

# Bowles Avenue: Grant Ranch Boulevard to Santa Fe Drive

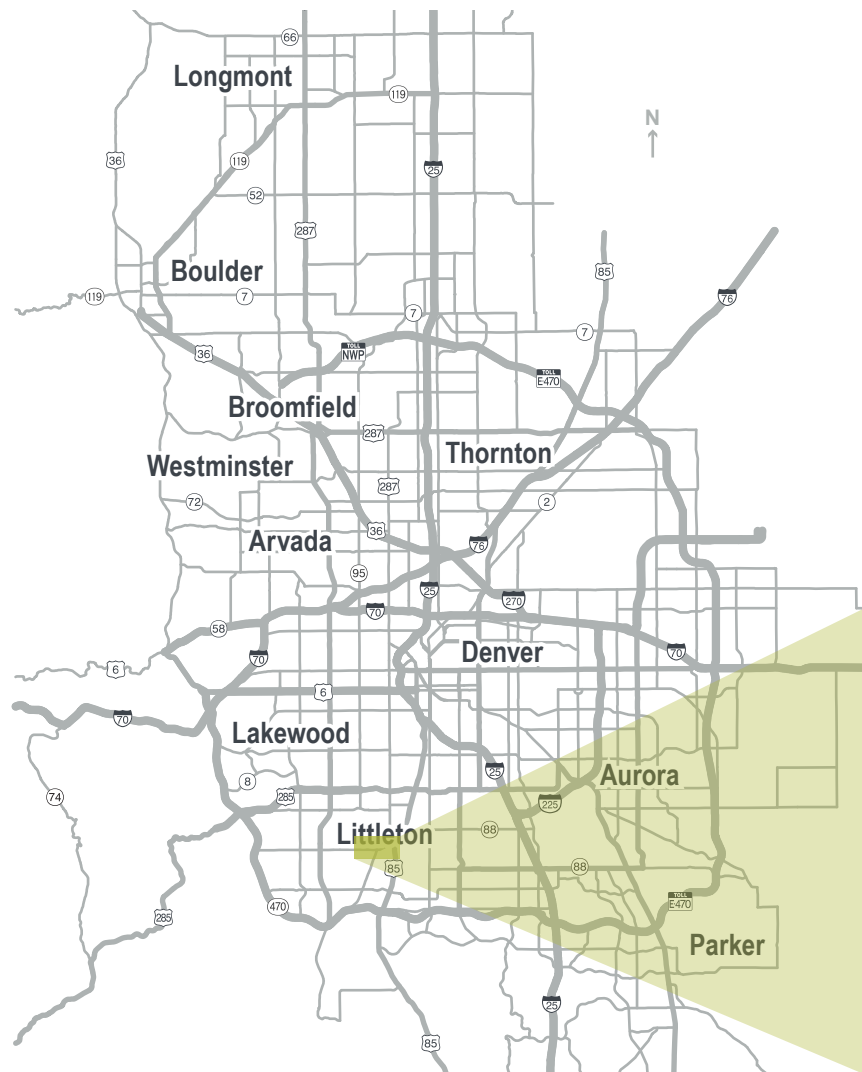


## Federal Funds for City of Littleton

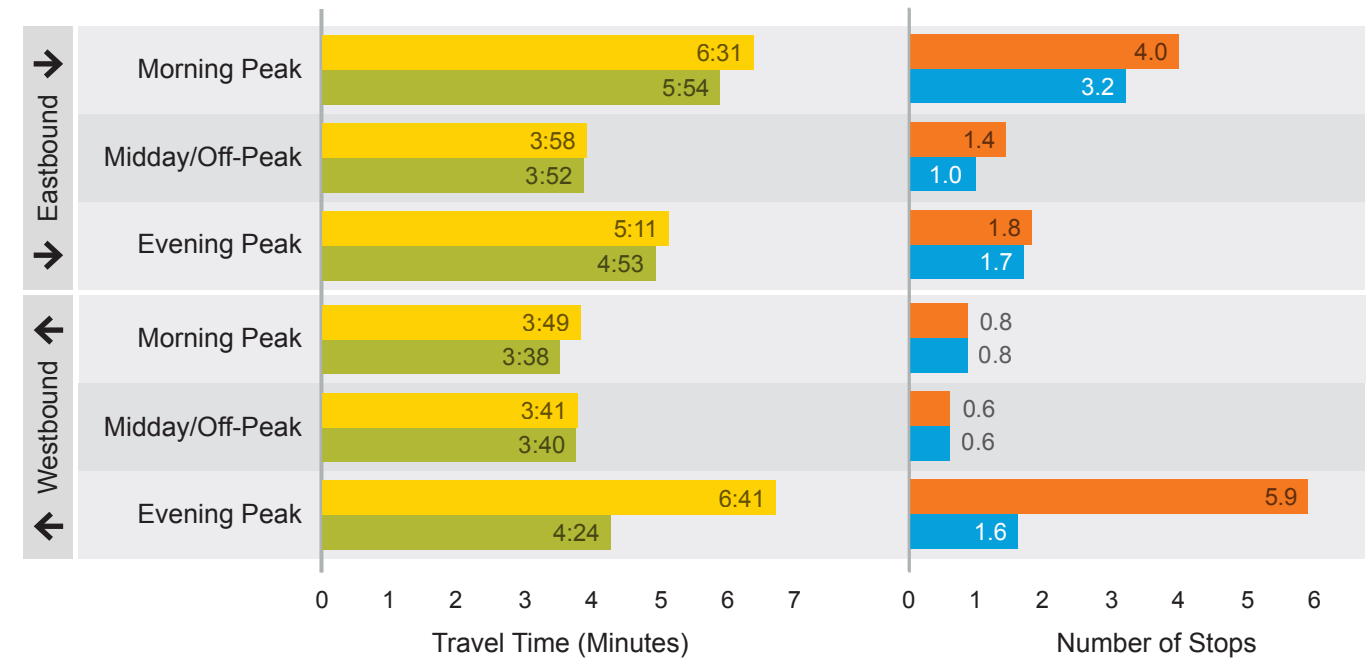
DRCOG engineering staff developed the signal timing and coordination plans in partnership with the project stakeholders.

## Project Achievements

Performance Measures	Daily Reduction
Vehicle travel time	289 hours
Fuel consumption	219 gallons
Time and fuel costs	\$6,800 savings daily (\$1,700,000 annually)
Greenhouse gas emissions	4,210 pounds
Emissions of six EPA-regulated pollutants	50 pounds



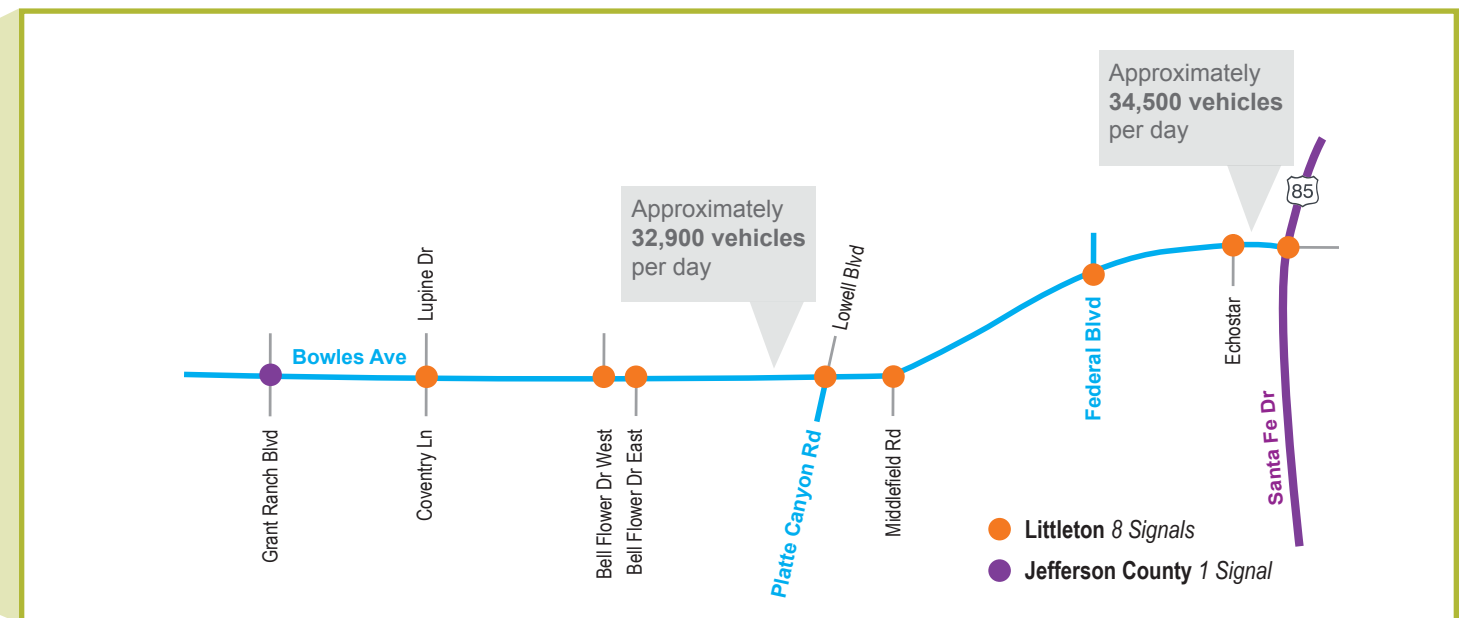
## Overall Improvements



- Average Travel Time Before Retiming
- Average Travel Time After Retiming
- Average Number of Stops Across Corridor Before Retiming (Less Idling)
- Average Number of Stops Across Corridor After Retiming (Less Idling)

## Project Scope

Bowles Avenue (2.0 miles)



## Traffic Signal Coordination

Traffic signal coordination allows traffic to travel along a street without stopping at every light. A major component of any coordinated signal-timing plan is properly-sized cycle length shared by each intersection along the corridor. The cycle length is the time required for one sequence of signal displays (green, yellow and red) around an intersection to be lit for each approach. DRCOG's engineers evaluate cycle lengths to strike a balance between intersection capacity and delay for all users. The cycle lengths vary by time of day to account for fluctuating numbers of vehicles, bicyclists and pedestrians.

Time of day	05:30	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
1 Bowles Ave & Grant Ranch Blvd	100-second cycle	90-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle
2 Bowles Ave & Coventry Ln / Lupine Dr														
3 Bowles Ave & Bell Flower Dr (West)														
4 Bowles Ave & Bell Flower Dr (East)														
5 Bowles Ave & Platte Canyon Rd / Lowell Blvd														
6 Bowles Ave & Middlefield Rd	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	
7 Bowles Ave & Federal Blvd														
8 Bowles Ave & Echostar	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle	150-second cycle	120-second cycle
9 Bowles Ave & Santa Fe Dr														

■ Jefferson County    ■ City of Littleton

For more information about signal timing, see: [bit.ly/SignalRed](http://bit.ly/SignalRed)  
 For more information about DRCOG's traffic operations program, see: [bit.ly/TrafficOps](http://bit.ly/TrafficOps)



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# SIGNAL TIMING PROJECT BRIEF

## Bowles Avenue: Grant Ranch Boulevard to Santa Fe Drive

The Denver Regional Council of Governments (DRCOG) leads multijurisdictional partnerships to achieve optimal signal timing and coordination on area roadways. Traffic signal timing adjustments provide the smoothest possible flow for cars, trucks and buses. At the same time, safety is enhanced for all users, including pedestrians and bicyclists. Signal timing optimization saves drivers time and money, minimizes greenhouse gas and pollutant emissions, and enhances air quality.

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