

Operations Paper Review

RTOC/ATTF

March 31, 2016

Recommendations

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Recommendation: CMAP should work with local governments to promote incident management training for law enforcement and fire/rescue organizations.

Recommendations: CMAP should work with municipal, county, and state police to establish a goal of reducing the amount of time roads are closed due to crashes and develop a plan for achieving the goal.

Interstate Recommendations: Invest in technology to automate incident detection and reduce detection time. For managed lanes, require automated incident detection systems.
Arterial Recommendations: Install CCTV at critical locations.

Recommendation: Each system operator should undertake a traffic signal audit and use the information to develop an action plan for improved traffic signal practices. ²⁴

What do we say about:

- Coordination with utilities?
- Power?

NHS Segment Priority Evaluation

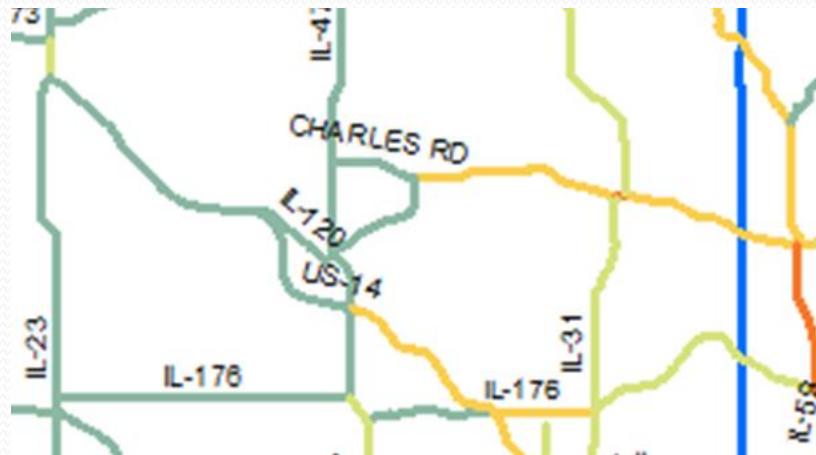
Regional Transportation Operations Coalition /
Advanced Technology Task Force
March 31, 2016

Data Sources

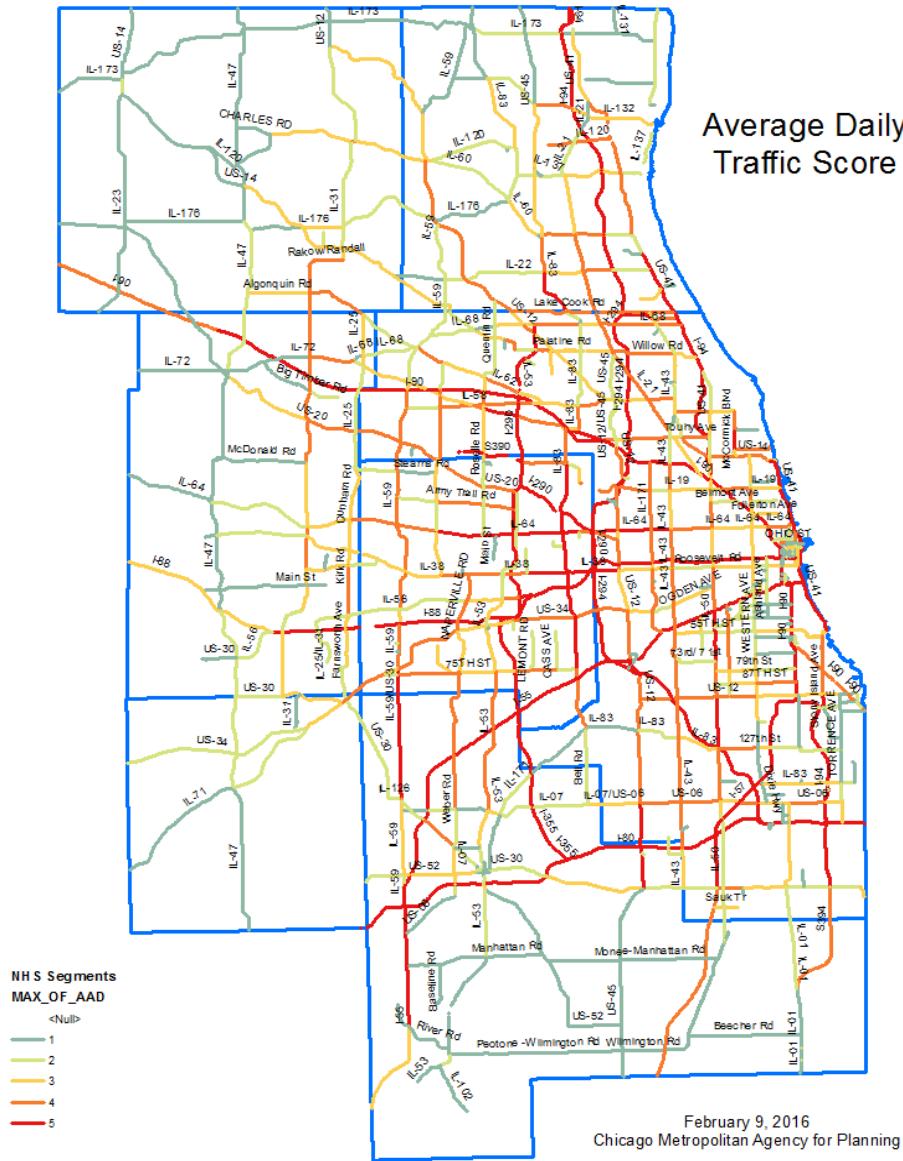
Criteria	Data Source	Method
Traffic Volume	IRIS 2014 AADT	Highest segment volume, ranked and divided into 5 categories
Important Freight Corridor	IRIS 2014 Truck Volumes	Highest segment volume, ranked and divided into 5 categories
Congestion	2012 Travel Time Index Score	Highest segment score, ranked and divided into 5 categories
Unreliability	2012 Planning Time Index Score	Highest segment score, ranked and divided into 5 categories
Condition	IRIS 2014 Condition Rating Survey	Worst segment condition with score based on IDOT criteria.
Crashes	2008-2012 K and A Crash Rate	Highest segment rate, ranked and divided into 5 categories
Existing ITS Infrastructure	CMAP Signal Interconnect Database	Calculate percent of coverage
Planned TSP Corridor	RTA Transit signal priority shapefile	Visual inspection
Serves Interstate Interchange	Expressway interchange shapefile	Visual inspection
<i>Is Smart Corridor</i>	<i>Literature review</i>	<i>Not identified on maps yet</i>

NHS Segment Development

- CMAP added current NHS to 2014 IRIS
- Divided into numbered segments
- Endpoints at NHS segments



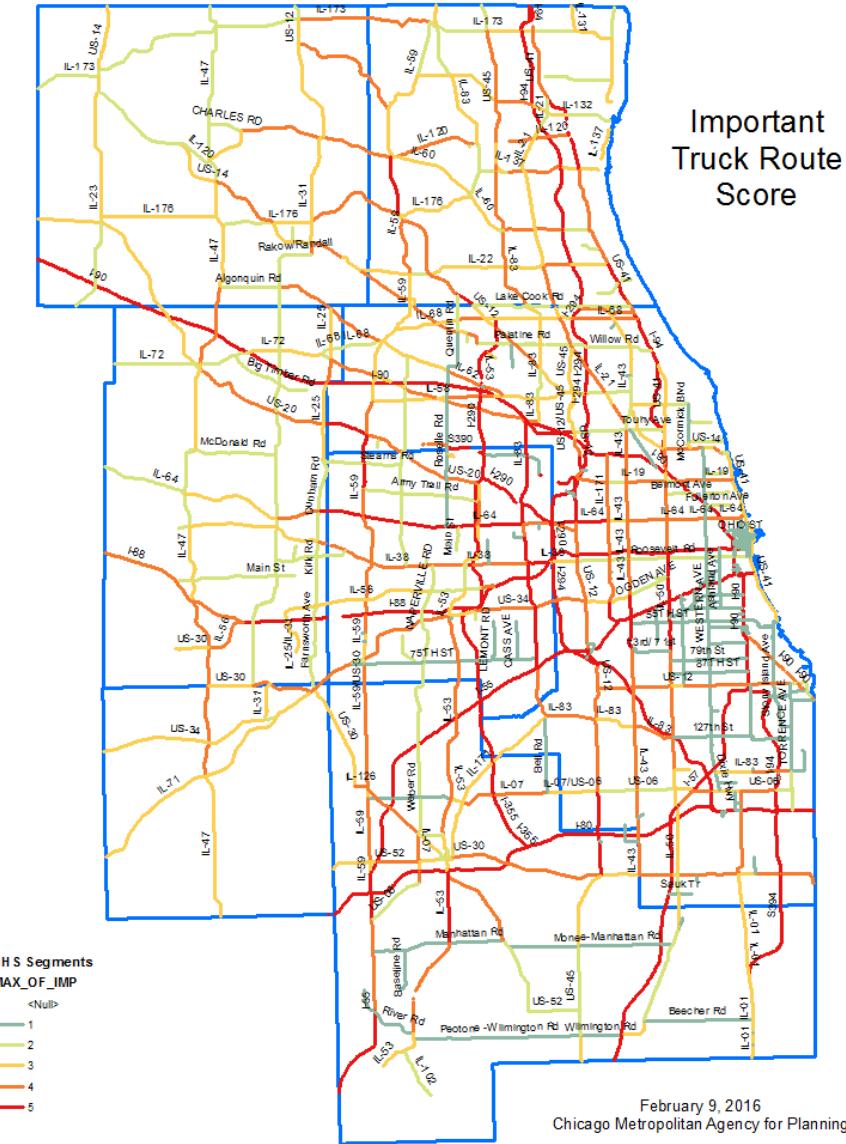
- 1039 segments



Daily Traffic

Average daily traffic score uses the 2014 IRIS file. Select the highest average daily traffic for each NHS segment. Sort by volume and divide into 5 quantiles. Assign the scores by quantile.

Score	Count Segments
1	208
2	208
3	208
4	208
5	207
Grand Total	1039

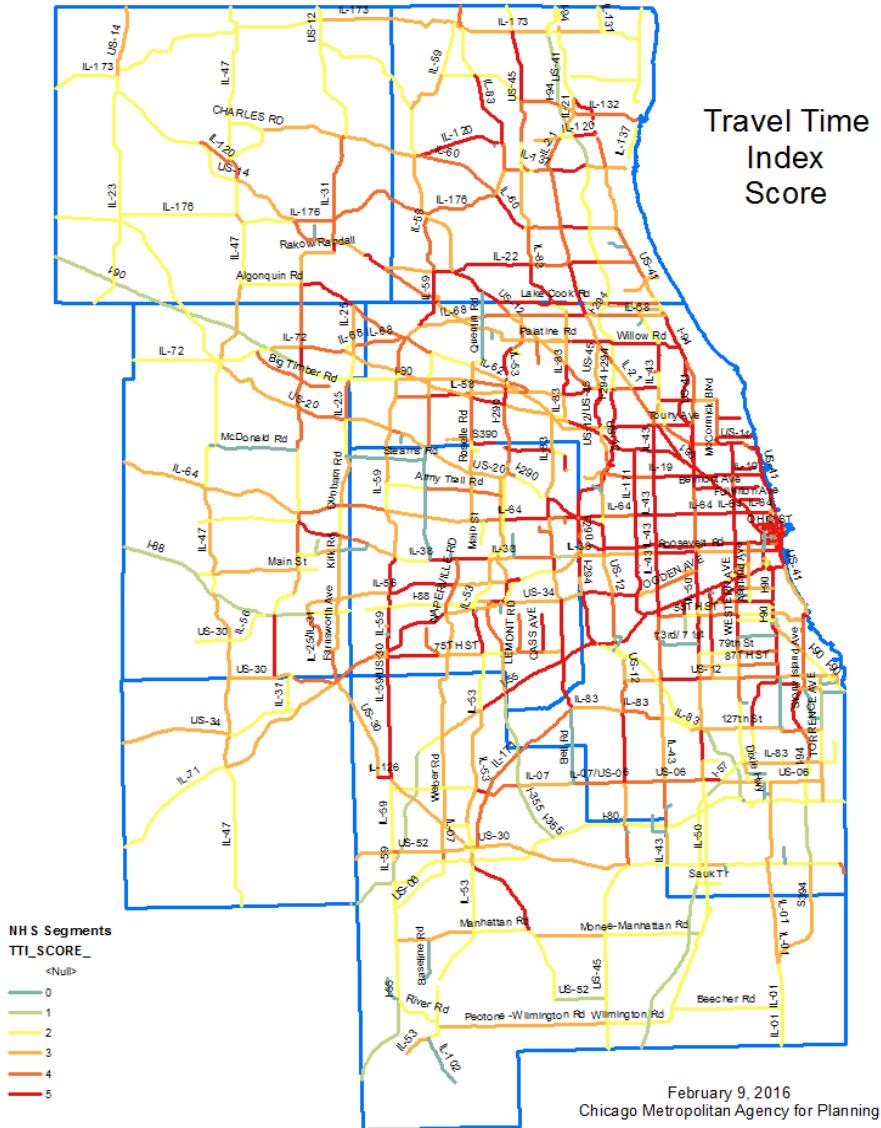


Importance to Truck Score

Use the 2014 IRIS file. All the IRIS segments are assigned NHS segment IDs. Select the highest volume IRIS HCV segment for each of the NHS segment. Sort by truck volume and divide into 5 quantiles.

We understand that the truck data in the IRIS file may not be accurate on arterials. We have requested truck count data from IDOT and will use it to update scores when it arrives.

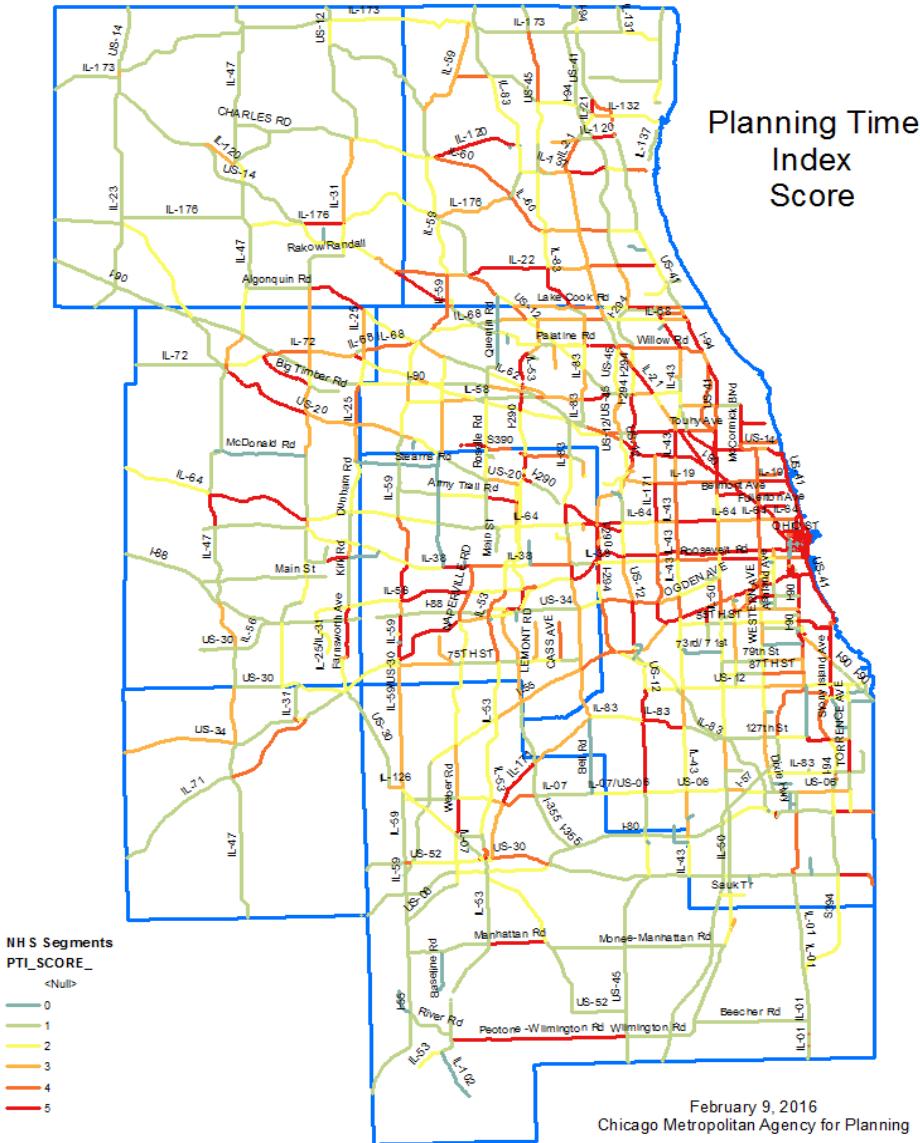
Score	Number of Segments
1	207
2	208
3	208
4	208
5	208
Grand Total	1039



Travel Time Index

NHS scores from the original scoring exercise ranged from 45 to 100, plus -1 where data was not available. Select the highest score in the segment, remove -1 and divide remaining range into equal intervals.

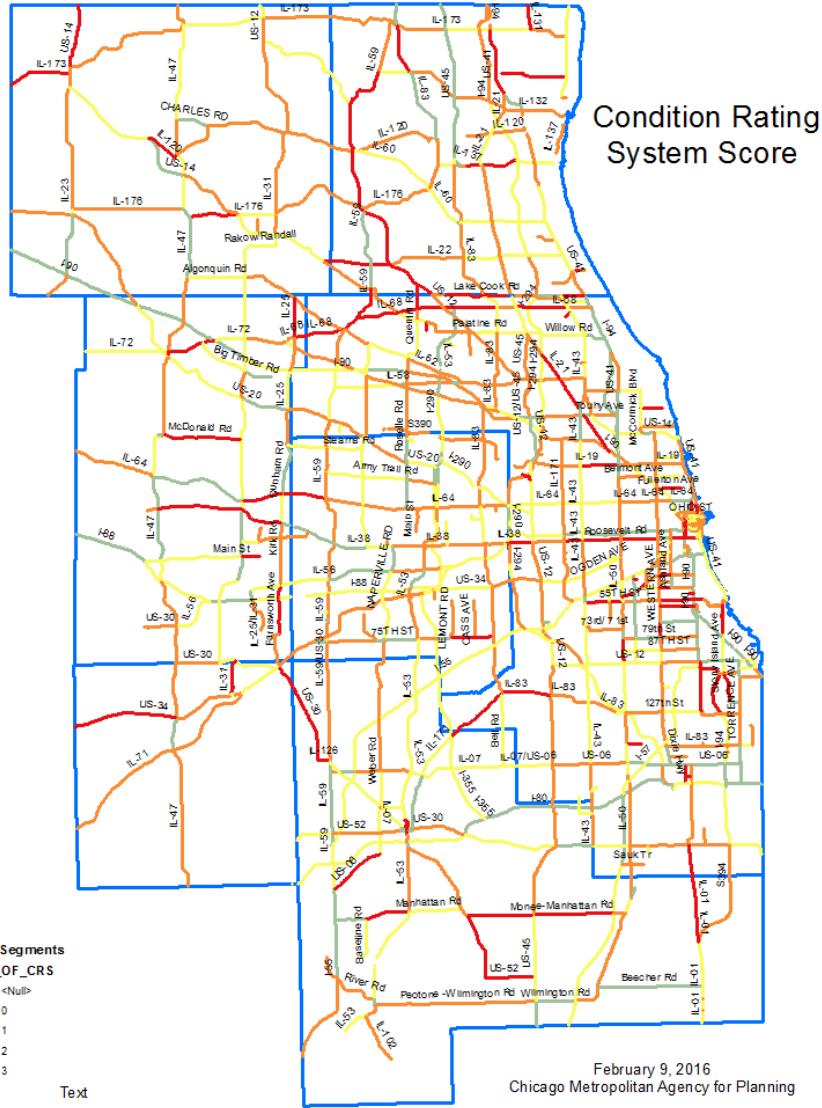
Original Score	MO Score
-1	0
45 - 55	1
56 - 66	2
67 - 77	3
78 - 88	4
89 - 100	5



Planning Time Index

NHS scores from the original exercise ranged from 12 – 100, plus -1 where data was not available. Select the highest score in the segment. Remove -1, and divide remaining range into equal intervals

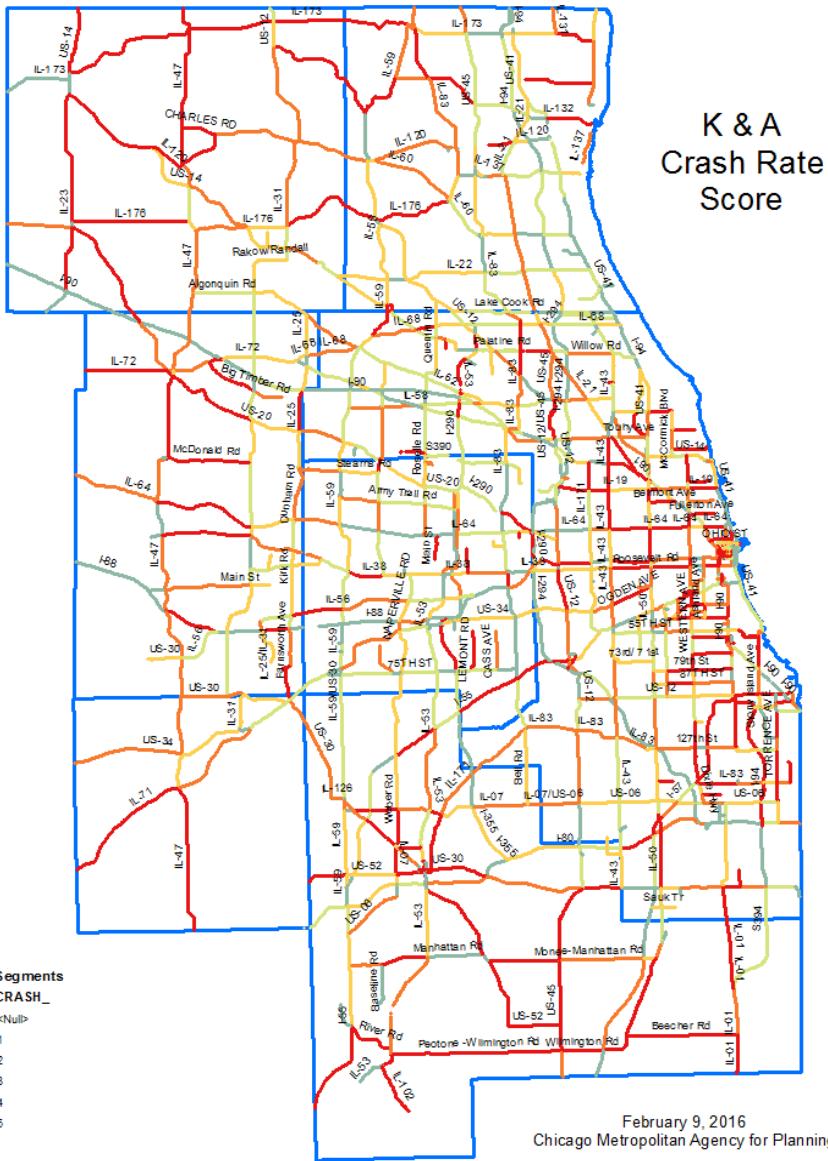
Original Score	MO Score
-1	0
12 – 30	1
31 – 47	2
48 – 64	3
65 – 81	4
82 – 100	5



Condition Score

IRIS 2014 CRS score – take the worst section of the roadway in the segment – assign the scores based on IDOT ranges.

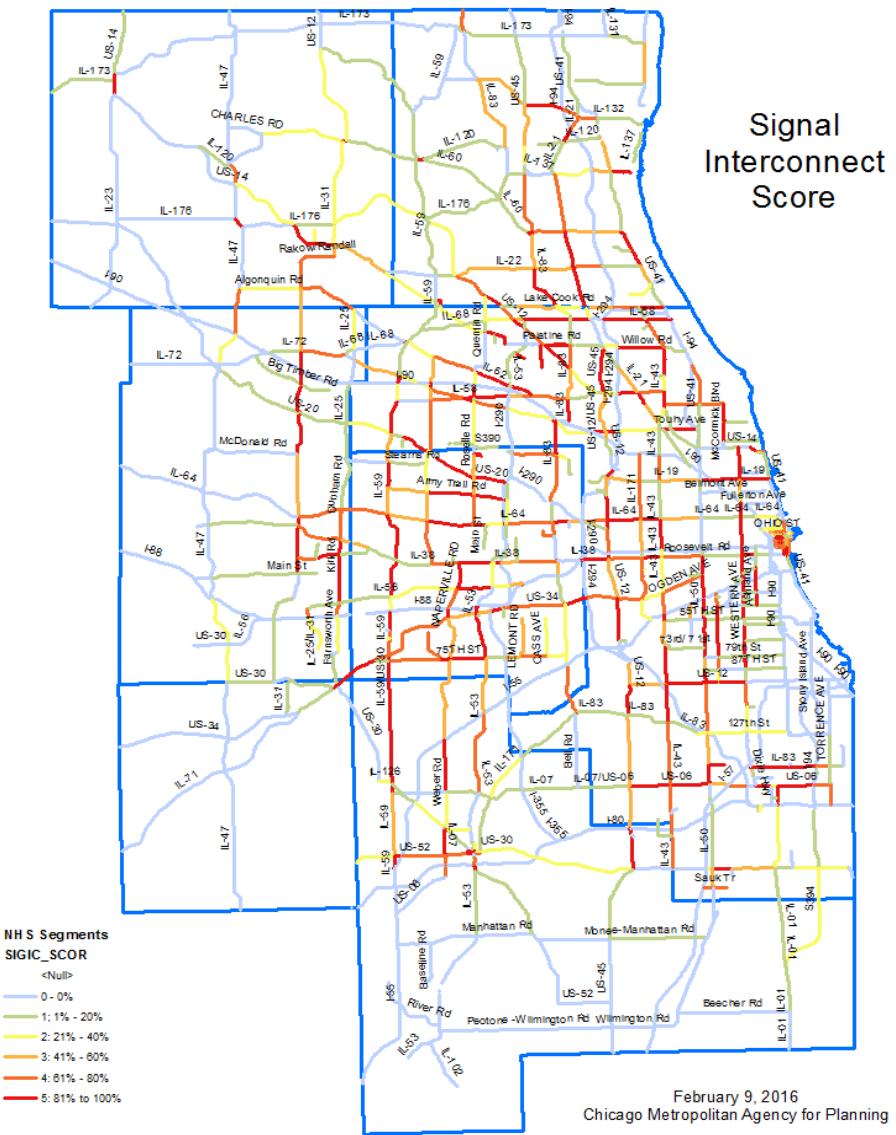
CRS Range	Score	Number
1.0 - 4.5 (poor)	3	111
4.6 - 6.0 (fair)	2	400
6.1 - 7.5 (good)	1	339
7.6 - 9.0 (excellent)	0	1
	0	189



K_A_crash_Rate

Select the highest rate on the segment, array from highest to lowest and divide into 5 categories. When the 208th record lands in the middle of a range, stop short or include the rest of the range depending on which will result in a number of records closer to 208.

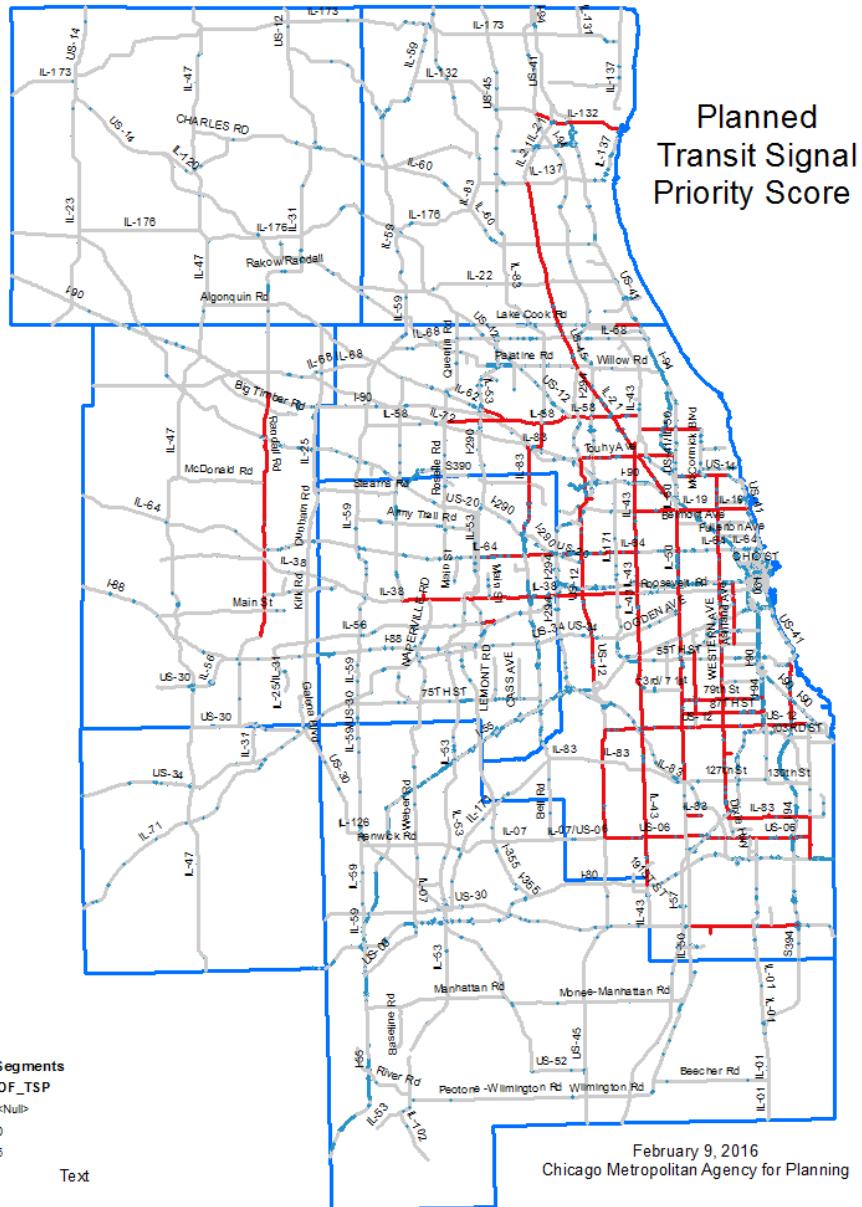
Count of Segments	KA Crash Score
201	5
200	4
203	3
196	2
239	1



Signal Interconnect Score

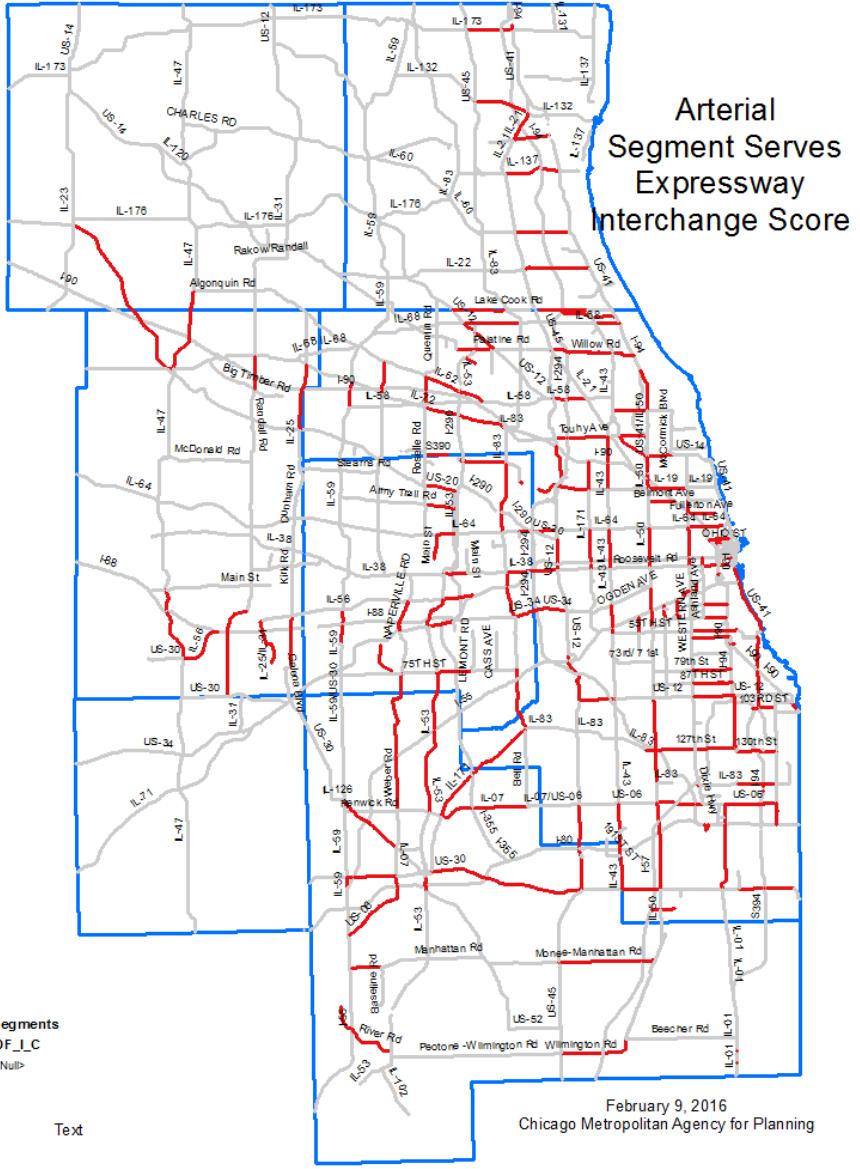
Apply a GIS analysis to calculate the proportion of each link covered by a signal interconnect.

Proportion	Score
0	0
.2	1
.4	2
.6	3
.8	4
1.0	5



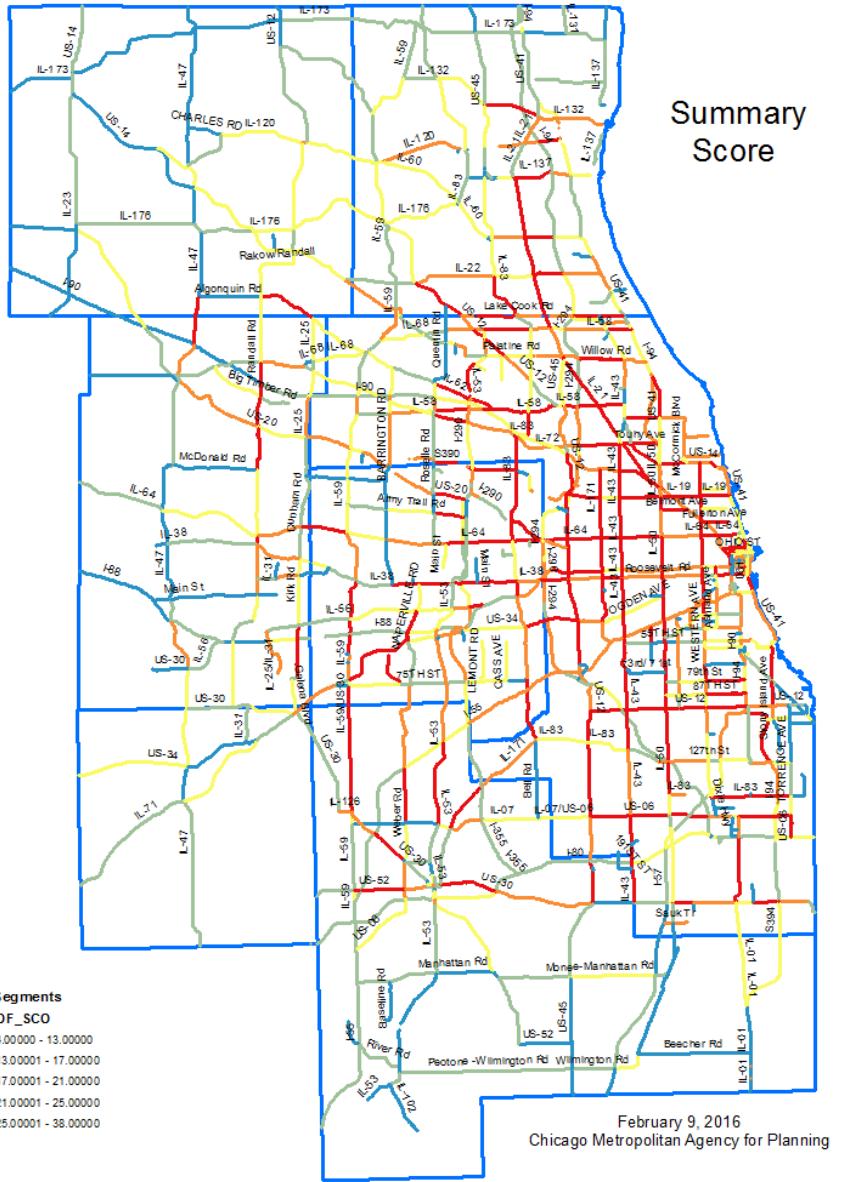
Planned Transit Signal Priority

Using RTA transit signal priority data. 5 if TSP is planned for any part of the segment 181 segments



Serves Interchange

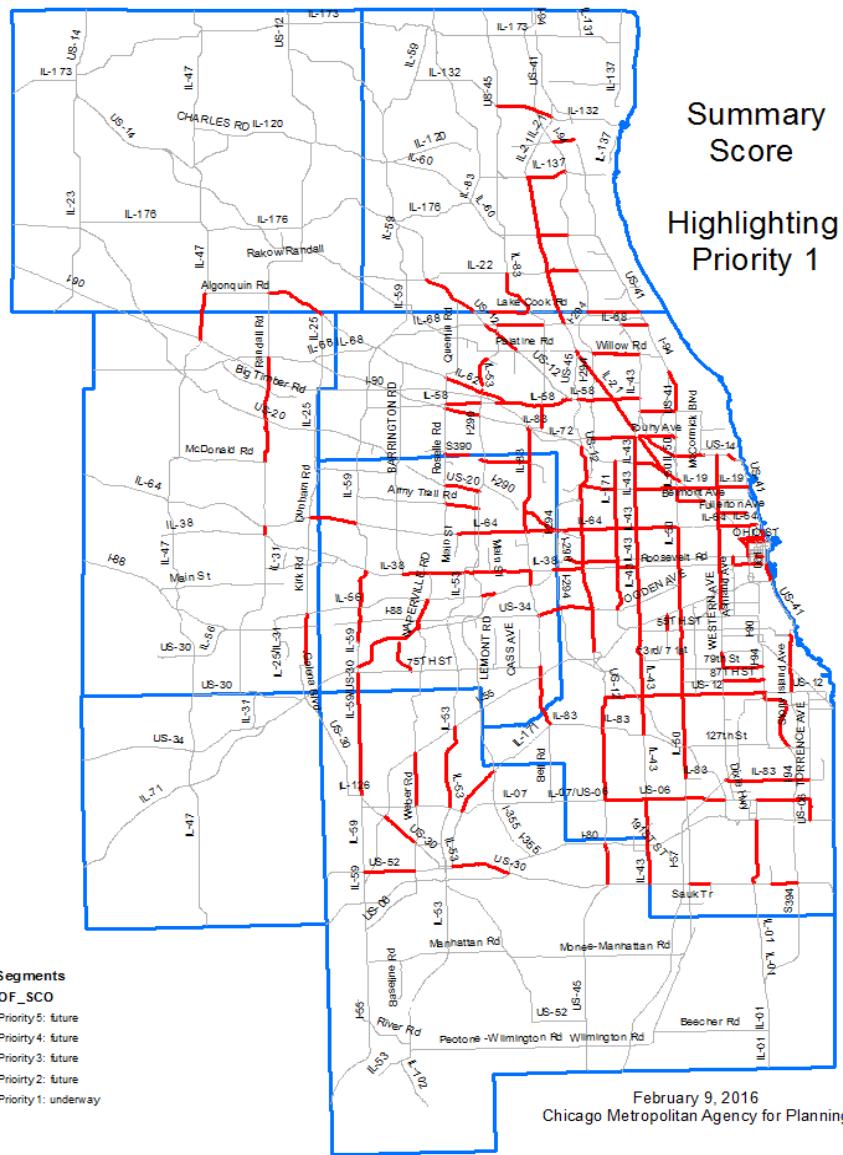
Score 5 or 0, 5 if this segment serves an interstate interchange 228 segments serve an interchange

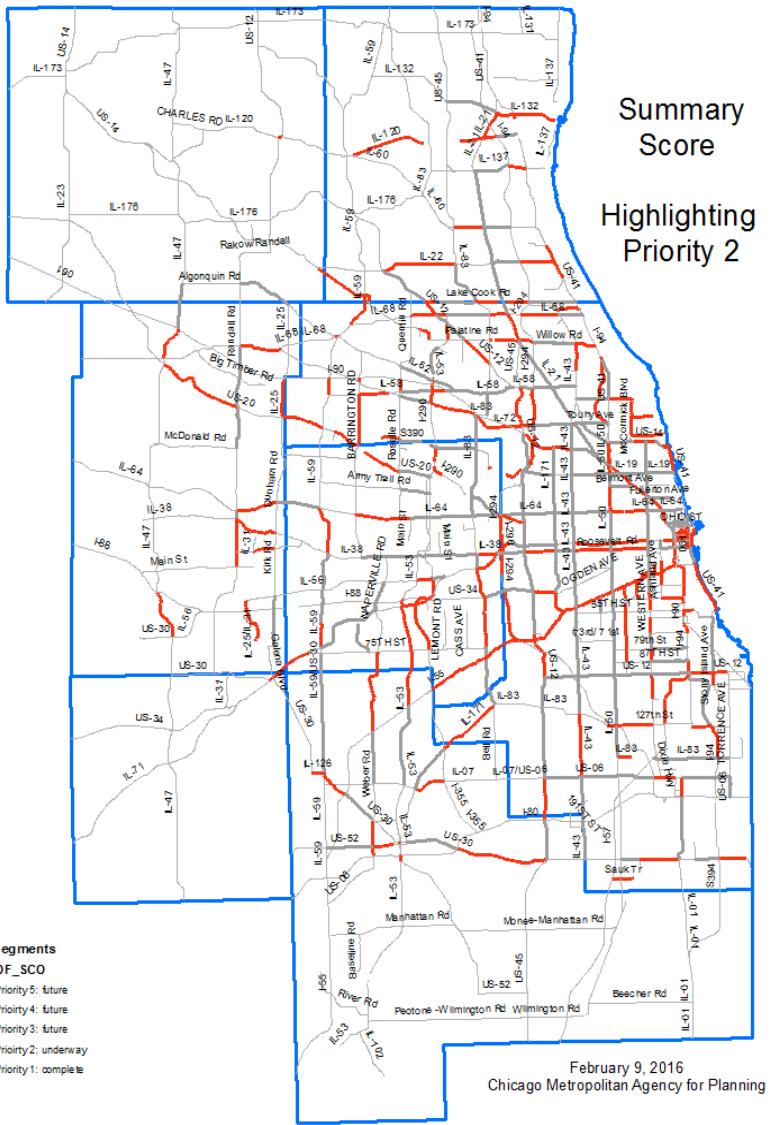


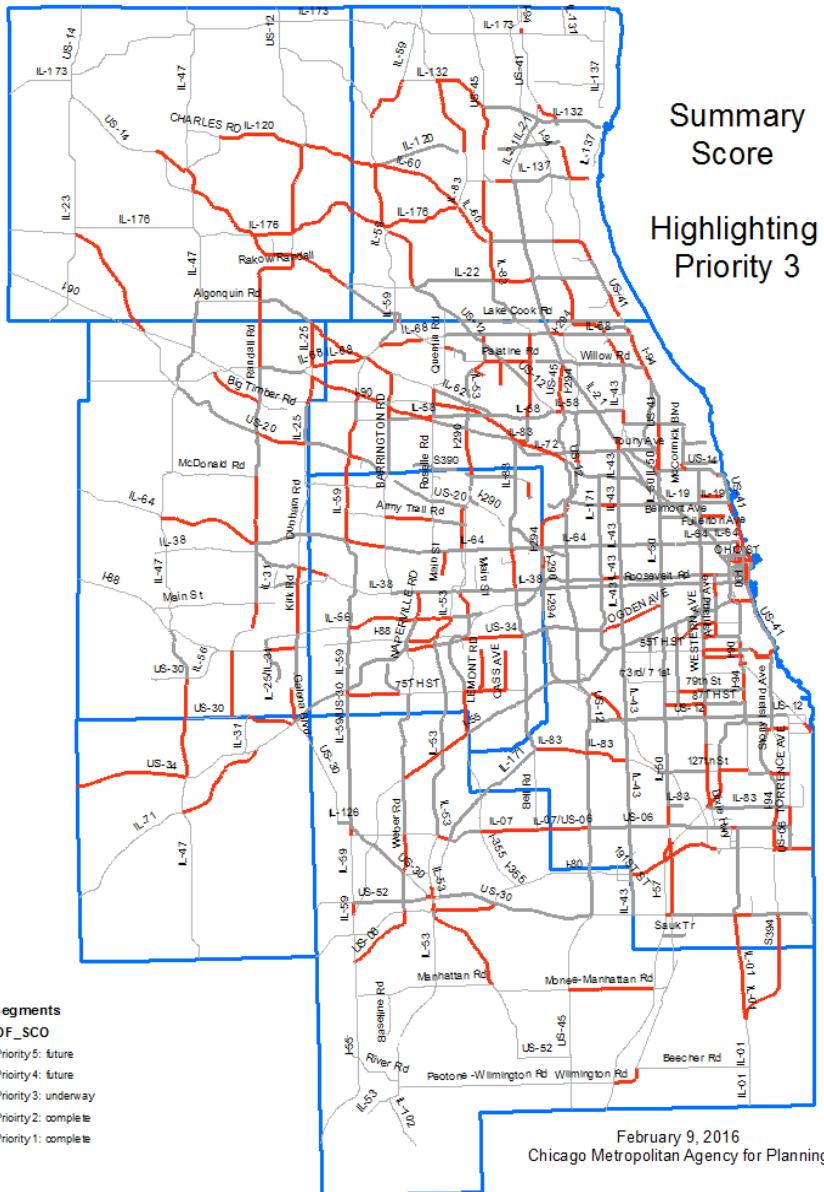
Summary Score

Interstate Score Notes

- No signal interconnects
- Lower K & A crash rates
- No “serves interchange”
- Generally decent pavement condition
- No planned TSP

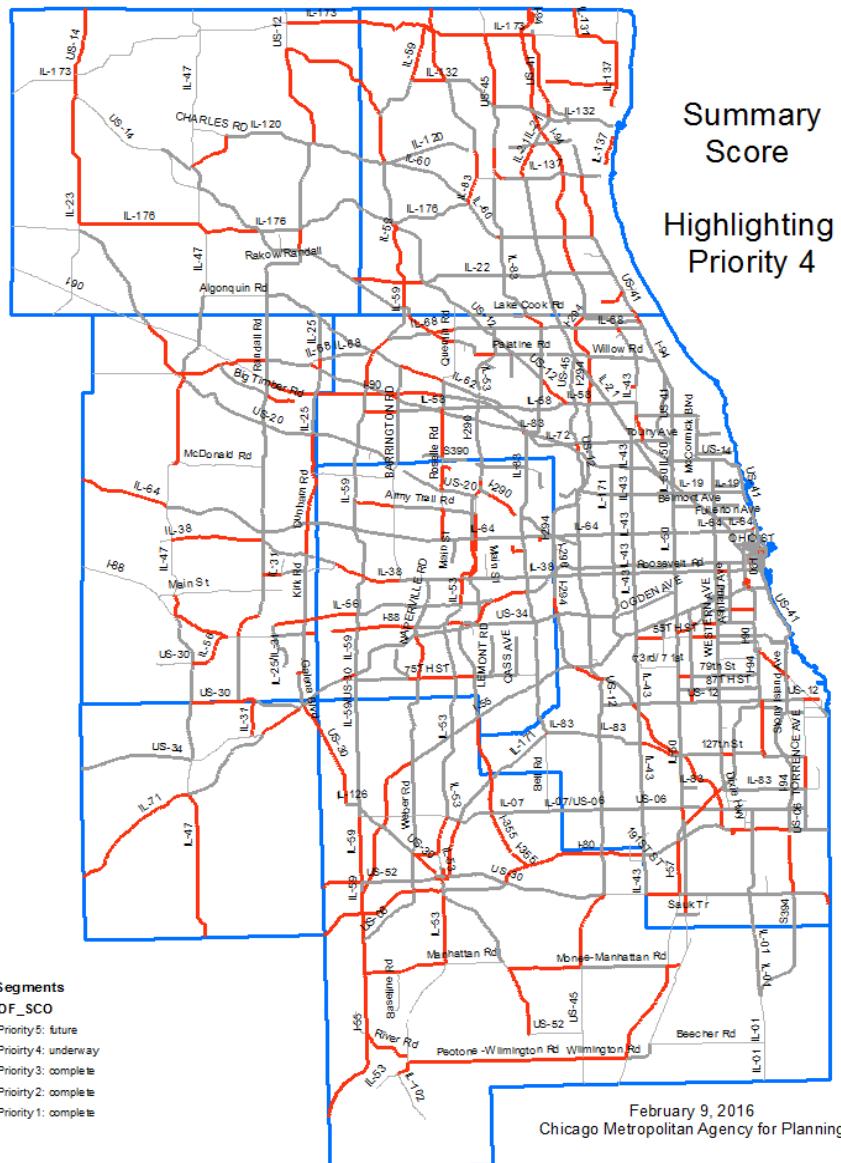


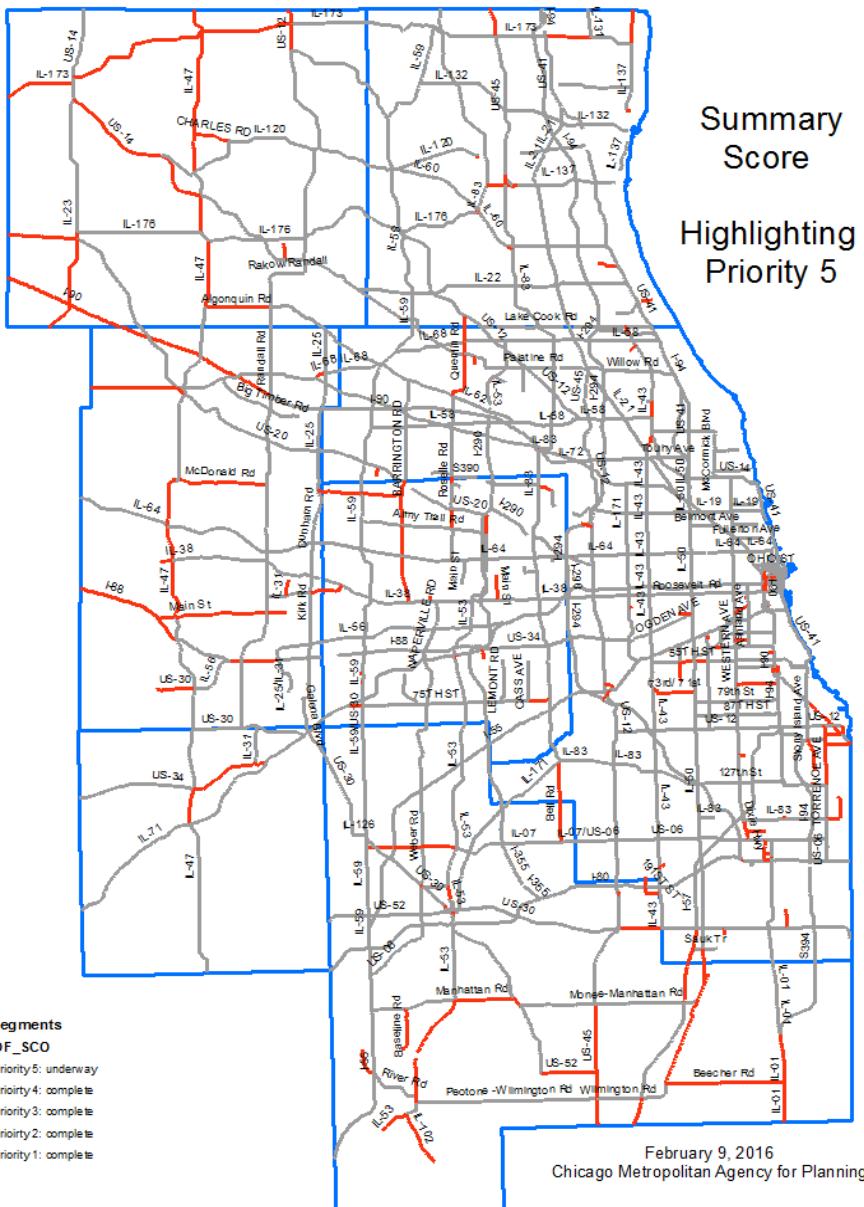




Summary Score

Highlighting Priority 3





Questions