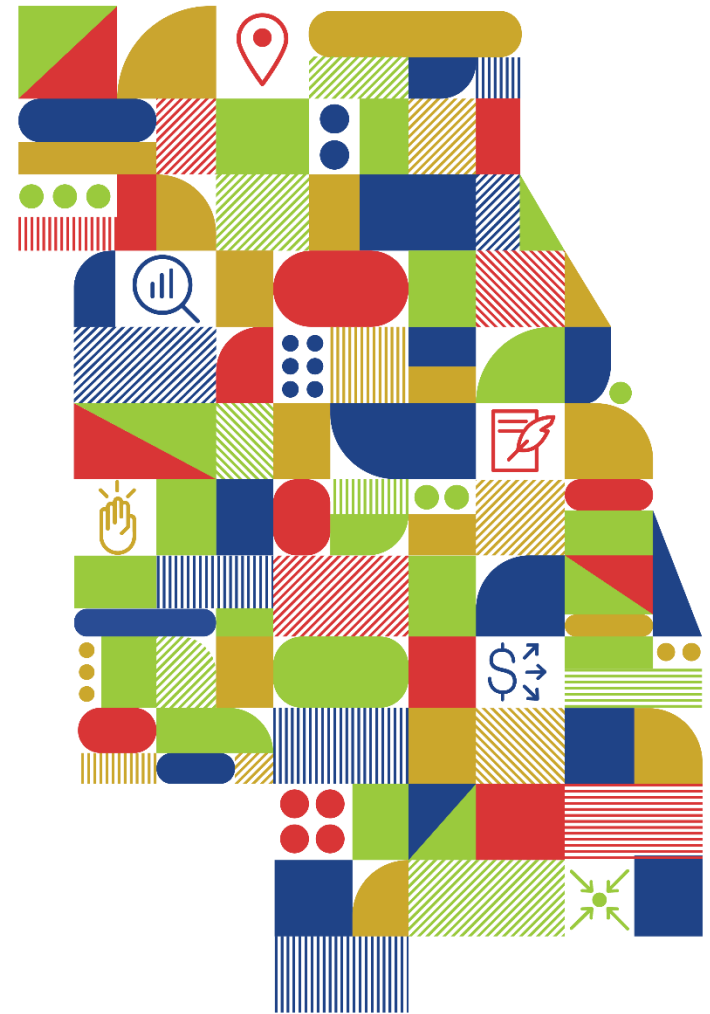




Traffic Signal Improvement Recommendations

Regional Traffic Operations Coalition
November 19, 2020



Vision

A modern traffic signal network providing for a well-integrated, multimodal transportation system that seamlessly moves people and goods within and through metropolitan Chicago safely and reliably with minimized delay.

Existing conditions findings

The system does not support system goals in the areas of:

communications

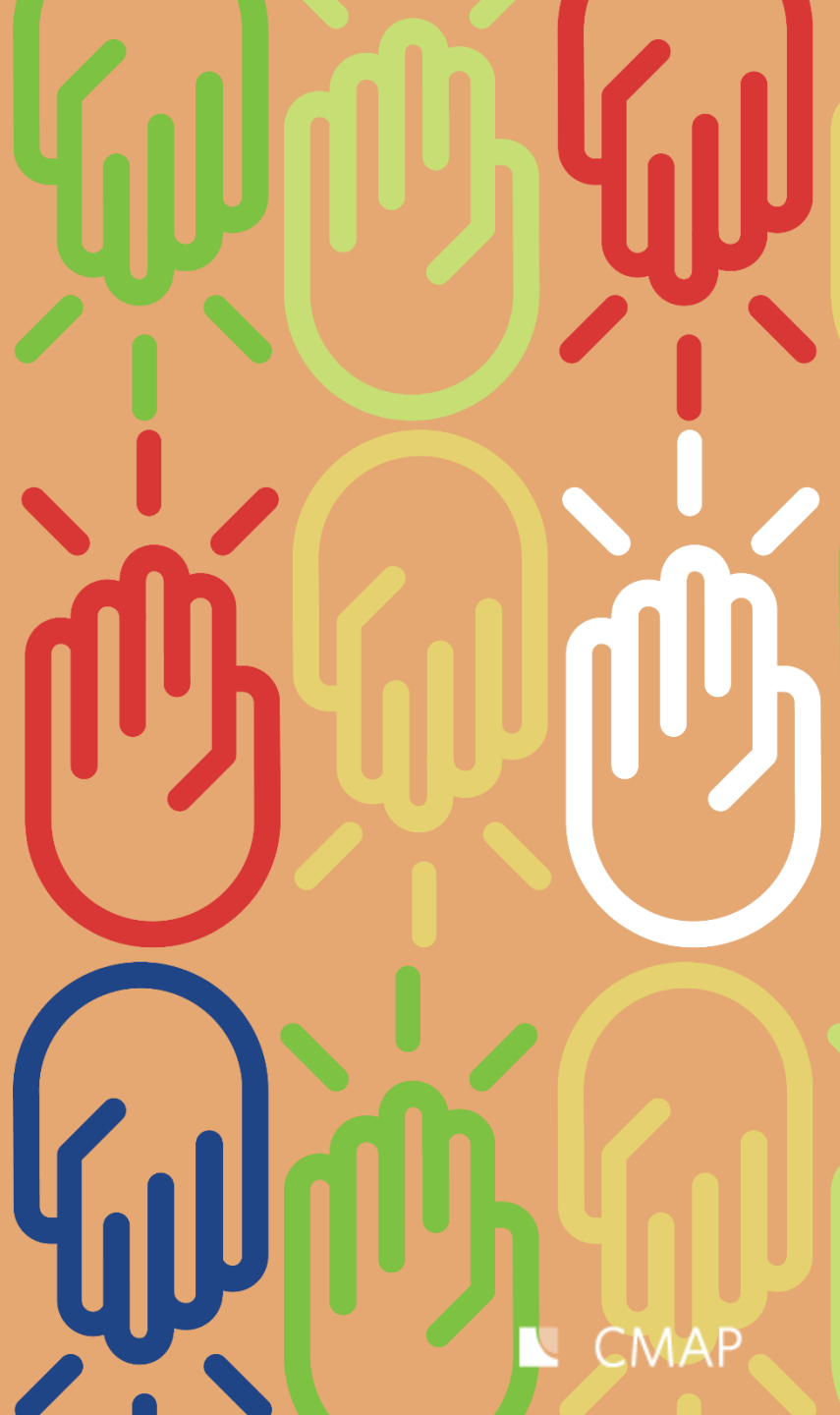
improved functionality

state of good repair

data use

asset management

Recommendations – implementing the Vision



The case for signal modernization

Signal retiming

Central signal systems

Partnerships and shared resources

Recommended traffic signal improvement approaches

Scope – low investment vs complete reconstruction

Cost – program mix of high and low cost projects

Automated traffic signal performance measures (ATSPM)

Funding programs

Fifteen-year program mixes

Improvement Mix		Annual cost over 15 years by number of signals improved (\$ million)		
Controller, cabinet, and accessible pedestrian signals at \$27,000 per signal	Full signal reconstruction at \$475,000 per Signal	8000 signals improved (all signals in the region)	7000 signals improved (all IDOT, county, and CDOT signals)	3500 signals improved (all National Highway System signals improved)
85%	15%	\$50	\$44	\$22
80%	20%	\$62	\$54	\$27
75%	25%	\$74	\$65	\$32
70%	30%	\$86	\$75	\$38
65%	35%	\$98	\$86	\$43
60%	40%	\$110	\$96	\$48
55%	45%	\$122	\$107	\$53
50%	50%	\$134	\$117	\$59
45%	55%	\$146	\$128	\$64
40%	60%	\$158	\$138	\$69
35%	65%	\$170	\$148	\$74
30%	70%	\$182	\$159	\$79
25%	75%	\$194	\$169	\$85
20%	80%	\$206	\$180	\$90
15%	85%	\$217	\$190	\$95
Signals per year		533	467	233

Communications cost (*\$ million*)

Program Timeframe	Full program	Per year over 10 years	Per year over 15 years
8000 signals improved (all signals in the region)	\$198	\$19.80	\$13.20
7000 signals improved (all IDOT, county, and CDOT signals)	\$174	\$17.40	\$11.60
3500 signals improved (all National Highway System signals improved)	\$87	\$8.70	\$5.80

**State of good repair & asset
management**

North Avenue Smart Corridor

Overarching recommendations

Promote the importance of signal investments

Improve the capabilities of agencies with traffic signals

Support agency development of signal asset inventory and asset management capabilities

Develop more signal improvement projects and funding applications



**Next steps – provide comments so
we can finalize the
recommendations and publish**

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