Technical Memorandum #3

Identification of CAR-LESS Destinations and ATS Corridors

April 2013

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Paul S. Sarbanes Transit In Parks
Technical Assistance Center
UNDERSTANDING RESOURCES SOLUTIONS

This document was prepared for the U.S. Forest Service
by the Paul S. Sarbanes Transit in Parks Technical Assistance Center

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1 Introduction

In 2010, the USDA Forest Service (USFS) was given a Paul S. Sarbanes Transit in Parks (TRIP) planning grant to conduct regional alternative transportation planning in Central California (CA) aimed at finding connections between underserved neighborhoods and federally managed lands. The first steps for the project included:

- ✓ branding the project
- ✓ creating a project vision and guiding principles
- ✓ developing an organizational structure
- ✓ creating a conceptual design
- ✓ creating a project boundary

1.1 Project Branding

The project was branded as CAR-LESS California with CAR-LESS standing for "**C**alifornia **A**lternative transportation for **R**ecreation – **L**eisure for **E**veryone that is **S**eamless and **S**ustainable". The term "car-less" was chosen because it represents travelers that do not or unable to own a car as opposed to "car-free" which represents travelers that either own a car and choose not to use it or have the means to own a car but choose not to.

1.2 Project Vision and Guiding Principles

A vision and guiding principles were created for the CAR-LESS California project to ensure that all project team members are "on the same page" and that expectations for the project are managed.

The project vision is as follows:

"*Alternative transportation systems (ATS) provide safe, affordable and sustainable travel excursions from neighborhoods to America's great outdoors. All population segments benefit, but public land managers are particularly mindful of population segments that may have limited access, and therefore, have not derived the health and leisure benefits that public lands provide. Project planning and implementation supports the three pillars of sustainable recreation: social, economic and environmental sustainability. Participating federal land management agencies (FLMAs) coordinate their actions to blur agency jurisdictions and focus on the visitor's experience. Outdoor experiences are meaningful and relevant to California's diverse population base. Interested agencies, organizations and individuals are invited to participate at any planning or implementation step. Project coordination serves as a national model for robust ATS connecting California's diverse people to their public lands. The next generation of California's outdoor recreation, leisure, environmental/ natural resource and health professionals provides a significant role in designing California's transit in parks future.*"

The project also has 10 main guiding principles which include:

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1. Advancing a seamless-service approach to outdoor recreation services - The general public does not understand the mission distinctions among federal land management agencies (FLMAs); they just want to have a safe, memorable outdoor experience. In light of this reality, the 'seamless-service' concept was developed by the California Roundtable on Recreation, Parks, and Tourism. The idea is to put the visitor first, developing outdoor-recreation services in a seamless manner, irrespective of agency jurisdiction. The FLMAs were brought in on the ground floor of CAR-LESS California to ensure 'seamless-service' as a founding principle.
2. Extending Transit in Parks opportunities to underserved communities - Ensuring accessibility is a fundamental principle across all federal agencies. Yet, currently, few Transit in Parks (TRIP) projects focus on the population segments with the fewest transit options. These are the population segments for whom ATS is a need rather than a choice. The hope, through CAR-LESS California, is to bring underserved communities, including those with low-incomes, urban minorities, youth, students and the elderly, into the TRIP conversation. By providing access to the most challenged members of the public, we will ensure access for all members of the public.
3. Adopting a planning and implementation horizon that supports sustainability - The project proposes the exploration of three sustainability spheres: social, economic and environmental. Traditional transportation planning defines problems primarily as traffic congestion or minimum level of service (LOS), ignoring issues such as inadequate mobility for non-drivers, the cost burden of vehicle ownership, parking costs for businesses and undesirable social and environmental impacts. Sustainable transportation needs to offer long-term solutions, looking 20 to 40 years into the future, well beyond the traditional 10 year plan. California's great diversity of people, terrain, population density and natural resources agencies requires a multi-year planning and implementation effort, and has great potential to yield a suite of practical solutions that can be adapted nationally.
4. Engaging strategic partners, stakeholders, technical support and expertise - Although the participation among FLMAs is captured in the TRIP legislation, it is important to engage other interested agencies, organizations, and parties at strategic points in the planning and implementation of CAR-LESS California. The project structure will be organized so that interested individuals are welcome to participate in meetings at any time. Efforts will be devoted to early and ongoing engagement of historically underserved groups. It is our hope that a commitment to meaningful public participation throughout the project will promote dialog and connection between and within affected communities.
5. Orchestrating the convergence of program offerings - There are a number of unique and meaningful FLMA program offerings that, as stand-alone programs, provide great opportunities for the public to enjoy the outdoors: the Scenic Byway, Geotourism, TRIP, and Kids in the Woods programs are a few examples. To further enhance the visitors' experience, these and similar programs should be coordinated to enhance their synergy and make the most of existing programs.
6. Pursuing meaningful outdoor experiences - California is blessed with a number of outstanding iconic tourism destinations. Culturally inclusive outdoor recreation, environmental education and similar program offerings represent a tangible way to enhance community livability, promote resource stewardship and respond to visitor preferences. Attention is usually given to the environmental benefits of ATS but not necessarily to the experience offered by the transportation system. Alternative transportation systems, when incorporated into the public lands experience,

provide new opportunities to engage visitors to provide meaningful visitor experiences. Research has shown that different groups of people have varying preferences for destinations and outdoor activities. It's not enough to get the public to a destination; the destination itself needs to have programming and infrastructure to facilitate meaningful outdoor experiences for a range of culturally diverse visitors. The type of existing or potential destination draws needs to be identified when considering destinations to be examined through CAR-LESS-Less California.

7. Nurturing the promise of the next generation of recreation professionals - The 23-campus California State University system is the largest and most diverse public university system in the nation. It serves as an excellent source of health, leisure, social-science and outdoor-recreation expertise. However, its most significant asset is its student body. CSU enrollment comes predominantly from the local community. With over 450,000 students, system-wide, they represent the geographic and cultural diversity of California. Students are less likely to have a car or the economic means to visit a park, and are more likely to have time for recreation. If this population develops a habit of visiting parks via ATS, they are more likely to continue to do so, and encourage others into the future. CSU students are the outdoor-recreation "ambassadors" to their neighborhoods and can help bridge the gap between FLMA's and the local community. The CAR-LESS California team shares the mutual responsibility of nurturing the leadership development of these students and providing them with applied experiences that enhance the rigor of their academic life. They are California's outdoor-recreation, health and leisure professionals of the future.

8. Promoting social sustainability through increased individual and community health - Social sustainability is one of the three pillars of the US Forest Service's Framework for Sustainable Recreation. To foster social sustainability, we need to strive toward maximizing the health of our communities, the individuals within the community and the environment supporting the community. Increasing access to outdoor recreation can help increase physical activity levels and reduce stress, bolstering individual and public health initiatives. Increased environmental resource benefits can be achieved (e.g., better air quality, reduced vehicular congestion and lower fuel use) with affordable, reliable, and pleasant ATS options for both those with access to personal vehicles and those without.

9. Promoting economic sustainability of transportation system, affected communities and recreation areas - Transportation corridors are highly active spaces and generators of social and economic activity. Communities and recreation areas that are also designated station areas along the corridor are able to contribute to, and benefit economically from this activity.

10. Promoting environmental sustainability by protecting and enhancing the natural, cultural and historic resources for the benefit and enjoyment of future generations - As stewards of public resources, federal land managers are tasked with protecting our public lands for the benefit and enjoyment of current and future generations of visitors. The environmental benefits of ATS are well documented. ATS reduce traffic, pollution and resource damage caused by the over reliance on private vehicles for transportation. ATS combat climate change by reducing greenhouse gases from vehicle emissions, and help preserve wildlife habitat. As visitation to public lands increases, it is ever more important to plan and implement ATS to ensure environmentally sustainable transportation into the future. Further, key characteristics of ATS and emerging social media communication

platforms provide exciting new opportunities to communicate the environmental benefits of ATS and natural resource stewardship to new generations and new allies and advocates for sustainability.

1.3 Organizational Structure

The project team was divided into five separate parts as shown in Figure 1. Those parts include:

- ✓ core team - consists of two USFS staff and three faculty members from Chico State University
- ✓ extended team – representatives from the Bureau of Land Management (BLM), US Fish and Wildlife Service (FWS), and the National Park Service (NPS)
- ✓ technical support and expertise – representatives from the Transit in Parks Technical Assistance Center (TRIPTAC), the U.S. Department of Transportation John A. Volpe National Transportation Systems Center (Volpe Center), USFS recreation experts, California Department of Transportation (Caltrans), and Metropolitan Planning Organizations
- ✓ partners and stakeholders – representatives including, but not limited to, California state parks; regional and county parks; and local neighborhood and community groups
- ✓ friends and guests – invited participants and interested partners

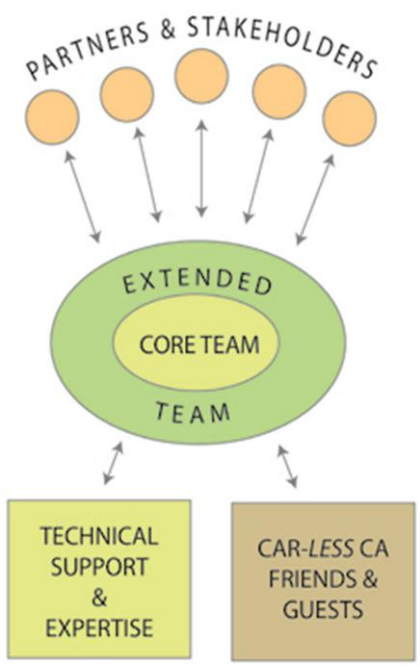

Figure 1: CAR-LESS Organizational Structure

1.4 Conceptual Design

Car-less CA has been broken into Phases and Tiers as shown in Figure 2. The Phases include (1) Central CA, (2) Southern CA, and (3) Northern CA. The project was also broken into Tiers. Tier 1 is Regional Transit Networks, Tier 2 is Transit Corridor Planning and (3) Station Area Site Design and Implementation. This particular portion of the project is focused on Phase 1 (Central CA) Tier 1 (Regional Transit Networks).

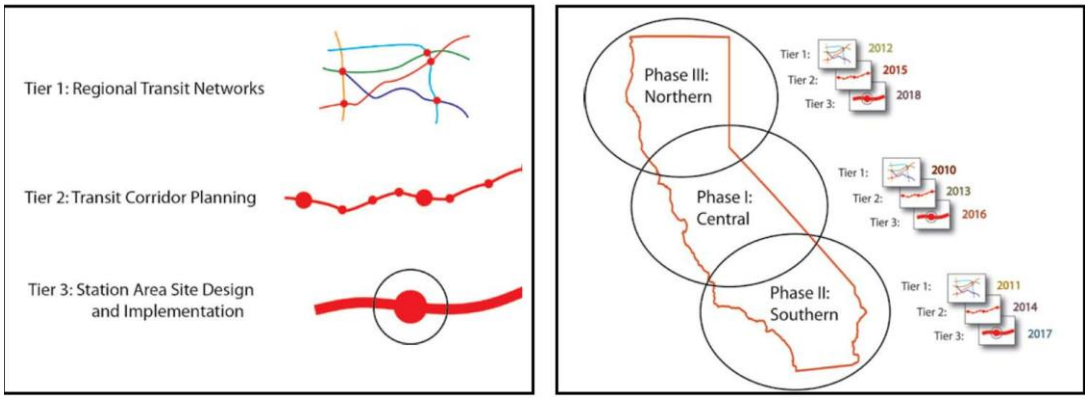

Figure 2: CAR-LESS Project Tiers and Phases

1.5 Project Boundary

The original Central CA boundary, as shown in Figure 3, included:

- ✓ Northern border starting in Sacramento goes east along I-80 to the CA/Nevada border. From Sacramento, goes west along I-80 until Vallejo where it will go across SR37 to US 101 then up US 101 to Bodega Ave/Tomales Road to where it hits SR 1 at the coastline/Hamlet
- ✓ Eastern border along the California/Nevada state line
- ✓ Southern border starting at Bakersfield, goes east across SR58 until US395 (between Boron and Barstow) where it will go north up US395 to the Nevada border. From Bakersfield, goes west on SR58 until US 101 then goes up US 101 and across SR 46 to the coastline
- ✓ Western border along the coastline including Pt. Reyes

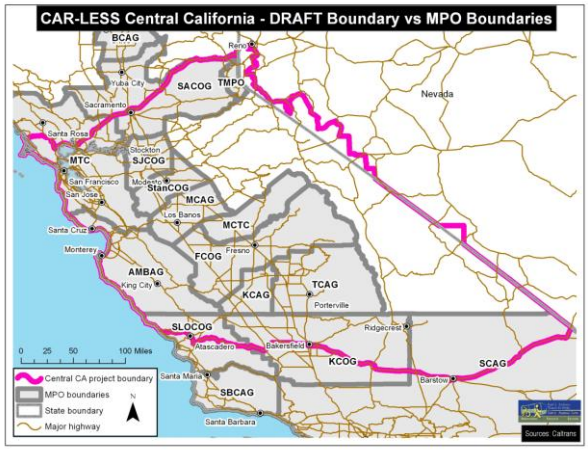

Figure 3: Original CAR-LESS Project Boundary

A discussion about splitting the Central and Southern project boundaries was held about whether the project boundary should be based on a transportation point of view or a geomorphically/vegetative point of view.

It was noted that there will be overlap between the northern and central CA project boundaries and between the central and southern CA boundaries. In some cases it will be easier to access a destination in one project boundary from another project boundary due to transit routes and/or wintertime closures.

To make the project boundary more consistent with existing boundaries and to simplify the outreach and community involvement, the Metropolitan Planning Organization (MPO) and the Rural Transit Planning Authority (RTPA) boundaries were mapped on the state of CA to allow adjustments in our project boundary to be made.

The final project boundaries, as shown in Figure 4, included:

- ✓ Northern border was moved slightly north to follow the Santa Rosa and Yuba City MPO boundaries
- ✓ Eastern border along the California/Nevada state line or the forest border which is partially in Nevada
- ✓ Southern border moved slightly south in the west to follow the SLOCOG and KCOG boundaries and moved slightly north to the east to follow the northern border of the SCAG MPO
- ✓ Western border along the coastline including Pt. Reyes

Figure 4: Final CAR-LESS Project Boundary

2 Purpose of this Technical Memorandum

The purpose of this technical memorandum is:

- ✓ To describe the process used to determine the prioritized list of destinations and the preferred ATS corridors.
- ✓ To document the final ATS corridors chosen to move forward for Phase I, Tier 2.

3 CAR-LESS CA Tier 1 Methodology

The CAR-LESS California Tier 1 methodology was broken into three distinct parts as shown in Figure 5, including (1) project initiation; (2) determine destinations, neighborhoods, and ATS; and (3) results.

The steps taken for the "determine destinations, neighborhoods, and ATS" piece are:

1. Establish neighborhood, destination, and ATS filters
2. Map Socio-economic data and Identify potential target neighborhoods
3. Prioritize list of target neighborhoods
4. Identify target population recreation preferences and ATS preferences
5. Identify target destinations in Central CA
6. Map destinations
7. Prioritized list of destinations
8. Map ATS
9. Identify preferred ATS – this step was completed in conjunction with the next step

The first step in the "results" section is also described in this Technical Memorandum.

1. Identify corridors serving priority communities and destinations

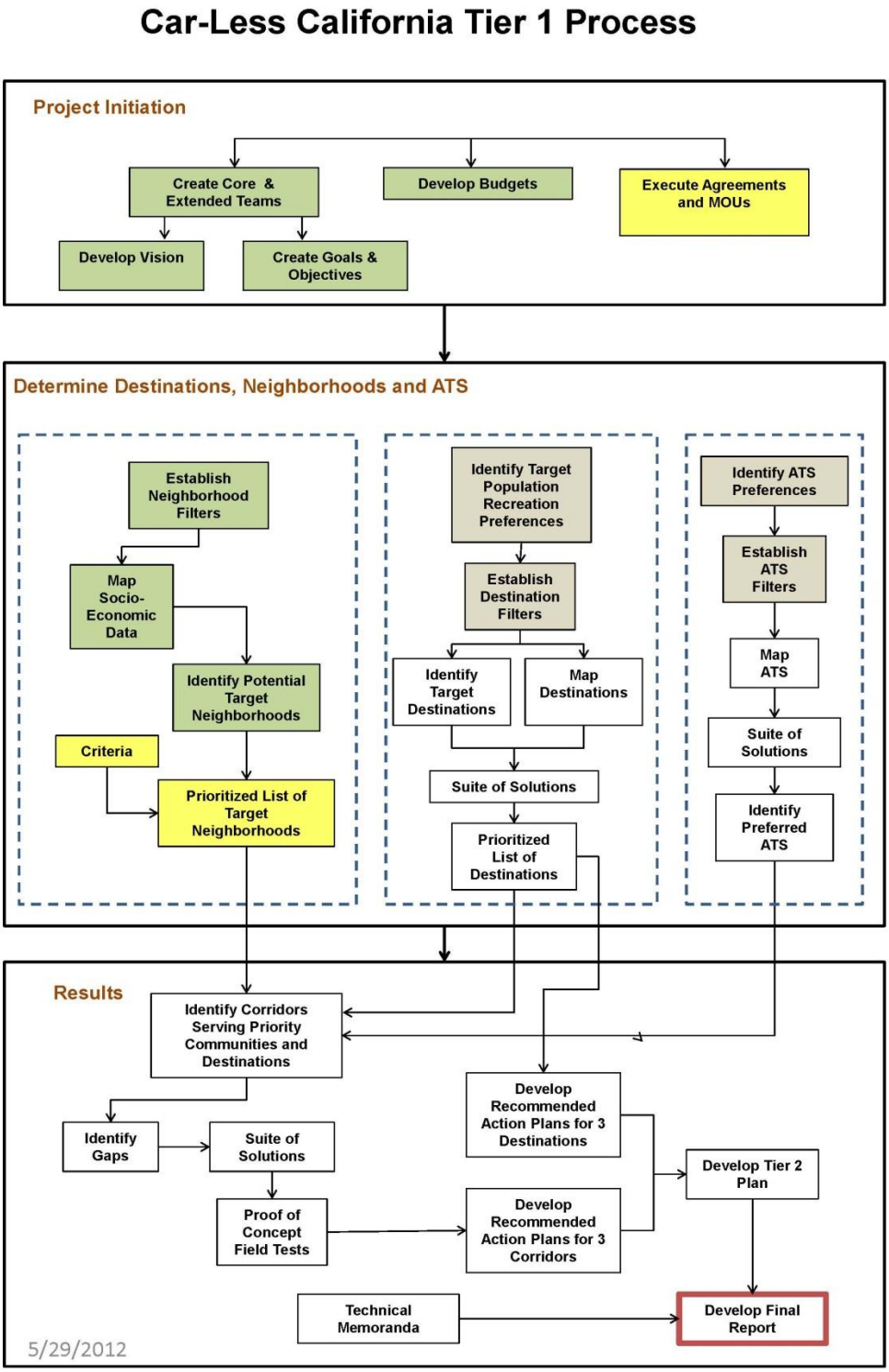

Figure 5: CAR-LESS CA Tier 1 Process

3.1 Establish Neighborhood, Destination, and ATS Filters

This step is defined in Technical Memorandum #1.

3.2 Map Socio-economic Data and Identify Potential Target Neighborhoods

This step is defined in Technical Memorandum #1.

3.3 Prioritize List of Target Neighborhoods

This step is defined in Technical Memorandum #1.

3.4 Identify Target Population Recreation Preferences and ATS Preferences

This step is defined in Technical Memorandum #2.

3.5 Identify Target Destinations in Central CA

A list of all Federal land areas within the Central CA project boundary was created. This included units from Army Corp, the Bureau of Indian Affairs (BIA), BLM, FWS, NPS, USFS, and ski areas located on USFS lands via special use permit. To be included on the destination list, the Federal area must be open to the public and have recreational opportunities available.

Inclusion of non-Federal areas (e.g., state, local, and regional parks) on the destination list was discussed, due to representatives from these areas serving as "partners and stakeholders" for this project and due to many of these locations being near federal locations; however, it was determined that only federal destinations should be used due to the grant being targeted at Federal lands as well as to make the project manageable and ensure it can be completed. A more integrated partnership with the non-Federal areas will be included in Tiers 2 and 3.

Identification of destinations for BLM, FWS, and NPS were straight forward due to their recreational areas being clearly defined. Identification of BIA destinations was difficult when relying on the internet only and required assistance from a BIA representative to identify destinations (e.g., casinos, natural history museums, interpretive centers, museums, nature centers, etc.). Identification of destinations for USFS was complicated. Using a forest as a destination was too large of a scale, but using a visitor use area (e.g., campground, trailhead, lake, etc.) was too small of a scale; therefore, USFS recreation staff used forest maps to cluster visitor use areas into a recreation area.

FLMAs vetted the destinations to ensure that it was an all-inclusive list. During this process, a total of 57 destinations were removed from the original list. The destination names and reasons removed were documented. The main reasons for removal include: not being open to the public, ski areas on private land rather than USFS land, temporary closures, BIA land without a known

recreation area or museum, and destinations outside the Central CA project boundary and not within a 45 mile neighborhood boundary

3.6 Map Destinations

Mapping the destinations was accomplished in several steps.

3.61 Apply Filters to the Destinations

The destination filters identified in step 1 included:

- ✓ Site Amenities (e.g., flush toilets, visitor center) – 14 votes
- ✓ Site Activities (e.g., water play, hiking interpretation) – 9 votes
- ✓ Current or Planned ATS Onsite – 7 votes
- ✓ Relevant Onsite Programs – 6 votes
- ✓ Within X Distance from Neighborhoods – 6 votes
- ✓ Iconic Destinations – 5 votes
- ✓ Ability to Handle Increased Visitation – 1 vote

Prior to the filters being applied to the destinations to calculate their ranking, it was determined that only motorized ATS will be used for the "current or planned ATS onsite" filter; however, non-motorized trail information was recorded in the excel sheet for later use. This decision was made because visitors being brought to a unit via transit will need a way to move around the unit once there and not all of the visitors will want to/or be able to use non-motorized trails.

It was also determined that three of the above filters should not be used in calculating the destination rankings:

1. The "ability to handle increased visitation" filter was removed as it is hard to measure and each Federal Land Management Area (FLMA) has a different definition for this filter so it would make it hard to compare across the FLMAs (e.g., NPS uses the definition of carrying capacity whereas FWS uses animal protection).
2. The "within X distance from neighborhoods" filter was removed from the ranking calculations and will instead be applied via the maps as a buffer from the neighborhood center. This process is described further in section 3.64.
3. The "iconic destinations" filter was also removed from the ranking calculations and these destinations will instead be shown as a separate category on the maps in order to represent multi-day trips.

The four remaining filters were then applied to each destination on the list for Central CA. The four filters include:

- Site Amenities (e.g., flush toilets, visitor center) – 14 votes
- Site Activities (e.g., water play, hiking, interpretation) – 9 votes
- Current or Planned ATS Onsite – 7 votes
- Relevant Onsite Programs – 6 votes

To apply the filters, a matrix was created with three columns for each filter. The first column indicates whether or not the amenities/activities listed in the filter (e.g., current or planned ATS, relevant onsite programs, etc.) are available at the destination (i.e., yes or no). The second column indicates the score for each filter. If the first column was a yes then all of the points/votes were applied to that filter and if it was a no then zero points were applied to that filter (i.e., if a destination has site amenities then it is scored 14 points and if it does not it is scored zero points). The third column then provides additional details on the available amenities/activities (e.g., types of site amenities, activities, ATS, and onsite programs).

The matrix also includes additional information about the destination such as which FLMA it belongs to, the website describing the destination, the destination's latitude and longitude, whether or not the destination was iconic, and the destinations category. The destinations were categorized into five separate types:

1. Recreation areas/complex
2. Ski areas
3. Casinos/Tribal lands
4. Interpretive sites/visitor center
5. Scenic Byways/trails (i.e., linear recreation areas or "strings of pearls")

To get the final ranking for each destination, the score for all four filters were added together. The destinations were then assigned a ranking of low, medium, or high where low = 0-10 and 11-20, medium = 21-30, and high = 30-36. Iconic destinations became a category of their own and therefore were not ranked by score. In all cases, the iconic destinations would have been ranked either medium or high.

3.62 FLMAs Validate Destinations and Filters

Each FLMA was provided the opportunity to adjust the destination list as necessary and to provide additional information to assist in filling in the information for filter ranking.

3.63 Original Destination Maps

Originally (i.e., prior to the neighborhood clusters being selected) destination maps were created for the entire Central CA project boundary, as well as detailed/zoomed in views of the San Francisco Bay area and the Sierra Mountain area in eastern CA, with the destinations symbols by FLMA and color coded by category.

After the neighborhood clusters were selected, the destinations were then mapped by neighborhood cluster and color coded by rank versus category.

3.64 Pre-filtering Destinations

A total of 200 destinations were on the overview maps as of July 2012; however, due to 12 of the destinations being double counted (mostly scenic byways with both gateways marked), there are 212 points on the map.

In order to reduce the number further, it was determined that the destinations should be pre-filtered based on how far a visitor would realistically be willing to travel from their neighborhood.

The literature review suggested that visitors are willing to travel two hours for a day trip. The listening sessions corroborated this information. Listening session participants said they were willing to travel within two hours if it was an express trip with no stops. It was noted by the project team that travel time via ATS is different than a private vehicle due to stops and speed.

To transfer time into mileage, the following methodology was used. It was assumed that two hours on transit would be about 60 miles via roadways due to transit usually traveling no faster than 30 mph. The most accurate way to calculate 60 miles via roadway would be to create an isochrome (i.e., a non-symmetrical boundary created by calculating the 60 miles in each direction from the center point via roadways); however, due to the GIS data being from many different sources and not all projections and datum being in the same format, automating the isochrome analysis in GIS would not allow for ease of completion and manually completing the isochromes analysis would be time intensive. Therefore, a test map was created where 30, 45, and 60 mile radii (i.e., “as the crow flies”) concentric circles were created from the center point of a neighborhood cluster and 30, 45, and 60 mile isochromes were overlaid manually on the map. From this test map, it was determined that a 45 mile radii circle/buffer was very similar to a 60 mile isochrome and therefore would be used with all of the maps.

Therefore, to pre-filter destinations, a 45 mile buffer was added to each of the 17 chosen neighborhood clusters. Destinations outside of these circles were removed from consideration, with exception of high ranking destinations located just outside the 45 mile buffer. No iconic locations were removed during the pre-filtering. It was noted that a visitor would most likely travel a longer distance to get to an iconic destination, such as Yosemite, than a non-iconic destination. These iconic locations could serve as multi-day trips which would equate to more than two hours of travel (i.e., 45 mile buffer).

This methodology reduced the number of destination to approximately 20-25 per neighborhood cluster (plus iconic locations).

3.7 Prioritized List of Destinations

The core group then met and narrowed down the destinations to between three and five per neighborhood cluster. Due to overlapping 45 mile buffers, some of the neighborhood clusters were combined on a map. The core group used the following maps to inform their destination filtering:

- “All Neighborhoods and Destinations” Map
- “All Neighborhoods and Iconic Destinations” Map
- “Destinations Outside Neighborhoods” Map
- “South Sacramento (A)” Map
- “Stockton (B)” Map
- “Merced (C)” Map
- “Fresno (D)” Map
- “Visalia/Tulare (E)” Map
- “Bakersfield (F)” Map
- “Richmond (G), Oakland (H), and Bayview/Hunters Point (I)” Map
- “San Fran Insert” Map
- “San Jose (J)” Map
- “Castroville (K) and Salinas (L)” Map

After the filtering occurred, approximately 75 destinations plus 25 iconic destinations, 15 of which are inside the 45 mile buffers, were left.

Table 1: Prioritized List of Destinations by Neighborhood

Neighborhood	Priority Destination	Secondary Destination	FLMA	Notes
Visalia	Cluster of #48, 49, 89, 90, 220, 221,	#124 lake recreation opportunity	NPS FS ACE	Some existing ATS. Keep cluster as one itinerary. Since Sequoia/Kings Canyon has a good ATS system, our goals here are to document that it exists and it is important to maintain. It has everything the CAR-LESS California project is looking for to see if this works. Examine to see if there are underserved communities using this ATS. If not, what can we do to help them to use it? What is the gap? What is opportunity from Hwy.198 over on the scenic byway? Consider that trip to sequoia takes 2.5 hours by bus from Visalia Destination #17 (FWS) is by invitation only so not considered a priority destination.
Bakersfield	#23 (trail hundred giants)	#92, 94, 190 cluster with lake recreation opportunities.	NPS FS BLM	We should look at how close the PCT comes to the Trail of Hundred Giants. (not close) The likelihood of these destinations rising to the top is very low. It is probably a 2 to 3 hour transit ride (2 hour drive at least) which is farther than our parameter. But that will be a problem with most of our iconic destinations. Job creation – if ATS is good enough to get folks from Bakersville to destination cluster, as small shuttle service could deliver folks to those different locations. Attraction is the Kern River and the connection to the river guiding system as an economic generator. Phil has a concern – we need to look for things that would be realistic. These destinations may be beyond the distance we can serve. And they may be beyond a price point that our underserved population can afford. This is just one of our many neighborhoods, these may be the reason they don't rise to the top of our low-hanging-fruit list but we can still present the advantages/ disadvantages of why this one is/isn't feasible.
South Sacramento	Tahoe Basin, Hwy 50 (#29) to South Lake Tahoe (FS Save)	3 potential BLM sites to follow up on #168, 173, and 175	FS FWS BLM	
Castroville and Salinas	#52, 95, 177	#228 if any kind of ATS available.	BLM FWS FS NPS	#39 off unless it's a BLM Save Big Sur? Figure out what opportunity could be, but not a low-hanging fruit #228- Pinnacles may not have ATS but big commitment to serving the area

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Table 1: Prioritized List of Destinations by Neighborhood (cont.)

Neighborhood	Priority Destination	Secondary Destination	FLMA	Notes
San Jose	#50		FWS NPS	#50 - transportation scholar is conducting ATS study 2012-2013 Emilyn also suggests the south bay terminus of the Anza trail that ends at #32. It is not a contiguous recreation trail yet but in the works.
Fresno	90, 48 along the way (byway)		FS	#129 is an Army Corps lake rec site: might have something to offer. #83, 84, 85: Bass, dinkey lake. Classic NF lake based rec sites, great amenities, camping hiking boating. But as a project first out of the shoot but low priority Explore #44 (SB) if route has an itinerary to that forest, maybe a community partner opportunity.
Merced	0, 36, 88, 219, all in same corridor 176 enroute to Yosemite on Hwy 120	Ask FWS: recommendations bet. 52, 53 & 54	BLM FWS FS NPS	FWS #52 ranks the highest but Modesto has a big population. We need to overlay with ATS to see the opportunities.
Stockton	53	Ask ACE: recommendations bet.126 & 127	FWS ACE	Two of the high rated NPs are only open seasonally. Leave them for the Oakland neighborhood. Connectivity is better there.
Oakland/ SF/ Richmond	#212 destination #214 destination Cluster - #32, 142, 143, 144 147, 215, 217, 218, (by way of Presidi-Go shuttle/bus) Cluster – 145, 148, 149, 150 (by way of the cross-town bus)	Cluster - #136, 137, 140 Cluster- #132, 138, 156	NPS	#204 (FWS) has limited ops but a transportation scholar is conducting a study so leave on list for now (?). #156 would be considered an iconic destination for the city. It is a popular “first-time” backpacking location. A lot of outfitter/guides/ city youth groups use. #144 to 215 along route

3.8 Map ATS

At the beginning of the project, the methodology was to identify and choose the neighborhoods, destinations, and ATS corridors separately. Due to this, at the beginning of the project, TRIPTAC attempted to gather as much ATS information via GIS as was possible from many different sources (e.g., Caltrans, MPOs, RTPAs, etc.). This proved to be a difficult and time consuming task as much of the data was outdated; there was too much detail in the data, and due to the data being from multiple sources, it was not always in the same format which led to challenges. Lastly, a map of the entire Central CA project boundary overlaid with all of the ATS information was not a useful map to have. The ATS data was too detailed for that large of a map and therefore did not provide any benefits for decision making.

Therefore, it was determined that adding ATS information to the smaller scale maps after neighborhoods and destinations were chosen would be more efficient and more effective for decision making.

ATS information was gathered from destination websites, Google transit, 511, and the Transit and Trails website. This information was then overlaid on the 45 mile neighborhood buffer to show what ATS exists already between neighborhoods and destinations.

3.9 Identify Preferred ATS

This step was completed in conjunction with the next step.

3.10 Identify Corridors Serving Priority Communities and Destinations

An extended team meeting was held with the following goals (1) to choose three to five ATS corridors to move forward to Tier 2 and (2) to create a prioritized list of potential neighborhood/destination pairs to use for future reference.

To inform this discussion, the Volpe Center also provided a table with the neighborhoods in rank order based on their demographic information; the one caveat is to keep total population in mind as well. Based on this information, Fresno was identified as the most underserved community. The seven ATS corridor filters, chosen at the beginning of the project, were also shown during this meeting as considerations but will be utilized in more detail in Tier 2. The seven ATS filters include:

- Proximity of ATS to Target Neighborhoods an Destinations
- ATS is Convenient (Level of Service)
- ATS is Affordable (x% of household income)
- ATS is Easy to Navigate (based on field research)
- ATS has Capacity for Recreation Equipment (e.g., coolers, bicycles, etc)
- Opportunities for Recreation on State/Regional Lands Along Route
- Services/Amenities Along Route

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The following considerations for choosing ATS corridors were discussed among the group:

- transit loops should be considered versus just a linear corridor; however, the concern with this is that a loop causes extra wait time to get to a destination
- there may be more than one corridor (e.g., a linear route and a loop route) between a neighborhood and a destination
- number and variety of FLMA destinations within a corridor
- the quality of programs at those destinations
- look at corridors providing rural connections as well, particularly for rural Tribal reservation communities
- multiple destinations, agency jurisdictions, and the potential to provide a loop opportunity
- potential for ridership in both directions for financial sustainability
- tier II will be looking for opportunities to build on, fill the gap in the existing ATS (the last mile, or the middle mile, improve scheduling, enhance interpretation, etc.)
- consider the locations of major airports to maps as discussion point for tourists and stewardship council locations due to education programs
- the need to consider looking in both directions from each neighborhood (e.g. north vs. south to see what opportunities may be found)
- hub and spoke type of opportunities (e.g., possibly use Amtrak train stations as hubs where people can eat, stay overnight, and go from there to several places (i.e., spokes). This should be considered further in Tier 2.)
- the opportunities along the 108 corridor and the neighborhoods served by BART and Amtrak; the need to fill a “middle mile”
- the potential to involved school sponsored educational programs and use of school buses
- are there any Tribal communities that overlap our identified neighborhoods?

At the meeting, participants broke into groups by FLMA in order to choose their top 5 ATS corridors. When the group resumed, a master list was created as shown in Table 2.

Table 2: Master List of ATS Corridors Chosen

Neighborhood	Destination	Route	FLMA
San Jose (Alviso, Fremont)	Don Edwards NWR (Alviso EEC and Fremont VC)	VTA 58 AC 251	FWS
South Sacramento	Stone Lakes NWR	I-5	FWS
South Sacramento	Tahoe	Hwy 50	USFS
South Sacramento	South Fork American River South Lake Tahoe	Hwy 50 Amtrak bus	BLM
Merced (Los Banos)	San Luis NWR	SR-99	FWS
Merced	Yosemite	Hwy 140	FWS
Merced	Yosemite	Hwy 140	USFS
Merced	Merced River and Yosemite	140 YARTS	BLM
Merced	Merced and Tuolumne Rivers Yosemite	Existing : YARTS , Amtrak connections	NPS
Visalia	Sequoia Kings	SR 198	FWS
Visalia	Greater Sequoia	Sequoia Shuttle	USFS
Fresno	Greater Sequoia	Loop (or either option)	USFS
Fresno	Greater Sequoia Sierra NF (Yosemite)	Hwy 180	NPS
Bayview/Hunters Point	Muir Woods	TBD	USFS
Bayview/Hunters Point	Muir Woods Pt Reyes Don Edwards NWR (Presidio-Crissy Field)	Existing public transit and “Transit and Trails” etc technology	NPS, FWS
Salinas/Castroville	Fort Ord National Monument Pinnacles	183 68 101 Monterey/Salinas transit	BLM

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Table 2: Master List of ATS Corridors Chosen (cont.)

Neighborhood	Destination	Route	FLMA
Salinas/Castroville	Ft Ord NM Big Sur and PT Lobos Pinnacles NP	Existing County Transit	NPS
Stockton	Cosumnes River preserve	I-5	BLM
All - Oakland Bakersfield Salinas	Numerous	Amtrak Corridor – hub and spoke	BLM
All	All	Amtrak Corridor – hub and spoke Technology On board interp Hubs at all stations with VCs Overnight accommodations Food Entertainment	NPS
Stockton	Numerous – Yosemite, Bay Area, FWS, USFS, Army Corp (#127)	120/108 corridor – gap between Manteca and Sonora	Partner

The duplicate ATS corridors were then combined by neighborhood; however, it should be noted that there still may be more than one ATS corridor identified for a neighborhood. This is due to meeting participants deciding that neighborhoods with multiple, directional ATS corridor opportunities should be kept separate for voting purposes.

Table 3 below shows the ranking of the top 13 corridors.

Table 3: Original Top 13 ATS Corridors

Neighborhood	Destination	Route	Votes
Fresno	Greater Sequoia Sierra NF	Loop and/or Hwy 180	11
Bayview/Hunters Point (SF)	Muir Woods Pt Reyes (Presidio-Crissy Field)	Existing public transit and "Transit and Trails" etc technology	11
All	all	Amtrak Corridor – hub and spoke	9
Stockton/Bay Area	Numerous – Yosemite, Bay Area, FWS, USFS, Army Corp (#127)	120/108 corridor	9
Merced	Yosemite Merced and Tuolumne Rivers	Hwy 140, Amtrak, bus	8
South Sacramento	South Fork American River South Lake Tahoe	Hwy 50 Amtrak bus	7
Salinas/Castroville	Fort Ord NM Pinnacles NP Big Sur and Pt Lobos	183 68 101 Monterey/Salinas transit	6
San Jose	Don Edwards NWR (Alviso EEC and Fremont VC)	VTA 58 AC 251	5
Visalia	Greater Sequoia	Sequoia Shuttle SR 198 and/or loop	5
Bayview/Hunters Point	Don Edwards NWR	transit	4
Stockton	Cosumnes River preserve Stone Lakes	I-5	2
Merced (Los Banos)	San Luis NWR	SR-99	2
South Sacramento	Stone Lakes NWR Cons. River	I-5	1

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Although the group was looking for the top five corridors, FLMAs were asked if there was a corridor that dropped off the list that they would like to save (i.e., an “American Idol” save). The following is the list of saves:

- NPS does not need one
- FWS – San Jose neighborhood with Don Edwards National Wildlife Refuge as the destination
- USFS – South Sacramento neighborhood along Highway 50
- BLM – Salinas neighborhood with Pinnacles National Park and Fort Ord National Monument as the destination

Therefore, rather than five corridors, there were eight selected. The group then decided that the ATS corridor with “all” listed as the neighborhood should be removed from the top corridor list and also decided that the Fresno and Visalia ATS corridors should be combined.

The final list of the top seven ATS corridors is shown in Table 4.

Table 4: Final List of Top Seven ATS Corridors

Rank	Neighborhood	Destination	Route	Votes
1	Fresno/Visalia	Greater Sequoia Sierra NF	Loop and/or Hwy 180 Sequoia Shuttle SR 198 and/or loop	11
2	Bayview/Hunters Point (SF)	Muir Woods Pt Reyes (Presidio-Crissy Field)	Existing public transit and "Transit and Trails" etc technology	11
3	Stockton/Bay Area	Numerous – Yosemite, Bay Area, FWS, USFS, Army Corp (#127)	120/108 corridor	9
4	Merced	Yosemite Merced and Tuolumne Rivers	Hwy 140, Amtrak, bus	8
5	South Sacramento	South Fork American River South Lake Tahoe	Hwy 50 Amtrak bus	7
6	Salinas/Castroville	Fort Ord NM Pinnacles NP Big Sur and Pt Lobos	183 68 101 Monterey/Salinas transit	6
7	San Jose	Don Edwards NWR (Alviso EEC and Fremont VC)	VTA 58 AC 251	5

4 Next Steps

The top seven ATS corridors were used to do proof of concept field tests and were used to inform the grant applications submitted for the Paul S. Sarbanes Transit in Parks 2012 grant cycle. These steps will be discussed further in subsequent Technical Memorandums.

The methodology described in this Technical Memorandum will be replicated for northern and southern CA.