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MEMORANDUM

To: **Transportation Committee**

From: CMAP Staff

Date: March 2014

Re: Project evaluation and costs for the capital element of the GO TO 2040 update

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For the major capital element of the GO TO 2040 update, CMAP is estimating the benefits and costs of proposed capital projects to help prioritize them for inclusion within the plan's fiscal constraint. This memo provides year-of-expenditure costs for the major capital projects previously discussed with the Transportation Committee and documents the methods used to estimate these costs. It then provides the results of CMAP's evaluation of the performance of the projects. Later in the spring, staff will present a recommended list of major capital projects to fit within the plan update's fiscal constraint.

Costs of the major capital projects

Fiscal constraint requires costs to be in year-of-expenditure dollars (YOE$) and to include both capital and operations and maintenance (O&M) costs. Thus, estimates are needed of both types of costs as well as the years in which these expenditures are expected to take place. Through fall and early winter, CMAP staff worked with implementers to update project information including scope, costs, phasing plans, and the portion of the project that would involve the addition of new capacity.

Capital costs

Capital costs were provided directly by the project sponsor. When provided in current year (or earlier) dollars, costs were escalated to YOE$ by assuming 3 percent annual cost inflation, the same as the assumption used in the GO TO 2040 financial plan for capital maintenance expenditures. Project phasing was taken into account when that information was available. When the sponsor provided costs in YOE$ but used a different cost escalation factor, costs were deflated to the base year and then escalated at 3 percent. In some cases, project sponsors did not provide a year within the time horizon of the plan. For those projects, the construction year is left blank and no YOE$ costs are calculated.

In CMAP's financial plan, the constrained cost of major capital projects is only the amount needed to build and operate new capacity. However, many major capital projects include elements of reconstruction as well as capacity addition. For example, add-lanes projects frequently include reconstruction of the existing facility along with addition of the new lane. The proportion of capital costs required for new capacity and reconstruction was provided directly by the project sponsor.

Operating costs

Operating costs were generally estimated from information provided by sponsors. For highway projects, operating costs were estimated by applying unit costs (per year per lane-mile) to the amount of new capacity, then inflating the cost each year by 3 percent. The unit cost estimate for non-tolled highways was derived from costs for FY09 – FY13 operations on the interstate system provided by IDOT District 1. The estimate for Tollway projects was derived from information provided by the Tollway on operating costs for the Elgin-O'Hare Western Access project. The estimate for the Illiana was taken from back-up material for the Illiana Expressway project study.

Except when directly provided by the sponsor, annual operating costs for transit projects were assumed to be 1 percent of the initial construction cost. In these cases, half of the transit operating cost was assumed to be covered through farebox recovery and therefore would reduce the cost of the project required to be fiscally constrained. Again, operating costs were inflated by 3 percent each year. These are the same assumptions previously used for transit projects in the major capital element of the GO TO 2040 plan.

Role of project-specific revenues

Unless they have already been counted in the financial plan forecasts, any revenues specifically generated by a project help offset the constrained cost of the project. Accounting for project revenues is somewhat complex, but the following points can be made for specific projects.

- The Illiana Expressway is assumed to be tolled and to utilize a public-private partnership. **CMAP's earlier analysis of the project** found that, under a "moderate" financing scenario (neither optimistic nor pessimistic), a $710 million public contribution would be required to help fund the Illiana. It was assumed that this amount would have to be provided by 2040. After accounting for financing costs, then, project revenue is estimated to offset 53% of the Illiana Expressway's capital and ongoing operations costs.

- The revenues of Tollway projects funded under Move Illinois are included in the financial plan forecast, with the exception of the Elgin-O'Hare Western Access (EOWA) project. CMAP staff used back-up material provided by the Tollway to estimate the portion of EOWA project costs recovered by tolls from that facility. Additional revenues from congestion pricing were not assumed in the estimate, but based on CMAP staff's work, congestion pricing could offset an additional 9 percent of the constrained cost over and above flat tolling.

- Construction of the extension of IL 53 and IL 120 bypass (the Central Lake County Corridor) is not included in the Move Illinois program. Cost estimates were provided by Tollway staff and revenue estimates were derived from the 2012 Blue Ribbon Advisory Committee recommendations. They include tolling the new capacity as well as tolling existing Route 53, indexing tolls to inflation and congestion pricing.

- The I-55 and I-290 managed lanes projects were assumed to have variable tolling with rates set to keep traffic moving at the speed limit. Both the capital and operating costs of priced managed lanes will be higher than on a newly added general purpose lane, mainly because electronic toll collection (ETC) systems will be needed. However, work by staff suggests that the revenue generated by these lanes would reduce the constrained cost by 24 percent on I-290 and 19 percent on I-55 in comparison to a non-priced managed lane alternative.

- Several projects may have opportunities to generate additional revenue. In particular, projects that create significant additional accessibility in a concentrated area may raise surrounding property values, creating an ideal opportunity to pursue value capture strategies. CMAP staff is seeking guidance from the Transportation Committee and its individual members on how to address these revenue opportunities to lower the constrained costs of projects.

Managed lanes methodology

Revenue for I-55 and I-290 was estimated from a previous **CMAP study of congestion pricing**. The costs of building and operating the electronic toll collection (ETC) systems were estimated from backup material for the 2010 study by the Tollway and the Metropolitan Planning Council. To estimate the total project capital cost, the costs related to ETC (detection equipment, gantries, etc.) were added onto the capital costs provided by the implementers. Additional costs related to lane separation were assumed negligible (striping only). Operating costs for ETC were taken from a survey of other managed lanes projects in the backup material. To account for financing costs, construction was assumed to be financed through bonds with a 20-year term, 6 percent interest, and a debt coverage ratio of 2.0. Revenue was assumed to grow at 1 percent while costs grow at 3 percent.

Results

The full list of projects and their costs is in Table 1 starting on the next page. The second-to-last column in bold type indicates the new capacity costs considered for fiscal constraint, while the last column describes the reconstruction costs associated with that new capacity. The "current fiscal constraint status" column indicates whether the project was on the constrained list in GO TO 2040 or amended into the plan since then, with 'C' meaning constrained and 'U' meaning unconstrained. Currently constrained projects come to $12.96 billion for new capacity with an additional $8.53 billion in associated reconstruction costs for $21.49 billion in total. No YOE$ costs are provided for projects outside the planning horizon.

Table 1. Costs of major capital projects.

Project	Project information					Costs for new capacity in YOE$b					Associated reconstruction costs, YOE$b
	Sponsor	Current fiscal constraint status	Year	Capital cost, 2014$	Percent of cost for new capacity	Capital cost, YOE$b	Operating costs to 2040, YOE$b	Total project cost, YOE$b	Cost offset by new project-specific revenue	**Cost considered for fiscal constraint, YOE$b**	
Elgin O'Hare Western Access*	Tollway	C	2020	2.15	99%	2.52	0.20	2.72	52%	**1.11**	0.03
I-90 Managed Lane	Tollway	C	2016	1.27	17%	0.23	0.07	0.30	0%	**0.30**	1.11
Central Lake County Corridor	Tollway	C	2028	2.10	88%	2.78	0.08	2.87	26%	**2.12**	0.39
I-294/I-57 Interchange Addition	Tollway	C	2024	0.35	75%	0.35	0.01	0.36	0%	**0.36**	0.12
I-55 Managed Lane	IDOT	C	2020	0.40	80%	0.38	0.03	0.41	19%	**0.33**	0.10
I-290 Managed Lane	IDOT	C	2020	1.60	20%	0.38	0.01	0.39	24%	**0.30**	1.53
Illiana Expressway	IDOT	C	2016	1.00	100%	1.06	0.23	1.29	53%	**0.71**	0.00
I-190 Access Improvements	IDOT	C	2020	0.38	20%	0.09	0.00	0.09	0%	**0.09**	0.36
Circle Interchange	IDOT	C	2015	0.41	20%	0.08	0.01	0.09	0%	**0.09**	0.34
Elgin O'Hare Exwy Far West Extension	Tollway	U	-	0.24	100%	-	-	-	-	-	-
Elgin O'Hare Exwy West Extension	Tollway	U	-	0.20	100%	-	-	-	-	-	-
I-294 Central Tri-State Mobility Imprvmt	Tollway	U	2025	1.04	25%	0.36	0.05	0.41	0%	**0.41**	1.08
I-55 Add Lanes - I-80 to Coal City Rd.	IDOT	U	-	0.84	20%	-	-	-	-	-	-
I-57 Add Lanes	IDOT	U	2030	0.90	80%	1.15	0.01	1.16	0%	**1.16**	0.29
I-80 Managed Lanes - Ridge Road to US	IDOT	U	2020	0.75	20%	0.18	0.12	0.30	0%	**0.30**	0.72
I-80 Managed Lanes - US 30 to I-294	IDOT	U	-	0.45	80%	-	-	-	-	-	-
I-80 to I-55 Connector	IDOT	U	-	0.10	100%	-	-	-	-	-	-
IL 394	IDOT	U	-	0.60	40%	-	-	-	-	-	-
Red Line Extension (South)	CTA	C	2020	1.70	82%	1.66	0.23	1.90	0%	**1.90**	0.37
Red/Purple Line Modernization	CTA	C	2020	4.20	64%	3.21	(0.06)	3.15	0%	**3.15**	1.81
UP Northwest Extension	Metra	C	2020	0.58	50%	0.35	0.19	0.54	0%	**0.54**	0.35
SouthWest Service Improvements	Metra	C	2020	1.03	25%	0.31	0.16	0.47	0%	**0.47**	0.92
UP North Improvements	Metra	C	2020	0.45	25%	0.13	0.07	0.21	0%	**0.21**	0.40
UP West Improvements	Metra	C	2017	0.52	25%	0.14	0.08	0.22	0%	**0.22**	0.43
Rock Island Improvements	Metra	C	2020	0.05	25%	0.02	0.01	0.02	0%	**0.02**	0.05
West Loop Transportation Ctr: Phase 1	CDOT	C	2020	0.84	75%	0.75	0.30	1.05	0%	**1.05**	0.25
West Loop Transportation Ctr: Phase 2**	CDOT	U	-	2.09	100%	-	-	-	-	-	-
Blue Line West Extension	CTA	U	-	2.57	75%	-	-	-	-	-	-
Brown Line Extension	CTA	U	-	4.14	75%	-	-	-	-	-	-
Circle Line South (Phase II)	CTA	U	-	1.00	75%	-	-	-	-	-	-
Circle Line North (Phase III)	CTA	U	-	2.24	75%	-	-	-	-	-	-
Orange Line Extension	CTA	U	-	0.50	75%	-	-	-	-	-	-
Yellow Line Enhancements and	CTA	U	-	0.29	75%	-	-	-	-	-	-

Project	Project information					Costs for new capacity in YOE$b					Associated reconstruction costs, YOE$b
	Sponsor	Current fiscal constraint status	Year	Capital cost, 2014$	Percent of cost for new capacity	Capital cost, YOE$b	Operating costs to 2040, YOE$b	Total project cost, YOE$b	Cost offset by new project-specific revenue	**Cost considered for fiscal constraint, YOE$b**	
Express Airport Train Service	CTA	U	-	1.80	50%	-	-	-	-	-	-
BNSF Extension	Metra	U	2020	0.84	100%	1.00	0.54	1.54	0%	**1.54**	0.00
BNSF Improvements	Metra	U	-	0.45	25%	-	-	-	-	-	-
Heritage Corridor Improvements	Metra	U	-	0.20	25%	-	-	-	-	-	-
Metra Electric Improvements	Metra	U	-	0.45	25%	-	-	-	-	-	-
Metra Electric Extension	Metra	U	2020	0.29	50%	0.17	0.09	0.27	0%	**0.27**	0.17
Milwaukee District North Extension	Metra	U	2020	0.64	75%	0.58	0.31	0.89	0%	**0.89**	0.19
Milwaukee District North	Metra	U	2020	0.13	75%	0.12	0.06	0.18	0%	**0.18**	0.04
Milwaukee District West Extension	Metra	U	2020	0.42	75%	0.38	0.20	0.58	0%	**0.58**	0.13
Milwaukee District West Improvements	Metra	U	-	0.45	25%	-	-	-	-	-	-
North Central Service Improvements	Metra	U	-	0.33	50%	-	-	-	-	-	-
Rock Island Extension	Metra	U	-	0.32	100%	-	-	-	-	-	-
SouthEast Service	Metra	U	2017	0.83	75%	0.68	0.37	1.05	0%	**1.05**	0.23
SouthWest Extension	Metra	U	-	0.33	50%	-	-	-	-	-	-
STAR Line	Metra	U	-	3.00	100%	-	-	-	-	-	-
Central Area Transitway	CDOT	U	2020	0.36	75%	0.33	0.13	0.46	0%	**0.46**	0.11
Mid-City Transitway	CDOT	U	-	1.60	100%	-	-	-	-	-	-
Total for all projects										**19.79**	11.48
Total for currently constrained projects										**12.96**	8.53

* Operating costs for the Elgin O'Hare Western Access project are already included in the financial plan expenditure forecasts, so they are not counted as part of the constrained cost here.

** In GO TO 2040, the West Loop Transportation Center was considered one project. As a result of the Union Station Master Plan, it was broken into two projects.

Performance of the major capital projects

The primary tool used to evaluate the major capital projects was CMAP's regional travel demand model. The characteristics of individual projects were coded into the model based on information supplied by the project sponsors. Travel conditions in 2040 were compared with the project (build scenario) and without the project (no-build scenario). Economic impacts were calculated using commercial software based on outputs from the travel demand model. Air emissions were computed using U.S. Environmental Protection Agency software. Impacts caused by spinoff development – increase in imperviousness and potential damage to green infrastructure – were estimated using a spreadsheet analysis based, again, on outputs from the

travel demand model. The evaluation measures were previously discussed with the Transportation Committee and are similar to the measures used in GO TO 2040:

- **Long-term economic development** – Measured by gross regional product in 2040, which is the total business output in the region less the value of inputs, reported in millions of dollars. This measures long-term gains from a more efficient transportation system rather than short-term gains from economic activity associated with facility construction.

- **Congestion** – Measured by vehicle-hours traveled in congested conditions ("congested VHT"), both in the region as a whole and in a five-mile corridor around the facility.

- **Work trip travel time** – Change in the average commute time in the region, in minutes, by auto or transit.

- **Mode share** – Measured as net new daily transit trips, where transit projects are evaluated for their ability to induce transit trips and highway projects are evaluated for their potential negative effect on transit use.

- **Jobs-housing access** – Measured as the number of jobs that can be reached by auto within 45 minutes or by transit within 75 minutes.

- **Air quality** – Measured as the change in carbon dioxide equivalent emitted by the transportation system in the region, in tons per year. The emissions of pollutants CMAP calculates under the Clean Air Act's transportation conformity requirements are ozone precursors and fine particulate matter. Emissions of these pollutants generally track with carbon dioxide emissions and for simplicity were not reported.

- **Natural resource preservation** – Two measures were used to try to capture impacts on natural resources: the creation of impervious surface and potential damage to regional green infrastructure. A well-accepted proxy measure for degradation of water resources, impervious surface is created directly by a facility as well as by encouraging spinoff development in undeveloped areas. Potential impact on terrestrial resources was measured by the number of households expected to locate in areas identified as ecologically important in the **Chicago Wilderness Green Infrastructure Vision**.

- **Infill and reinvestment** – Measured by the percent of trips using the facility that originate within current municipal boundaries, which indicates the extent to which existing communities benefit from a project.

- **Facility condition** – For improvements or additions to existing facilities, reconstruction and modernization is a typical part of the project. Thus, existing facility condition is a relevant metric for prioritization. For highway projects, conditions were measured by the Condition Rating Survey (IDOT roads only). Higher values indicate better condition

with a maximum of nine. Facility condition was not examined for transit projects because data are not available to do so.

- **Freight** – Measured as heavy truck vehicle-hours traveled in congested conditions, both in the region as a whole and in a five-mile corridor around the facility. This measure was computed only for highway facilities.

Summary of project evaluation results

Tables 2 and 3 below report the evaluation results as the change in the measure, i.e., the build scenario minus the no-build scenario. The baseline value for 2040 is provided at the bottom of the tables for comparison. Because the projects are small relative to overall travel in the region in 2040, modeling in some cases shows insignificant results. In those cases, the results are reported as '---'. It is important to emphasize that the evaluation is a planning-level comparison rather than the more detailed modeling required for project studies.

Roadway extensions typically have relatively large effects on regional mobility and accessibility. For instance, the Central Lake County Corridor reduces system congestion more than any other project, while the Elgin O'Hare Western Access project makes significantly more jobs available within a 45-minute drive. Several of the roadway extensions have fairly large economic benefits as well, much of which is driven by improved access to customers and suppliers for businesses. On the other hand, these roadway extension projects have higher costs and higher negative impacts as well. The Illiana Expressway is projected to create nearly 2,000 acres of impervious surface and induce the location of about 500 new households in important areas identified in the Green Infrastructure Vision, while the Central Lake County Corridor would create 2,200 acres of impervious surface and potentially induce 1,800 households to locate within the regional green infrastructure network (although the **Illinois Route 53/120 Corridor Land Use Plan** that CMAP is developing in conjunction with Lake County is expressly meant to lower such potential impacts). Overall environmental impacts are lower with the Elgin O'Hare Western Access because it is in an already-developed area.

Greenhouse gas emissions (GHG) from roadway extensions are variable. By reducing congestion, highway projects also reduce GHG emissions, since emission rates generally decrease as speeds increase. On the other hand, an overall increase in driving brought about by the project can offset this effect. The balance of these two competing factors is reflected in the handful of highway projects that show significant changes in GHG emissions. Lastly, highway extensions by themselves tend to affect transit ridership negatively. Many of the capital projects have transit elements (typically express bus or bus rapid transit) under consideration for them, but no specific information was available for modeling. Inclusion of transit elements in highway projects is expected to offset negative impacts on overall transit ridership. In one case transit ridership increases with highway construction; this is likely because the project increases accessibility to transit stations by car.

Table 2. Evaluation results for highway projects: 2040 build minus no-build.

Project	Current fiscal constrain t status	Gross regional product ($ millions annually)	Regional congested VHT (daily)	Corridor congested VHT (daily)	Work trip travel time by auto (minutes)	Transit trips (daily)	Number of jobs accessible within 45 minutes by car	Carbon dioxide emissions (tons/year)	Number of households located in Green Infrastructure Vision areas	New impervious surface in project corridor (acres)	Percent of trip origins within current municipal borders	Heavy truck regional congested VHT	Heavy truck corridor congested VHT	Current Condition Rating Survey
Elgin O'Hare Western Access	C	$598	-10,031	-3,433	-0.14	-882	21,688	38,476	---	---	96%	555	452	7.4
I-90 Managed Lane	C	$93	-21,048	-13,699	-0.12	-1,366	8,129	88,422	---	732	90%	-1,138	-883	---
Central Lake County Corridor	C	$1,203	-64,406	-39,788	-0.37	-4,633	8,296	---	1,779	2,203	87%	-5,811	-2,625	---
I-294/I-57 Interchange Addition	C	$95	---	936	---	-1,011	---	---	---	---	75%	---	141	---
I-55 Managed Lane	C	$371	-8,347	-3,342	---	-2,531	4,966	---	---	---	94%	---	---	7.8
I-290 Managed Lane	C	$272	-4,498	-1,566	---	---	5,491	-48,693	---	---	98%	---	-111	8.6
Illiana Expressway	C	$425	-4,441	-1,471		---	3,849	99,528	478	1,948	42%	-997	-78	---
I-190 Access Improvements	C	---	-6,808	-981	---	-1,116	---	---	---	---	89%	---	---	4.5
Circle Interchange	C	$295	-7,247	1,108	---	-1,073	3,484	---	---	---	97%	---	164	7.6
Elgin O'Hare Exwy Far West Extension	U	---	---	-1,482	---	---	---	---	---	---	97%	---	---	---
Elgin O'Hare Exwy West Extension	U	---	---	-2,808	---	1,202	---	---	---	---	96%	---	---	---
I-294 Central Tri-State Mobility Imprvmt	U	$609	-15,245	-12,320	---	---	17,664	-66,690	---	---	94%	-3,522	-3,219	---
I-55 Add Lanes - I-80 to Coal City Rd.	U	---	---	-1,739	---	---	---	---	---	---	61%	-522	-256	8.6
I-57 Add Lanes	U	---	---	-6,664	---	---	---	---	---	---	69%	-968	-895	7.7
I-80 Managed Lanes - Ridge Road to US 30	U	---	---	-3,259	---	---	---	---	---	---	77%	---	-218	8.5
I-80 Managed Lanes - US 30 to I-294	U	---	---	-1,129	---	---	---	---	---	---	81%	373	--	8.2
I-80 to I-55 Connector	U	---	7,591	-520	---	---	---	-60,707	---	---	34%	---	---	---
IL 394	U	---	-9,054	-1,294	---	---	---	---	---	---	73%	-377	-93	7.4
Baseline*		$802,516	1,482,436	---	32.81	1,519,043	1,089,994	32,192,565	52,272	674,928	---	69,426	---	---

* Baseline values of '---' are not included because the statistics are specific to each project.

Table 3. Evaluation results for transit projects: 2040 build minus no-build.

Project	Current fiscal constrain t status	Gross regional product ($ millions annually)	Regional congested VHT (daily)	Corridor congested VHT (daily)	Work trip travel time by transit (minutes)	Transit trips (daily)	Number of jobs accessible within 75 minutes by transit	Carbon dioxide emissions (tons/year)	Number of households located in Green Infrastructure Vision areas	New impervious surface in project corridor (acres)	Percent of trip origins within current municipal borders
Red Line Extension (South)	C	---	---	-860	---	708	2,382	---	---	---	100%
Red/Purple Line Modernization	C	---	---	-2,168	---	1,283	---	---	---	---	100%
UP Northwest Extension	C	---	-8,135	-3,608	---	9,359	17,421	---	356	---	94%
SouthWest Service Improvements	C	$127	---	956	---	1,722	6,156	---	---	---	98%
UP North Improvements	C	---	-7,502	-4,711	-0.17	3,299	5,415	---	---	---	84%
UP West Improvements	C	---	-9,216	-2,703	-0.20	4,315	19,063	---	---	---	99%
Rock Island Improvements	C	---	---	-1,692	---	2,421	---	---	---	---	100%
West Loop Transportation Center: Phase 1	C	---	---	---	---	---	---	---	---	---	---
West Loop Transportation Center: Phase 2	U	$417	---	---	-0.89	15,870	34,001	---	---	---	99%
Blue Line West Extension	U	---	---	---	---	4,372	8,153	---	---	---	100%
Brown Line Extension	U	$149	---	2,743	---	881	---	---	---	---	100%
Circle Line South (Phase II)	U	$416	---	---	-0.11	5,926	-8,379	-41,194	---	---	100%
Circle Line North (Phase III)	U	$437	---	---	---	5,583	-4,859	---	---	---	100%
Orange Line Extension	U	---	---	---	---	2,363	---	---	---	---	100%
Yellow Line Enhancements and Extension	U	---	---	---	---	4,124	---	---	---	---	100%
Express Airport Train Service	U	---	---	2,282	---	---	---	---	---	---	100%
BNSF Extension	U	---	---	-718	---	---	---	---	257	---	95%
BNSF Improvements	U	---	---	---	---	3,045	12,104	---	---	---	100%
Heritage Corridor Improvements	U	---	---	---	---	2,822	19,174	---	---	---	99%
Metra Electric Improvements	U	$211	---	---	---	5,800	---	---	---	---	99%
Metra Electric Extension	U	---	-10,678	---	---	---	---	---	---	---	83%
Milwaukee District North Extension	U	---	---	---	0.18	3,299	---	-42,130	551	524	99%
Milwaukee District North Improvements	U	---	---	---	---	---	---	---	---	---	97%
Milwaukee District West Extension	U	---	---	1,018	---	---	---	---	---	---	96%
Milwaukee District West Improvements	U	---	---	---	---	586	9,975	---	---	---	100%
North Central Service Improvements	U	---	---	---	---	1,286	9,884	-43,180	---	---	98%

Project	Current fiscal constrain t status	Gross regional product ($ millions annually)	Regional congested VHT (daily)	Corridor congested VHT (daily)	Work trip travel time by transit (minutes)	Transit trips (daily)	Number of jobs accessible within 75 minutes by transit	Carbon dioxide emissions (tons/year)	Number of households located in Green Infrastructure Vision areas	New impervious surface in project corridor (acres)	Percent of trip origins within current municipal borders
Rock Island Extension	U	---	---	493	---	---	---	---	243	---	84%
SouthEast Service	U	$190	---	---	---	5,016	14,381	-52,130	407	---	100%
SouthWest Extension	U	---	---	-56	---	---	---	---	---	---	82%
STAR Line	U	---	---	---	---	1,271	13,978	---	220	---	100%
Central Area Transitway	U	---	---	---	---	7,058	13,726	---	---	---	99%
Mid-City Transitway	U	$137	---	---	-0.22	4,594	31,697	---	---	---	100%
Baseline*		$802,516	1,482,436	---	43.96	1,519,043	840,121	32,192,565	52,272	674,928	---

* Baseline values of '---' are not included because the statistics are specific to each project.

Like highway extensions, transit extensions typically have relatively large effects as well. For example, several of the transit extensions are able to put tens of thousands of additional jobs within reach in a reasonable commute time. They also have lower impacts on natural resources in their corridors, although a few do tend to increase development pressure on areas identified in the Green Infrastructure Vision. In general, transit extensions to areas that are poorly served by transit currently tend to show greater net increases in ridership while transit projects in transit-rich areas partly take their riders from existing services. Thus, a commuter rail extension to an outlying area may show a relatively high increase in overall ridership while a rapid transit project shows lower net ridership gains even though it has higher usage. Transit improvements typically have large reconstruction elements associated with them, but new capacity and service enhancement can combine to provide significant benefits. For instance, several of the transit improvement projects make 10,000 - 20,000 more jobs accessible.

With some exceptions, additions to existing highways typically have more modest effects than construction of new facilities. The I-90 managed lane project performs well because of its length and the congestion in the corridor, as does the Central Tristate Mobility Improvements project. Both reduce overall hours traveled in congested conditions with a large portion of the benefit to freight haulers. In general, additions to existing highways would be expected to support infill/reinvestment goals better, but it should be noted that several of the add-lanes projects have relatively low benefit to existing communities because they are on the outer portions of expressways. The add-lanes projects tend to have lower environmental impacts than the highway extension projects.

Two expressway-to-expressway interchanges were modeled. Although it adds some new capacity, the Circle Interchange is mostly a rehabilitation project. While the weighted average condition rating score (7.6) puts it in good condition, portions of it are in much worse condition. While it was not modeled, the project is expected to reduce the number of crashes through the interchange as well. The interchange at I-294/I-57 is a new project at the only location where two interstates cross but do not interchange. Neither project shows a significant regional congestion reduction benefit and is expected to slightly worsen congestion in the surrounding corridor.

Projects not modeled

Several projects identified in the **"universe" of major capital projects** discussed with the Transportation Committee in January were not modeled. The reasons are as follows:

- DuPage "J" Line – The Cook-DuPage Corridor Study determined that an arterial rapid transit (ART) system is more feasible. Since this project would no longer be considered a major capital project, it was not modeled.

- O'Hare to Schaumburg Transit Service – Similarly, this project is expected to be bus rapid transit (BRT), likely running in a shoulder lane on the Elgin-O'Hare Expressway. As such, it is not considered a separate major capital project.

- Inner Circumferential rail service – The CREATE Program has shown that freight conflicts make this project infeasible.

- South Lakefront Corridor – The Chicago South Lakefront Corridor Study recommended that the Gold Line project not advance further.

Please note that while they are not itemized with specific costs broken out, ART and BRT projects continue to be priorities for GO TO 2040. These projects are included in the systematic enhancements budget of the financial plan. They should be eligible for federal funding and be allowed to proceed through the federal project development process.

Conclusion

As required by federal regulations, the GO TO 2040 plan update will include a list of fiscally constrained major capital projects, which are priority projects that the region intends to build within the time frame and the funding envelope of the plan. This memo provides year-of-expenditure costs for the major capital projects and summarizes the performance of the projects. A list of prioritized major capital projects will be discussed with the Transportation Committee later in spring.

Action requested: Discussion