



CMAP

GO TO 2040

**Analysis of congestion pricing on GO TO 2040
major capital projects**

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Background and goals



- CMAP long-range plan GO TO 2040 recommends congestion pricing as a policy
- Need to explore impact of pricing on local streets, revenue, impacts across socio-economic groups
- Build on previous studies (Metropolitan Planning Council, Illinois Tollway)
- Apply CMAP's investment in a highway pricing model
- Support a sustained “campaign” to implement congestion pricing

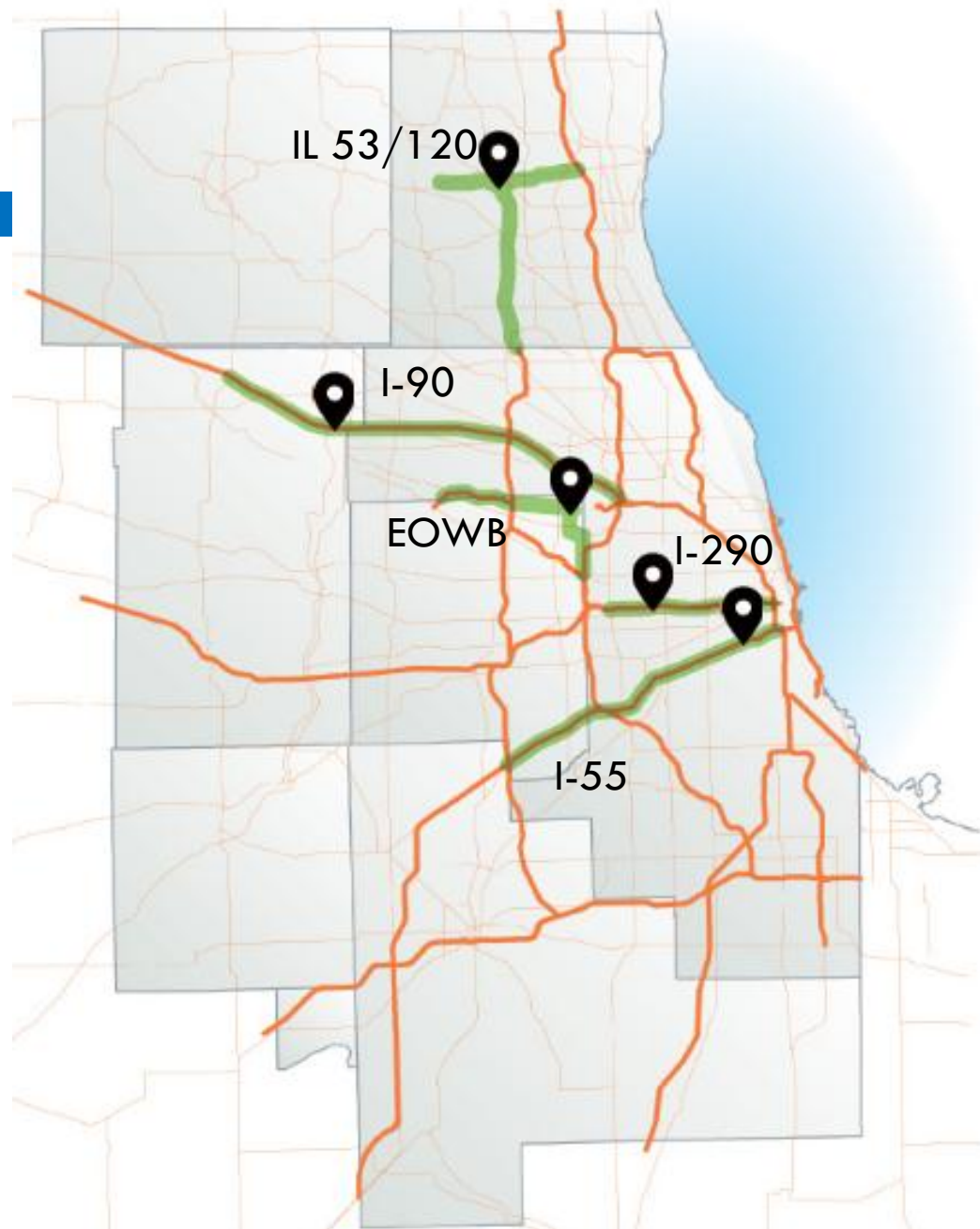
Projects

□ New facilities

- IL 53/120 aka Central Lake County Corridor
- Elgin O'Hare West Bypass

□ New lanes

- I-90
- I-290
- I-55



Major planning assumptions

- Implement congestion pricing on all new capacity at the time it is added
 - ▣ All lanes on new facilities
 - ▣ All lanes added to existing facilities
- Toll rates set to maximize LOS, not throughput or revenue
- No discounts for HOVs
- 1 access point per 7 ~ 11 miles for express lanes

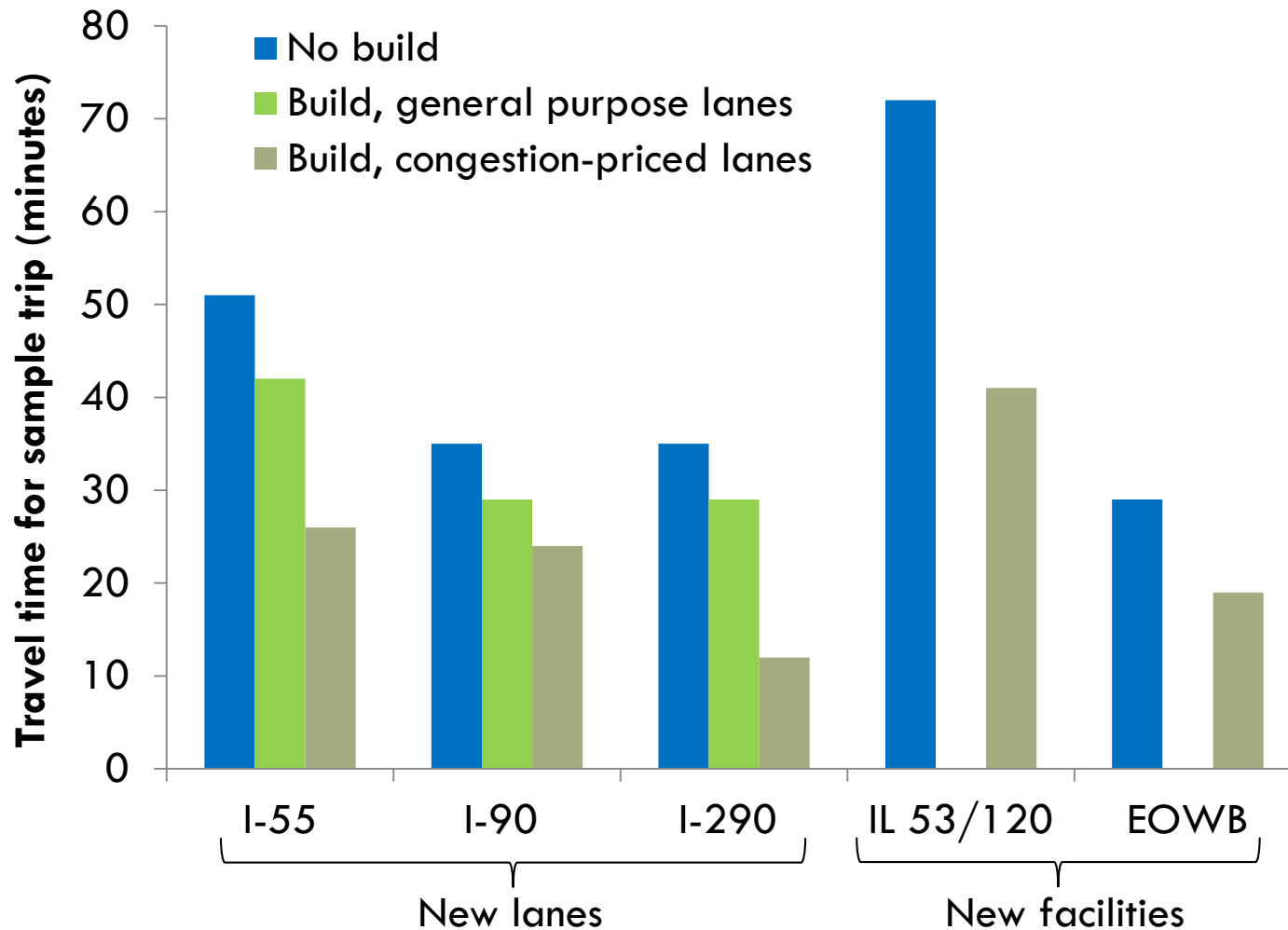
Setting toll rates

- If there are 5 minutes of delay on an expressway segment, then
 - ▣ 5 minutes of delay $\div$
 - ▣ 60 minutes per hour $\times$
 - ▣ \$11.50 per hour, the regional average toll user's VOT $\div$
 - ▣ 5 mile segment
 - ▣ = \$0.19 per mile

Current year validation (daily VMT)

Expressway	Modeled VMT	Observed VMT	Modeled/ Observed
Elgin-O'Hare (existing roadway)	533,941	475,865	1.12
I-290 (entire)	6,634,035	6,525,870	1.02
I-55 (I-355 to I-90/94)	3,507,887	3,937,035	0.89
I-90 (Elgin to O'Hare)	2,983,103	3,143,646	0.95
SUBTOTAL	28,344,803	29,134,864	0.97
Other expressways	51,759,102	49,503,759	1.05
TOTAL	80,103,905	78,638,623	1.02

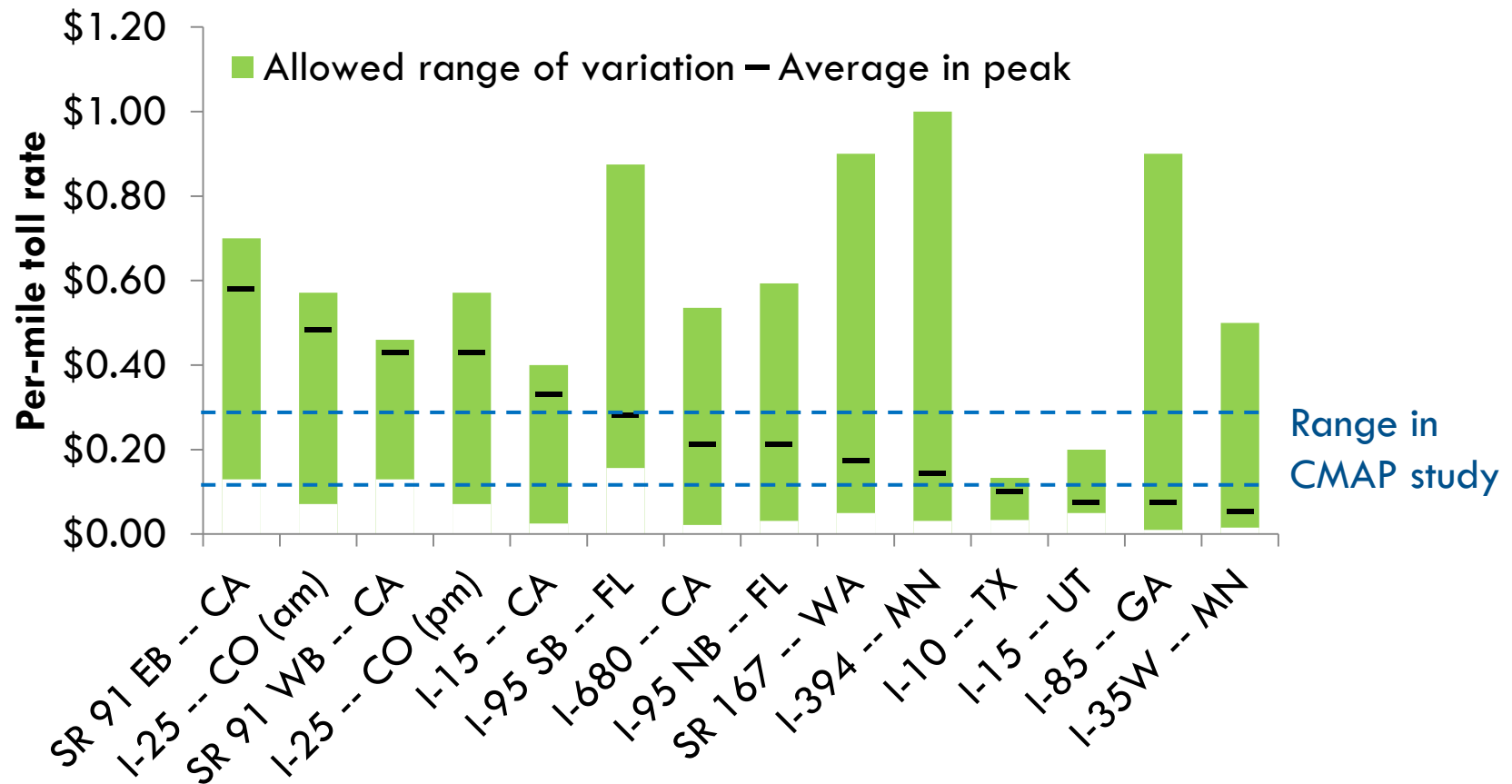
Travel times (AM peak)



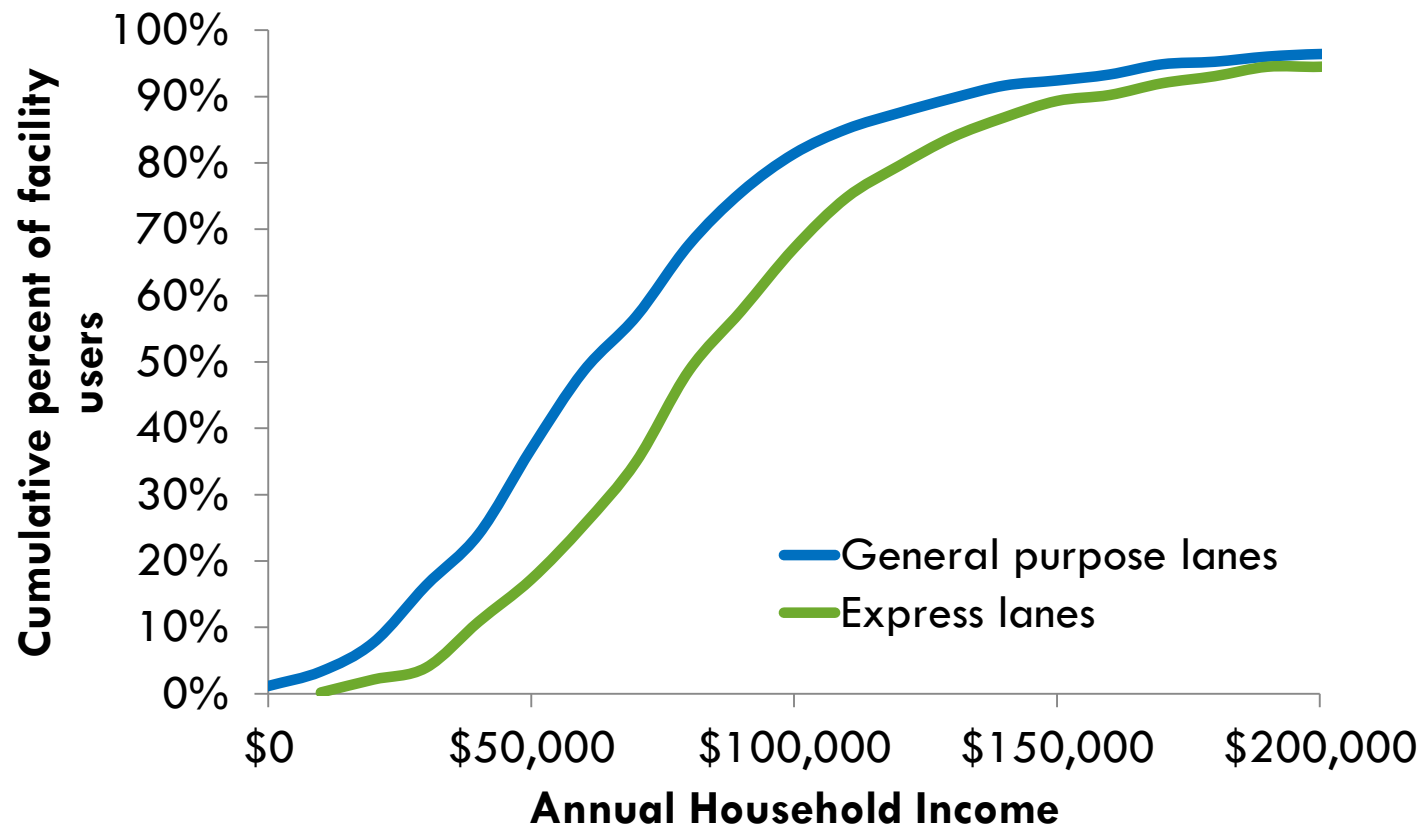
Average toll in AM peak

Facility	Base toll	Toll with congestion pricing
Central Lake County Corridor	\$0.20	\$0.29
Elgin O'Hare Expressway	\$0.20	\$0.25
I-55	No toll	\$0.12
I-90	\$0.09	\$0.14
I-290	No toll	\$0.26

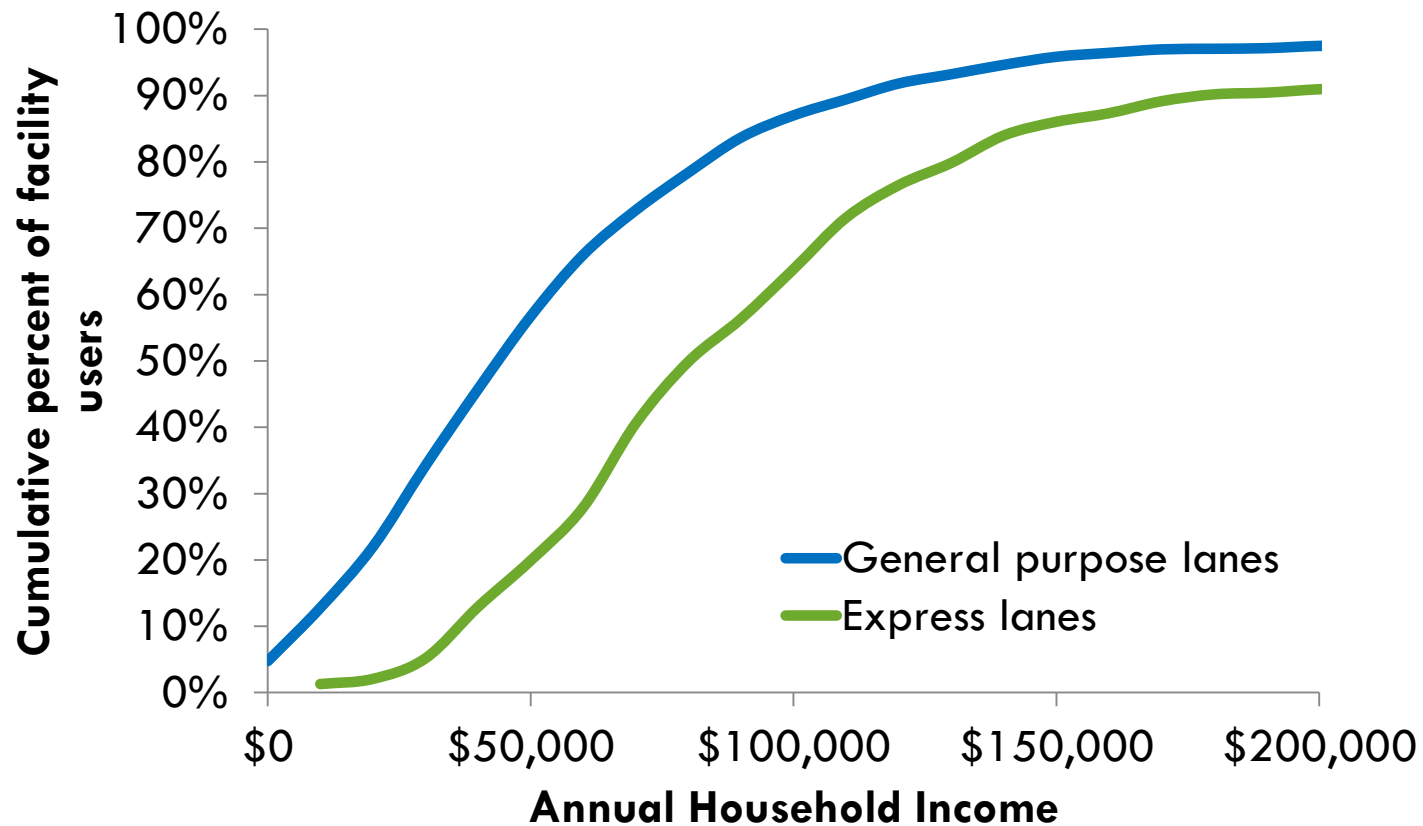
Selected average peak tolls



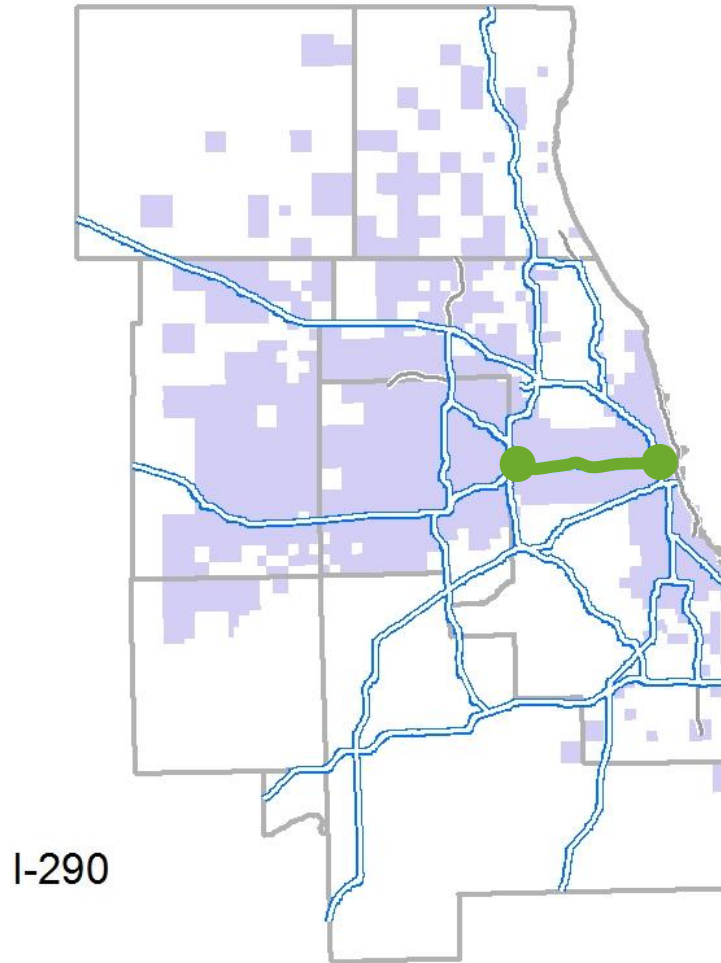
Income profile (I-90)



Income profile (I-290)



Express lane access and the travel market for I-290



Marginal revenue and cost of congestion pricing (millions, annual)

Facility	Gross revenue	Annualized cost	Net revenue
IL 53 / 120	\$9		\$9
Elgin O'Hare	\$11		\$11
I-55 managed lane	\$13	\$6	\$7
I-90 managed lane	\$15		\$15
I-290 managed lane	\$14	\$3	\$11
Total	\$62	\$9	\$53

Other findings

- No effect on mode share except very small increase in carpooling and decrease in driving alone
- Decrease in congestion on arterials in corridor – no traffic spillover – because of capacity increase

Frequency of use

Corridor	< 1 d/wk	1 - 2 d/wk	2 - 3 d/wk	3 - 4 d/wk	> 4 d/wk
IL 53/120					
Elgin O'Hare					
I-55					
I-90					
I-290					

Finding from other regions: Drivers take 2.2 – 2.8 one-way trips on express lanes per week

Future study

- Conversion of existing general purpose lanes to express toll lanes
- Effect of improved transit when congestion pricing revenues invested in transit system
- Economic impact
- Air quality



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Questions/comments?

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