Transportation Authority of Marin

**DATE:** October 28, 2021

**TO:** Transportation Authority of Marin Board of Commissioners

**FROM:** Anne Richman, Executive Director
Derek McGill, Director of Planning
Scott McDonald, Senior Transportation Planner

**SUBJECT:** 2021 Congestion Management Program Report & 2020 Transportation System Monitoring Report (Action), Agenda Item No. 9

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## RECOMMENDATION

Accept the 2021 Congestion Management Program (CMP) and 2020 Transportation System Monitoring Report for Marin County.

The Funding, Programs & Legislation (FP&L) Executive Committee reviewed and voted unanimously to recommended that the TAM Board accepts the 2021 CMP and 2020 Transportation System Monitoring Report for Marin County, noting within its approval the influence of the fire season along with the pandemic on this cycle of monitoring.

## BACKGROUND

As the Congestion Management Agency (CMA) for Marin, TAM must update the CMP every two years as required by state law to monitor Marin County's transportation network. The next CMP update is due to the Metropolitan Transportation Commission (MTC) by December 2021.

California Government Code Section 65089 requires that every county that includes an urbanized area adopts a CMP. The CMP shall include every city/town and the county. California Government Code Section 65088.1 defines urbanized areas as being over 50,000 in population. Marin County meets this definition. The requirements for the CMP were enacted with the passage of Assembly Bill 471 (1989) and became effective upon voter approval of the Prop 111 Blueprint Legislation passed in June 1990. The CMP sets the stage for local land use changes to not adversely impact current transportation service without committed transportation mitigation measures. The goal of the original legislation was to tie together land-use decisions with transportation investments. Proposition 111 provided for a nine-cent increase in the state gas tax. Note that since 1990 there has also been additional legislation linking transportation and land use, specifically AB 32 and SB 375.

TAM has engaged TJKM Associates to help prepare the 2021 CMP Report along with the associated 2020 Transportation System Monitoring Report. As with previous CMP updates, TAM has collected transportation data to measure system performance in even-numbered years, in this case, through the 2020 Transportation System Monitoring Report. The data is then utilized for the development of the 2021 CMP.

The CMP measures automobile travel times to determine the level of congestion on all highways and principal arterial segments in Marin County. These segments were adopted by the Marin County CMA (TAM's predecessor agency) in the first CMP in 1994. The CMP evaluates the measured conditions against pre-established performance standards using a Level of Service (LOS) standard. The CMP then identifies segments of roadways with deficiencies requiring remedial action. The CMP uses Transportation Demand Management (TDM) and traffic relief strategies and compiles a Capital Improvement Program (CIP) to improve multi-modal system performance. Transportation system monitoring data collection is necessary to develop the CMP.

The CMP legislation makes the following requirements of a conformance determination for local jurisdictions:

- Maintain LOS standards outlined in the CMP (LOS E for highways and LOS D for local arterials), with the exclusion of grandfathered segments;
- Participate in a program to analyze the impact of land-use decisions;
- Participate in the adoption and implementation of a deficiency plan when LOS standards are not maintained, with the exclusion of grandfathered segments.

Cities and counties have a vested interest in complying with the CMP requirements because their receipt of Proposition 111 gas tax subventions, along with other state and federal transportation funds, is conditioned on the development of and compliance with a CMP.

MTC published updates to its CMP Guidance on June 14, 2019. The CMP must be consistent with the latest adopted Regional Transportation Plan (RTP) and with the current MTC travel model. Changes to MTC's CMP Guidance include references to regional goals and policies established in the Plan Bay Area (PBA) plans.

TAM is required to conduct either a CMP or a countywide transportation plan (CTP) in order to maintain eligibility for MTC planning funds. MTC is encouraging counties to consider opting out of conducting CMPs, in alignment with state legislative trends and planning best practices to address vehicle miles traveled (VMT) and greenhouse gas (GHG) reductions. TAM staff will be assessing this request in the coming months.

## DISCUSSION/ANALYSIS

Marin's CMP network of monitored roadways was adopted in 1994 by the then Marin County CMA in response to state statutory requirements associated with the CMP legislation of 1990. The locations of the CMP roadways are identified in the table below:

***Marin County CMP Network***

| Street | From | To | Roadway Type |
|---|---|---|---|
| SR 1 | US 101 | Tennessee Valley Rd | Arterial |
| SR 1 | Northern Ave | Almonte Blvd | Arterial |
| SR 1 | Sir Francis Drake Blvd | Pt. Reyes Station | Arterial |
| SR 37 | US 101 | Atherton Ave | Freeway |
| US 101 | Golden Gate Bridge | Spencer Ave | Freeway |
| US 101 (SOV and HOV) | SR 131 (Tiburon Blvd) | Tamalpais Dr | Freeway |
| US 101 (SOV and HOV) | Sir Francis Drake Blvd | I-580 | Freeway |
| US 101 (SOV and HOV) | I-580 | Mission Ave | Freeway |

| Street | From | To | Roadway Type |
|---|---|---|---|
| US 101 (SOV and HOV) | Mission Ave | N. San Pedro Rd | Freeway |
| US 101 (SOV and HOV) | Freitas Pkwy | Lucas Valley Rd | Freeway |
| US 101 | North of Atherton | Sonoma Co. Line | Freeway |
| SR 131 (Tiburon Blvd) | Redwood Hwy Front. Rd | E. Strawberry Dr | Arterial |
| I-580 | Sir Francis Drake Blvd | Marin Co. Line | Freeway |
| I-580 | Bellam Blvd | Sir Francis Drake Blvd | Freeway |
| Novato Blvd | San Marin Dr | Eucalyptus Ave | Arterial |
| Novato Blvd | Wilson Ave | Diablo Ave | Arterial |
| S. Novato Blvd | Sunset Pkwy | US 101 | Arterial |
| Bel Marin Keys | US 101 | Commercial Blvd | Arterial |
| Sir Francis Drake Blvd | Butterfield Rd | Willow Rd | Arterial |
| Sir Francis Drake Blvd | San Anselmo Ave | Red Hill Ave | Arterial |
| Sir Francis Drake Blvd | College Ave | Toussin Ave | Arterial |
| Sir Francis Drake Blvd | College Ave | Wolfe Grade | Arterial |
| Sir Francis Drake Blvd | US 101 | Larkspur Landing Circle | Arterial |
| Red Hill Ave | Sir Francis Drake Blvd | Second St | Arterial |
| Second St | US 101 | Marquard St | Arterial |
| Third St | US 101 | Marquard St | Arterial |
| Bridgeway | Gate 5 Rd | Gate 6 Rd | Arterial |

As its base, the CMP measures PM peak hour travel times along arterial and highway segments to determine system performance. Over time, the data collection process for travel times has changed from floating car surveys to big data sources including INRIX and PeMs.

With the development of the non-motorized transportation pilot program and increased focus on transit services in the county, TAM has modified the approach to system monitoring over the years to reflect additional transit and bike and pedestrian reporting. A major expansion of this effort started in 2016, in response to needs for better data on growing traffic congestion on our highways and local roads. The TAM Board authorized an expanded set of data collection effort to include:

- Expanding the bike and pedestrian count locations over a 14-hour period on weekdays
- Expanding the hours of the data collection to gather average daily traffic (ADT) and determine peak hour counts
- Expanding the weekend data collection process to better compare weekend ADT to weekday ADT
- Expanding data collection outside the CMP roadway network, which included the following locations this cycle (found on page 72 of the system monitoring report):

***Additional Non-CMP Arterials in 2020***

| | | |
|---|---|---|
| 1 | Bridgeway | Olive St to Spring St (Sausalito) |
| 2 | Paradise Dr | Paradise Cove Rd to Seafirth Ln (Tiburon) |
| 3 | Paradise Dr | Ranch Rd to Robin Dr (Tiburon) |
| 4 | Miller Ave | South of Sunnyside Ave (Mill Valley) |
| 5 | Corte Madera Ave | Redwood Ave to Bahr Ln (Corte Madera) |
| 6 | Magnolia Ave | Creekside Dr to Doherty Dr (Larkspur) |

| | | |
|---|---|---|
| 7 | 2nd St | Shaver St to E St (San Rafael) |
| 8 | Fifth Ave | G St to H St (San Rafael) |
| 9 | Sir Francis Drake Blvd | El Camino Bueno to Winship Ave (Ross) |
| 10 | Lucas Valley Rd | San Anselmo Blvd to Red Hill Ave (County of Marin) |
| 11 | San Marin Dr | Somerset Dr to W. Campus Dr (Novato) |
| 12 | Atherton Ave | Bugeia Ln to Archibald Ln (Novato) |
| 13 | Tennessee Valley Rd | Marin Ave to Villa Garden Dr (County of Marin) |
| 14 | Trestle Glen Blvd | Hacienda Dr to Turtle Rock Ct (Tiburon) |
| 15 | Panoramic Hwy | Kent Wy to Bayview Dr (County of Marin) |
| 16 | Edgewood Ave | Daffodil Ln to Sunset Ln (Mill Valley) |

This data collection effort has been shaped by our member agencies, specifically with input from public works staff.

The resultant 2020 System Monitoring Report provides system performance information on a wide range of quantitative travel information from roadway speeds and volumes, transit performance, and bike and pedestrian volumes. Tube counts were conducted at roadway locations and video technology was used at the identified bike and pedestrian count locations. Vehicle data was collected on Tuesdays, Wednesdays, and Thursdays and bike and pedestrian data was collected on a Thursday and Saturday. Holidays and days with special events or extreme weather conditions were avoided.

Local Roadway Volumes

Roadway volumes collected during this process showcase a 3-day (Tuesday-Thursday) average, with approximated peak period of 6-10 AM and 3-7 PM. These volumes have been shared with local jurisdictions' public works and planning staff.

Local Roadway Service Levels

In the 2020 Monitoring Cycle, none of the arterial roadway segments fell below the LOS goal "D" for the PM peak of the 17 arterial roadways monitored. Therefore, no follow-up actions are required on any of these segments.

Although the AM period is not included as a performance standard for the CMP, TAM also measures AM peak periods as part of the system monitoring report, and no arterial segments fell below the LOS goal "D."

Highway Service Levels (Mixed Flow Lanes)

In the 2020 monitoring cycle, no mixed flow highway segment fell below the minimal established LOS goal of "E" in the PM period. TAM also measures AM peak periods, and no highway segment fell below the LOS goal of "E". With traffic of this cycle being highly influenced by pandemic conditions, the LOS levels improved greatly across all segments.

High Occupancy Vehicle (HOV) Lane Service Levels

In the 2020 monitoring cycle, all HOV lanes met the LOS goals for HOV lane performance in the PM period. In the AM period, which is not required to be monitored under the CMP, monitoring was conducted and no segments of US 101 HOV lanes fell below the established goal of LOS level "E."

Other System Performance Measures

*Transit Services*

The CMP measures total transit ridership across Marin Transit, Golden Gate Transit, and Sonoma Marin Area Rail Transit (SMART), and reports on data collected through 2020. Due to the COVID-19 pandemic, the traffic monitoring report notes drastically reduced transit service, and many routes were suspended. Across transit operator services in Marin, boardings reduced accordingly in the FY19/20 fiscal year.

*Bike and Pedestrian Activity*

Bicycle and pedestrian activity is monitored at various locations in Marin County as mentioned above. Bridgeway at Princess Street remains the highest level of activity among all the locations monitored.

Due to various methodologies used for bike and pedestrian counts, there is limited consistent historical data available for review. To account for this limited historical data set, the CMP compares peak hours of bike/ped activity at consistent locations across the CMPs. Based on this peak hour analysis, 2018 was a record high for bike/ped usage. From the significantly increased level in 2018, average bicycle volumes decreased by 7% in 2020 monitoring, while average pedestrian volumes fell by 41% between 2018 and 2020 based on a total of 28 bicycle/pedestrian locations this cycle. This decrease may have been highly impacted by the focused data collection process, overall commute trips and remote work impacts during the pandemic. It is worth noting that bike facility volumes in particular, more so than pedestrian volumes, showed large increases in some locations and large decreases in others.

Travel Demand Modeling and Land Use Analysis

The CMP is required to identify consistency with MTC's Regional Travel Demand Model Methodology and databases used in the Regional Travel Demand Model. MTC published updates to its CMP Guidance on June 4, 2019. As done in previous CMP cycles, the 2021 CMP Update must be consistent with the latest adopted RTP (Plan Bay Area 2040, adopted July 2017) and with the current MTC travel model. There have been no changes to the regional guidance since TAM's adoption of the 2019 CMP. MTC and CMA staff around the region are in discussions about future CMP guidance and modeling requirements.

The intent of the Land Use Analysis Program (LUAP) is to improve the linkage between local land-use decisions and regional transportation facility decisions; to better assess the impacts of development in one community on another; and to promote information sharing between local governments when the decisions made by one jurisdiction have an impact on another. TAM acts as a resource to local governments in performing transportation analyses of land-use changes on the CMP-designated transportation network.

CIP

The CIP portion of TAM's CMP is the basis for determining which projects are included in the State Transportation Improvement Program (STIP). The CIP must also show consistency with regional air quality attainment plans.

Both Marin's ½-Cent Transportation Sales Tax (Measure A/AA) and $10 Vehicle Registration Fee (Measure B) Expenditure Plans provide dedicated local funding to transportation projects and programs which are identified through the RTP and included in the CIP. Please note that as of now, Marin is not expecting any RTIP (Regional Transportation Improvement Program) funds out of the STIP for approximately 10 years due to advanced funding provided to the Highway 101 Gap Closure project.

Monitoring, Conformance and Deficiency Planning

Local jurisdictions must meet the CMP conformance requirements to receive Proposition 111 gas tax subvention funding. The process of conformity has not substantively changed in the 2021 CMP. LOS monitoring did not report any new deficiencies, and all local jurisdictions that conform to LUAP requirements are expected to remain in conformance.

Congestion Maps
New for this cycle, congestion maps were developed along with the CMP, based on commercially available INRIX speed data for all CMP network segments. These countywide speed maps allow comparison between 2019 (pre-pandemic) and 2020 conditions showing travel times in both the AM and PM peak hours. These maps, while not required by the CMP, can further illustrate the CMP LOS levels through a new section on TAM's website located at: https://www.tam.ca.gov/cmp/#interactivemap.

Pandemic Impacts
The COVID-19 pandemic that started in 2020 and still ongoing has caused drastic changes on traffic volumes and patterns in Marin County. For arterials, freeways, and many bike/pedestrian facilities, the COVID-19 pandemic drastically reduced traffic likely as a result of stay-at-home orders, increased telecommuting, and virtual learning. Lighter than usual traffic conditions were observed in most locations.

The 2021 CMP concludes that no follow-up actions are required on any of the evaluated roadway segments.

## FISCAL CONSIDERATION

No fiscal consideration is needed. The CMP was conducted within budget and on schedule.

## NEXT STEPS

The final CMP is required to be submitted to MTC by December 2021. Once the TAM Board reviews and accepts the CMP, staff will submit it to MTC as required. Additionally, staff will assess the implications of MTC guidance regarding CMPs and related plans and will return to the Board for additional discussion and direction in the coming months.

## ATTACHMENTS

Attachment A – Draft 2021 CMP Report (https://bit.ly/TAM-CMP-2021)
Attachment B – Draft 2020 Transportation System Monitoring Report (https://bit.ly/TAM-TSM-2020)
Attachment C – Congestion Maps (https://www.tam.ca.gov/cmp/#interactivemap)
Attachment D – PowerPoint Presentation

# Congestion Management Program & Transportation System Monitoring Report

Transportation Authority of Marin

Board of Commissioners

October 28, 2021

# CMP Background & Overview

- CMP Legislation – 1990
- Assess local jurisdictions' impact on regional road network
- Biennial Update
- Transportation System Monitoring conducted every even year (2020)
- CMP report every odd year (2021)
- MTC Guidance from 2019, updates in process

# Expanded Data Collection

- In 2015, TAM Board authorized expanded traffic monitoring

- Key Features this Cycle:
  - 33 arterial road locations (17 CMP locations, 16 additional locations)
  - 28 bike/ped locations
  - New Congestion Map for 2019 and for 2020 to display pre-pandemic and post-pandemic conditions
  - Use of INRIX Big Data for Congestion Map

# Congestion Management Program

- TAM as CMA is required to perform CMP for Marin

## ARTERIALS

| Speed | Level of Service (LOS) |
|---|---|
| 25 mph | A |
| 20 mph | B |
| 13 mph | C |
| 10 mph | D |
| 7 mph | E |
| < 7 mph | F |

Source: Highway Capacity Manual

## FREEWAYS

| Speed | Level of Service (LOS) |
|---|---|
| 60 mph | A |
| 57 mph | B |
| 54 mph | C |
| 46 mph | D |
| 30 mph | E |
| < 30 mph | F |

Source: Highway Capacity Manual

- Freeways - LOS Standard 'E'
- Arterials – LOS Standard 'D'
- Grandfathered Segments are Exempt
- Corrective Measures Needed for Deficient Segments

# Arterial Roads

- SR 1
- SR 131 (Tiburon Blvd)
- Novato Blvd
- Bel Marin Keys
- Sir Francis Drake Blvd
- Red Hill Ave, 2nd St, 3rd St
- Bridgeway

# Arterial Roads – AM Conditions

- LOS Standard for Arterials – D
- 17/17 segments performed above LOS standard in 2020
- In 2018, 16/17 performed above LOS D
- Sir Francis Drake US 101 to Larkspur Landing Circle moved up from LOS D in 2018 to LOS A in 2020

# Arterial Roads – PM Conditions

- LOS Standard for Arterials – D
- In 2020, 17/17 segments perform above LOS D
- In 2018, 12/17 performed above LOS D
- Sir Francis Drake US 101 to Larkspur Landing Circle at LOS F in 2018 and LOS B in 2020

# Arterial Road – Historical Performance (PM)

| Roadway | Segment | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 | 2018 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| SR 1 | US 101 to Tennessee Valley Rd | - | B | B | C | C | D | C | B |
| SR 1 | Northern Ave to Almonte Blvd | B | A | A | B | A | B | B | C |
| SR 11 | Sir Francis Drake Blvd to Pt. Reyes Station | A | A | A | A | A | A | A | A |
| SR 131 (Tiburon Blvd) | Redwood Hwy Frontage Rd to E. Strawberry Dr | A | A | B | A | A | B | B | A |
| Novato Blvd | San Marin Dr to Eucalyptus Ave | B | C | A | B | B | A | A | A |
| Novato Blvd | Wilson Ave to Diablo Ave | C | B | C | B | B | C | C | A |
| S. Novato Blvd | Sunset Pkwy to US 101 | A | A | A | B | A | B | B | A |
| Bel Marin Keys | US 101 to Commercial Blvd | B | C | B | B | A | C | C | C |
| Sir Francis Drake Blvd | Butterfield Rd to Willow Rd | D | F | D | C | E | D | E | C |
| Sir Francis Drake Blvd | San Anselmo Ave to Red Hill Ave | C | C | C | B | C | C | D | B |
| Sir Francis Drake Blvd | College Ave to Toussin Ave | C | D | D | C | E | C | E | B |
| Sir Francis Drake Blvd | College Ave to Wolfe Grade | C | A | B | B | B | B | B | A |
| Sir Francis Drake Blvd | US 101 to Larkspur Landing Cir | F | E | C | D | F | F | F | B |
| Red Hill Ave | Sir Francis Drake Blvd to Second St | B | D | D | C | C | C | B | A |
| Second St | US 101 to Marquard St | - | - | C | C | B | D | D | B |
| Third St | US 101 to Marquard St | - | - | C | C | B | C | B | C |
| Bridgeway | Gate 5 Rd to Gate 6 Rd | B | C | D | C | B | B | C | B |

# Freeways

## Freeways

- I-580 (2 Segments)
- US 101 ( 7 Segments)
- SR 37 (1 Segment)
- US 101 HOV (5 Segments)

# Freeways – Mixed Flow AM Conditions

- LOS Standard for Highways – E
- 6/6 segments perform above LOS Standards
- Last Cycle 1 Segment fell below standard
- US 101 Freitas Parkway to Lucas Valley (SB)
- In 2020, Location moved from LOS F to A

# Freeways – Mixed Flow PM Conditions

- LOS Standard for Highways – E
- All but one segment performed above LOS Standard
- US 101 from SR131 to Tamalpais (NB) moved from LOS F in 2018 to LOS E in 2020

# Freeway – Historical Performance (PM)

| Roadway | Segment | 2006 | 2008 | 2010 | 2012 | 2014 | 2016 | 2018 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| SR 37 | US 101 to Atherton Ave | A | B | A | A | A | A | N/A | A |
| US 101 | Golden Gate Bridge to Spencer Ave | A | A | D | E | D | E | E | C |
| US 101 | SR 131 (Tiburon Blvd) to Tamalpais Dr | F | F | F | F | F | F | F | E |
| US 101 | Sir Francis Drake Blvd to I-580 | F | E | D | D | D | E | C | B |
| US 101 | I-580 to Mission Ave | F | E | E | D | E | D | C | B |
| US 101 | Mission Ave to N. San Pedro Rd | C | F | E | D | B | C | B | A |
| US 101 | Freitas Pkwy to Lucas Valley Rd | A | A | D | B | E | B | A | A |
| US 101 | North of Atherton Ave to Sonoma County Line | E | F | E | E | F | F | N/A | B |
| I-580 | Sir Francis Drake Blvd to Marin County Line | F | E | A | E | E | F | N/A | A |
| I-580 | Bellam Blvd to Sir Francis Drake Blvd | E | E | D | E | F | F | N/A | A |

# HOV Lane/GGB to Spencer Segment LOS Levels

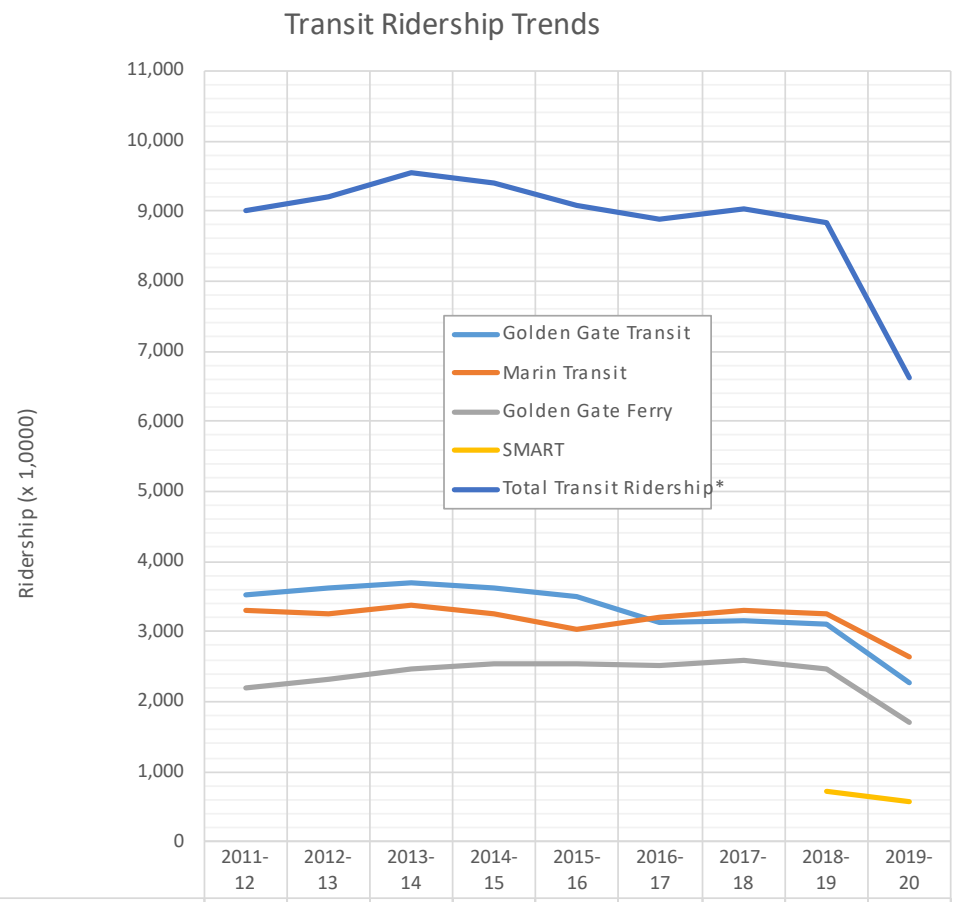
## AM Peak (Southbound Direction)

| Roadway | Segment | 2014 | 2016 | 2018 | 2020 |
|---|---|---|---|---|---|
| US 101 | Golden Gate Bridge to Spencer Ave | - | D | C | A |
| US 101 | SR 131 (Tiburon Blvd) to Tamalpais Dr | A | A | A | A |
| US 101 | Sir Francis Drake Blvd to I-580 | A | B | D | A |
| US 101 | I-580 to Mission Ave | A | B | A | D |
| US 101 | Mission Ave to N. San Pedro Rd | A | C | B | A |
| US 101 | Freitas Pkwy to Lucas Valley Rd | D | E | A | A |

## PM Peak (Northbound Direction)

| Roadway | Segment | 2014 | 2016 | 2018 | 2020 |
|---|---|---|---|---|---|
| US 101 | Golden Gate Bridge to Spencer Ave | - | D | D | B |
| US 101 | SR 131 (Tiburon Blvd) to Tamalpais Dr | F | F | F | E |
| US 101 | Sir Francis Drake Blvd to I-580 | B | D | F | A |
| US 101 | I-580 to Mission Ave | A | C | E | E |
| US 101 | Mission Ave to N. San Pedro Rd | A | B | A | B |
| US 101 | Freitas Pkwy to Lucas Valley Rd | A | A | A | A |

# Transit Ridership Trends




| | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|---|---|---|---|---|---|---|---|---|---|
| Golden Gate Transit | 3,514 | 3,616 | 3,693 | 3,612 | 3,499 | 3,137 | 3,159 | 3,110 | 2,280 |
| Marin Transit | 3,307 | 3,264 | 3,388 | 3,252 | 3,031 | 3,216 | 3,293 | 3,263 | 2,635 |
| Golden Gate Ferry | 2,195 | 2,325 | 2,471 | 2,540 | 2,545 | 2,523 | 2,578 | 2,470 | 1,713 |
| SMART | | | | | | | | 717 | 567 |
| Total Transit Ridership* | 9,016 | 9,205 | 9,552 | 9,404 | 9,075 | 8,876 | 9,030 | 8,843 | 6,628 |

# Bike and Pedestrian Counts

- Facilities with the Highest Weekday Daily Volumes:
  - Bridgeway – 3,830 weekday bike and peds
  - Downtown San Anselmo – 2,274 weekday bike and peds
  - Downtown Fairfax – 1,847 weekday bike and peds
- Average Peds down 41%, Bikes Down 7%; results for individual locations mixed

# Weekday Bike Counts

| COUNT LOCATION DESCRIPTION AND CITY | 2020 Weekday 14-Hour Total (6 AM - 8 PM) | % Change (2018-2020) |
|---|---|---|
| Magnolia Avenue @ Ward Street, Larkspur | 401 | 75% |
| Pacheco Hill Path @ Alameda del Prado, Novato | 172 | 50% |
| Los Ranchitos Road @ Lincoln Hill Multi-Use Pathway, San Rafael | 316 | 48% |
| San Anselmo Avenue @ Tunstead Avenue, San Anselmo | 701 | 40% |
| Bellam Boulevard @ Andersen Drive, San Rafael | 250 | 26% |
| Larkspur-Corte Madera Path @ Baltimore Avenue, Larkspur | 614 | 24% |
| Camino Alto @ E. Blithedale Avenue, Mill Valley | 455 | 20% |
| Broadway @ Bolinas Road, Fairfax | 734 | 19% |
| Corte Madera Creek Path @ Bon Air Road, Greenbrae | 426 | 15% |
| S. Novato Boulevard @ Rowland Way, Novato | 137 | 10% |
| Enfrente Bike Path @ S. Novato Boulevard, Novato | 116 | 6% |
| Doherty Drive @ Larkspur Plaza Drive/Rose Lane West, Larkspur | 516 | 5% |
| Nicasio Valley Road @ Nicasio School, Nicasio | 67 | 3% |
| Tiburon Boulevard @ Main Street, Tiburon | 389 | -10% |
| Mill Valley-Sausalito Path @ Tennessee Valley , Tam Junction | 1,028 | -17% |
| Andersen Drive @ Cal Park Tunnel Path, San Rafael | 293 | -23% |
| Tiburon Boulevard @ S. Knoll Road, Mill Valley | 110 | -26% |
| Mill Valley-Sausalito Path @ E. Blithedale Avenue, Mill Valley | 517 | -44% |
| Bridgeway @ Princess Street, Sausalito | 848 | -50% |
| ***Average*** | **426** | **-7%** |
| | **8,090** | |

# Weekday Pedestrian Counts

| COUNT LOCATION DESCRIPTION AND CITY | 2020 Weekday 14-Hour Total (6 AM - 8 PM) | % Change (2018-2020) |
|---|---|---|
| Enfrente Bike Path @ S. Novato Boulevard, Novato | 76 | 65% |
| Pacheco Hill Path @ Alameda del Prado, Novato | 36 | 44% |
| Los Ranchitos Road @ Lincoln Hill Multi-Use Pathway, San Rafael | 83 | 34% |
| Andersen Drive @ Cal Park Tunnel Path, San Rafael | 122 | 3% |
| Mill Valley-Sausalito Path @ Tennessee Valley, Tam Junction | 814 | 2% |
| Larkspur-Corte Madera Path @ Baltimore Avenue, Larkspur | 768 | -6% |
| Corte Madera Creek Path @ Bon Air Road, Greenbrae | 658 | -10% |
| Bellam Boulevard @ Andersen Drive, San Rafael | 201 | -12% |
| Magnolia Avenue @ Ward Street, Larkspur | 1,301 | -32% |
| San Anselmo Avenue @ Tunstead Avenue, San Anselmo | 1,573 | -36% |
| Doherty Drive @ Larkspur Plaza Drive/Rose Lane West, Larkspur | 521 | -37% |
| Tiburon Boulevard @ Main Street, Tiburon | 972 | -38% |
| Camino Alto @ E. Blithedale Avenue, Mill Valley | 134 | -40% |
| Broadway @ Bolinas Road, Fairfax | 1,113 | -51% |
| S. Novato Boulevard @ Rowland Way, Novato | 175 | -53% |
| Bridgeway @ Princess Street, Sausalito | 2,982 | -55% |
| Mill Valley-Sausalito Path @ E. Blithedale Avenue, Mill Valley | 219 | -62% |
| Tiburon Boulevard @ S. Knoll Road, Mill Valley | 44 | -63% |
| Nicasio Valley Road @ Nicasio School, Nicasio | 1 | -67% |
| ***Average*** | **621** | **-41%** |
| | **11,793** | |

Transportation Authority of Marin

# Congestion Maps

- Displays LOS for most major roadways in Marin
- Based on average speeds from INRIX data in October 2019 and 2020
- View AM or PM peaks
- Zoom in on a particular road or view an entire area to see average congestion
- Each link shows average speed, direction, segment length, and LOS
- Opportunity to compare pre-pandemic and pandemic traffic conditions

# 2019 Congestion Map

The map shows Level of Service (LOS) on arterials and freeways in Marin County, averaged for typical weekdays (Tue-Wed-Thu) between October 1 and October 31, 2019.

AM Peak Period - 7 a.m. to 9 a.m.
PM Peak Period - 4 p.m. to 6 p.m.

**INSTRUCTIONS**

**STEP 1:** Click on the icons below to toggle between AM and PM Peak Period maps.

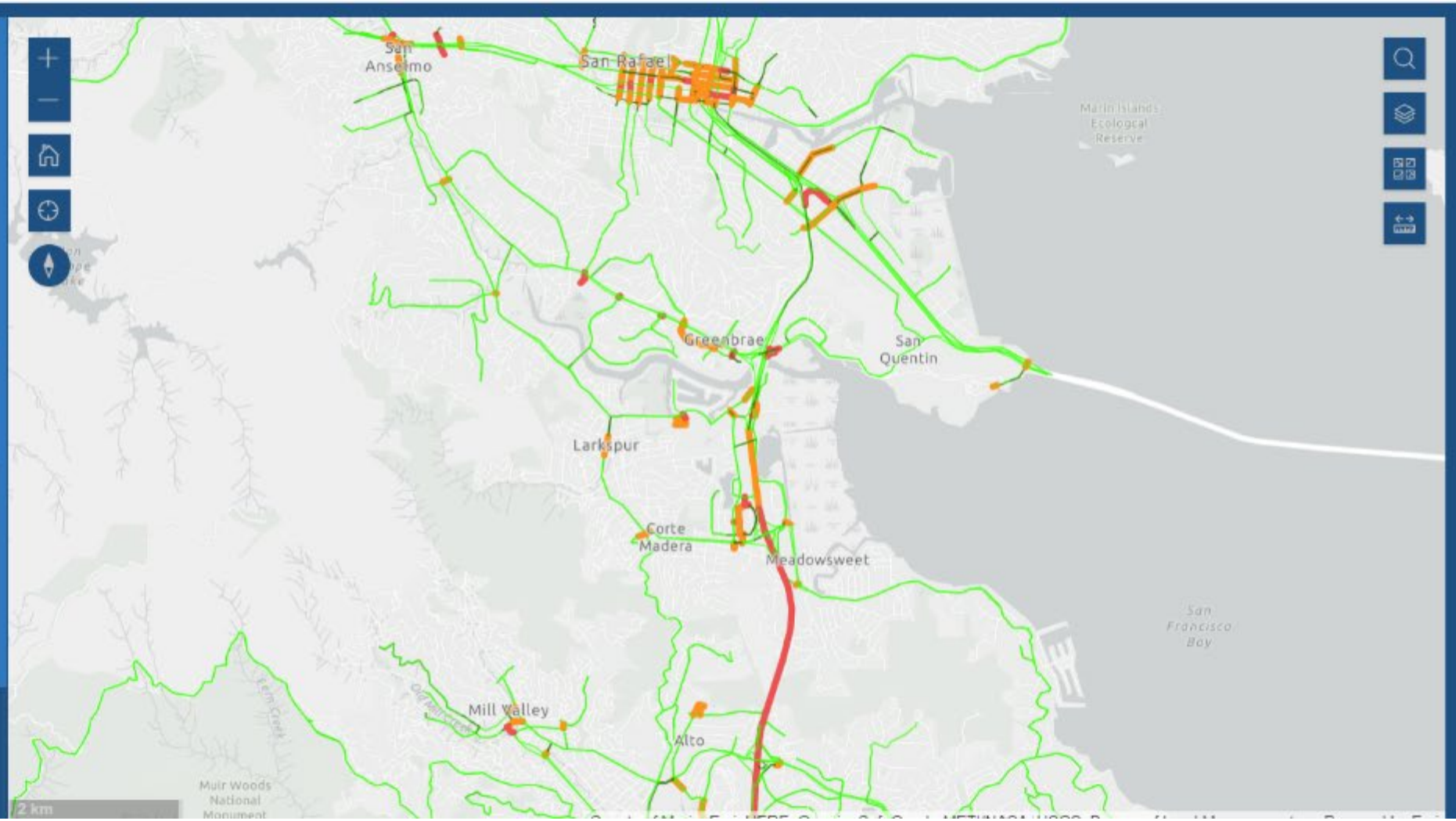
- Level of Service (AM Peak Period)
- Level of Service (PM Peak Period)

**STEP 2:** Click on any segment on the map to view their details (segment length, direction, average travel time, average speed, and level of service).

**STEP 3:** Zoom in and out of the map to view your desired location.

**LEGEND**

- LOS C or Better
- LOS D
- LOS E
- LOS F



# 2020 Congestion Map

The map shows Level of Service (LOS) on arterials and freeways in Marin County, averaged for typical weekdays (Tue-Wed-Thu) between October 1 and October 31, 2020.

AM Peak Period - 7 a.m. to 9 a.m.
PM Peak Period - 4 p.m. to 6 p.m.

**INSTRUCTIONS**

**STEP 1:** Click on the icons below to toggle between AM and PM Peak Period maps.

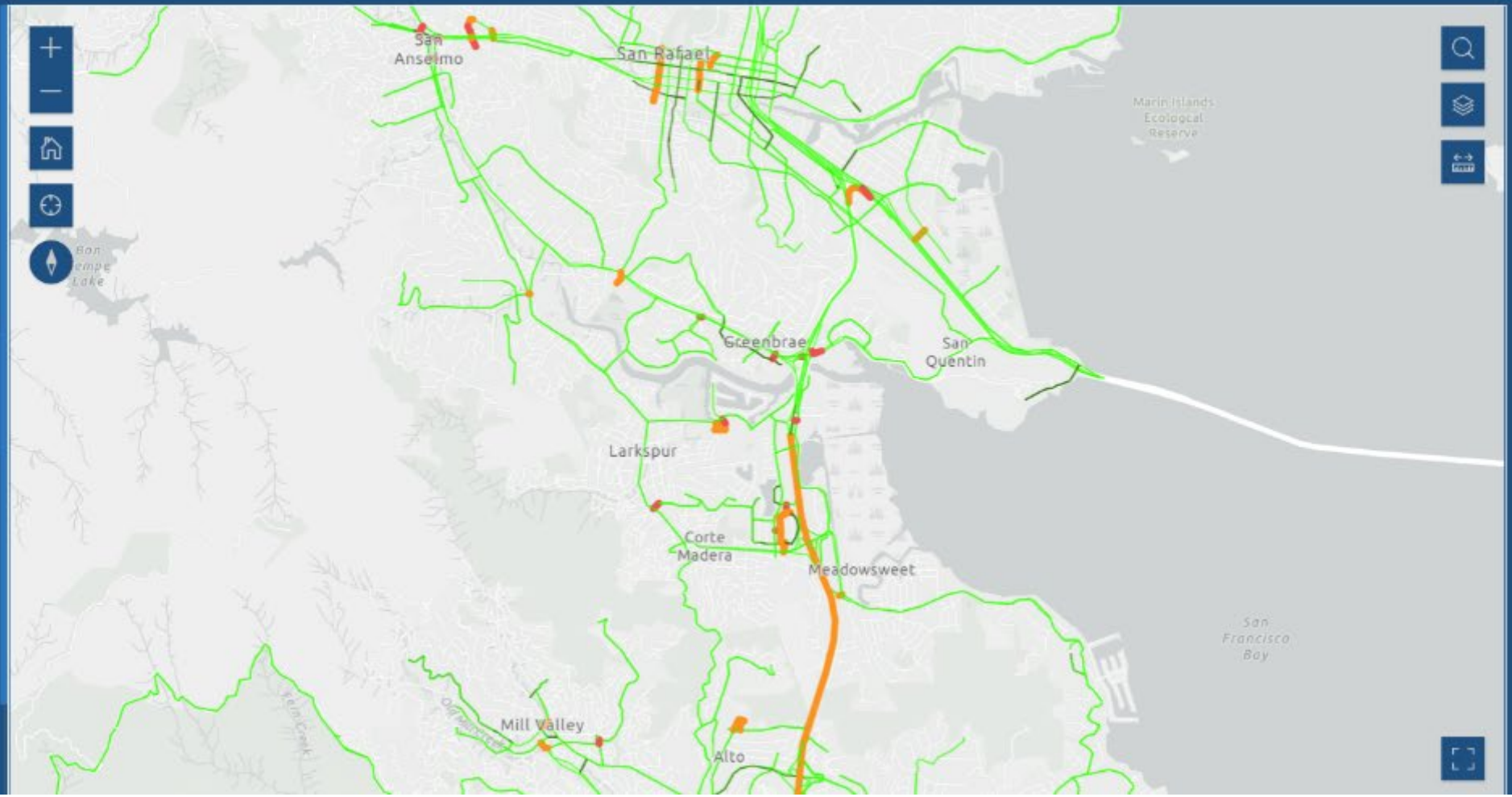
- Level of Service (AM Peak Period)
- Level of Service (PM Peak Period)

**STEP 2:** Click on any segment on the map to view their details (segment length, direction, average travel time, average speed, and level of service).

**STEP 3:** Zoom in and out of the map to view your desired location.

**LEGEND**

- LOS C or Better
- LOS D
- LOS E



# View Attributes

The map shows Level of Service (LOS) on arterials and freeways in Marin County, averaged for typical weekdays (Tue-Wed-Thu) between October 1 and October 31, 2019.

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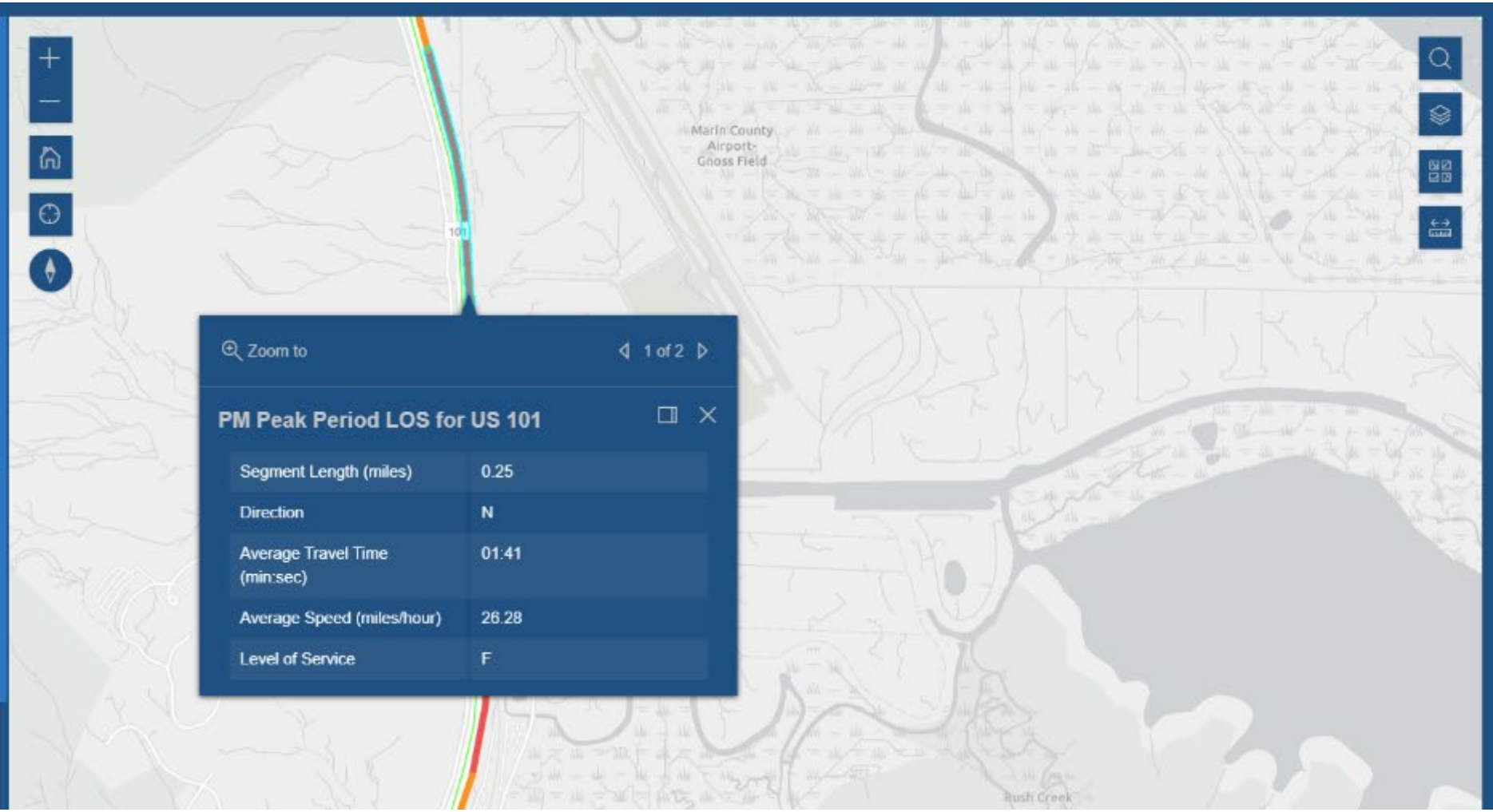
**LEGEND**

- LOS C or Better
- LOS D
- LOS E



# View Areas

The map shows Level of Service (LOS) on arterials and freeways in Marin County, averaged for typical weekdays (Tue-Wed-Thu) between October 1 and October 31, 2019.

AM Peak Period - 7 a.m. to 9 a.m.
PM Peak Period - 4 p.m. to 6 p.m.

**INSTRUCTIONS**

**STEP 1:** Click on the icons below to toggle between AM and PM Peak Period maps.

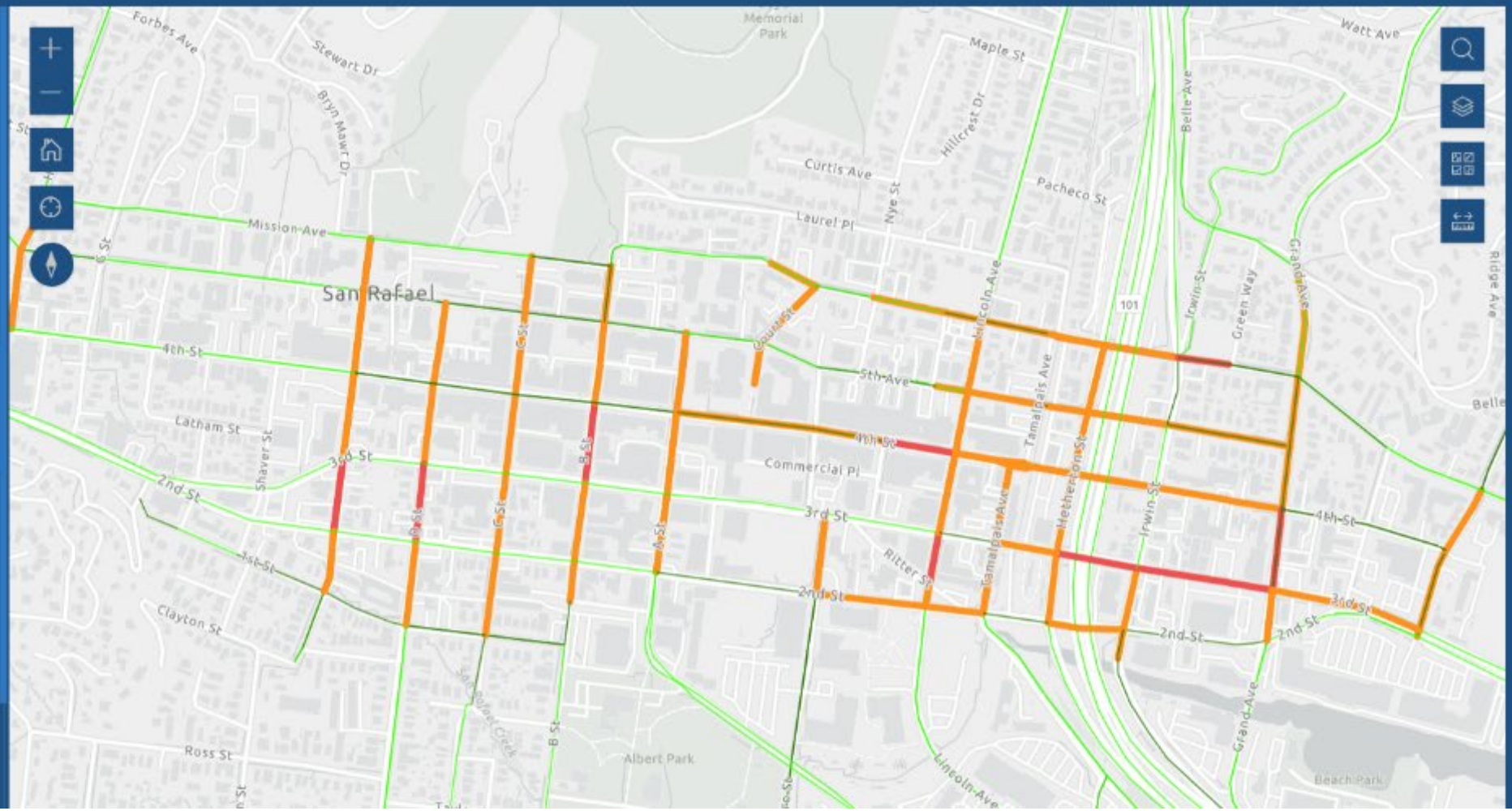
- Level of Service (AM Peak Period)
- Level of Service (PM Peak Period)

**STEP 2:** Click on any segment on the map to view their details (segment length, direction, average travel time, average speed, and level of service).

**STEP 3:** Zoom in and out of the map to view your desired location.

**LEGEND**

- LOS C or Better
- LOS D
- LOS E



# CMP Summary

- COVID had major impact on trips – both congestion and volumes
  - Arterial Roads - No segments failed/major traffic reduction
  - Freeways - No Mixed Flow Lanes Failed, Freeway segments improved
  - Pandemic impact most influential on AM traffic, PM fewer changes.
- No action is required by the CMP
- Bike/Ped monitoring shows decline in average activity since 2018 counts but mixed depending on location. Commute trips and tourism impacted greatly by COVID.
- Transit ridership decline is evident in reported data
- This cycle, overall traffic reduced significantly from changes associated with the pandemic

# Questions?

Thank you!

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