



CITY of CRYSTAL

May 18, 2021 City Council Work Session

- **Blue Line Extension
Update**

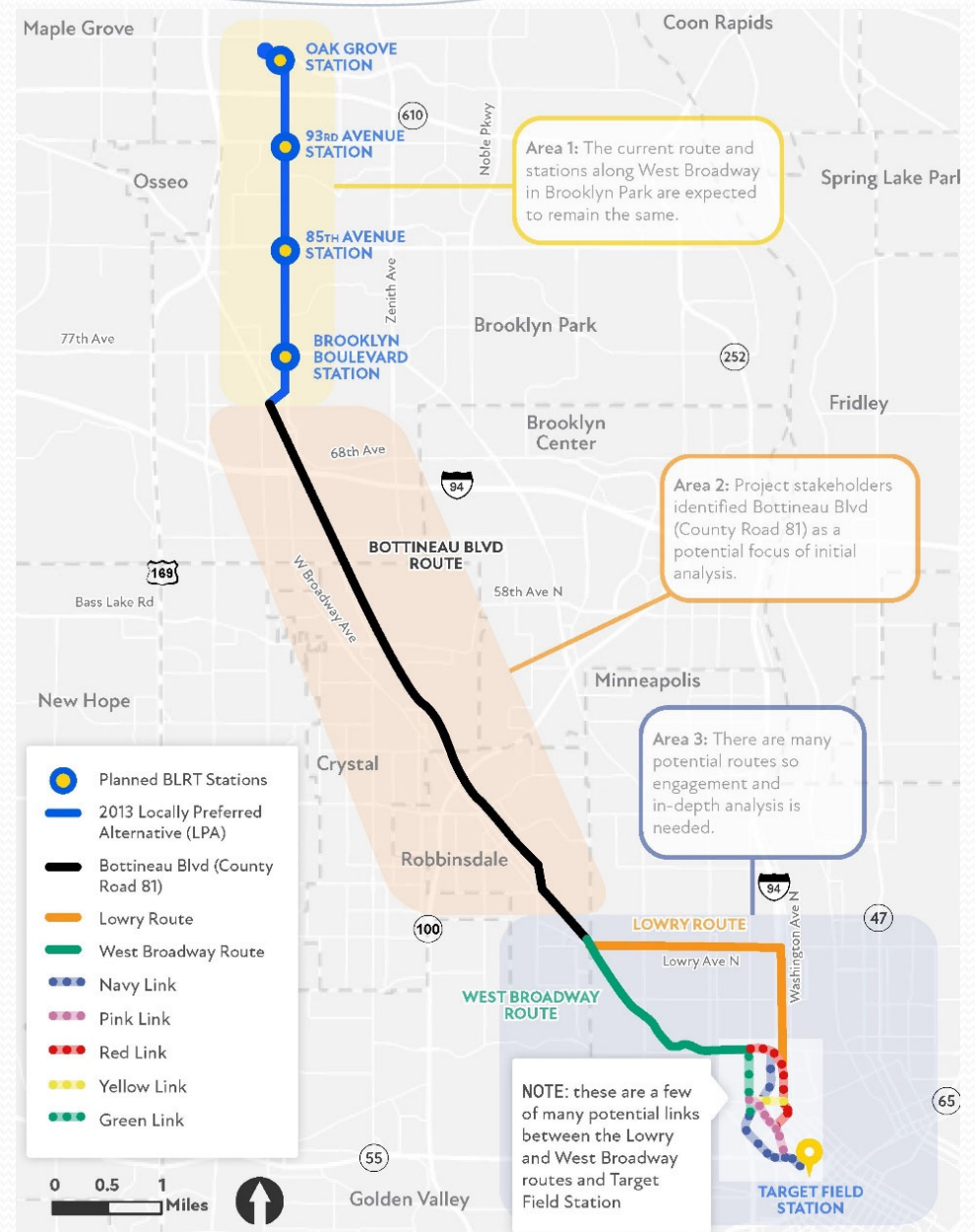
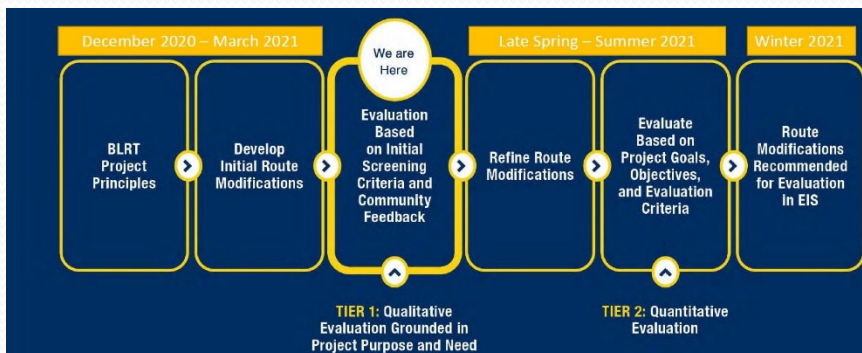
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Blue Line Extension Update

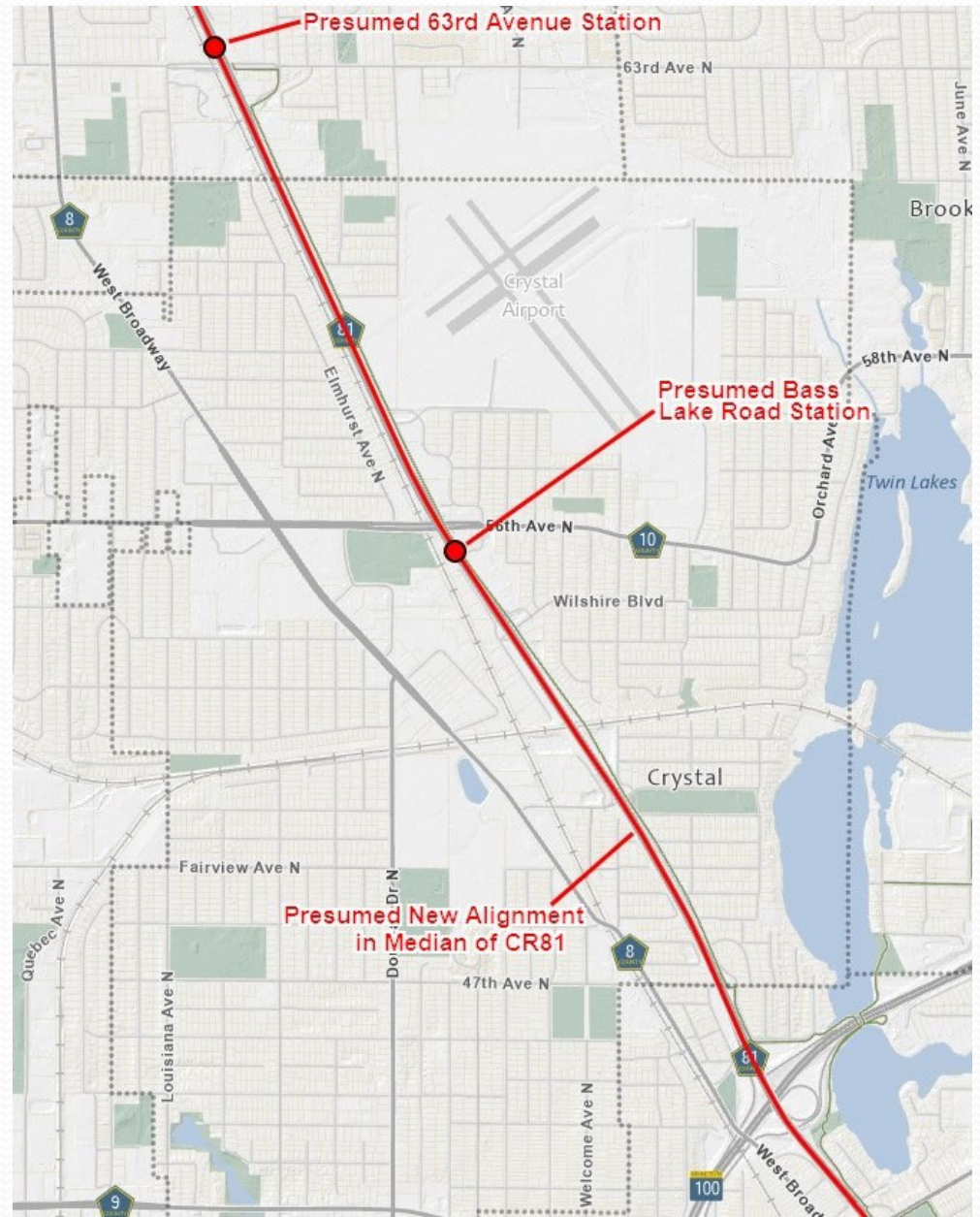
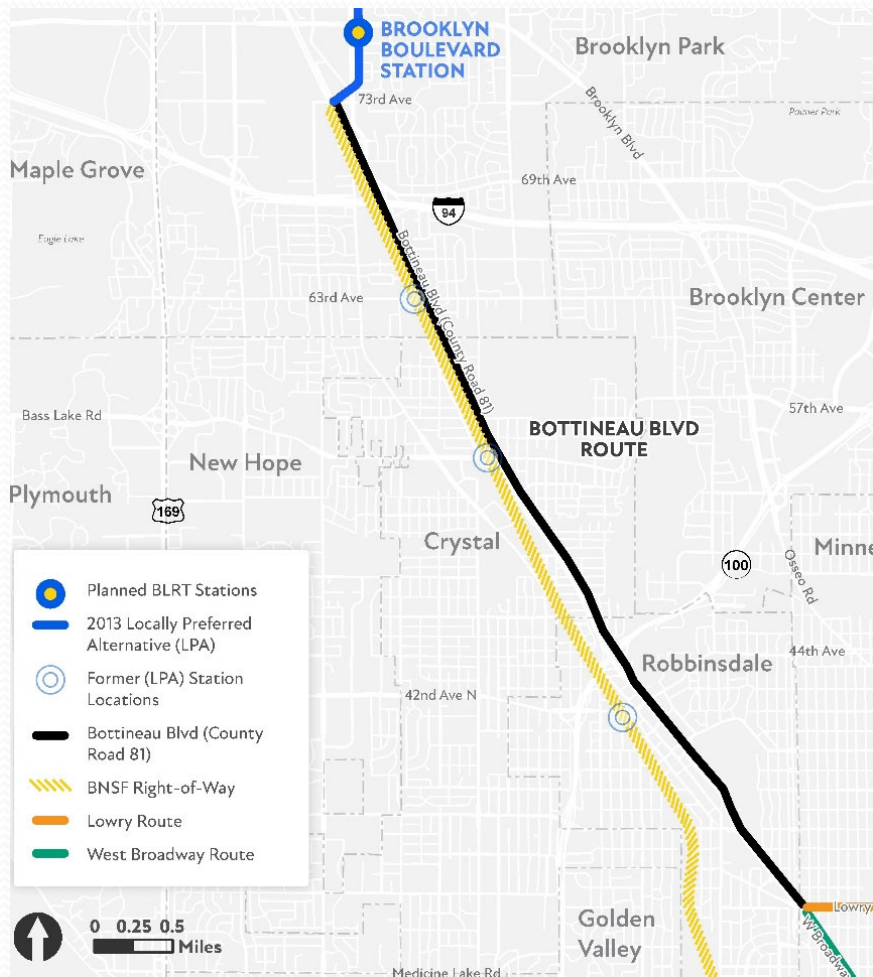
- Initial Route Evaluation Underway
 - Area 1: Four stations north of I-94 (*little change from previous design*)
 - Area 2: Bottineau Blvd/CR81 corridor from I-94/694 to Robbinsdale-Mpls. boundary (*incl. Crystal segment*)
 - Area 3: From Robbinsdale-Mpls. Boundary to Target Field Station (*many potential routes*)





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Blue Line Extension Update





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Blue Line Extension Update

Rough concept -
Bass Lake Road
station in CR81
median south of
intersection

- North end of platform would be accessed from Bass Lake Road crosswalk
- South end of platform would be accessed by elevator & stair to pedestrian bridge across CR81
- Park & Ride likely to be necessary, and may be on previously planned site





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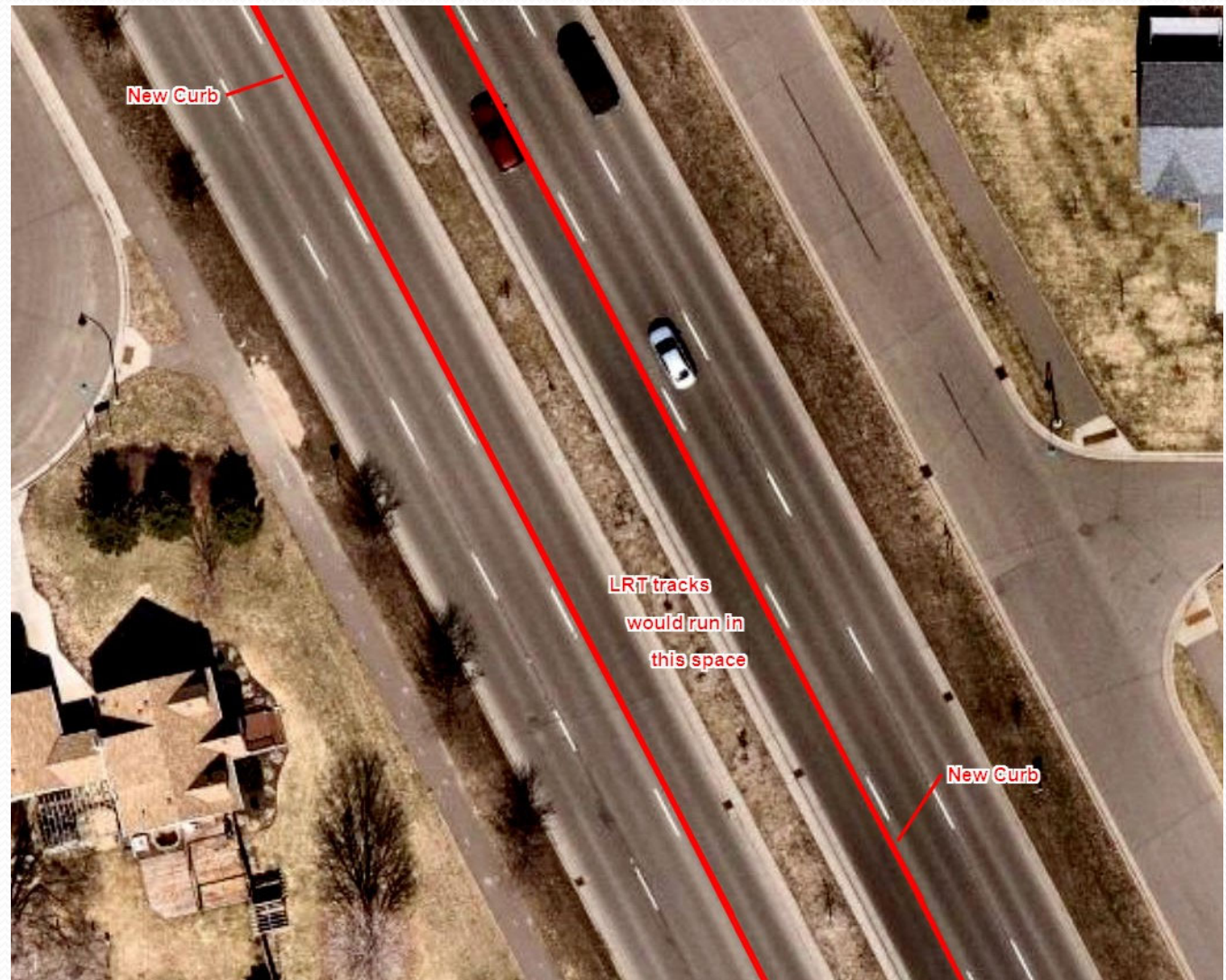
Blue Line Extension Update

Where would LRT tracks go?

- *At-grade in the median of CR81*

What would that mean?

- *Removal of one though lane in each direction (four lanes instead of six)*
- *Would fit within existing curb-to-curb width (except at some intersections)*





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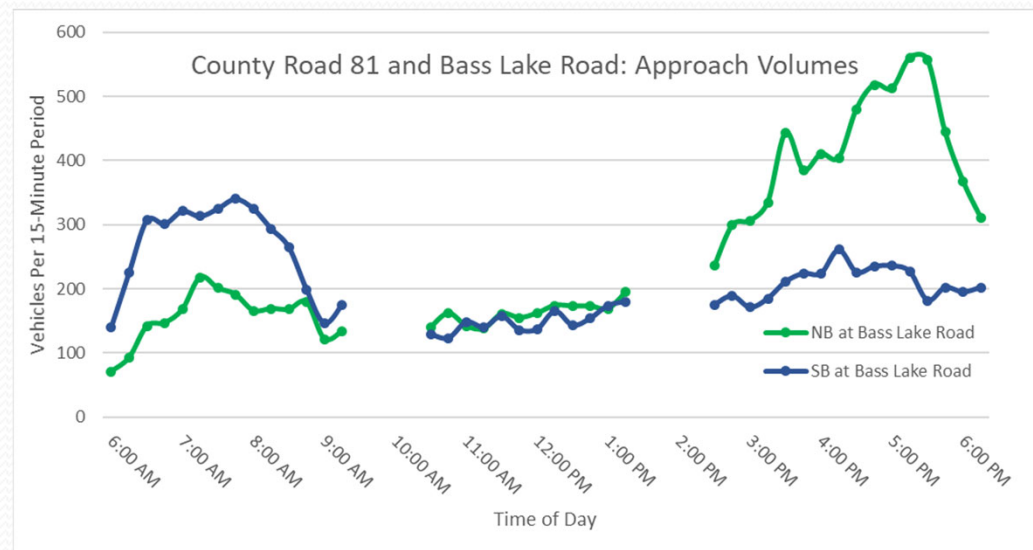
Blue Line Extension Update

What does the preliminary SimTraffic model predict?

- Bass Lake Road intersection would fail in the p.m. peak hour
- Other intersections see reduced level of service
- At all intersections, some particular movements fail even though the overall intersection does not

Note: City staff skeptical about 47th in the a.m. peak based on southbound backups in 2015 when it was still striped for 4 lanes

| Intersection | | Level of Service | | |
|----------------|-----------|---------------------------------|-------------------------|--------------------------|
| | | Existing (pre-pandemic volumes) | 2040 No-Build (6 lanes) | 2040 Build LRT (4 lanes) |
| Bass Lake Road | A.M. Peak | C | C | C |
| | P.M. Peak | C | D | F |
| Wilshire Blvd | A.M. Peak | B | B | B |
| | P.M. Peak | A | B | C |
| Corvallis/51st | A.M. Peak | A | A | B |
| | P.M. Peak | B | B | D |
| 47th | A.M. Peak | C | C | C |
| | P.M. Peak | B | B | B |





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Blue Line Extension Update

A.M. Peak Comparison

Existing Conditions (6 lanes)

| SimTraffic Delay Summary - Existing Conditions - AM Peak Hour | | | | | | | | | | |
|---|---------|----------|------------------------|-----|-----------------|-----|-----------------|------|----------------------|-----|
| Intersection | Control | Approach | Operations by Movement | | | | | | Overall Intersection | |
| | | | Left | | Through | | Right | | Delay (sec/veh) | LOS |
| | | | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | | |
| CR 81 & I-94 North Ramp | Signal | EB | - | - | - | - | - | - | 11.3 | B |
| | | WB | 50.0 | D | - | - | 8.0 | A | | |
| | | NB | - | - | 13.1 | B | 7.3 | A | | |
| | | SB | 32.5 | C | 6.7 | A | - | - | | |
| CR 81 & I-94 South Ramp | Signal | EB | - | - | - | - | - | 21.3 | C | |
| | | WB | 42.2 | D | - | - | 7.8 | | | A |
| | | NB | - | - | 18.8 | B | 7.1 | | | A |
| | | SB | 48.0 | D | 5.3 | A | - | | | - |
| CR 81 & 63rd Avenue | Signal | EB | 54.6 | D | 49.6 | D | 12.4 | B | 19.9 | B |
| | | WB | 49.2 | D | 46.6 | D | 6.2 | A | | |
| | | NB | 67.5 | E | 15.1 | B | 7.0 | A | | |
| | | SB | 38.7 | D | 9.2 | A | 2.6 | A | | |
| CR 81 & Bass Lake Road | Signal | EB | 49.9 | D | 44.4 | D | 13.8 | B | 26.2 | C |
| | | WB | 49.8 | D | 43.4 | D | 5.8 | A | | |
| | | NB | 47.7 | D | 16.2 | B | 5.1 | A | | |
| | | SB | 52.1 | D | 22.0 | C | 13.0 | B | | |
| CR 81 & Wilshire Boulevard | Signal | EB | 55.6 | E | 41.0 | D | 1.1 | A | 13.1 | B |
| | | WB | 49.3 | D | 46.9 | D | 7.9 | A | | |
| | | NB | 61.4 | E | 8.7 | A | 1.6 | A | | |
| | | SB | 76.4 | E | 6.1 | A | 5.3 | A | | |
| CR 81 & Corvallis Avenue | Signal | EB | 48.6 | D | 48.8 | D | 16.2 | B | 8.6 | A |
| | | WB | 43.0 | D | 60.3 | E | 5.6 | A | | |
| | | NB | 52.4 | D | 5.1 | A | 1.4 | A | | |
| | | SB | 47.9 | D | 3.8 | A | 3.7 | A | | |
| CR 81 & 47th Avenue | Signal | EB | 54.2 | D | 65.0 | E | 82.6 | F | 21.0 | C |
| | | WB | 71.5 | E | 73.6 | E | 71.4 | E | | |
| | | NB | 44.9 | D | 2.0 | A | 0.5 | A | | |
| | | SB | 62.9 | E | 23.7 | C | 15.3 | B | | |

2040 Build (4 lanes)

| SimTraffic Delay Summary - 2040 Conditions w/ Lane Reduction - AM Peak Hour | | | | | | | | | | |
|---|---------|----------|------------------------|-----|-----------------|-----|-----------------|------|----------------------|-----|
| Intersection | Control | Approach | Operations by Movement | | | | | | Overall Intersection | |
| | | | Left | | Through | | Right | | Delay (sec/veh) | LOS |
| | | | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | | |
| CR 81 & I-94 North Ramp | Signal | EB | - | - | - | - | - | - | 13.6 | B |
| | | WB | 46.0 | D | - | - | 9.3 | A | | |
| | | NB | - | - | 13.1 | B | 7.3 | A | | |
| | | SB | 37.1 | D | 10.4 | B | - | - | | |
| CR 81 & I-94 South Ramp | Signal | EB | - | - | - | - | - | 22.9 | C | |
| | | WB | 43.7 | D | - | - | 10.5 | | | B |
| | | NB | - | - | 21.4 | C | 10.5 | | | B |
| | | SB | 46.4 | D | 7.7 | A | - | | | - |
| CR 81 & 63rd Avenue | Signal | EB | 48.1 | D | 44.6 | D | 21.8 | C | 25.1 | C |
| | | WB | 51.3 | D | 46.5 | D | 7.6 | A | | |
| | | NB | 62.5 | E | 18.4 | B | 9.3 | A | | |
| | | SB | 41.7 | D | 18.6 | B | 7.1 | A | | |
| CR 81 & Bass Lake Road | Signal | EB | 52.5 | D | 44.4 | D | 20.3 | C | 32.9 | C |
| | | WB | 50.8 | D | 42.4 | D | 8.2 | A | | |
| | | NB | 54.4 | D | 22.0 | C | 5.1 | A | | |
| | | SB | 65.7 | E | 32.9 | C | 19.0 | B | | |
| CR 81 & Wilshire Boulevard | Signal | EB | 30.6 | C | 39.4 | D | 0.9 | A | 16.2 | B |
| | | WB | 52.7 | D | 54.2 | D | 11.3 | B | | |
| | | NB | 50.3 | D | 10.8 | B | 2.6 | A | | |
| | | SB | 59.7 | E | 10.5 | B | 3.3 | A | | |
| CR 81 & Corvallis Avenue | Signal | EB | 49.6 | D | 65.0 | E | 21.3 | C | 13.2 | B |
| | | WB | 42.5 | D | 51.8 | D | 6.4 | A | | |
| | | NB | 49.3 | D | 8.5 | A | 1.6 | A | | |
| | | SB | 69.3 | E | 9.9 | A | 2.9 | A | | |
| CR 81 & 47th Avenue | Signal | EB | 68.4 | E | 72.1 | E | 100+ | F | 28.9 | C |
| | | WB | 64.4 | E | 67.8 | E | 52.7 | D | | |
| | | NB | 64.7 | E | 3.3 | A | 0.8 | A | | |
| | | SB | 56.3 | E | 32.6 | C | 22.2 | C | | |



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Blue Line Extension Update

P.M. Peak Comparison

Existing Conditions (6 lanes)

| SimTraffic Delay Summary - Existing Conditions - PM Peak Hour | | | | | | | | | | |
|---|---------|----------|------------------------|-----|-----------------|-----|-----------------|------|----------------------|-----|
| Intersection | Control | Approach | Operations by Movement | | | | | | Overall Intersection | |
| | | | Left | | Through | | Right | | Delay (sec/veh) | LOS |
| | | | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | | |
| CR 81 & I-94 North Ramp | Signal | EB | - | - | - | - | - | - | 12.8 | B |
| | | WB | 48.9 | D | - | - | 25.0 | C | | |
| | | NB | - | - | 7.0 | A | 4.8 | A | | |
| | | SB | 34.1 | C | 6.4 | A | - | - | | |
| CR 81 & I-94 South Ramp | Signal | EB | - | - | - | - | - | 18.9 | B | |
| | | WB | 47.1 | D | - | - | 21.3 | | | C |
| | | NB | - | - | 16.9 | B | 17.7 | | | B |
| | | SB | 35.9 | D | 3.8 | A | - | | | - |
| CR 81 & 63rd Avenue | Signal | EB | 51.4 | D | 45.5 | D | 6.3 | A | 27.9 | C |
| | | WB | 51.1 | D | 43.7 | D | 14.3 | B | | |
| | | NB | 59.8 | E | 27.9 | C | 16.4 | B | | |
| | | SB | 37.9 | D | 13.3 | B | 4.3 | A | | |
| CR 81 & Bass Lake Road | Signal | EB | 53.7 | D | 45.7 | D | 8.5 | A | 32.5 | C |
| | | WB | 60.0 | E | 58.9 | E | 20.0 | B | | |
| | | NB | 29.7 | C | 19.4 | B | 9.0 | A | | |
| | | SB | 62.1 | E | 39.8 | D | 11.1 | B | | |
| CR 81 & Wilshire Boulevard | Signal | EB | 54.8 | D | 49.0 | D | 1.4 | A | 9.3 | A |
| | | WB | 52.3 | D | 52.0 | D | 21.4 | C | | |
| | | NB | 53.1 | D | 6.2 | A | 2.9 | A | | |
| | | SB | 45.7 | D | 5.4 | A | 4.3 | A | | |
| CR 81 & Corvallis Avenue | Signal | EB | 46.2 | D | 48.8 | D | 8.1 | A | 17.0 | B |
| | | WB | 50.2 | D | 73.3 | E | 14.3 | B | | |
| | | NB | 51.4 | D | 13.6 | B | 3.0 | A | | |
| | | SB | 57.4 | E | 13.5 | B | 3.9 | A | | |
| CR 81 & 47th Avenue | Signal | EB | 55.8 | E | 55.2 | E | 70.9 | E | 10.1 | B |
| | | WB | 62.1 | E | 72.1 | E | 71.7 | E | | |
| | | NB | 34.8 | C | 2.1 | A | 1.1 | A | | |
| | | SB | 55.0 | D | 14.9 | B | 3.3 | A | | |

2040 Build (4 lanes)

| SimTraffic Delay Summary - 2040 Conditions w/ Lane Reduction - PM Peak Hour | | | | | | | | | | |
|---|---------|----------|------------------------|-----|-----------------|-----|-----------------|------|----------------------|-----|
| Intersection | Control | Approach | Operations by Movement | | | | | | Overall Intersection | |
| | | | Left | | Through | | Right | | Delay (sec/veh) | LOS |
| | | | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | | |
| CR 81 & I-94 North Ramp | Signal | EB | - | - | - | - | - | - | 16.0 | B |
| | | WB | 47.7 | D | - | - | 30.1 | C | | |
| | | NB | - | - | 10.7 | B | 5.9 | A | | |
| | | SB | 34.8 | C | 7.7 | A | - | - | | |
| CR 81 & I-94 South Ramp | Signal | EB | - | - | - | - | - | 22.9 | C | |
| | | WB | 46.8 | D | - | - | 23.1 | | | C |
| | | NB | - | - | 24.3 | C | 18.7 | | | B |
| | | SB | 39.9 | D | 4.5 | A | - | | | - |
| CR 81 & 63rd Avenue | Signal | EB | 50.0 | D | 47.1 | D | 9.7 | A | 32.5 | C |
| | | WB | 47.8 | D | 47.9 | D | 16.5 | B | | |
| | | NB | 66.5 | E | 35.4 | D | 19.0 | B | | |
| | | SB | 37.9 | D | 15.8 | B | 5.3 | A | | |
| CR 81 & Bass Lake Road | Signal | EB | 100+ | F | 76.1 | E | 12.0 | B | 85.8 | F |
| | | WB | 82.2 | F | 100+ | F | 44.4 | D | | |
| | | NB | 76.2 | E | 83.4 | F | 56.1 | E | | |
| | | SB | 100+ | F | 93.7 | F | 16.7 | B | | |
| CR 81 & Wilshire Boulevard | Signal | EB | 49.4 | D | 59.4 | E | 1.2 | A | 33.2 | C |
| | | WB | 54.9 | D | 54.8 | D | 37.9 | D | | |
| | | NB | 77.0 | E | 44.2 | D | 25.0 | C | | |
| | | SB | 58.0 | E | 7.5 | A | 2.1 | A | | |
| CR 81 & Corvallis Avenue | Signal | EB | 100+ | F | 100+ | F | 15.0 | B | 39.0 | D |
| | | WB | 94.8 | F | 100+ | F | 51.8 | D | | |
| | | NB | 100+ | F | 40.7 | D | 30.5 | C | | |
| | | SB | 100+ | F | 13.7 | B | 4.2 | A | | |
| CR 81 & 47th Avenue | Signal | EB | 69.0 | E | 56.4 | E | 90.0 | F | 15.0 | B |
| | | WB | 63.5 | E | 56.7 | E | 71.6 | E | | |
| | | NB | 42.1 | D | 7.1 | A | 3.4 | A | | |
| | | SB | 66.2 | E | 18.3 | B | 6.3 | A | | |



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Blue Line Extension Update

What mitigation options could the project explore for the Bass Lake Road intersection?

- Elevate the four through lanes of Bottineau Blvd over Bass Lake Road
 - *Would essentially create a “tight diamond” interchange with the LRT station platform at-grade with Bass Lake Road*
 - *No pedestrian bridge (because Bottineau Blvd through traffic would be overhead on a bridge)*

- Elevate the LRT tracks starting at CP bridge and shift to west side with elevated station by the park & ride, then drop back into the median north of Bass Lake Road
 - *Could allow six through lanes to be maintained on Bottineau Blvd on either side of Bass Lake Road*
 - *There would need to be lane drops north and south of Bass Lake Road - not ideal (merging conflicts, etc.)*
 - *Unknown if there’s space for LRT tracks to get below airport runway approach surface elevations*



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Blue Line Extension Update

What's next for Crystal?

- Metro Transit has more work to do on the traffic simulations
Staff has requested that they make a presentation to the City Council
- Metro Transit will start sketching preliminary cross sections and layouts to illustrate what it might look like, including options for Bass Lake Road
Staff has requested illustrations to help the public visualize the project
- Anticipate more information at June 15 City Council work session
- Anticipate holding a community open house or virtual information session (depending on public health situation) in late June

City staff is seeking Council questions and feedback to relay to Metro Transit prior to next work session