

# Attachment 2: Mobility Hub Program Sheets

A Mobility Hub Program Sheet was developed for each program of improvements proposed for all the mobility hubs within the North County subregion. Each sheet provides information about the program and describes how it is related to the nine strategy layers and other strategic anchors (i.e., mobility boulevard and regional spine). Below is an overview of the elements that can be found across the Mobility Hub Program Sheet.

## Mobility Hub Program Sheet User Guide


STRATEGIC ANCHOR: MOBILITY HUBS

- 1 Flexible Feet: Microtransit**
- 2 Related North County CMCP Strategies**
- 3** This program creates microtransit service in the North County region. Microtransit — which typically uses buses and vans much smaller than traditional municipal buses — is designed to be demand responsive or to run with fixed schedules, lines, and stops. This allows the service to be more efficient by pooling riders with other passengers traveling in the same or similar direction to nearby destinations. Hailing a ride could be done through a mobile app, call center, website, or an agent at popular destinations.
- 4 ACTIONS**

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>Study travel patterns</li> <li>Determine feasibility of service and ideal scale</li> <li>Negotiate agreements with software developers and microtransit operators</li> <li>Engage with community and stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Develop web interface</li> <li>Determine service boundaries and ideal scale</li> <li>Finalize contracts with providers</li> <li>Facilitate connections with existing and planned bus and rail infrastructure</li> <li>Plan for drop-off/pick-up areas at popular destinations</li> <li>Educate public on usage</li> </ul>	<ul style="list-style-type: none"> <li>Make necessary adjustments to system</li> <li>Determine if bus lines can be replaced with microtransit service, or vice-versa</li> </ul>
- 5 CMCP Improvements**










Microtransit provides flexible, single-seat rides for users at a low cost, without the need to rely on schedules, and attracts riders who find traditional transit unreliable or too infrequent. Microtransit would improve North County by:

  - Implementing a similar passenger experience as UberPOOL.** This program provides more convenient and accessible opportunities for non-automobile mobility throughout North County.
  - Facilitating connections with existing and planned transit infrastructure.** First- and last-mile gaps in the existing transit network are closed, wait times are lowered, and destinations that do not have the demand to support traditional transit can be reached.
- 6 Preliminary Projects and Programs**

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Perform a micromobility study to determine viable first- and last-mile strategies to SPRINTER stations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provide flex/microtransit service with a flex service zone along Cannon Rd.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide flex/microtransit service along Twin Oaks Valley Rd with a flex service zone between Buena Creek Rd and Wild Canyon Drive.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provide on-demand microtransit shuttle service from the Pointsetta Station to the business park along Palomar Airport Rd.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Provide an intra-city shuttle service to connect CSUSM and other job centers in the San Marcos area.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provide a seasonal shuttle service to connect inland residents to beaches.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement an affordable Mobility on Demand (MCD) service to serve communities of concern with access to key destinations around North County.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
- 7 Program Photos**


Caltrans SANDAG North County CMCP June 2023 | Mobility Hub Program Sheets (FINAL) | 3

- 1. Program Name** – Name of the program to implement within mobility hub zones
- 2. Related North County CMCP Strategies** – Highlights in green and a yellow outline which of the following strategies the mobility hub program supports:

Strategy Layer Icon	Strategy Layer
	Smart Arterials and Intersections
	Regional “SMART” Highway Capacity Management
	Active Transportation Network
	Reconnecting Communities
	Mobility as a Service
	High-Frequency Core, Rapid, and Commuter Services
	SPRINTER Improvements
	TSMO/ICM
	Complementary Programs

- 3. Program Statement** – Describes what the program is and its purpose
- 4. Actions by Term** – Details the actions to implement the program by phase (i.e., short, mid, and long)
- 5. CMCP Improvements** – What the CMCP can do to improve conditions for specific users by implementing this program
- 6. Preliminary Projects and Programs** – Lists out the projects and program strategies relevant to the program
- 7. Program Photos** – Precedent imagery related to the program

# Flexible Fleet: Electric Bike and Scooter Share

## Related North County CMCP Strategies



Electric Bike and Scooter Share offers bikes and scooters that can be rented and returned from docking stations located throughout the area, or by using a mobile app to locate available, undocked vehicles. Electric bike and scooter share programs provide first-mile/last-mile solutions while allowing users to utilize existing and planned active transportation infrastructure, such as bike lanes and streets.

## ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>Study locations suitable for bike and scooter share</li> <li>Develop priority locations</li> <li>Negotiate agreements with bike and scooter share companies</li> <li>Engage with community and stakeholders</li> <li>Improve supporting infrastructure (bike lanes, signage), as needed</li> </ul>	<ul style="list-style-type: none"> <li>Develop locations for share stations and staging</li> <li>Determine slow/no-ride zones</li> <li>Finalize contracts with providers</li> <li>Improve supporting infrastructure (EV charging), as needed</li> </ul>	<ul style="list-style-type: none"> <li>Make necessary system adjustments</li> <li>Improve supporting infrastructure (inductive EV charging), as needed</li> </ul>

## CMCP Improvements

Electric Bike and Scooter Share provides flexible, point-to-point service for users at a low cost and without the need to rely on schedules. These flexible fleets would improve North County by:

- Creating better connections with existing and planned transit infrastructure.** Electric Bike and Scooter Share helps users make more timely connections and reduces topographic or distance barriers.
- Raising usage of active transportation infrastructure.** This program will provide more options for different modes of transportation that will minimize the physical effort needed to travel by foot or traditional bike.
- Positively impacting community health.** By providing an alternative to private cars and carshares, this program will reduce air pollution while minimizing time spent in traffic. Overall health will also be improved through the increased levels of physical and outdoor activity.

## Preliminary Projects and Programs

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Designate electric bike and scooter share pick-up/drop-off locations along mobility boulevards with bike facilities and job centers to provide access to SPRINTER stations and other key destinations.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Administer a voucher or reduced-fee program for individuals from low-income households.		<input type="checkbox"/>	<input type="checkbox"/>
Install bike charging stations at SPRINTER stations and key destinations in mobility hubs (e.g., commercial centers, employer sites, and industrial parks).		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Partner with local bike CBOs to launch a bike lease and fix-it education program.		<input type="checkbox"/>	<input type="checkbox"/>
Implement secure bike parking.		<input checked="" type="checkbox"/>	<input type="checkbox"/>



Bikeshare (Source: JUMP)



Flexible Fleets (Source: Getty Images)



Station Rendering: Genesee



Micromobility Parking

# Flexible Feet: Microtransit

## Related North County CMCP Strategies



This program creates microtransit service in the North County region. Microtransit — which typically uses buses and vans much smaller than traditional municipal buses — is designed to be demand responsive or to run with fixed schedules, lines, and stops. This allows the service to be more efficient by pooling riders with other passengers traveling in the same or similar direction to nearby destinations. Hailing a ride could be done through a mobile app, call center, website, or an agent at popular destinations.

## ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>• Study travel patterns</li> <li>• Determine feasibility of service and ideal scale</li> <li>• Negotiate agreements with software developers and microtransit operators</li> <li>• Engage with community and stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Develop web interface</li> <li>• Determine service boundaries</li> <li>• Finalize contracts with providers</li> <li>• Facilitate connections with existing and planned bus and rail infrastructure</li> <li>• Plan for drop-off/pick-up areas at popular destinations</li> <li>• Educate public on usage</li> </ul>	<ul style="list-style-type: none"> <li>• Make necessary adjustments to system</li> <li>• Determine if bus lines can be replaced with microtransit service, or vice-versa</li> </ul>

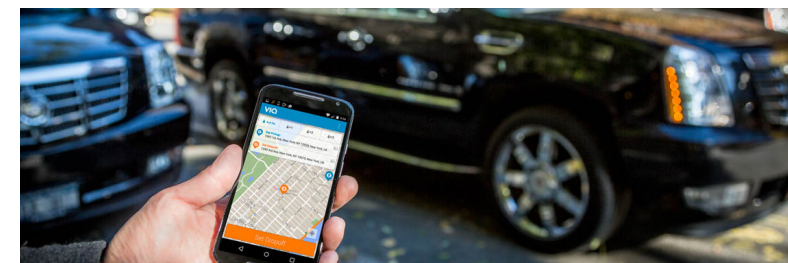
## CMCP Improvements

Microtransit provides flexible, single-seat rides for users at a low cost, without the need to rely on schedules, and attracts riders who find traditional transit unreliable or too infrequent. Microtransit would improve North County by:

- **Implementing a similar passenger experience as UberPOOL.** This program provides more convenient and accessible opportunities for non-automobile mobility throughout North County.
- **Facilitating connections with existing and planned transit infrastructure.** First- and last-mile gaps in the existing transit network are closed, wait times are lowered, and destinations that do not have the demand to support traditional transit can be reached.

## Preliminary Projects and Programs

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Perform a micromobility study to determine viable first- and last-mile strategies to SPRINTER stations.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Provide flex/microtransit service with a flex service zone along Cannon Rd.		<input type="checkbox"/>	<input type="checkbox"/>
Provide flex/microtransit service along Twin Oaks Valley Rd with a flex service zone between Buena Creek Rd and Wild Canyon Drive.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provide on-demand microtransit shuttle service from the Pointsettia Station to the business park along Palomar Airport Rd.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Provide an intra-city shuttle service to connect CSUSM and other job centers in the San Marcos area.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provide a seasonal shuttle service to connect inland residents to beaches.		<input type="checkbox"/>	<input type="checkbox"/>
Implement an affordable Mobility on Demand (MOD) service to serve communities of concern with access to key destinations around North County.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Ride Sharing Applications (Source: Via)



Microtransit (Source: iStock)



Shuttle (Source: iStock)



Easy Mile (Source: Debbie Leung)

# Flexible Fleet: NEVs

## Related North County CMCP Strategies



This program facilitates implementation for Neighborhood Electric Vehicles (NEVs). NEVs are small, sometimes resembling a golf cart, generally with a maximum speed of 25 MPH. NEVs can be utilized for a variety of purposes, such as municipal service vehicles, carshare, or flexible shuttle service. Advantages to NEVs include their small size which allow them to navigate through tight spaces and occupy smaller parking spaces, their low speed which allows for safer integration with bike and pedestrian traffic, and their classification as zero-emission vehicles. As such, they qualify for a purchase rebate of \$1,500 from the State of California, which would lower costs for municipalities and agencies to acquire these vehicles.

### ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>Determine feasibility of service and ideal scale</li> <li>Determine best uses for NEVs</li> <li>Assess NEV policies</li> <li>Negotiate with vehicle manufacturers</li> <li>Engage with community and stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Finalize contracts with providers</li> <li>Upgrade local infrastructure (charging, storing, and maintenance)</li> <li>Launch NEV public awareness campaign</li> <li>Develop services if applicable</li> </ul>	<ul style="list-style-type: none"> <li>Make necessary adjustments to system</li> <li>Refine integration with transit and microtransit, bike, and pedestrian, network</li> </ul>

### CMCP Improvements

NEVs provide cleaner and more flexible vehicle options for municipalities and agencies. These flexible fleets would improve North County by:

- Providing more accessibility than traditional transit use.** Their small size allows them to be utilized on local streets and non-classified roadways, such as alleys, pedestrian malls, plazas, and pathways.
- Implementing a car share program for North County residents.** Residents can rent NEVs as needed, which will raise overall quality of life by lowering or eliminating costs associated with vehicle ownership.
- Positively impacting roadway safety.** The relatively low speed of NEVs will help prevent collisions and minimize severe injuries and/or fatalities.

## Preliminary Projects and Programs

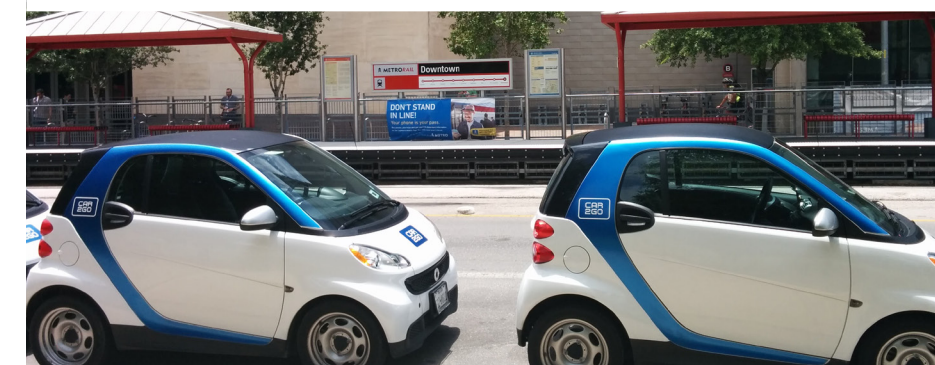
DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Perform a micromobility study to determine viable first- and last-mile strategies.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Review speed along mobility boulevards and within mobility hubs to adjust speeds on roadway facilities to operate NEV services.		<input type="checkbox"/>	<input type="checkbox"/>
Develop a NEV plan for each community in the subregion.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Develop NEV policies to be inclusive of new transportation technologies along walking and biking facilities.		<input type="checkbox"/>	<input type="checkbox"/>
Consider implementing NEV dedicated facility connecting the Coastal Rail Trail to communities along the coast.		<input type="checkbox"/>	<input type="checkbox"/>
Upgrade rail trail facilities to allow shared use with NEVs.		<input type="checkbox"/>	<input type="checkbox"/>



Free subsidized shuttle service (Source: FRED)



Car Sharing (Source: Zipcar)



Electric Carshare (Source: Car2Go)



On-Street EV Charging (Source:iStock)

# Pedestrian Safety Enhancements

## Related North County CMCP Strategies



This program is broad in scope and will create a safer and more enjoyable pedestrian experience for residents. Projects could include, but are not limited to, pedestrian overpasses, improvements to the regional trail system, wider and more abundant sidewalks, road diets, safety buffers, better ADA compliance, flashing crossing beacons, and pedestrian scale lighting. Improvements will be focused along mobility boulevards within mobility hubs. These improvements complement one another, and provide a more attractive pedestrian experience.

## ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>• Study locations in need of improvements</li> <li>• Prioritize locations most in need</li> <li>• Engage with community and stakeholders</li> <li>• Study cost, effects, and best practices of each intervention</li> <li>• Coordinate with municipalities that feature existing/planned active transportation plans</li> </ul>	<ul style="list-style-type: none"> <li>• Select alternatives for each location</li> <li>• Coordinate and develop contracts with consultants and construction crews</li> <li>• Educate public on improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to improve out sidewalk network</li> <li>• Monitor long-term reduction in injuries and fatalities</li> </ul>

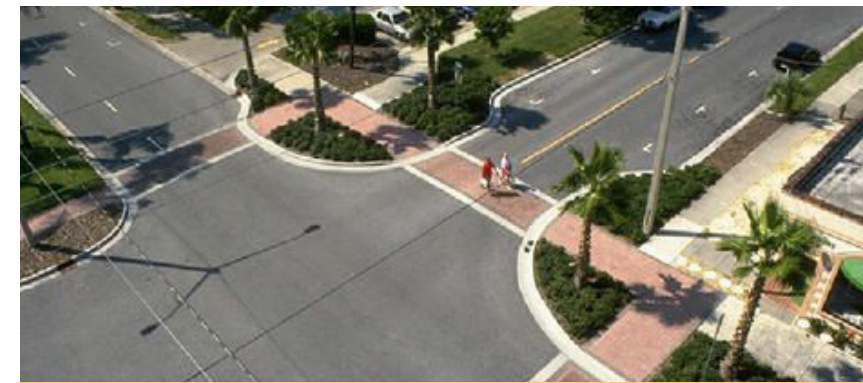
## CMCP Improvements

Pedestrian Safety Enhancements would improve North County by:

- **Increasing the number of trips completed by walking.** More walking trips reduces single-occupant vehicle trips and vehicle congestion.
- **Benefiting community and regional health.** Increased walking raises physical activity levels and air quality.
- **Removing barriers of inconvenience and creating new safety features.** Increased comfort and accessibility of pedestrian trips provides greater mobility options for non-vehicle trips.

## Preliminary Projects and Programs

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Improve pedestrian access across mobility boulevards by designing short-cut paths, introducing mid-block crossings, refuge islands, and other crossing improvements with complementary programs.		✓	☐
Improve pedestrian amenities along mobility boulevards and at overpasses/underpasses to improve safety and connectivity (e.g., street furniture, shading, and lighting improvement).		✓	✓



Bulbout (Source: NACTO)



Sidewalk Widening (Source: NACTO)



Mid-Block Crossing Enhancements (Source: SANDAG)



Safety Beacon at Crossing (Source: NACTO)

# Bikeways

## Related North County CMCP Strategies



This program focuses on improving multi-modal access to regional bikeways and trails in North County. This program will ensure that trailheads are located in areas that are accessible by the active transportation network and that areas near the trailheads generate trips on the regional bike and trails network. In addition, this program aims to improve access to popular destinations or important transportation nodes adjacent to trails. Providing these improvements would facilitate more opportunities for active transportation along mobility boulevards and within mobility hubs.

## ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>• Study locations in need of improvements</li> <li>• Prioritize locations most in need</li> <li>• Engage with community and stakeholders</li> <li>• Study cost, effects, and best practices of each intervention</li> <li>• Coordinate with municipalities that feature existing/planned active transportation plans</li> </ul>	<ul style="list-style-type: none"> <li>• Select alternatives for each location</li> <li>• Coordinate and develop contracts with consultants and construction crews</li> <li>• Educate public on improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor overall increase in bike and pedestrian mile traveled and trips</li> <li>• Coordinate with extensions/expansions to the regional bikeways and trails</li> </ul>

## CMCP Improvements

Bikeway and trailhead improvements would improve North County by:

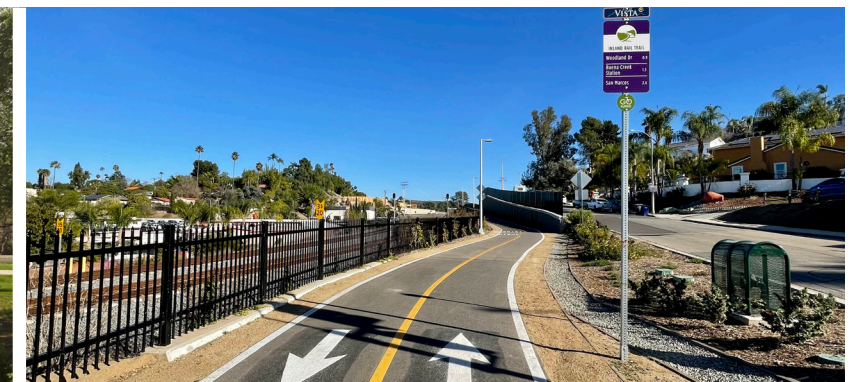
- **Encouraging more activity at the trailheads.** More attractive, functional, and visible trailheads will draw users to trailheads and their adjoining trails.
- **Designing infrastructure for the region's climate.** Due to the region's climate that supports year-round walking and biking, improving access to and attractiveness of trailheads will raise the viability of pedestrian trips, providing greater mobility options for non-vehicle based trips.

## Preliminary Projects and Programs

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Improve multi-modal connections to trailheads and regional bike facilities by implementing Class I/Class IV bike facilities along mobility boulevards.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Connect Escondido Creek Trail to mobility hubs.		<input type="checkbox"/>	<input type="checkbox"/>
Provide fix-it stations at key locations near rail trails and within mobility hubs.		<input type="checkbox"/>	<input type="checkbox"/>
Evaluate feasibility of upgrading rail trail facilities to allow for future shared-use with NEV		<input type="checkbox"/>	<input type="checkbox"/>
Improve pedestrian amenities along and at Inland Rail Trail Trailheads.		<input type="checkbox"/>	<input checked="" type="checkbox"/>



Santa Fe River Trail Bridge



Inland Rail Trail (Source: SANDAG)



Off-Street Bike Facility



On Street Protected Bike Facility

# Roundabouts

## Related North County CMCP Strategies



This program will implement policies and projects to analyze the feasibility of roundabouts as part of intersection improvements. Roundabouts are a type of traffic control strategy used to reduce high speeds, improve traffic flows, reduce conflict points between vehicles and other modes, and create a more comfortable pedestrian and bicyclist experience. Roundabout features — such as raised splitter islands that allow pedestrians to cross one direction of vehicle traffic at a time or separated pathways for bicyclists — can be included to enhance the user experience for multiple modes of travel. Truck aprons can also be included as a design feature to allow heavy vehicles to navigate the roundabout without damaging any infrastructure.

### ACTIONS

SHORT TERM	MID TERM	LONG TERM
<ul style="list-style-type: none"> <li>Determine and prioritize locations for implementation</li> <li>Engage with community and stakeholders</li> <li>Study cost, effects, and best practices of each intervention</li> <li>Adopt a roundabout policy to explore the feasibility of a roundabout prior to constructing an intersection</li> <li>Perform an Intersection Control Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Select alternatives for each location</li> <li>Coordinate and develop contracts with consultants and construction crews</li> <li>Educate public on improvements</li> <li>Implement roundabouts at locations already identified as feasible by municipalities</li> </ul>	<ul style="list-style-type: none"> <li>Monitor change in collisions with a focus on pedestrian and bicycle collisions</li> <li>Implement roundabouts in the North County subregion</li> </ul>

### CMCP Improvements

Roundabouts would benefit North County by:

- Improving Safety.** Roundabouts improve safety by reducing conflict points between vehicles and pedestrians and creating an environment that calms traffic. Lower speeds provide a more comfortable street environment for bicyclists and are associated with a decreased risk of collision resulting in injury or fatality.
- Providing Features for All Users.** Roundabouts can be designed to provide features for all users such as ramps to and from a separated or shared use path and enhanced crossing treatments for pedestrian visibility.
- Maintaining Flow of Traffic.** Roundabouts maintain the flow of traffic and reduce idling while enhancing pedestrian facilities to allow for greater pedestrian feasibility.

## Preliminary Projects and Programs

DESCRIPTION	PRIMARY STRATEGY	SUPPLEMENT/ SUPPORT MOBILITY BOULEVARD	SUPPLEMENT/ SUPPORT REGIONAL SPINE
Roundabout Policy Update		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction of a roundabout and enhanced pedestrian crossing facilities at feasible intersections in the North County subregion that have a history of high bicycle and pedestrian collision rates.		<input type="checkbox"/>	<input type="checkbox"/>
Analysis and design of intersection control features such as a roundabout, traffic signal or other intersection control improvement.		<input checked="" type="checkbox"/>	<input type="checkbox"/>



Residential Roundabout (Street View)



Aerial View of Roundabout



Pedestrian Crossing at Roundabout