 09B. Major milestone dates are presented at the end of this memo. In the April to June time period, the CWTP-TEP Committees will be focusing on:

- Coordinating with ABAG and local jurisdictions on defining the Detailed Land Use Scenarios for the Sustainable Communities Strategy and establishing how land use and the SCS will be addressed in the CWTP;
- Providing input on issues papers that discuss challenges and opportunities regarding transportation needs in Alameda County, including best practices and strategies for achieving Alameda County's vision beyond this CWTP update;
- Developing and implementing a Call for Projects and Committed Funding and Project Policy that is consistent and concurrent with MTC's call for projects and guidance;
- Developing countywide financial projections and opportunities that are consistent and concurrent with MTC's financial projections;
- Beginning the discussion on Transportation Expenditure Plan strategic parameters and funding scenarios;
- Identifying transportation investment packages for evaluation;
- Reviewing polling results for an initial read on voter perceptions;
- Continuing to conduct public outreach on transportation projects and programs and the Initial Vision Scenario and the Detailed Scenarios.

Regional Planning Efforts

Staff continues to coordinate the CWTP-TEP with planning efforts at the regional level including the Regional Transportation Plan (MTC), the Sustainable Communities Strategy (ABAG), Climate Change Bay Plan and amendments (San Francisco Bay Conservation and Development Commission (BCDC)) and CEQA Guidelines (Bay Area Air Quality Management District (BAAQMD)).

In the three month period for which this report covers, MTC and ABAG are focusing on

- Receiving input on the Initial SCS Vision Scenario released March 11, 2011;
- Developing the Detailed Scenarios based on that input;
- Developing draft financial projections;
- Adopting a committed transportation funding and project policy;
- Implementing a call for projects; and
- Assessing performance of the projects and beginning the performance assessment.

Staff will be coordinating with the regional agencies and providing feedback on these issues, through:

- Participating on the MTC/ABAG Regional Advisory Working Group (RAWG),
- Participating on regional Sub-committees (Equity sub-committee); and
- Assisting in public outreach.

Key Dates and Opportunities for Input

The key dates shown below are indications of where input and comment are desired. The major activities and dates are highlighted below by activity:

Sustainable Communities Strategy:
Presentation of SCS information to local jurisdictions: Completed
Initial Vision Scenario Released: March 11, 2011: Completed
Detailed SCS Scenarios Released: July 2011
Preferred SCS Scenario Released/Approved: December 2011/January 2012

RHNA
RHNA Process Begins: January 2011
Draft RHNA Methodology Released: September 2011
Draft RHNA Plan released: February 2012
Final RHNA Plan released/Adopted: July 2012/October 2012

RTP
Develop Financial Forecasts and Committed Funding Policy: March/April 2011
Call for RTP Transportation Projects: March 1 through April 29, 2011
Conduct Performance Assessment: March 2011 - September 2011
Transportation Policy Investment Dialogue: October 2011 – February 2012
Prepare SCS/RTP Plan: April 2012 – October 2012
Draft RTP/SCS for Released: November 2012
Prepare EIR: December 2012 – March 2013
Adopt SCS/RTP: April 2013

CWTP-TEP
Develop Land Use Scenarios: May 2011
Call for Projects: Concurrent with MTC
Outreach: January 2011 - June 2011
Draft List of CWTP screened Projects and Programs: July 2011
First Draft CWTP: September 2011
TEP Program and Project Packages: September 2011
Draft CWTP and TEP Released: January 2012
Outreach: January 2012 – June 2012
Adopt CWTP and TEP: July 2012
TEP Submitted for Ballot: August 2012

Countywide Transportation Plan and Transportation Expenditure Plan
Preliminary Development Implementation Schedule - Updated 12/22/10

Calendar Year 2010

Task	January	February	March	April	May	June	Meeting FY2010-2011 July	August	Sept	Oct	Nov	Dec
	2010							2010				
Alameda CTC Committee/Public Process												
Steering Committee			Establish Steering Committee	Working meeting to establish roles/ responsibilities, community working group	RFP feedback, tech working group	Update on Transportation/ Finance Issues	Approval of Community working group and steering committee next steps	No Meetings		Feedback from Tech, comm working groups	No Meetings	Expand vision and goals for County ?
Technical Advisory Working Group								No Meetings		Roles, resp, schedule, vision discussion/ feedback	No Meetings	Education: Trans statistics, issues, financials overview
Community Advisory Working Group								No Meetings		Roles, resp, schedule, vision discussion/ feedback	No Meetings	Education: Transportation statistics, issues, financials overview
Public Participation								No Meetings			Stakeholder outreach	
Agency Public Education and Outreach	Information about upcoming CWTP Update and reauthorization											
Alameda CTC Technical Work												
Technical Studies/RFP/Work timelines: All this work will be done in relation to SCS work at the regional level						Board authorization for release of RFPs	Pre-Bid meetings	Proposals reviewed	ALF/ALC approves shortlist and interview; Board approves top ranked, auth. to negotiate or NTP	Technical Work		
Polling												
Sustainable Communities Strategy/Regional Transportation Plan												
Regional Sustainable Community Strategy Development Process - Final RTP in April 2013			Local Land Use Update P2009 begins & PDA Assessment begins						Green House Gas Target approved by CARB.	Start Vision Scenario Discussions		
											Adopt methodology for Jobs/Housing Forecast (Statutory Target)	Projections 2011 Base Case
												Adopt Voluntary Performance Targets

Countywide Transportation Plan and Transportation Expenditure Plan
Preliminary Development Implementation Schedule - Updated 12/22/10

Calendar Year 2011

	2011						FY2011-2012	2011				
Task	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**Sept**	**Oct**	**Nov**	**Dec**
Alameda CTC Committee/Public Process												
Steering Committee	Adopt vision and goals; begin discussion on performance measures, key needs	Performance measures, costs guidelines, call for projects and prioritization process, approve polling questions, initial vision scenario discussion	Review workshop outcomes, transportation issue papers, programs, finalize performance measures, land use discussion, call for projects update	Outreach and call for projects update (draft list approval), project and program packaging, county land use, financials, committed projects	Outreach update, project and program screening outcomes, call for projects final list to MTC, TEP strategic parameters, land use rcmmdn	No Meetings.	Project evaluation outcomes; outline of CWTP; TEP Strategies for project and program selection	No Meetings	1st Draft CWTP, TEP potential project and program packages, outreach and polling discussion		Meeting moved to December due to holiday conflict	Review 2nd draft CWTP; 1st draft TEP
Technical Advisory Working Group	Comment on vision and goals; begin discussion on performance measures, key needs	Continue discussion on performance measures, costs guidelines, call for projects, briefing book, outreach	Review workshop outcomes, transportation issue papers, programs, finalize performance measures, land use discussion, call for projects update	Outreach and call for projects update, project and program packaging, county land use, financials, committed projects	Outreach update, project and program screening outcomes, call for projects update, TEP strategic parameters, land use	No Meetings.	Project evaluation outcomes; outline of CWTP; TEP Strategies for project and program selection	No Meetings	1st Draft CWTP, TEP potential project and program packages, outreach and polling discussion		Review 2nd draft CWTP, 1st draft TEP, poll results update	No Meetings
Community Advisory Working Group	Comment on vision and goals; begin discussion on performance measures, key needs	Continue discussion on performance measures, costs guidelines, call for projects, briefing book, outreach	Review workshop outcomes, transportation issue papers, programs, finalize performance measures, land use discussion, call for projects update	Outreach and call for projects update, project and program packaging, county land use, financials, committed projects	Outreach update, project and program screening outcomes, call for projects update, TEP strategic parameters, land use	No Meetings.	Project evaluation outcomes; outline of CWTP; TEP Strategies for project and program selection	No Meetings	1st Draft CWTP, TEP potential project and program packages, outreach and polling discussion		Review 2nd draft CWTP, 1st draft TEP, poll results update	No Meetings
Public Participation	Public Workshops in two areas of County: vision and needs; Central County Transportation Forum	Public Workshops in all areas of County: vision and needs		East County Transportation Forum			South County Transportation Forum	No Meetings		2nd round of public workshops in County: feedback on CWTP,TEP; North County Transportation Forum		No Meetings
Agency Public Education and Outreach	Ongoing Education and Outreach through November 2012						Ongoing Education and Outreach through November 2012					
Alameda CTC Technical Work												
Technical Studies/RFP/Work timelines: All this work will be done in relation to SCS work at the regional level	Feedback on Technical Work, Modified Vision, Preliminary projects lists					Work with feedback on CWTP and financial scenarios	Technical work refinement and development of Expenditure plan, 2nd draft CWTP					
Polling		**Conduct baseline poll**								Polling on possible Expenditure Plan projects & programs		
Sustainable Communities Strategy/Regional Tra												
Regional Sustainable Community Strategy Development Process - Final RTP in April 2013			Release Initial Vision Scenario	Detailed SCS Scenario Development			Release Detailed SCS Scenarios	Technical Analysis of SCS Scenarios; Adoption of Regional Housing Needs Allocation Methodology		SCS Scenario Results/and funding discussions		Release Preferred SCS Scenario
	Discuss Call for Projects		Call for Transportation Projects and Project Performance Assessment		Project Evaluation		Draft Regional Housing Needs Allocation Methodoligy					
	Develop Draft 25-year Transportation Financial Forecasts and Committed Transportation Funding Policy											

Countywide Transportation Plan and Transportation Expenditure Plan
Preliminary Development Implementation Schedule - Updated 12/22/10

Calendar Year 2012

	2012						FY2011-2012				
Task	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**Sept**	**Oct**	**November**
Alameda CTC Committee/Public Process											
Steering Committee	Full Draft TEP, Outcomes of outreach meetings	Finalize Plans	Meetings to be determined as needed			Adopt Draft Plans	Adopt Final Plans	Expenditure Plan on Ballot			VOTE: November 6, 2012
Technical Advisory Working Group	Full Draft TEP, Outcomes of outreach meetings	Finalize Plans	Meetings to be determined as needed								VOTE: November 6, 2012
Community Advisory Working Group	Full Draft TEP, Outcomes of outreach meetings	Finalize Plans	Meetings to be determined as needed								VOTE: November 6, 2012
Public Participation			Expenditure Plan City Council/BOS Adoption								VOTE: November 6, 2012
Agency Public Education and Outreach	Ongoing Education and Outreach Through November 2012 on this process and final plans						Ongoing Education and Outreach through November 2012 on this process and final plans				
Alameda CTC Technical Work											
Technical Studies/RFP/Work timelines: All this work will be done in relation to SCS work at the regional level	Finalize Plans										
Polling					Potential Go/No Go Poll for Expenditure Plan						
Sustainable Communities Strategy/Regional Tra											
Regional Sustainable Community Strategy Development Process - Final RTP in April 2013	Approval of Preferred SCS, Release of Regional Housing Needs Allocation Plan		Begin RTP Technical Analysis & Document Preparation	Prepare SCS/RTP Plan							Release Draft SCS/RTP for review

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To: MTC Planning Committee, ABAG Administrative Committee

Date: March 4, 2011

Fr: ABAG and MTC Executive Directors

Re: Initial Vision Scenario

The Initial Vision Scenario starts the conversation on the Sustainable Communities Strategy among local jurisdictions, regional agencies, and other interested stakeholders. This scenario proposes a future development pattern that depends upon a strong economy, sufficient funding for affordable housing and supportive public infrastructure and transportation investments. The proposed distribution of housing focuses on areas close to transit that have been identified by local jurisdictions. This focused growth pattern preserves open space and agricultural land in the Bay Area.

This important step in the Sustainable Communities Strategy process is designed to solicit comment primarily from local elected officials and their constituents. This input will inform the development of the detailed scenarios to be drafted by the summer of 2011.

Through integrated regional land use, housing, and transportation investments, the Initial Vision Scenario proposes a sustainable pattern of regional growth that maximizes the reduction of greenhouse gas emissions while accommodating the entire region's housing need through 2035. In this scenario, which is unconstrained in terms of financial and other resources to support housing growth, Priority Development Areas (PDAs), Infill Opportunity Areas (areas not designated as PDAs, but that share many of the same attributes), and transit corridors accommodate a major share of housing growth. The development of the transportation network in the region by 2035 is aligned with those areas. As such the transportation network for the Initial Vision Scenario is based on Transportation 2035, but also includes improved transit headways to serve increased growth in PDAs and Infill Opportunity Areas. The attached maps show the Priority Development and Infill Opportunity Areas for the region and for each county.

The Initial Vision Scenario relies on input from local jurisdictions and the characteristics of the places they identified for the distribution of growth. The Initial Vision Scenario differs from previous forecasts (Projections 2007, 2009, 2011) in identifying places to accommodate an additional demand for 267,000 households beyond Projections 2011 so that the current phenomenon of "in-commuting" from adjoining regions does not worsen in the future. These prior forecasts were derived from Census Tracts. This scenario was constructed utilizing a detailed place-based approach, meaning that growth was distributed in specific neighborhoods or geographic locations based on their characteristics. Between November 2010 and January 2011, MTC and ABAG received input from local planners on the capacity for sustainable growth in PDAs and new Infill Opportunity Areas to supplement the information gathered through the PDA Assessment. To the extent possible, MTC and ABAG staff used local estimates of

growth to meet the housing target. However, this scenario includes additional housing units in some PDAs or Infill Opportunity Areas beyond the number submitted by local jurisdictions.

The Initial Vision Scenario assumes a growth of 903,000 households up to 3.6 million, and 1.2 million jobs up to 4.5 million by 2035 compared to today. About 95 percent of new households are accommodated within the urban footprint. PDAs and Infill Opportunity Areas include about two thirds of household growth in the region. At the county level, San Francisco, Santa Clara, Alameda and Contra Costa are projected to absorb a major share of the total increase in the number of households, at nearly 80%. They also absorb the majority of the region's job growth, also nearly 80%. It should be noted that the Initial Vision Scenario does not substantially reallocate jobs to PDAs and assumes continued job growth in employment campuses dispersed throughout the region.

Major cities take the lead in the projected growth of housing in the region. San Jose, San Francisco, and Oakland are projected to produce one third of the housing needed by 2035 by building upon their regional centers and intensifying transit corridor development. At the same time, medium-sized cities that range from city centers to transit towns (Fremont, Santa Rosa, Berkeley, Hayward, Richmond, Concord, and Santa Clara) would accommodate 17 percent of the regional total.

When assessed against the performance targets adopted by the regional agencies, the Initial Vision Scenario reflects significant progress towards the sustainability and equity targets of the region. The Initial Vision Scenario meets the regional housing target and achieves an incremental improvement over our current regional plans with the reduction of greenhouse gas emissions (GHG) per capita by 12 percent in 2035. Thus, it falls short of the 15% GHG per capita reduction target in 2035 established by California Air Resources Board. As expected, we will need to evaluate other infrastructure and transportation demand management strategies in order for the region to achieve the GHG target.

The performance of the Initial Vision Scenario on healthy and safe communities, equitable access, and transportation system effectiveness targets is mixed, indicating some improvements over previous trends and previous forecasts. These results point to the need for additional policies and strategies to meet the regional performance targets. In particular, strategies that will encourage more job growth in PDAs and near transit nodes would substantially improve the performance of the targets, especially the greenhouse gas emissions target. These strategies will be the subject of the upcoming detailed scenarios analysis.

The complete report on the Initial Vision Scenario with detailed analysis, data, and maps will be released for public review and presented at your March 11, 2011 joint meeting.

Ezra Rapport

Steve Heminger

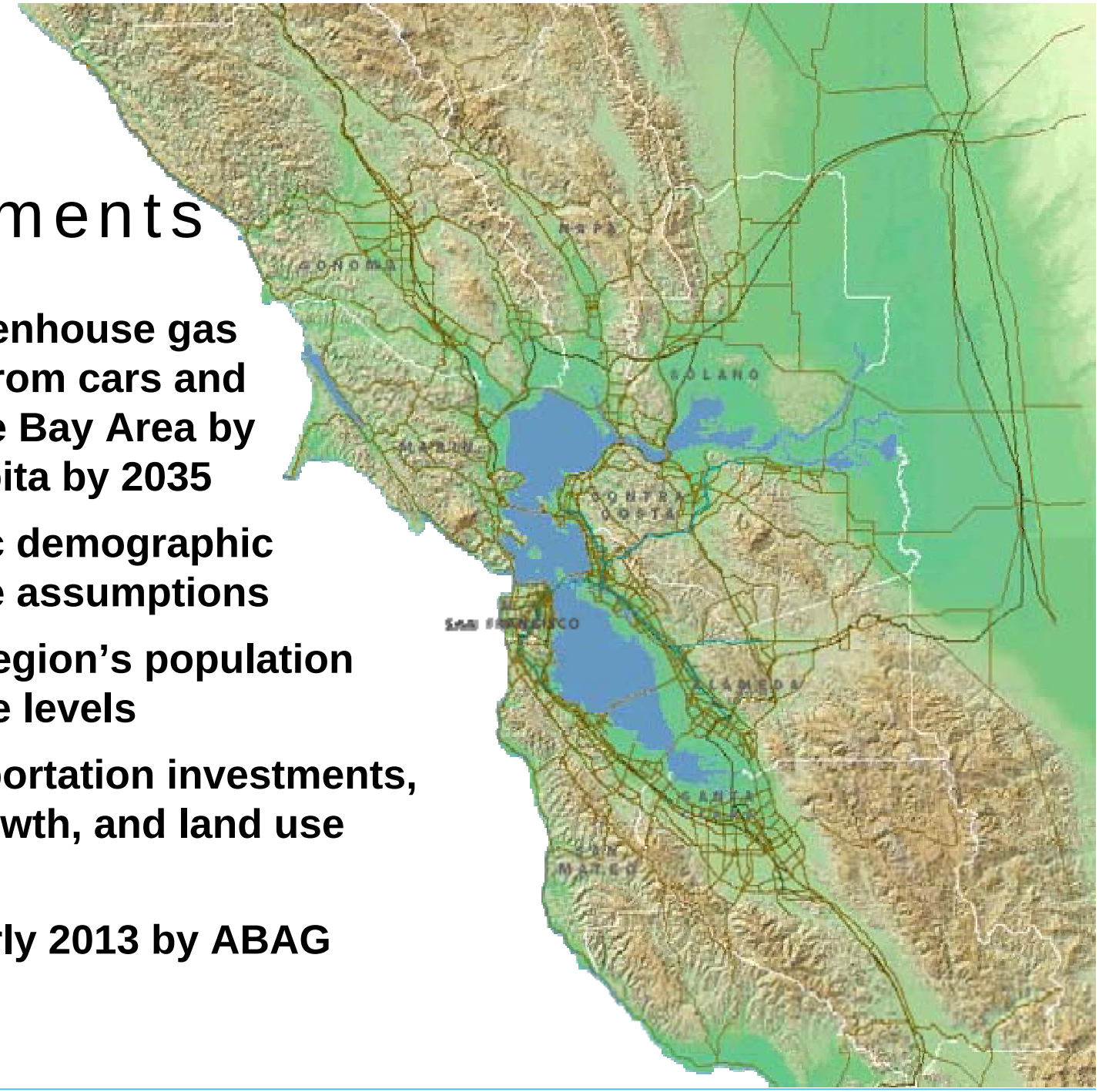
J:\COMMITTE\Planning Committee\2011\March11\Initial Vision Scenario - Memo Final 2-28-11 dkv1.doc

Current Regional Plans & Initial Vision Scenario

Partnership Technical Advisory Committee

March 21, 2011

SB 375 Requirements



- **Reduce greenhouse gas emissions from cars and trucks in the Bay Area by 15% per capita by 2035**
- **Use realistic demographic and revenue assumptions**
- **House the region's population at all income levels**
- **Align transportation investments, housing growth, and land use planning**
- **Adopt in early 2013 by ABAG and MTC**

Plan BayArea

Current Regional Plans

- **Updates Projections 2009 forecast**
- **Starting point for analysis; basis for creation of the Initial Vision Scenario**
- **Reflects current planning and assumptions**
- **Not designed to meet the targets**
- **Won't become the Sustainable Communities Strategy**

Initial Vision Scenario

- **Starting point to develop the Sustainable Communities Strategy (SCS)**
- **Identifies places for sustainable growth**
- **Accommodates regional housing need**
- **Strengthens existing communities**
- **Utilizes existing transit infrastructure**
- **Assumes unconstrained resources**
  - Affordable housing
  - Neighborhood infrastructure
  - Transit and other investments

Initial Vision Scenario:
How was it developed?

- **Housing Growth Distribution Criteria**
  - Locally identified growth in Priority Development Areas or new Growth Opportunity Areas
  - Additional housing units based upon a jurisdiction's selected Place Type for a PDA or Growth Area
  - Greater housing density proximate to significant transit investments (Existing Transit or Resolution 3434 Transit Expansions)
  - Major mixed-use corridors with high potential for transit-served, infill development

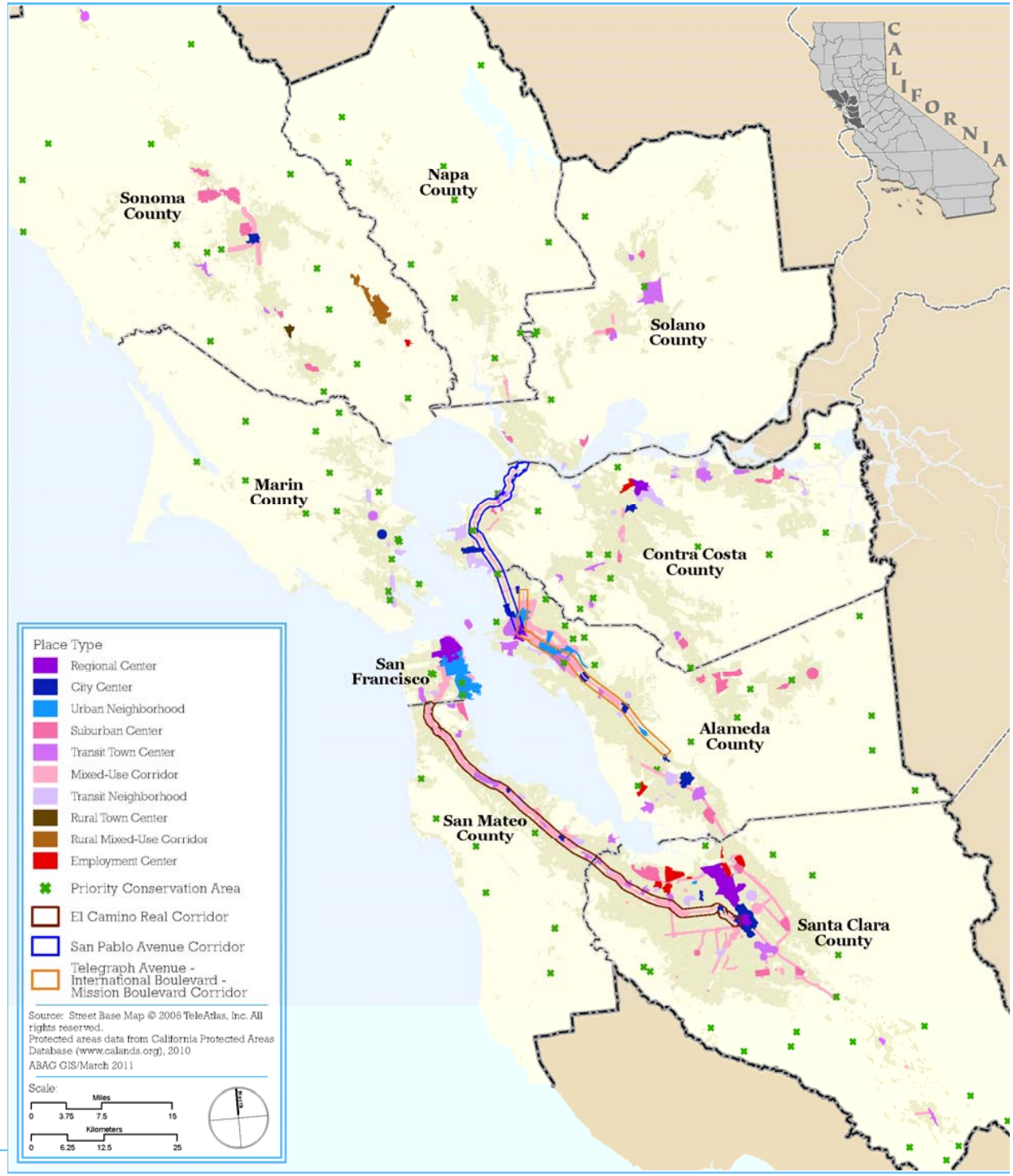
Regional Growth Overview

Scenario	Households	Population	Employed Residents	Jobs
2010	2,669,800	7,348,300	3,152,400	3,271,300
2035 Current Regional Plans	*+633,500*	*+1,717,900*	*+881,600*	*+1,129,100*
2035 Growth Increment	*+269,000*	*+363,700*	*+165,000*	*+92,900*
2035 Initial Vision Scenario	*+902,500*	*+2,081,600*	*+1,046,600*	*+1,222,000*
Total 2035 Initial Vision Scenario	3,572,300	9,429,900	4,199,000	4,493,300

Housing Distribution

70% of growth in Priority Development Areas and Growth Opportunity Areas

97% of growth within the existing urban footprint



BayArea Plan

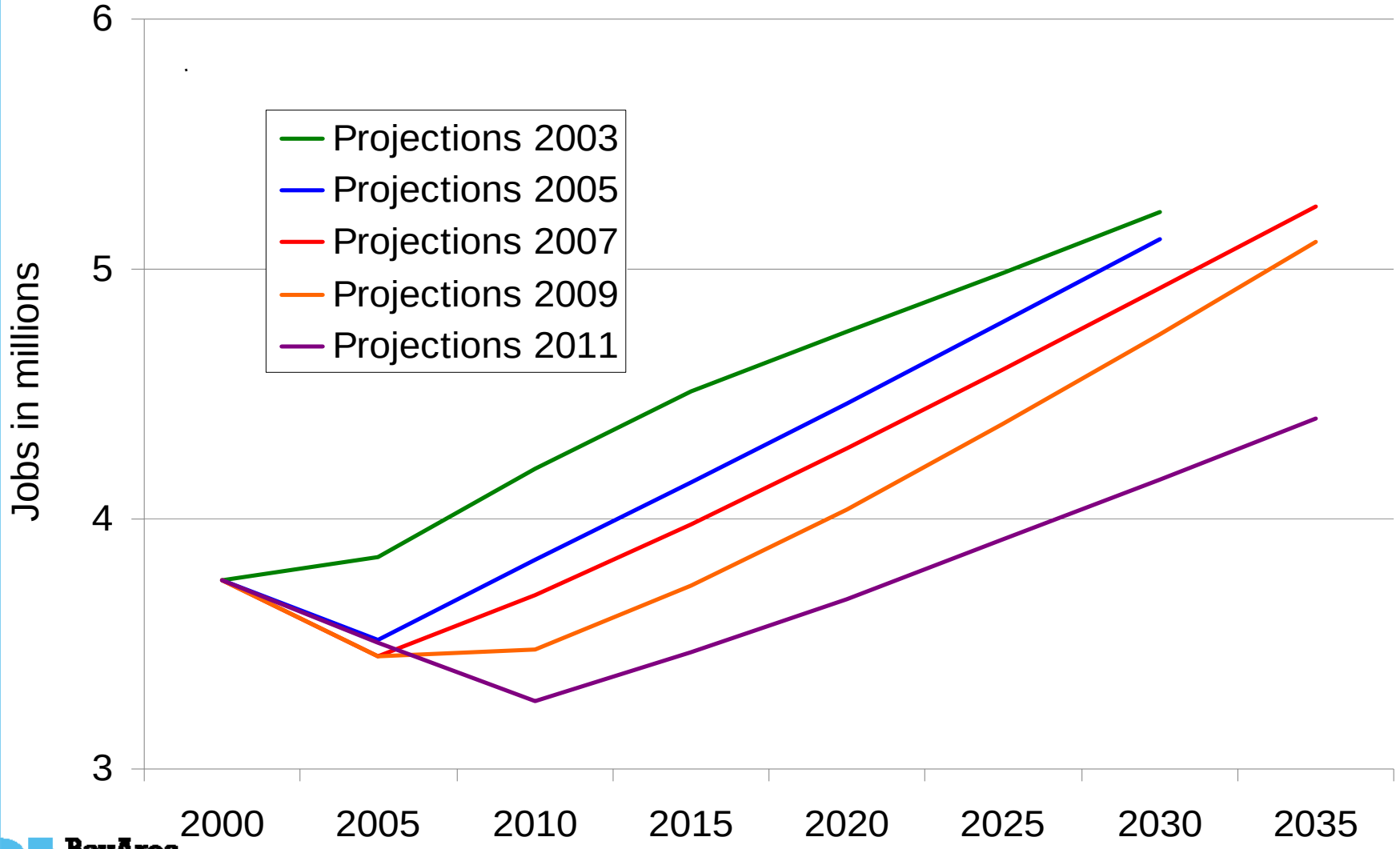
Initial Vision Scenario:
Housing Distribution

COUNTY	2010 Households	2035 Households	2010-2035 Growth	2010-2035 Growth Rate
Alameda	557,700	770,400	212,700	38%
Contra Costa	392,700	546,700	154,000	39%
Marin	106,400	117,100	10,700	10%
Napa	51,300	56,100	4,800	9%
San Francisco	346,700	436,800	90,100	26%
San Mateo	264,500	358,300	93,800	36%
Santa Clara	613,900	867,800	253,900	41%
Solano	148,200	187,800	39,600	27%
Sonoma	188,400	231,400	42,900	23%
TOTAL	**2,669,800**	**3,572,300**	**902,600**	**34%**

Initial Vision Scenario:
Growth Pattern

- Concentrates 70% of growth in PDAs, Growth Opportunity Areas; about 3% of region's land area
- Limits greenfield development – 97% of growth in existing developed areas
- Reduces development pressure on Priority Conservation Areas
- Preserves character of existing residential neighborhoods
- Utilizes existing transit; strengthens planned transit
- Provides for rapid growth in senior population
- Leverages /improves existing water, sewer infrastructure
- Lower per capita water use to growth location, development type

Current Regional Plans:
Regional Job Projections



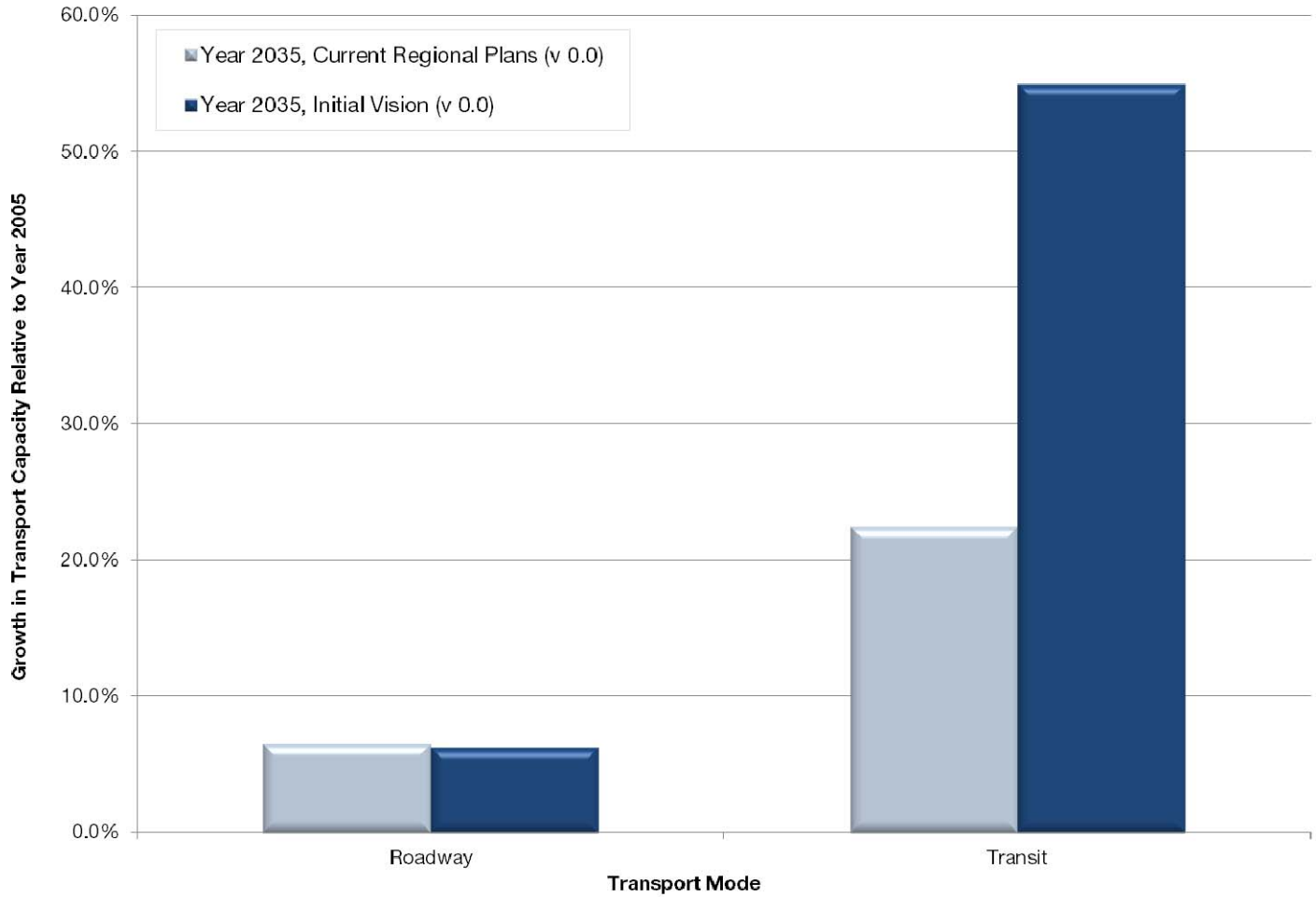
Employment Distribution

COUNTY	2010 Jobs	2035 Jobs	2010-2035 Growth	2010-2035 Growth Rate
Alameda	675,600	925,400	249,900	37%
Contra Costa	345,900	479,400	133,400	39%
Marin	129,700	151,100	21,400	17%
Napa	70,100	88,800	18,700	27%
San Francisco	544,800	713,700	168,900	31%
San Mateo	330,100	452,200	122,100	37%
Santa Clara	858,400	1,238,400	380,000	44%
Solano	126,300	176,700	50,400	40%
Sonoma	190,400	267,600	77,200	41%
TOTAL	**3,271,300**	**4,493,300**	**1,222,000**	**37%**

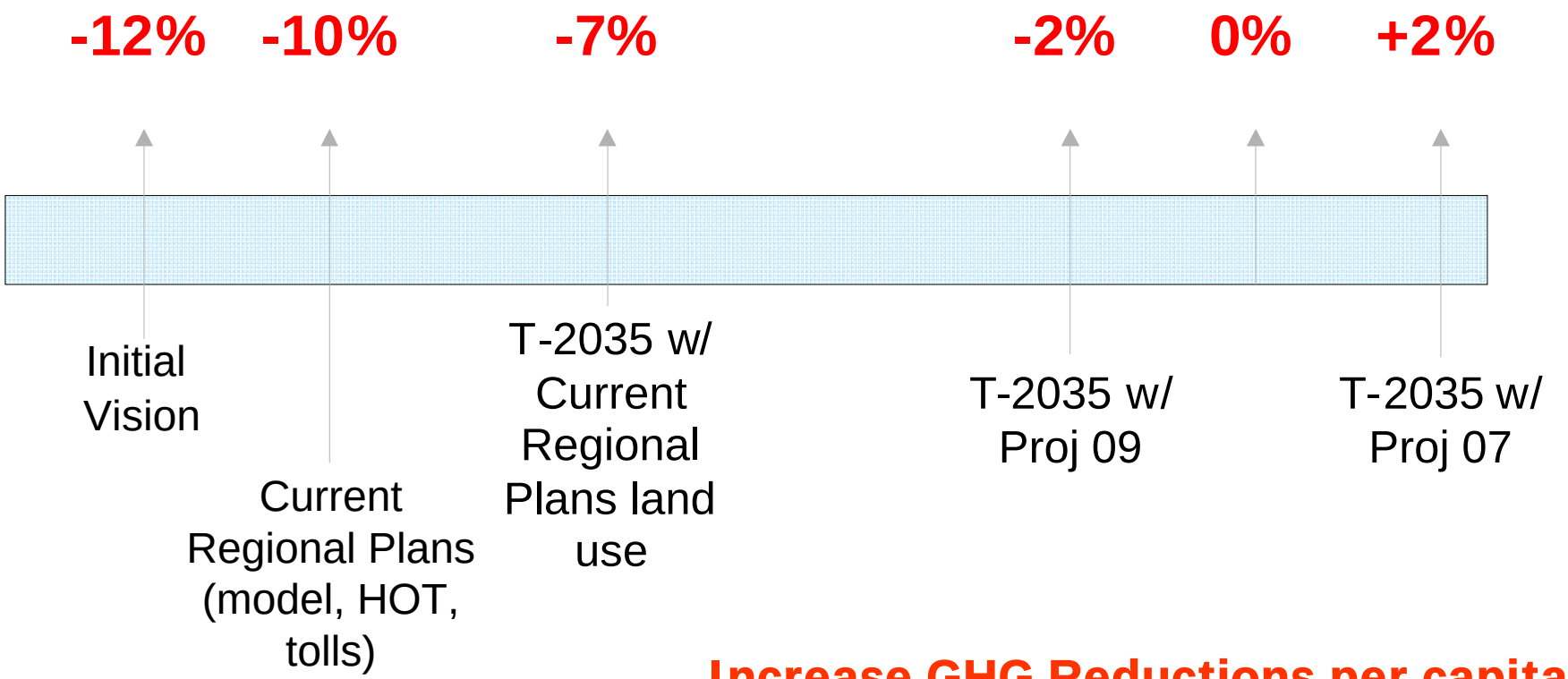
Initial Vision Scenario: Transportation Network

- **Transportation 2035 is base network with Express Lane Backbone system**
- **Increased frequencies of existing transit services adjacent to Initial Vision growth areas**
- **Highlights include …**
  - Improved headways on over 70 local bus routes and several express bus routes
  - Improved headways on BART, eBART, Caltrain, Muni Metro, VTA Light Rail, and ACE
  - 60 miles of dedicated bus lanes in San Francisco and Santa Clara counties
- **Increase in passenger seat miles of**
  - 55 percent relative to 2005
  - 25 percent relative to Current Regional Plans in 2035

Growth in Transportation Capacity From Year 2005



GHG Emission Reduction Estimates
(% per capita - 2005 vs. 2035)



GHG Targets

(% per capita reduction compared to 2005)

Horizon Year	ARB Target	Current Regional Plans	Initial Vision Scenario
2020	-7%	-9%	-11%
2035	-15%	-10%	-12%

Target Results Preview

Initial Vision Scenario does two things:

1. **Creates more housing and more affordable housing**

   This is all "good" news for the targets:

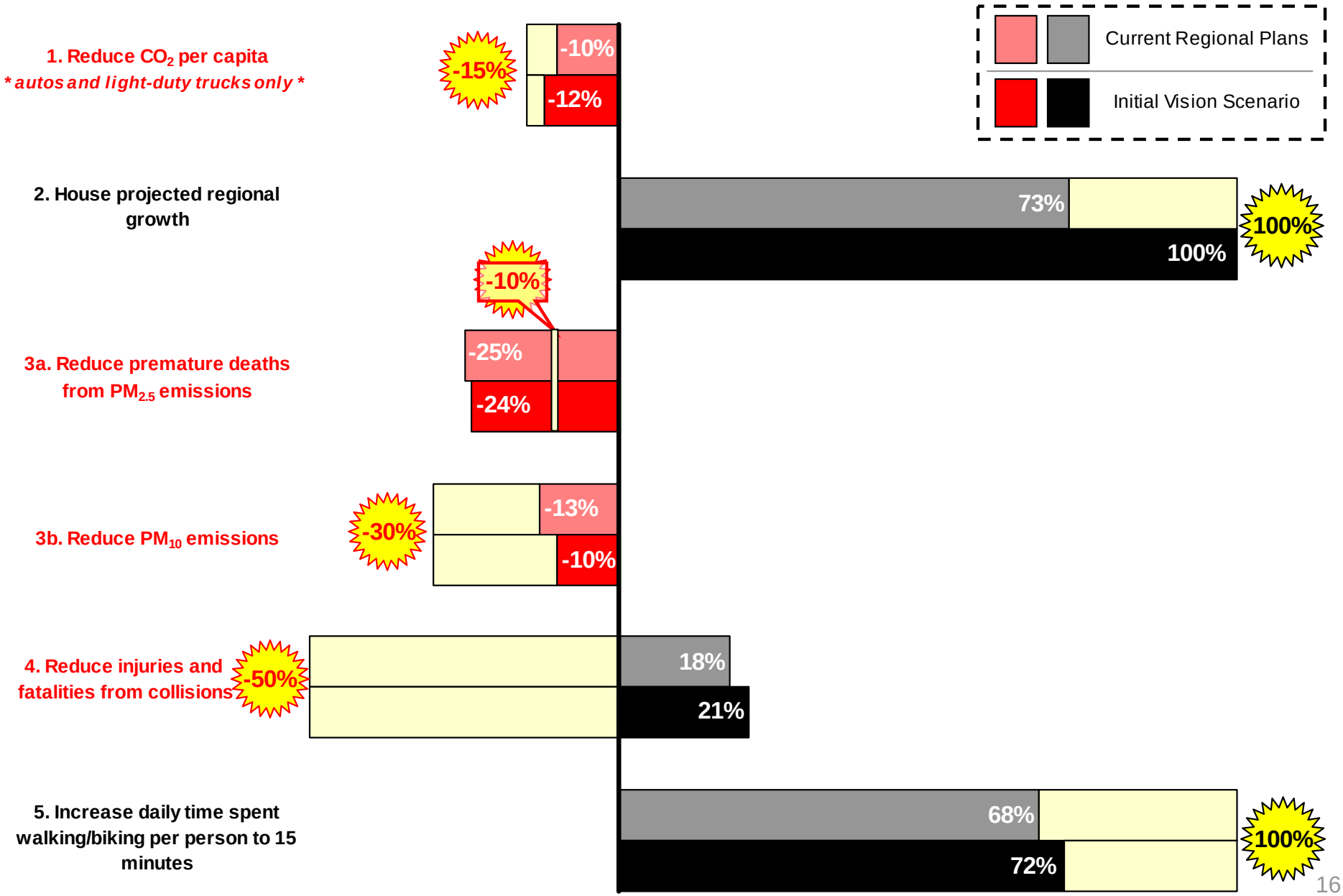
   - Meets the housing target
   - Improves jobs-housing-transit alignment
   - Reduces housing costs for low-income households

2. **Brings more people into the region**

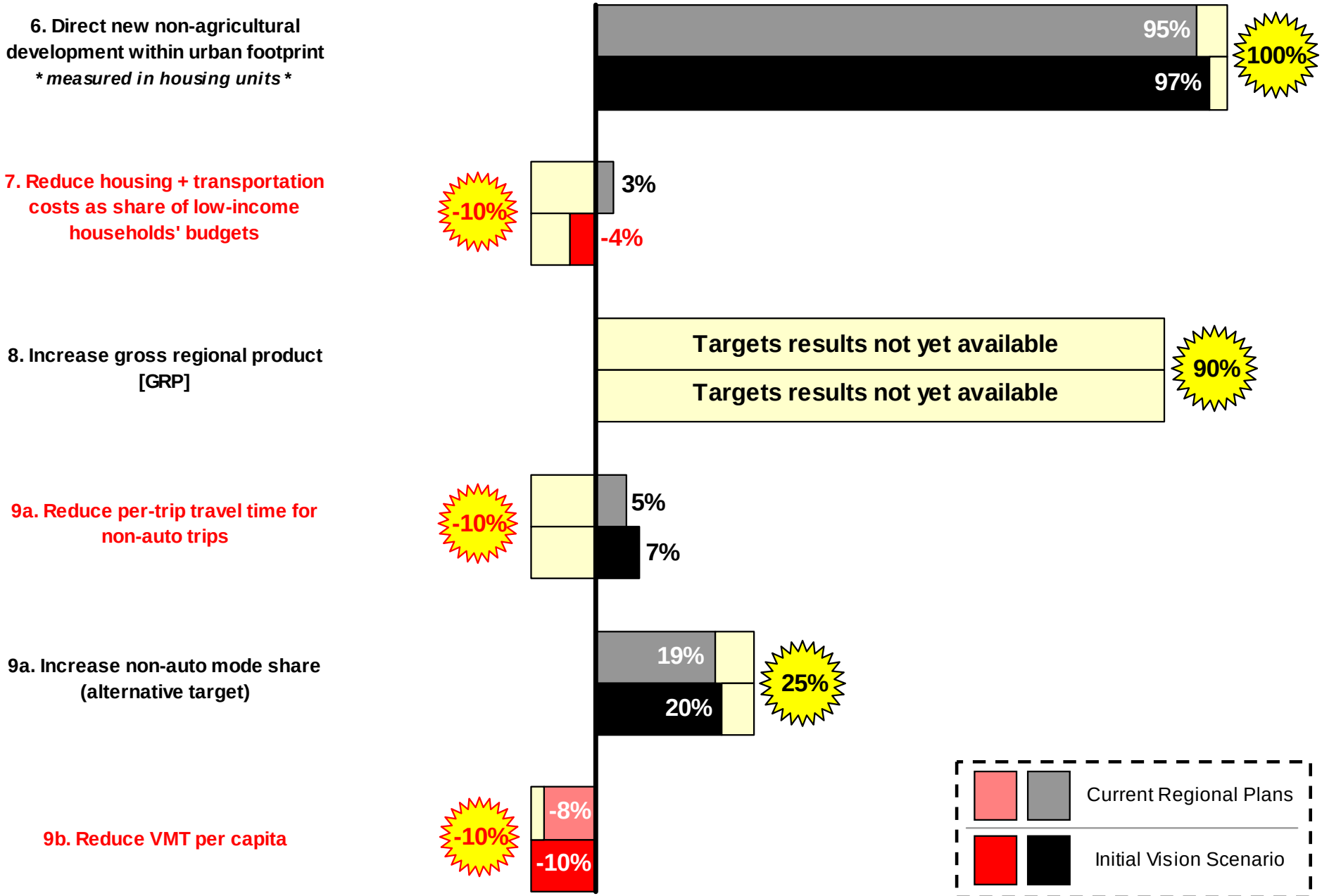
   This is both "good" and "bad" for the targets:

   - New residents ride transit, walk and bike more than existing residents and GHG/capita and VMT/capita go down
   - But they still drive. As a result, total VMT goes up, which increases collisions and particulate emissions from autos

Target Results (1)

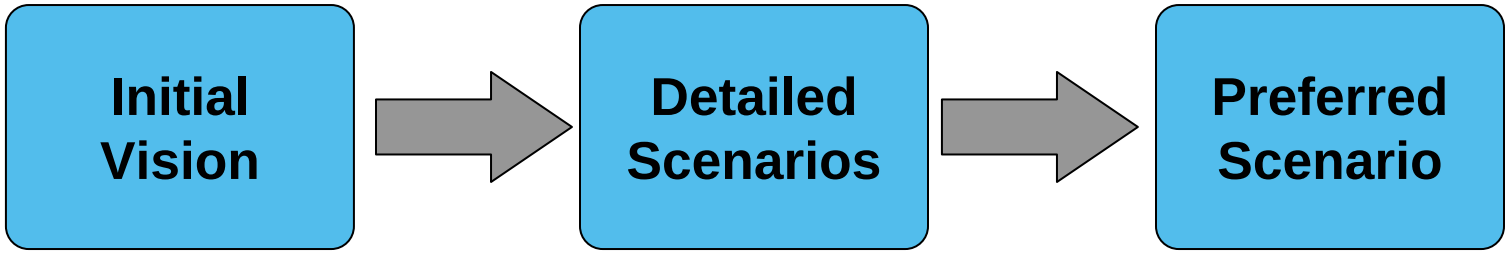


Target Results (2)



Initial Vision Equity Analysis: Approach

- **Three-phase Equity Analysis approach outlined in Public Participation Plan**



- **Initial Vision Scenario Approach**
  - Break out targets by income level as preliminary equity indicators
- **Reviewed approach and results with RTP/SCS Equity Working Group**
  - Interested members of Regional Advisory Working Group and MTC's Policy Advisory Council Equity & Access Subcommittee

Do Low-Income Households Have Similar or Better Results Than Higher-Income Households for the Initial Vision Scenario?

		Current Conditions	2035 Initial Vision Scenario
Climate Protection	*Per-capita VMT*	◒	◒
Adequate Housing	*Adequate housing*	○	◒
Healthy and Safe Communities	*Active travel*	●	●
Equitable Access	*Affordability*	○	◒
Economic Vitality	*Travel time to work/school*	●	●
	Travel cost	◒	●
Transportation System Effectiveness	*Non-auto travel time*	●	●

KEY

○ = Worse results

◒ = Result mixed, or by assumption

● = Similar or better results

Conclusions

- **The Initial Vision Scenario reflects additional progress towards the sustainability of the region**
- **The prolonged Great Recession is having profound impacts on projected job growth**
- **Bay Area communities can accommodate housing in sustainable locations given adequate resources and transit**
- **While we meet the 2020 GHG target, we still don't meet the 2035 GHG target and some other targets**
- **Achieving the targets still requires additional land-use, transportation and non-infrastructure strategies**
- **Employment location, and its relationship to housing and transit, is a key issue requiring further analysis**

Next Steps

Public Involvement (mid-March – July 2011)

- Elected Officials Briefings
- Planner-to-Planner Discussions
- Countywide Workshops
- Community-based Engagement in Communities of Concern
- Telephone Poll & Focus Groups
- Web-based Survey & Interactive Visualization Tools

Detailed SCS Scenarios Definitions (April – December 2011)

- Seek input on a range of detailed alternatives to be tested
- Define draft alternatives that represent varying land-use/transportation strategies that will help us achieve greenhouse gas and other targets
- Finalize alternative definitions in July 2011
- Evaluate alternatives and produce results by December 2011
- Identify preferred scenario by January 2012

Next Steps (continued)

Additional Analysis (starting in April 2011)

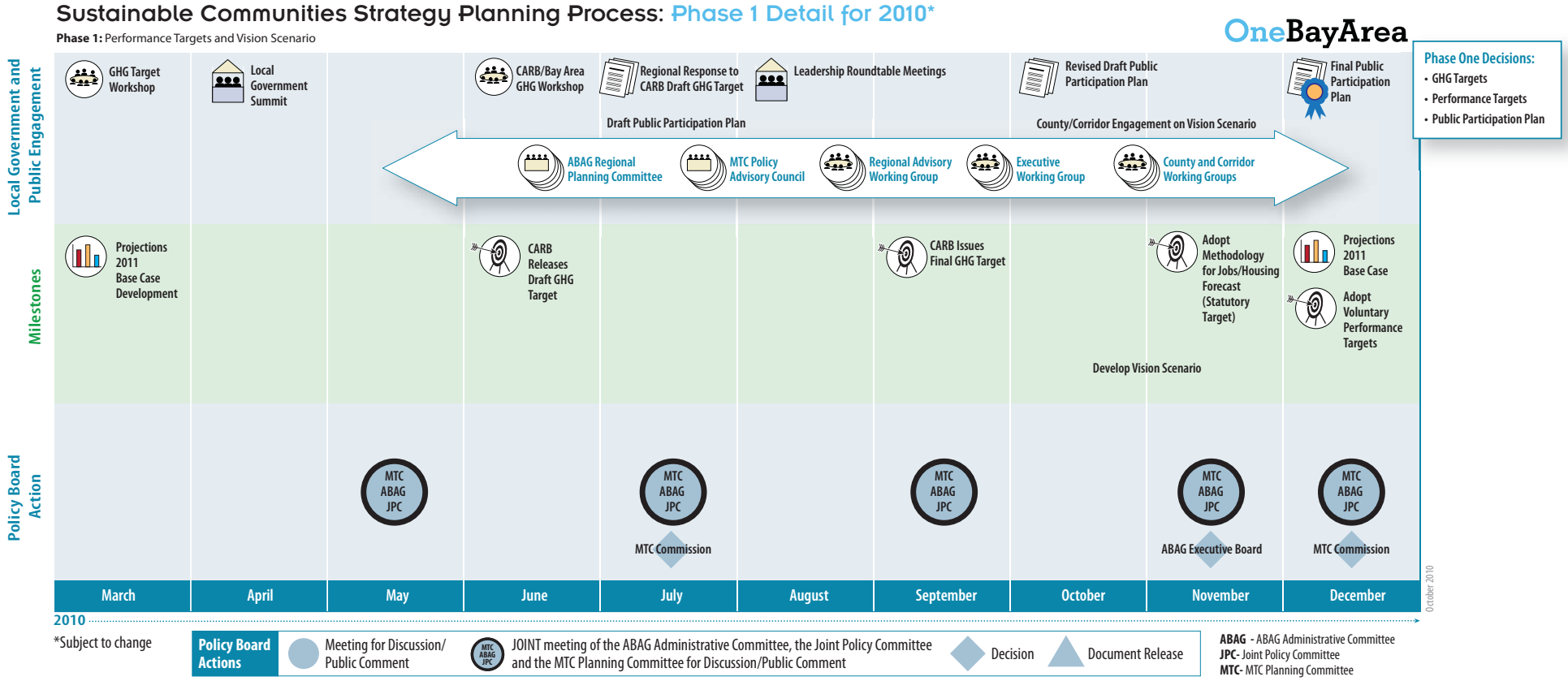
- Employment distribution across region
- Housing distribution by economic segments
- Equity analysis

Transportation Investment Strategy (starting in October 2011)

- Discuss transportation policies and investment strategies

Regional Housing Needs Allocation (RHNA) (underway)

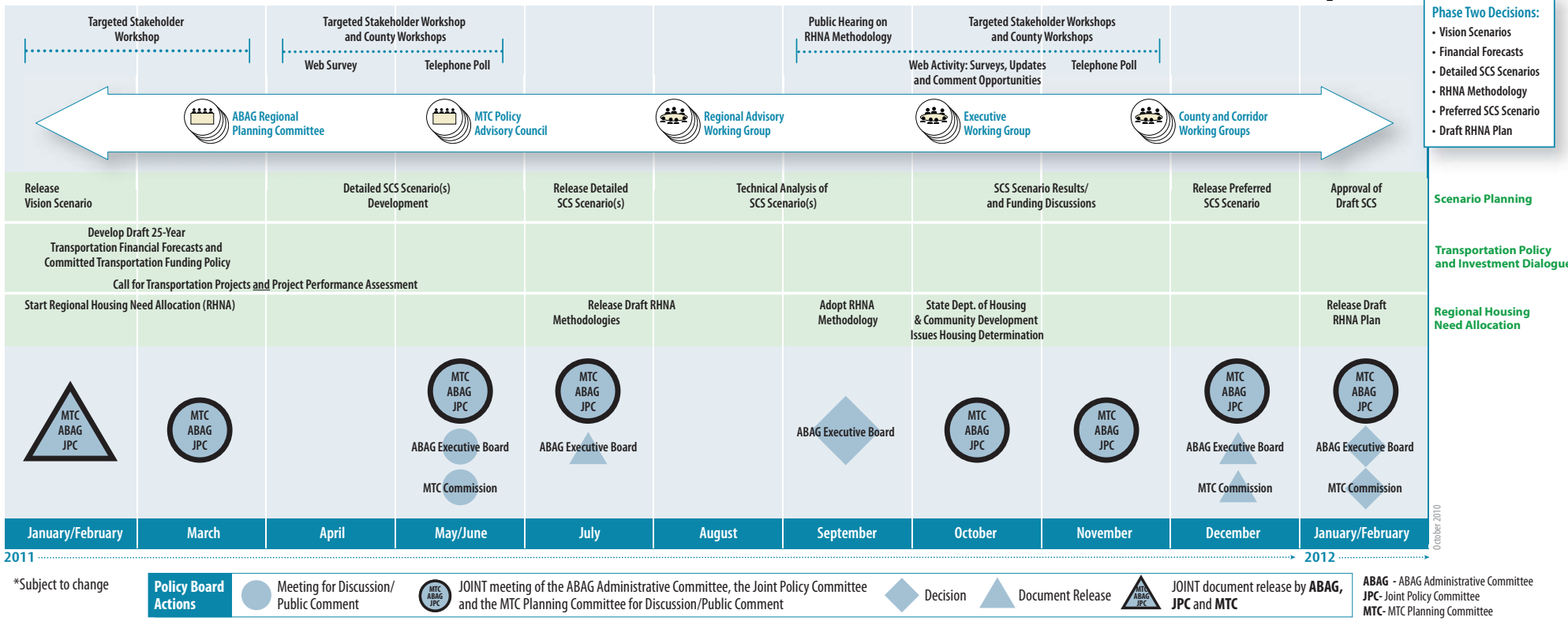
- Release Draft RHNA Methodology in July 2011
- Adopt Final RHNA Methodology in September 2011
- State issues Bay Area housing needs determination in October 2011
- Release Draft RHNA Plan in January 2012
- Adopt Final RHNA Plan in September 2012


Sustainable Communities Strategy Planning Process: Phase 1 Detail for 2010*
Phase 1: Performance Targets and Vision Scenario
OneBayArea
Local Government and Public Engagement
Milestones
Policy Board Action
GHG Target Workshop
Local Government Summit
CARB/Bay Area GHG Workshop
Regional Response to CARB Draft GHG Target
Leadership Roundtable Meetings
Revised Draft Public Participation Plan
Final Public Participation Plan
Draft Public Participation Plan
County/Corridor Engagement on Vision Scenario
ABAG Regional Planning Committee
MTC Policy Advisory Council
Regional Advisory Working Group
Executive Working Group
County and Corridor Working Groups
Projections 2011 Base Case Development
CARB Releases Draft GHG Target
CARB Issues Final GHG Target
Adopt Methodology for Jobs/Housing Forecast (Statutory Target)
Projections 2011 Base Case
Adopt Voluntary Performance Targets
Develop Vision Scenario
MTC ABAG JPC
MTC Commission
ABAG Executive Board
Phase One Decisions:
• GHG Targets
• Performance Targets
• Public Participation Plan
March
April
May
June
July
August
September
October
November
December
2010
October 2010
*Subject to change
Policy Board Actions
Meeting for Discussion/ Public Comment
JOINT meeting of the ABAG Administrative Committee, the Joint Policy Committee and the MTC Planning Committee for Discussion/Public Comment
Decision
Document Release
ABAG - ABAG Administrative Committee
JPC- Joint Policy Committee
MTC- MTC Planning Committee

Sustainable Communities Strategy Planning Process: Phase 2 Detail for 2011*

Phase 2: Scenario Planning, Transportation Policy & Investment Dialogue, and Regional Housing Need Allocation

OneBayArea



*Subject to change

Policy Board Actions

- Meeting for Discussion/ Public Comment
- JOINT meeting of the ABAG Administrative Committee, the Joint Policy Committee and the MTC Planning Committee for Discussion/Public Comment
- Decision
- Document Release
- JOINT document release by **ABAG, JPC** and **MTC**

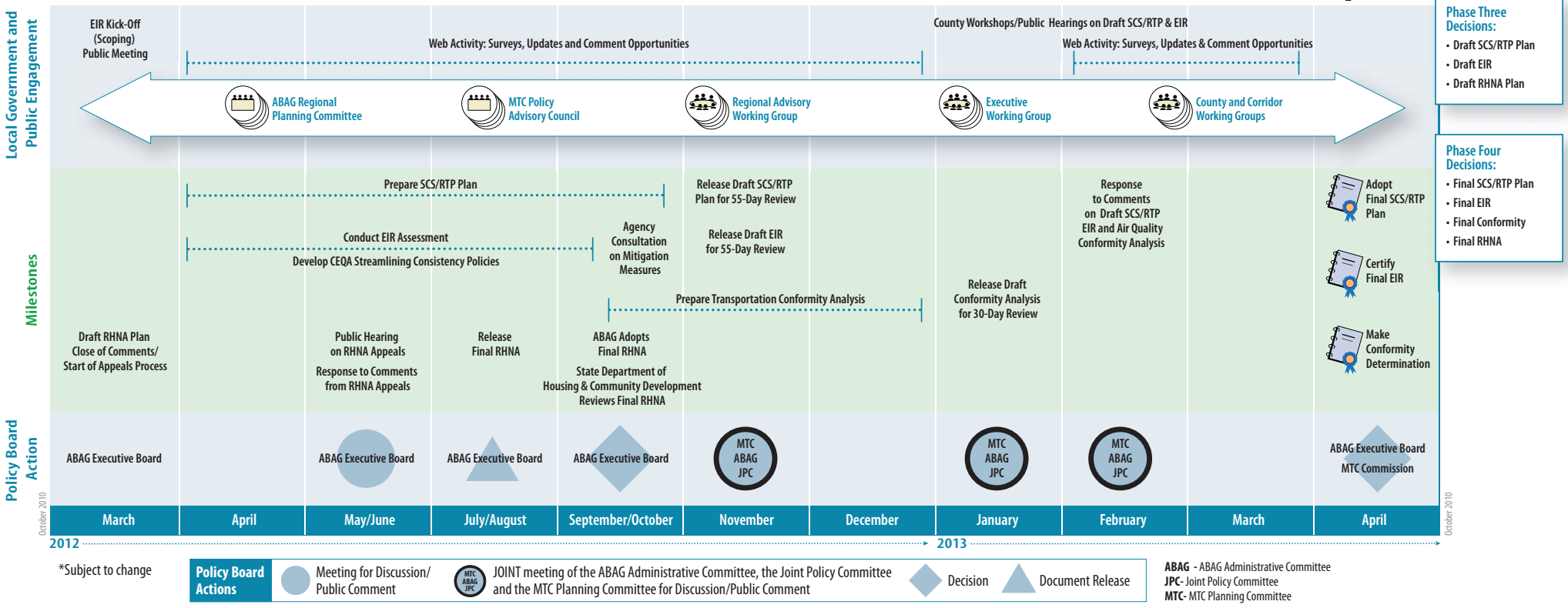
ABAG - ABAG Administrative Committee
JPC- Joint Policy Committee
MTC- MTC Planning Committee

Sustainable Communities Strategy Planning Process: Phases 3 & 4 Details for 2012–2013*

OneBayArea

Phase 3: Housing Need Allocation, Environmental/Technical Analyses and Final Plans

Phase 4: Plan Adoption



Phase Three Decisions:
- Draft SCS/RTP Plan
- Draft EIR
- Draft RHNA Plan

Phase Four Decisions:
- Final SCS/RTP Plan
- Final EIR
- Final Conformity
- Final RHNA

*Subject to change

Policy Board Actions

Meeting for Discussion/ Public Comment

JOINT meeting of the ABAG Administrative Committee, the Joint Policy Committee and the MTC Planning Committee for Discussion/Public Comment

Decision

Document Release

ABAG - ABAG Administrative Committee
JPC- Joint Policy Committee
MTC- MTC Planning Committee

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Upcoming Advisory and Steering Committee Meetings Schedule

ALL MEETINGS at Alameda CTC, 1333 Broadway, Suite 300, Oakland, CA

	Meeting Date/Function	Outcomes	Agenda Items
1	CAWG February 3, 2011 2:30 p.m. – 5 p.m. TAWG February 10, 2011 1:30 – 4 p.m. Steering Committee February 24, 2011 12 – 2 p.m.	• Receive an update on Regional and Countywide Transportation Plan and Transportation Expenditure Plan (CWTP-TEP) activities and processes • Receive overview and schedule of Initial Vision Scenario • Review the Metropolitan Transportation Commission (MTC) draft policy on committed funding and projects and call for projects • Receive an outreach status update and approve the polling questions • Discuss performance measures	• Update on CWTP-TEP Activities Since Last Meeting • Update on Countywide and Regional Processes • Discuss the initial vision scenario and approach for incorporating SCS in the CWTP • Review and comment on MTC's Draft Policy on Committed Funding and Projects, Approve Alameda CTC Call for Projects process and approve prioritization policy • Outreach status update and *Steering Committee approval of polling questions* • Continued discussion and refinement of Performance Measures • Update: Steering Committee, CAWG, TAWG, and Other Items/Next Steps
2	CAWG March 3, 2011 2:30 p.m. – 5 p.m. TAWG March 10, 2011 1:30 – 4 p.m. Special TAWG March 18, 2011 11:30 a.m. to 1:30 p.m. Steering Committee March 24, 2011 11 a.m. – 1 p.m.	• Receive an update on outreach • Adopt Final Performance Measures • Initiate discussion of programs • Receive update on MTC Call for Projects and Alameda County approach • Comment on transportation issue papers subjects • Provide input to land use and modeling and Initial Vision Scenario (TAWG) • Update on Initial Vision Scenario and Priority Conservation Areas (TAWG) • Receive update and finalize Briefing Book • Discuss committed funding policy	• Update on Outreach: Workshop, Polling Update, Web Survey • *Approve Final Performance Measures* & link to RTP • Discussion of Programs • Overview of MTC Call for Projects and Alameda County Process • Discussion of Transportation Issue Papers & Best Practices Presentation • Discussion of Land use scenarios and modeling processes (TAWG) • Update on regional processes: Initial Vision Scenario and Priority Conservation Areas (ABAG to present at TAWG) • Finalize Briefing Book • TAWG/CAWG/SC update
3	CAWG April 7, 2011 2:30 p.m. – 5 p.m.	• Receive update on outreach activities • Provide feedback on policy for projects and programs packaging	• Update on Workshop, Poll Results Presentation, Web Survey • Discuss Packaging of Projects and Program for CWTP • Discussion of Alameda County land use

	Meeting Date/Function	Outcomes	Agenda Items
	TAWG April 14, 2011 1:30 – 4 p.m. Steering Committee April 28, 2011 12 – 2 p.m.	• Provide comments on Alameda County land use scenarios • Receive update on Call for Projects outcomes • Comment on refined Transportation Issue Papers • Comment on committed projects and funding policy and Initial Vision Scenario	scenarios • Discuss Call for Projects results*: Draft project list to be approved by SC to send to MTC* • Transportation Issue Papers & Best Practices Presentation • Update on regional process: discussion of policy on committed projects, refinement of Initial Vision Scenario • TAWG/CAWG/SC update
4	CAWG May 5, 2011 2:30 p.m. – 5 p.m. TAWG May 12, 2011 1:30 – 4 p.m. Steering Committee May 26, 2011 12 – 2 p.m.	• Review outcomes of initial workshops and other outreach • Review outcomes of call for projects, initial screening and next steps • Discuss TEP Strategic Parameters & alternative funding scenarios • Recommend land use scenario for CWTP and provide additional comments on Initial Vision Scenario • Receive information on Financial projections and opportunities • Introduction to modeling (CAWG) • Title VI update	• Summary of workshop results and other outcomes • Discussion of Financials for CWTP and TEP • Outcomes of project call and project screening- Present screened list of projects and programs. *Steering Committee recommends final project and program list to full Alameda CTC commission to approve and submit to MTC.* • Additional Analysis and Packaging of Projects for CWTP and Scoring and Screening for TEP • TEP Strategic Parameters- duration, potential funding amounts, selection process • Update on regional processes: Focus on Financial Projections, Initial Vision Scenario: *Steering Committee recommendation to ABAG on land use (for both a refined IVS and other potential aggressive options)* • Introduction to modeling (CAWG) • Title VI update • TAWG/CAWG/SC update
	No June Meeting		
5	CAWG July 7, 2011 2:30 p.m. – 5 p.m. TAWG July 14, 2011 1:30 – 4 p.m. Steering Committee July 28, 2011 12 – 2 p.m.	• Provide comments on outcomes of project evaluation • Comment on outline of Countywide Transportation Plan. • Adopt TEP parameters and finalize strategy for selecting TEP projects and programs.	• Results of Project and Program Packaging and Evaluation • Review CWTP Outline • Discussion of TEP strategic parameters and project/program selection • Update on regional processes: Detailed land use scenarios and results of performance assessments (ABAG presents to TAWG) • TAWG/CAWG/SC update
6	CAWG September 1, 2011 2:30 p.m. – 5 p.m.	• Comment on first draft of Countywide Transportation Plan • Comment on potential packages of projects and programs for	• Presentation/Discussion of Countywide Plan Draft, including preferred land use and list of projects and programs (modeled results will be presented)

	Meeting Date/Function	Outcomes	Agenda Items
	TAWG September 8, 2011 1:30 – 4 p.m. Steering Committee September 22, 2011 12 – 2 p.m.	TEP • Prepare for second round of public meetings and second poll	• Presentation/Discussion of TEP candidate projects • Refine the process for further evaluation of TEP projects • Discussion of upcoming outreach and polling questions • Update on regional processes: ABAG RHNA methodology and update on preferred SCS (ABAG presents to TAWG) • TAWG/CAWG/SC update
7	CAWG November 3, 2011 2:30 p.m. – 5 p.m. TAWG November 10, 2011 1:30 – 4 p.m. Steering Committee December date to be determined	• Comment on second draft of Countywide Transportation Plan • Review and provide input on first draft of Transportation Expenditure Plan Projects and Programs • Review results of second poll	• Presentation/Discussion of Countywide Plan second draft • Presentation/Discussion of TEP Projects and Programs (first draft of the TEP) • Presentation on second poll result • Update on regional processes • TAWG/CAWG/SC update
8	CAWG January 5, 2012 2:30 p.m. – 5 p.m. TAWG January 12, 2012 1:30 – 4 p.m. Steering Committee January 26, 2012 12 – 2 p.m.	• Review and comment on draft of full TEP • Review outcomes of outreach meetings	• Presentation/Discussion of Draft TEP • Presentation of Outreach Findings • Update on regional processes: ABAG update on preferred SCS (ABAG to present to TAWG) • TAWG/CAWG/SC update

Future Meeting Dates:
Additional meetings are anticipated in March, May and June 2012 to refine both the CWTP and TEP.

CWTP: Countywide Transportation Plan, TEP: Transportation Expenditure Plan

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Alameda County Transportation Commission

Technical Advisory Working Group (TAWG)

	Planning Area	First Name	Last Name	Title	Business Name
1	North	Alex	Amoroso	Principal Planner, Planning Department	City of Berkeley
2	North	Aleida	Andrino-Chavez	Transportation Planner	City of Albany
3		Eric	Angstadt		City of Oakland
4	South	Marisol	Benard	Even Start Program Manager	New Haven Unified School District
5		Kate	Black	City Planner	City of Piedmont
6		Jeff	Bond	Planning and Building Manager	City of Albany
7	East	Jaimee	Bourgeois	Senior Civil Engineer (Traffic)	City of Dublin
8		Charlie	Bryant	Director of Planning and Building	City of Emeryville
9	North	Ann	Chaney	Director of Community Development	City of Albany
10	South	Mintze	Cheng	Public Works Director	City of Union City
11	Central	Keith R.	Cooke	Principal Engineer	City of San Leandro
12		Brian	Dolan	Director of Community Development	City of Pleasanton
13	South	Soren	Fajeau	Senior Civil Engineer	City of Newark - Engineering Division

Alameda County Transportation Commission

Technical Advisory Working Group (TAWG)

	Planning Area	First Name	Last Name	Title	Business Name
14	East	Jeff	Flynn	Planning Director	Livermore Amador Valley Transit Authority
15	Central	Don	Frascinella	Transportation Manager, PWD	City of Hayward
16	East	Susan	Frost	Principal Planner	City of Livermore
17	South	Jim	Gannon	Manager of Transportation Services	Fremont Unified School District
18	East	Robin	Giffin	Senior Planner	City of Pleasanton
19	CW	Mike	Gougherty	Transportation/Environmental Planner/Analyst	Water Emergency Transporation Authority
20	South	Terrence	Grindall	Community Development Director	City of Newark
21	North	Cindy	Horvath	Senior Transportation Planner	Alameda County Planning
22	North	Diana	Keena	Associate Planner	City of Emeryville
23	Central	Paul	Keener	Senior Transportation Planner	Alameda County Public Works Agency
24	North	Obaid	Khan	Supervising Civil Engineer	City of Alameda - Public Works Department
25	South	Wilson	Lee	Transit Manager	City of Union City
26		Tom	Liao	Planning and Housing Manager	City of San Leandro

Alameda County Transportation Commission

Technical Advisory Working Group (TAWG)

	Planning Area	First Name	Last Name	Title	Business Name
27		Albert	Lopez		Alameda County
28	South	Joan	Malloy	Economic and Community Develoopment Director	City of Union City
29		Dan	Marks	Director of Planning and Development	City of Berkeley
30	CW	Gregg	Marrama	Department Manager, Capital	BART
31	CW	Val	Menotti	Department Manager, Planning	BART
32		Neena	Murgai	Epidemiologist	CAPE
33	North	Matt	Nichols	Principal Planner, PWD	City of Berkeley
34	Central	Erik	Pearson	Senior Planner, Planning	City of Hayward
35	South	James	Pierson	Transportation & Operations Director	City of Fremont
36		Jeri	Ram		City of Dublin
37		David	Risk		City of Hayward
38		Marc	Roberts		City of Livermore
39		Brian	Schmidt	Director of Planning, Programming and Operations	ACE Rail

Alameda County Transportation Commission

Technical Advisory Working Group (TAWG)

	Planning Area	First Name	Last Name	Title	Business Name
40	North	Peter	Schultze-Allen	Environmental Analyst, PWD	City of Emeryville
41	South	Jeff	Schwob	Planning Director	City of Fremont
42	North	Tina	Spencer	Director of Service Development and Planning	AC Transit
43	North	Iris	Starr	Division Manager of Infrastructure Plans and Programming	Public Works Agency
44	East	Mike	Tassano	City Traffic Engineer	City of Pleasanton
45	CW	Lee	Taubeneck	Deputy District Director - District 4	Caltrans
46	North	Andrew	Thomas	Planning Services Manager	City of Alameda
47	North	Jim	Townsend	Trails Development Program Manager	East Bay Regional Park District (EBRPD)
48	East	Bob	Vinn	Assistant City Engineer	City of Livermore
49	East	Marnie	Waffle	Senior Planner	City of Dublin
50	North	Bruce	Williams	Senior Transportation Planner	City of Oakland
51	CW	Stephen	Yokoi	Office Chief, Office of Regional Planning - District 4	Caltrans
52	Central	Karl	Zabel	Operations and Development Supervisor	Hayward Area Recreation and Park District (HARD)

Alameda County Transportation Commission

Technical Advisory Working Group (TAWG)

	Planning Area	First Name	Last Name	Title	Business Name
Alt	South	Farooq	Azim	Principal Civil Engineer	City of Union City
Alt	South	Carmela	Campbell	Planning Manager	City of Union City
Alt	East	Gary	Huisingh		City of Dublin
Alt		Nathan	Landau		AC Transit
Alt	North	Cory	LaVigne	Director of Service Development and Planning	AC Transit
Alt	Central	Larry	Lepore	Park Superintendent	Hayward Area Recreation and Park District (HARD)
Alt	North	Kate	Miller	Capital Planning/Grants Manager	AC Transit