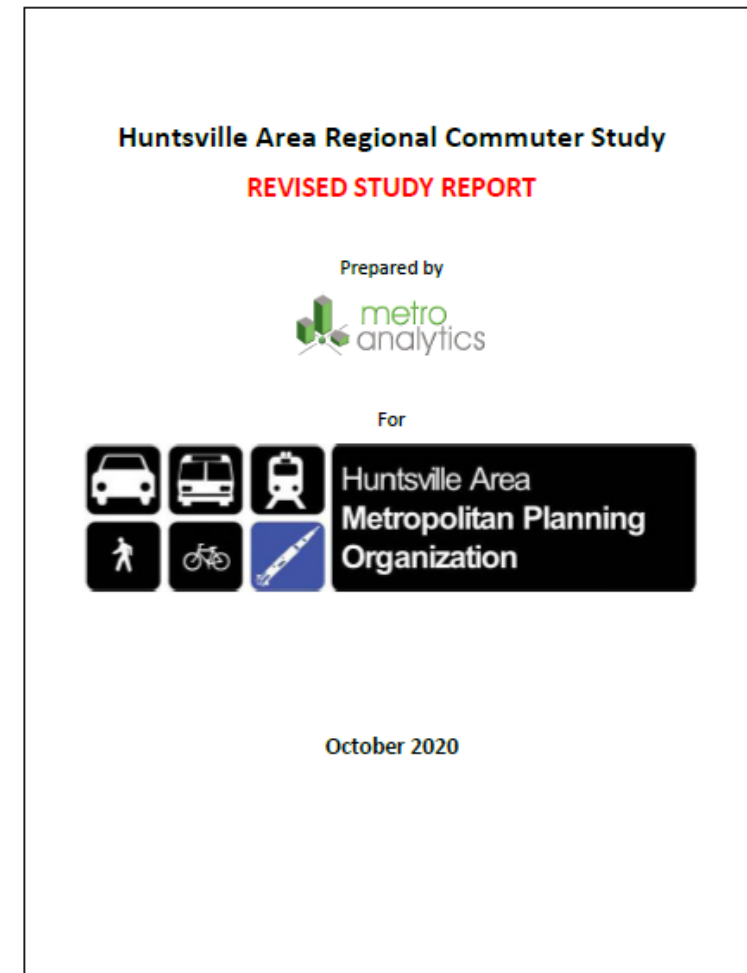


Huntsville Area Regional Commuter Study

9/22/2021 MPO/TCC Meetings:
Final Analysis of COVID-19 Travel
Patterns and Study Conclusions

Presented to:
*Huntsville Area
Metropolitan Planning Organization*

Presented by:
Robert G. Schiffer, AICP
Metro Analytics



Presentation Overview

- Quick study recap
- COVID-19 impacts on travel patterns
- External travel patterns
- Study conclusions & insights
- Questions & comments



Huntsville Area Regional Commuter Study



Quick Recap

- Project Purpose – better understand worker travel patterns
- Data obtained from StreetLight InSight and Redstone Arsenal
- Identified predominant trip origins and destinations
- Mapped key flows between origin and destination points
- Analyzed trips by time-of-day and truck travel patterns
- Located future park-n-ride lots – inside and outside MPO area
- Revised MPO's Congestion Management Plan
- ***Assessing travel conditions pre-, during-, post-COVID***
- ***Analyzing regional “external” travel patterns***

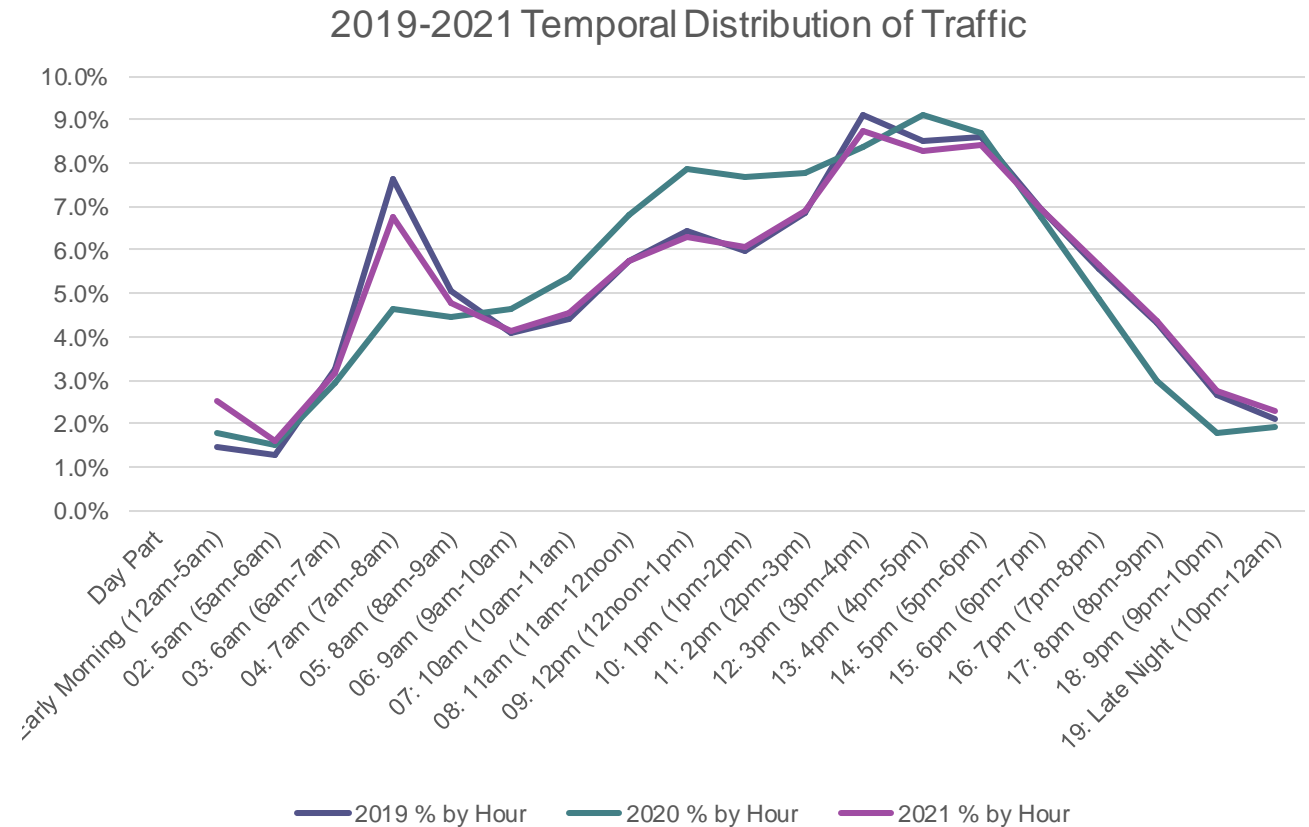


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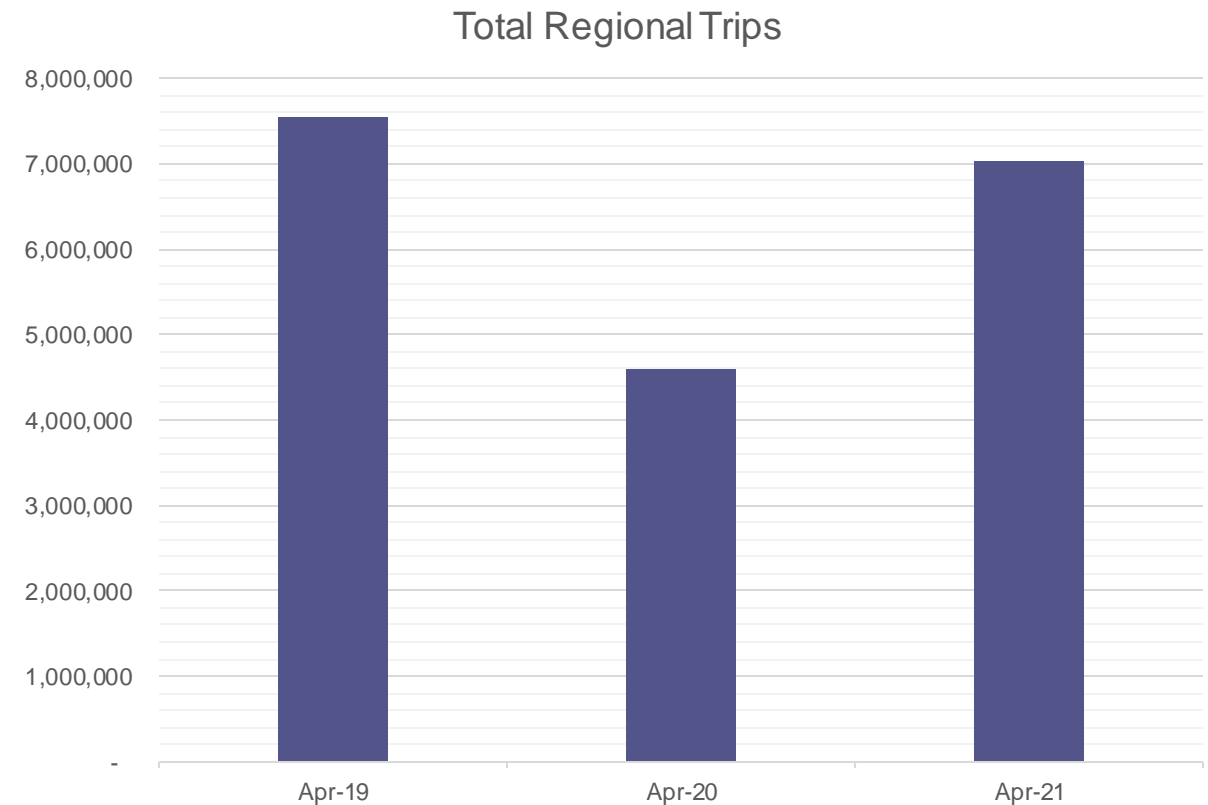
COVID-19 Impacts on Travel Patterns – Time-of-Day

- Compared April 2019, April 2020, and April 2021
 - 2020 was an expected anomaly – traffic continued to increase throughout the day until late afternoon (single peak)
 - 2019 and 2021 exhibit similar trip patterns by time-of-day; however, 2021 traffic is still generally lower than 2019



COVID-19 Impacts on Travel Patterns – Autos

- As expected, 2020 trip activity was way down from 2019, with 2021 climbing towards 2019 levels
- 2020 trip disruption was greatest in areas with highest office employment:
 - Arsenal zones
 - Research Park zones
 - Downtown Huntsville area

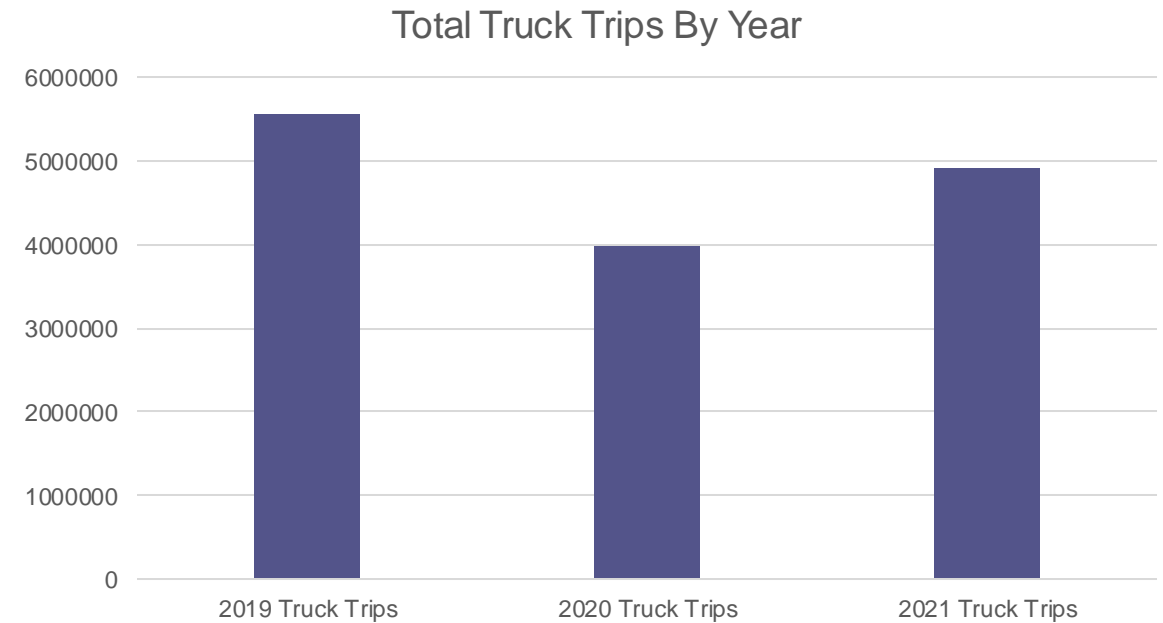


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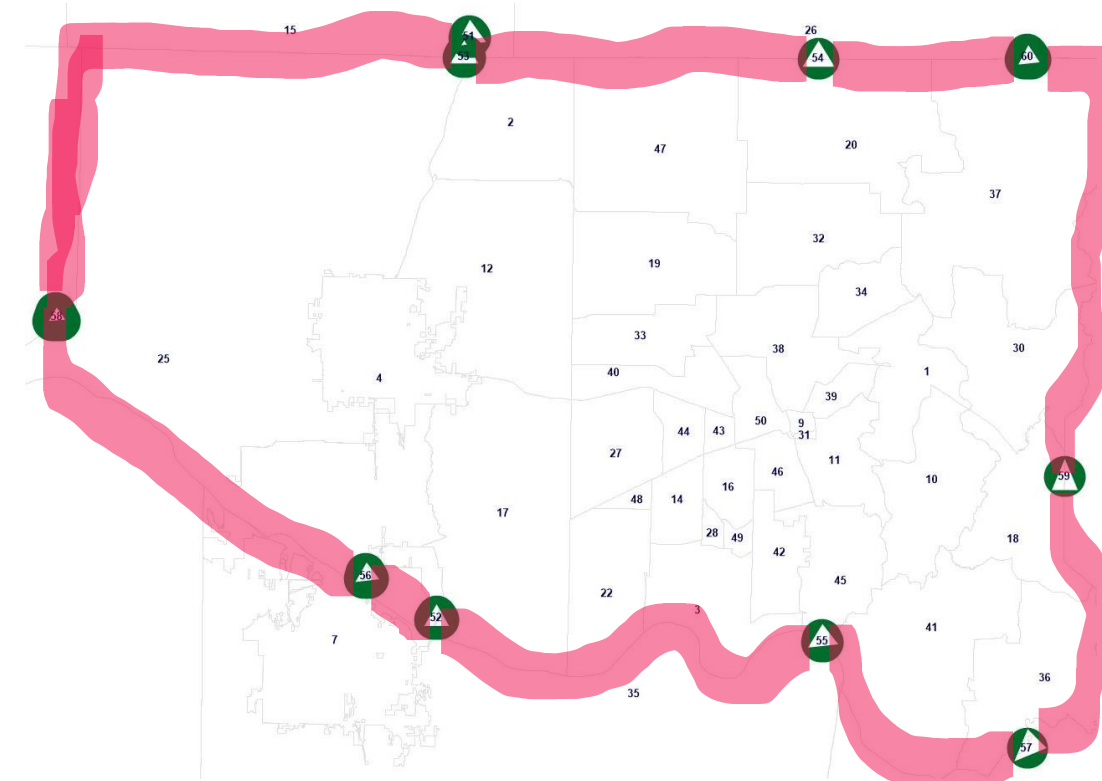
COVID-19 Impacts on Travel Patterns – Trucks

- Similar drop from 2019 to 2020 and partial increase from 2020 to 2021
- 2020 truck disruption had some similarities/***differences*** vs. autos:
 - Arsenal zones
 - ***Medical district***
 - ***Meridianville (home to Toyota plant)***



External Travel Patterns – Overview

- External trips are those with 1-2 trip ends outside expanded MPO area
 - Expanded area assumed to include Limestone Co. in addition to Madison Co.
 - External-external trips pass THROUGH expanded area (e.g., I-65 N to I-65 S)
 - Internal-external trips have origin OR destination in expanded area (e.g., Huntsville to Decatur)

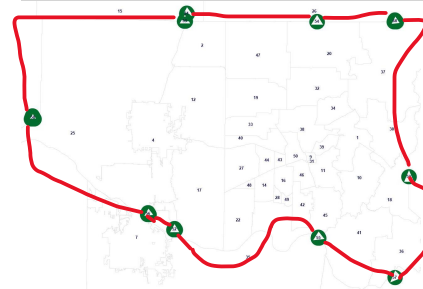


External Travel Patterns – Through Trips

- Top 5 Two-Way Flows (Daily Trips):

- I-65 N to I-65 S (13,616)
- I-65 S to Alt US 72 W (2,334)
- US 72 E to Alt US 72 W (2,059)
- I-65 N to Alt US 72 W (1,943)
- I-65 N to US 72 W (616)

April 2021 External-External Trip Matrix													
		I-65 N	US 72 W	ALT US 72	I-65 S	US 231 S	US 431 S	US 72 E	Winchester	US 431 N	AL 53		
		51	52	53	54	55	56	57	58	59	60	Sum	
51	1. I-65/US 31 at State Line		82	996	6134	11	11	19	2	5	223	7,483	
52	2. US 72 at Elk River	93		160	307	13	9	87	0	6	12	687	
53	3. Alt 72/US 31S at TN River	947	141		1203	37	93	1068	83	113	56	3,741	
54	4. I-65 at TN River	7482	309	1131		43	10	203	91	154	67	9,490	
55	5. US 231 at TN River	3	3	32	48		47	21	7	91	12	264	
56	6. US 431 at Madison/Marsh	16	8	85	16	48		15	3	44	36	271	
57	7. US 72 at Madison/Jackson	7	83	991	159	29	19		13	30	26	1,357	
58	8. Winchester Rd at State Lin	2	0	54	86	19	5	9		8	2	185	
59	9. US 231/431 at State Line	6	7	141	146	91	41	38	5		3	478	
60	10. AL 53 at State Line	243	8	0	85	13	40	38	5	49		481	
		8,799	641	3,590	8,184	304	275	1,498	209	500	437	24,437	



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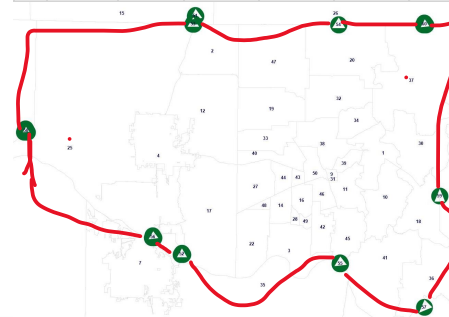


External Travel Patterns – Internal-External Trips

- Top 5 One-Way Flows (Daily Trips):

- US 231 S to Southeast (4,584)
- Alt US 72 W to Greenbrier (3,599)
- Alt US 72 W to Madison (2,756)
- US 231 N to Hazel Green (2,255)
- I-65 S to Greenbrier (2,160)

April 2021 Top 15 MPO External-Internal Trip Matrix																		
											Jetplex/	Jetplex/	Research			Research		
			Southeast	Greenbrier	Madison	Hazel Gree	Greenbrier	East Centre	Madison	East Centre	Triana	Triana	Park West	Northwest	East Centre	Park West	East Centre	Totals
	Ranking>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
51	1. I-65/US 31 at State Line																	-
52	2. US 72 at Elk River																	-
53	3. US 31/Alt 72 at TN River		3,599	2,756					1,230	1,077		1,063	1,010					10,735
54	4. I-65 at TN River					2,160		1,994			1,077			977	976	970		8,154
55	5. US 231 at TN River	4,584						1,997										6,581
56	6. US 431 at Madison/Marshall Co. Line (Paint Rock River)																	-
57	7. US 72 at Madison/Jackson Co. Line (or Guntersville Lake Bridge)																	-
58	8. Winchester Rd at State Line																	-
59	9. US 231/431 at State Line				2,255													2,255
60	10. AL 53 at State Line																	-
																		27,725



Huntsville Area Regional Commuter Study



Study Conclusions & Insights

- Employment allocation at Arsenal properties
- Arsenal workers by home zip code
- Predominant travel flows to/from Arsenal
- Relative share of trips across the MPO Area
- Flow patterns into/out of MPO Area by time-of-day
- Intra-MPO flow patterns by time-of-day
- Temporal distribution of travel in MPO area
- Truck flows within MPO and into/out of MPO area

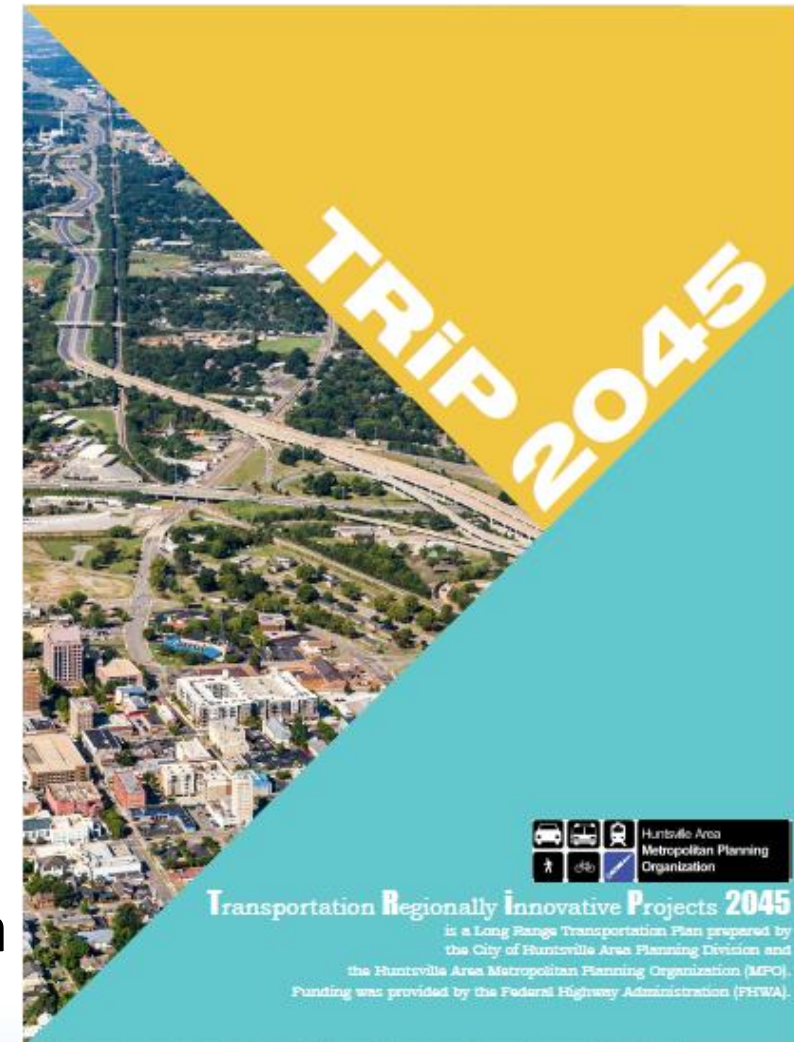


Huntsville Area Regional Commuter Study



Study Conclusions & Insights (Cont'd)

- Park-n-Ride Locations within MPO area
- Park-n-Ride Locations in adjacent counties
- Update to Congestion Management chapter of TRiP 2045 Report
- COVID-19 analysis of trip patterns by time-of-day, location, and vehicle type (April 2019, 2020, 2021)
- Daily through trip estimates by origin/destination
- Daily flows from key highway locations to MPO area



Huntsville Area Regional Commuter Study



Questions & comments



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