RECENT AND CONCURRENT PLANNING PROCESSES

Numerous previous and current planning projects are being used to inform the Northgate Boulevard Transportation Plan. These efforts include citywide planning efforts as well as visions created by the community. Key efforts reviewed include:

Citywide Plans
- Sacramento General Plan 2035, City of Sacramento, 2015
- South Natomas Community Plan, 2015 (this document was part of the General Plan)
- Vision Zero Sacramento Action Plan, City of Sacramento, 2018
- City of Sacramento Bicycle Master Plan, City of Sacramento, 2018
- Pedestrian Crossing Guidelines, 2021
- Sacramento General Plan Update 2040, City of Sacramento, Ongoing

Partner Agency Plan
- SacRT Forward Alternatives Report, 2018

Community-Based Plans
- Gardenland Northgate Strategic Neighborhood Action Plan, 2003
- Northgate Streetscape Master Plan, 2006

Sacramento General Plan 2035, City of Sacramento, 2015

The General Plan’s Mobility Element addresses the infrastructure and service needs of various modes of transport. The plan calls for the creation of a balanced, multimodal network that meets the needs of all road users.

Relevant Goals:
- Provide a multimodal transportation system that supports the social, economic and environmental vision, goals, and objectives of the City.
- Increase multimodal accessibility throughout the city and region with an emphasis on walking, bicycling, and riding transit.
- Improve accessibility and system connectivity by removing physical and operational barriers to safe travel.
- Design, construct, and maintain a universally accessible, safe, convenient, integrated and well-connected pedestrian system that promotes walking.
- The City shall plan, design, operate and maintain all streets and roadways to accommodate and promote safe and convenient travel for all users.

South Natomas Community Plan, 2015

The South Natomas Community Plan was created to put forth community-based policies to increase livability. The plan analyzes the history and planning context in South Natomas and includes relevant policies from the 1988 General Plan Update that affect the area.

Relevant Policies:
- The City shall discourage drive-through commercial uses.
- The City shall acquire and maintain of right-of-way for the extension of light rail service into the community.
Vision Zero Sacramento Action Plan, City of Sacramento, 2018

The City of Sacramento developed a Vision Zero Action Plan to prioritize safety improvements and make progress toward eliminating all traffic fatalities. The Action Plan found that 79% of collisions resulting in death or serious injury occurred on 14% of the street network. Northgate Boulevard was classified as a High Injury Network street and is the 6th worst corridor overall.

The Action Plan includes a crash typology and a series of countermeasures to reduce those crashes. Countermeasures tackle crash reduction from multiple angles: street design, enforcement, and education. It outlines short-term and long-term actions.

Relevant Strategies:

- Incorporate Vision Zero safety principles into all future City plans and design documents.
- Provide ongoing safety-related training and support to City staff responsible for street design and enforcement activities.
- Enhance street lighting to improve visibility throughout the HIN.
- Revisit pedestrian crossing guidelines for signalized and unsignalized intersections.
- Continue building the enhanced bikeway network consistent with the Bicycle Master Plan.

Key Findings:

- Crash victims who walk are 10 times more likely to be killed or seriously injured in Sacramento than crash victims who drive.
- Between 2009 and 2015, collisions where someone was killed or seriously injured while biking or walking increased 63%.
- Unsafe speed is the leading cause of crashes. 2/3 of fatal crashes occur on streets with a posted speed of 40 mph or higher.
- About 44% of fatal crashes and half of pedestrian KSI crashes occur in the City’s Disadvantaged Communities, which account for only 25% of the roadway network.
The City of Sacramento's Bicycle Master Plan provides a blueprint for developing a bicycle network that is safe and accessible for residents of all ages and abilities.

**Goals:**

- **Increase Ridership**: 7% bicycle mode share for commuting by 2020
- **Increase Safety**: Zero bicyclist fatalities by 2020
- **Increase Connectivity**: Double the percentage of residents that can conveniently reach a continuous low-traffic-stress bikeway network* by 2025
- **Increase Equity**: Equitable investments in bicycling facilities and programs for all neighborhoods by 2020

Northgate Boulevard was identified as a gap in the network and an unsafe bike route in community feedback. In the list of recommended infrastructure projects, buffered bike lanes are proposed from N Market Blvd. to Rosin Court on Northgate Boulevard (north of the Northgate Boulevard Transportation Plan study area).

The City of Sacramento's Pedestrian Crossing Guidelines provide information on the siting and design of crossings.

**Goals:**

- **Help City staff** select pedestrian crossing treatments for new marked crosswalks
- **Enhance existing marked crosswalks** in combination with the guidance provided in the City of Sacramento

A critical element is recommending different types of crossings based on vehicle Average Daily Traffic, number of lanes per direction, presence of a median, and posted speed. The bigger the road and the faster and heavier the traffic, greater protection is needed to create a safe crossing.

Treatments include high-visibility crosswalks, raised crosswalks, yield to pedestrian signage, curb extensions, refuge islands, pedestrian signalization.

The guidelines provide a definition, considerations, and example design renderings to communicate safety improvements.
I-5

INTRODUCTION

SacRT Forward, 2018

The Sacramento Regional Transit District, known as SacRT, runs buses and light rail throughout the city.

SacRT commissioned a study in 2018 to understand how service might evolve to meet two different alternatives:

• “High Coverage” or lots of routes covering most areas of the city, but with low frequencies and a short daily schedule
• “High Frequency, High Ridership” meaning service would be concentrated on major roads and buses would run more frequently and for more hours of the day

This study focused on laying out the tradeoffs of these two alternatives. For example, high coverage means a person does not have to walk far to a bus stop, but since buses must cover so many streets, it might only run every 45 minutes to an hour. Service focused on major roads means a person might have to walk farther to the bus stop, but service could run every 15 or 20 minutes.

Plan Implementation

As part of this plan the following changes were implemented to service along Northgate Boulevard:

• Buses now arrive every 45 minutes instead of every 60 minutes
• Service was added on weekends

Route 13 Changes

Route 13 serves Northgate Boulevard. Below are route changes implemented by SacRT as part of SacRT Forward.

Proposed routing changes to Route 62

*363 passengers/day
• 19.1 passengers/hour
• Largely industrial service area

Proposed

1. Reroute extend to two high schools, library, and junior college
2. Improve weekday frequency to 45 minutes
3. Add Saturday and Sunday/Holiday service
4. Forecast 440 passengers/day
In 2019, the City initiated an update to the General Plan. A Draft Land Use Map, Proposed Roadway Changes, and 10 Key Strategies were approved by City Council in January 2021. Plan production is currently underway and should be complete in Spring 2022.

Relevant Key Strategies:

- Facilitate compact mixed-use development in key commercial corridors to create vibrant walkable and transit-supportive neighborhoods.
- Use an equity framework to prioritize and fund infrastructure improvements in historically disinvested and underserved neighborhoods.
- Right-size streets to fit today’s mobility needs to prioritize walking, biking, and transit over automobile use.
- Eliminate City-mandated parking minimums citywide and introduce parking maximums.
The Strategic Neighborhood Action Plan (SNAP) is a planning and decision-making guide informed by neighborhood priorities to uplift place and community health. The plan is short-range (3-5 years) and identifies actions to achieve established priorities.

The plan is organized thematically into four categories:

1. Housing and Infill
2. Neighborhood Beautification and Safety
3. Commercial Corridors
4. Parks and Recreation

Relevant Strategies:

• Make traffic safety improvements in front to Smythe School on Northgate Boulevard. Improvements may include installation of a median, pedestrian crossing, and/or pedestrian signal in front of the school.

• Make traffic safety improvements at the intersection of West El Camino and Northview Drive to assist safe pedestrian crossing.

• Prepare a Master Plan for Northgate Boulevard. Possible components of a plan would be lighting, design, infrastructure/traffic improvements, establishing commercial nodes on Northgate, and promoting housing.
Northgate Streetscape Master Plan, City of Sacramento 2006

The Northgate Boulevard Streetscape Master Plan was created in response to needs expressed by the community through the Northgate SNAP. The study area spans from Rosin Court to Arden Garden Connector.

Existing conditions identified three sub-areas along Northgate, each defined by land use intensity and type. The plan introduces interventions to improved pedestrian safety and access including high visibility crosswalks, widened crosswalks, and curb ramps.

**Relevant Strategies**

- The plan puts forth a preferred option that fits within the existing right-of-way except for a couple spot locations. The option replaces the center turn lane with a median from Rosin Court to Arden Garden Connector. The median ranges from 6’-23’.
- Detailed recommendations on landscaping, lighting, furnishing, and other urban design elements are included in the plan.
TRAFFIC

Historic Traffic Volumes

Today, Northgate Boulevard’s traveled way, or the space between sidewalks, is used primarily by people driving cars, buses, and trucks. Understanding how that space is being used provides a baseline to build future alternatives.

Historic ADT was available for 2017 and 2018 (right). ADT was higher north of San Juan Blvd., likely due to traffic accessing I-80. South of San Juan Blvd., ADT indicates that lane reallocation is worth exploring. This means the street could function effectively even with less travel lanes. This project will use community input and traffic modeling to verify any changes to travel lanes.

Data Collection

New data was collected during a weekday in fall 2021. Data collection included:

- Speed and volume of cars at Jefferson Ave., Haggin Ave., and Rosin Ct. during a 24-hour period
- Turning movements of drivers and counts of bicyclists and pedestrians at Arden Garden Connector, El Camino Ave., Haggin Ave., and San Juan Rd. Counts were collected from 7-9 am and 2:45-7:15 pm. The long afternoon collection time captured both school and commute traffic.

Lane Reallocation

Communities find that streets need to accommodate growing and changing needs within the same space. Reallocation a vehicle lane (often called a “road diet”) is an opportunity to rethink how that space is used.

Traffic volumes are a starting point to see if lane reallocation is feasible. Many agencies use an ADT of 15,000-25,000 as a threshold for a street that can operate with one lane per direction. Peak hour volumes of 1,000 per hour is another threshold often used.

Traffic volumes alone are not the only consideration. Other critical factors include:

- Availability of alternate routes
- Availability of alternate means of getting around
- How the change meets larger City goals and policies

The decision to change the design of a street rests on how the City and community weigh the tradeoffs of decisions. Lane reallocation may inconvenience drivers but make Northgate Boulevard safer for people walking or bicycling.

Average Daily Traffic (ADT) or the total number of vehicles using the corridor in a 24-hour period (2018)

EXISTING CONDITIONS

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Figure 12. Road Diet Implementation Maximum Volume Thresholds by Agency

Source: FHWA Road Diet Handbook
Peak Hour Conditions

The 2021 peak volumes were compared to 2018 to understand trends. Data was not available at the exact same intersections, but can still be used for an overall identification of trends.

Note that since turn movement counts, used for this graphic, were taken at slightly different locations than the ADT counts on the previous page, the totals differ slightly. This is due to drivers turning on and off the corridor.

Key Findings

• Similar to the previous comparison of historic ADT, the peak volumes at Rosin Ct. decreased slightly from 2018 to 2021, while volumes around El Camino and Haggin Aves. increased.

• The time when the peak hour occurs differs by location. The evening peak hour at Arden Garden Connector and El Camino Ave. was 4:30-5:30 pm. At Haggin Ave. and San Juan Rd., the peak hour was 2:45-3:45 pm, likely due to school traffic from Smythe Academy K-6.
Intersection Movements

Often times capacity is added at intersections in the form of right or left turn lanes to process traffic. Volumes of through and turn movements at intersections reveal opportunities to rethink use of street space.

Key Findings

Arden Garden Connector
There is a strong travel pattern of people driving south on Northgate Boulevard turning left onto Arden Garden Connector eastbound, as well as the opposite pattern – people driving west on Arden Garden Connector and turning right on Northgate Boulevard.

El Camino Ave.
There are high turning movements in all directions, right and left, at this location. El Camino Ave. is a primary east-west route.

Haggin Ave.
Turn volumes are low at this intersection. Access to Smythe Academy is on Northgate Boulevard, meaning school traffic likely does not use Haggin Ave.

San Juan Rd.
This intersection has two left turn lanes on Northgate Boulevard. Volumes of left turns are much higher on the north side of the intersection. U-turns are allowed and are fairly common southbound. There were zero northbound U-turns.

Walking/Bicycling Activity

The highest amount of pedestrian activity was at Haggin Ave., where an average of 71 people were counted during morning and evening peak hours.

Bike activity was highest at Arden Garden Connector, likely due to connections to several trails.

Full traffic data collection sheets can be found in Appendix F
EXISTING CONDITIONS

SAFETY

Are Crashes More Common At Intersections Or Midblock?

Crashes on Northgate Boulevard were equally likely to occur at an intersection versus not at an intersection (police reports classify these as midblock, though they don’t necessarily occur at the midblock point of an intersection).

Most Common Movements Preceding Collisions

What movement were travelers making just prior to the collision? Examining the movement preceding a crash can help in identifying potential countermeasures to reduce the frequency and severity of crashes. The top five movements preceding collisions for all modes and all injury crashes on Northgate Boulevard were:

- Proceeding straight
- Making a left turn
- Making a right turn
- Entering traffic, or
- Other unsafe turning

Sources: (1) Statewide Integrated Traffic Records System (SWITRS), January 2016 to December 2021 and (2) Crossroads, March 2020 to March 2021
**What Causes Killed or Seriously Injured (KSI) Crashes?**

Police reports from crashes typically report a Primary Crash Factor (PCF). The PCF is the “best describes the primary or main cause of the collision,”* according to the reporting officer.

The top three PCF for crashes occurring along Northgate Boulevard are:
- Automobile Right of Way (ROW)**
- Unsafe Speed
- Improper Turning

**Driver had the right of way and that was infringed upon by another traveler (driver, pedestrian, or cyclist)

**When Do Crashes Occur?**

Crashes were examined by mode of travel involved in the crash and the time of day the crash occurred. 38% of bicycle-involved crashes on Northgate Boulevard occur between 6 and 9 p.m., while 33% of pedestrian-involved crashes occur between 3 and 6 p.m.
Crashes Involving People Biking

From January 2016 to March 2021, twenty-six (26) crashes along Northgate Boulevard involved people riding bikes. The most common types of crashes were:

- Motor vehicle proceeding straight; bicyclist proceeding straight (58%)
- Motor vehicle making left turn; bicyclist proceeding straight (16%)
- Motor vehicle proceeding straight; bicyclist proceeding wrong way (16%)

In the most common crash type involving people biking (motor vehicle proceeding straight and bicyclist proceeding straight), approximately half take place at intersections and half occur elsewhere along the street segment.

Potential countermeasures that could be considered to reduce this crash risk are:

- Bicycle signal phase
- New traffic signals at previously unsignalized intersection
- Protected bike lane
- Education and enforcement

Crashes Involving People Walking

From January 2016 to March 2021, sixteen (16) crashes along Northgate Boulevard involved people walking. The most common types of crashes were:

- Motor vehicle making left turn; pedestrian crossing in crosswalk at intersection (13%)
- Motor vehicle making right turn; pedestrian crossing in crosswalk at intersection (13%)
- Motor vehicle proceeding straight; pedestrian not crossing in crosswalk (13%)

Two of the most common crash types involving people walking occur when vehicles are turning left or right at intersections while pedestrians are in the crosswalk.

Potential countermeasures that could be considered to reduce this crash risk are:

- Leading pedestrian interval (LPI)
- Right-turn-on-red restrictions
- Curb extensions or radius reductions
- Median or centerline hardening
Top 10 Vision Zero Action Plan Crash Profiles On Northgate

The 2018 Vision Zero Action Plan identified the ten most frequently seen KSI crash profiles seen in the City of Sacramento. The table below highlights the degree to which the Top 10 crash profiles occur on Northgate Boulevard. Crashes may fall under multiple crash profiles (e.g., broadside crashes involving a bicyclist also occurred in a commercial area), therefore column totals may exceed 100%.

<table>
<thead>
<tr>
<th>Top 10 KSI Crash Profiles</th>
<th>Percent of crashes on Northgate</th>
<th>Percent of KSI crashes on Northgate</th>
<th>Percent of citywide KSI crashes*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe Speed on Non-Local Streets – Northgate is classified as an arterial</td>
<td>--</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>Alcohol Involved</td>
<td>22</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>35+ MPH Streets (Northgate is 40 mph for length of study area)</td>
<td>100</td>
<td>100</td>
<td>65</td>
</tr>
<tr>
<td>30+ MPH Streets – Bicycle Involved</td>
<td>9</td>
<td>29</td>
<td>85</td>
</tr>
<tr>
<td>Broadside Crashes – Bicycle Involved</td>
<td>6</td>
<td>25</td>
<td>44</td>
</tr>
<tr>
<td>Driver Making Left or Right Turn – Bicycle/Pedestrian Involved</td>
<td>4</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Crashes in Commercial Areas</td>
<td>65</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>60+ Year Old Pedestrians</td>
<td>11</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Pedestrian Crossing Outside of an Intersection or Crosswalk</td>
<td>3</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Pedestrian Crashes Near Transit Stops (within 200’)</td>
<td>62</td>
<td>6</td>
<td>17</td>
</tr>
</tbody>
</table>

Sources: (1) Statewide Integrated Traffic Records System (SWITRS), January 2016 to December 2021 and (2) Crossroads, March 2020 to March 2021

*City of Sacramento’s Vision Zero Action Plan analyzed 2009 to 2015 crash data

There are several KSI crash profiles that occur more frequently on Northgate Boulevard than city-wide that are important to point out, for example driver making left or right turn – bicycle/pedestrian involved (18% of KSI crashes on Northgate Boulevard) and crashes involving pedestrians 60 and older (12% of KSI crashes on Northgate Boulevard). These findings highlight important areas to focus on for infrastructure improvements, awareness and education along the corridor.
EXISTING CONDITIONS

TRANSIT OPPORTUNITIES

Methodology

- An interview was conducted with SacRT facilities staff to understand opportunities to improve access to stops along Northgate Boulevard.
- This appendix details stop-by-stop discussions.
- Each page shows the existing stops (in red) and proposed relocation, if applicable (in blue).

<table>
<thead>
<tr>
<th>Route</th>
<th>Hours of Operation</th>
<th>Service Area</th>
<th>Major Destinations</th>
<th>Frequency (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 – Natomas/Arden</td>
<td>Mon – Fri: 6 a.m. – 9 p.m.</td>
<td>North Sacramento:</td>
<td>Arden Fair Mall Transit Center, Arden/Del Paso Blue Line, Walmart on Truxel</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Sat: 7:30 a.m. - 9:30 p.m.</td>
<td>El Centro &amp; Del Paso to Butano &amp; El Camino</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sun: 7:30 a.m. - 7:30 p.m.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>113 – North Market Commuter</td>
<td>Mon – Fri: 7:00 a.m. – 5:30 p.m.</td>
<td>Truxel &amp; Gateway Park to Arden/Del Paso</td>
<td>Arden/Del Paso Blue Line, Gateway Park</td>
<td>4 round trips per day</td>
</tr>
</tbody>
</table>

Northgate Boulevard Service Summary
**EXISTING CONDITIONS - TRANSIT**

**TRANSIT**

Route 13 and 113 travel along Northgate Boulevard. Route 13 turns at San Juan Rd. and runs every 45 minutes. Route 113 runs five times per day and travels farther north to Truxel & Gateway Park.

The map (Fig. 3.9) below shows boarding (red) and alighting (blue) activity per stop along the study area. Route 13 carried **363 passengers per day** before the pandemic. The section of Route 13 traveling through the study area carries **73 boardings per day**, while Route 113 only carries **11 boardings**. Route 86 running on San Juan Rd has relatively high ridership at the intersection of Northgate Boulevard and San Juan Rd.

**Key Findings**

- Boardings are highest at El Camino Ave.
- 60% of bus stops have no shelter or seating
**Jefferson**

- **Northbound**
  - Stop is between driveways
  - Move stop south closer to intersection (might not be enough room)

- **Southbound**
  - Stop is far from Jefferson. Bus turns left at Arden.
  - Move stop closer to intersection
EL CAMINO AVE.

- **Northbound**
  - Stop is between driveways
  - Move stop south closer to intersection in front of Texaco
  - Due to landscaping pinch point, may not meet ADA

- **Southbound**
  - Far from intersection due to poles in sidewalk
  - Would like to be closer to intersection, but concerned about high speed right turning drivers from El Camino to Northgate southbound hitting bus
Haggin Ave.

- Northbound
  - Far from intersection
  - Move stop closer to intersection

- Southbound
  - Must stay near side
  - Rolled curb only
EXISTING CONDITIONS

Sontano Dr. / Wisconsin Ave.

- Northbound
  - Near side, far from intersection
  - Move far side just past Jimboy’s driveway

- Southbound
  - Far from intersection
  - Move closer to intersection, put 5’x8’ landing in a wave in the wall
EXISTING CONDITIONS

Tenaya Ave. / Senator

- Northbound
  o Serves grocery
  o No crossing – remove unless can add a crossing

- Southbound
  o Serves grocery opposite side
  o No crossing – remove unless can add crossing
**EXISTING CONDITIONS**

**Wintergarden**

- **Northbound**
  - Stop requested to serve housing complex
  - Low ridership
  - No crossing

- **Southbound**
  - No Southbound stop
  - City to build new signal at Rio Tierra/Winterhaven
  - Remove Wintergarden stop
  - Create new stop pair at Rio Tierra/Winterhaven
San Juan Ave.

- Northbound
  - Far from intersection
  - Only stop with a shelter on corridor
  - Move to Quick Quack car wash

- Southbound
  - Far from intersection
  - Concern about high speed drivers turning from San Juan onto Northgate then into driveway – could clip bus if stop moved closer to intersection
  - San Juan is a transfer location – ideal to minimize distance from intersection
EXISTING CONDITIONS

Patio Ave.

- Northbound
  - Far from intersection
  - Move 100’ from intersection
  - Avoid guidewire (mirror breaks) – put stop 40’ ahead of guidewire

- Southbound
  - Future Sonic development
  - Move stop closer to intersection
EXISTING CONDITIONS

Rosin Ct.

- Northbound
  - Far from intersection
  - Move stop closer to intersection
  - Stay near side – utilize Taco Bell sidewalk/access

- Southbound
  - McDonald’s southern walkway not compliant
  - No change
APPENDIX A

TRAFFIC, SAFETY, AND TRANSIT

SUMMARY

NORTHGATE BOULEVARD TRANSPORTATION PLAN