

---

---

## UP 230

### Transportation Planning: Fundamentals and Innovations

Department of Urban and Regional Planning  
University of Illinois at Urbana-Champaign  
Spring 2023

---

---

<b>Instructor:</b>	Amanda Merck <a href="mailto:merck2@illinois.edu">merck2@illinois.edu</a>
<b>Course Sessions:</b>	Tuesdays and Thursdays 9:30–10:50 AM, TBH 227
<b>Credit Hours:</b>	3.00
<b>Instructor Office Hours:</b>	Wednesdays at 3:10-4:00 at TBH 224 or via zoom. <a href="https://illinois.zoom.us/j/83773211627?pwd=MHY0ODZJc1ZYam56NjJTK0Njblc4QT09">https://illinois.zoom.us/j/83773211627?pwd=MHY0ODZJc1ZYam56NjJTK0Njblc4QT09</a> Or you can make an appointment through Calendly: <a href="https://calendly.com/merck2">calendly.com/merck2</a>
<b>Teaching Assistant (TA):</b>	Kyuhyun Lee klee181@illinois.edu
<b>TA Office Hours:</b>	Thursdays at 3:30-4:30 at TBH 224 or via zoom. <a href="https://illinois.zoom.us/meeting/register/tZUqdeuppjlqHNWeJ_BfB4KC38T8m760ktRo">https://illinois.zoom.us/meeting/register/tZUqdeuppjlqHNWeJ_BfB4KC38T8m760ktRo</a>
<b>Final Exam</b>	Friday, May 5 at 7:00-10:00 PM

---

---

### Course Description

Due to historic discriminatory planning practices, American neighborhoods are racially and economically segregated and dependent on the automobile, both of which hinder equitable access to opportunity. By investing in auto-centric infrastructure and development, the government has eliminated the feasibility of competing modes of travel, resulting in auto-dependence. Despite massive public investment in roadways, American families continue to face various social, economic, environmental, and health consequences of inadequate transportation options.

In light of these issues, UP 230 will prepare students to think critically about the following types of questions: What does our transportation system look like today, and how did we get here? Who makes decisions about transportation infrastructure and how are projects funded? What are the impacts of transportation on congestion, the environment, safety, health, and equity? How can we design streets and places that are safe for users of all travel modes, ages, and abilities? Will autonomous vehicles simply encourage more driving, or can they be harnessed to support community goals? The course is divided into five major sections that address these and other critical questions:

- **Section I: Transportation Foundations:** The first section of the course is brief and provides foundational knowledge about transportation planning, focusing primarily on the

U.S. context. Students will learn about key transportation concepts; the structure of transportation planning (e.g., who makes decisions, how transportation investments are funded); and current travel patterns and trends. This section also introduces transportation planning as a social science.

- **Section II: Where We Are and How We Got Here:** The second section of the course focuses on major phases in transportation history in the U.S. over the past 100 years. Students will learn about political and economic factors behind car dependence and our nation's history of discriminatory planning. This section also introduces transportation finance and spatial transportation mismatch.
- **Section III: Multimodal Planning Considerations:** The third section of the course provides an overview of planning for multiple modes of transportation, highlighting key considerations for pedestrians, bicyclists, and public transit.
- **Section IV: System Concerns and Impacts:** The fourth section of the course explores several concerns and impacts of the transportation system related to accessibility, safety, public health, social equity, and sustainability. Students will learn about these concerns and impacts through a combination of interactive lectures and student-led presentations.
- **Section V: Anticipating the Future:** The final section of the course explores the future of transportation planning with an emphasis on autonomous vehicles. Students will learn about equity frameworks and policy and design strategies that can support a modal shift away from the automobile and toward more safe, affordable, equitable, and sustainable modes of transportation.

## Course Learning Objectives

By the end of the semester, students in UP 230 will:

- Be able to articulate and apply key concepts in transportation planning such as derived demand, triple convergence, spatial mismatch, and the difference between mobility and accessibility
- Be able to explain the history, theory, and application of transportation planning in the U.S.
- Be able to distinguish between transportation planning institutions at federal, state, regional, and local levels and the roles they play in the transportation planning process.
- Be able to describe the past and anticipate the future impacts of transportation planning on public health, the environment, and social equity.
- Be able to anticipate the challenges and opportunities associated with autonomous vehicles
- Be able to summarize various sources of information into tables, graphs, and reports
- Be able to engage in meaningful dialogue about key policy issues in transportation planning

Ultimately, by the end of the course, students will be critical consumers and producers of transportation information, to include acknowledging existing inequities in who benefits from and who is burdened by transportation action; critiquing business as usual practices and policies; identifying and critiquing singular and/or contradictory justifications for transportation action; acknowledging hidden assumptions regarding beliefs, values, and government involvement; and relying on disaggregated and non-traditional data to elevate diverse transportation needs.

## Course Format

This course will be in-person and will include a combination of lectures and in-class activities (e.g., labs, discussions, and activities). Students are expected and encouraged to actively engage in both lectures and in-class activities, contributing their questions, ideas, and experiences.

## Course Requirements and Grading

The table below summarizes the course requirements and how they will be weighted in calculating the final course grade. Detailed descriptions of these requirements are provided below.

Requirements	Weight in Final Grade
<i>Engagement</i>	
Participation	6%
Labs (X4)	12%
<i>Assignment</i>	
Assignment 1 (individual, written)	14%
Assignment 2 (individual, written)	14%
Assignment 3 (group, oral)	14%
Assignment 4 (individual, written)	14%
<i>Exams</i>	
Pop Quiz (x2)	6%
Final Exam	20%
<b>Total</b>	<b>100%</b>

### Engagement

*Participation.* Active engagement with the course materials, with the instructor, and with other students in the class is essential for success in this course. In addition to strong attendance, engagement can be demonstrated in multiple ways. Students are expected to complete the assigned readings prior to class and to come to lectures prepared for thoughtful participation. Lectures will be interactive and students will be expected and encouraged to engage in active dialogue about key concepts and real-world examples. Additionally, all students can demonstrate engagement through proactive communication with the instructor and classmates. Note that regularly engaging in distracting behaviors (e.g., repeated tardiness, texting, laptop use unrelated to class) will result in a lower participation grade.

*Labs.* Students will complete four labs over the course of the semester, sometimes individually and sometimes in groups. Labs are due at midnight the following day. Students who miss class on designated lab days will be expected to complete the work outside of class (collaboration with classmates is still allowed). However, one of the labs (Lab 4) will need to be completed in-person with me before/after class, during office hours, or during another scheduled time.

### Assignments

*Assignments.* Students will complete four assignments that apply concepts learned in class to real-world examples in practice. One of the assignments will be completed individually and two will be completed in small groups. The assignments will cover the following topics:

Assignment	Format	Deliverable
------------	--------	-------------

<b>A1</b>	Political Economic Factors of Car Dependence	Individual	Report
<b>A2</b>	Travel Behavior Data	Individual	Report
<b>A3</b>	System Concerns and Impacts	Group	Presentation & One-pager
<b>A4</b>	Non-Traditional Transportation Data	Individual	Report

Assignment 1: Individually, students will read Mattioli et. al. (2020) and answer questions. This assignment will be completed in two phases, with the first due on February 12 and the second due on February 17.

Assignment 2: Individually, students will obtain travel data from NHTS and ACS and draft a report summarizing travel trends at the national level as well as travel trends at the local level in a metropolitan statistical area of your choosing. A template report will be provided.

Assignment 3: In small groups, students will prepare a presentation and a one-pager about their assigned topic.

Assignment 4: TBD.

## Exams

Pop Quizzes. To encourage attendance and preparation for class by completing the assigned readings, there will be two pop quizzes. They will be brief and will be specific to the assigned readings and/or class lectures and discussions.

Final Exam. A cumulative final exam covering lecture materials and course readings will be held during the official University final exam period. I will provide a detailed study guide two weeks in advance to help you prepare. The University policy on deferred, missed, and make-up exams will be followed (please see <http://studentcode.illinois.edu/article3/part2/3-201/>).

## Grading

Grading Scale. Numeric grades will be converted into letter grades using the scale outlined below. The course will not be graded on a curve, and **there will be no rounding** applied to numeric grades.

<b>A+:</b> 97.0– 100.0	<b>B+:</b> 87.0– 89.99	<b>C+:</b> 77.0– 79.99	<b>D+:</b> 67.0–69.99	<b>F:</b> Less than 60.0
<b>A:</b> 94.0– 96.99	<b>B:</b> 84.0– 86.99	<b>C:</b> 74.0– 76.99	<b>D:</b> 64.0–66.99	
<b>A-:</b> 90.0– 93.99	<b>B-:</b> 80.0– 83.99	<b>C-:</b> 70.0– 73.99	<b>D-:</b> 60.0–63.99	

Detailed instructions for completing each assignment will be provided. Submitted assignments will be graded and returned promptly with detailed feedback. The general grading rubric is as follows:

- An “A” assignment demonstrates original thought and synthesis of ideas and sophisticated, cogent analysis. It is clearly written and presented. Outstanding work.
- A “B” assignment includes above average analysis with appropriate evidence to support ideas. It is clearly written and presented. Good work.
- A “C” assignment shows a basic level of understanding, with analysis limited to obvious arguments. Writing is competent. Developing but adequate work.
- A “D” assignment misunderstands or misrepresents the material, or is so poorly written or presented as to obscure the analysis. Inadequate work.

Late Assignments. Students are expected to turn in all deliverables (assignments, labs, etc.) on time. However, I understand—**now more than ever**—that challenges, unanticipated obligations, and illnesses will arise. If you are unable to meet a particular deadline, it is your responsibility to **let me know in advance so we can develop an alternative deadline**. Otherwise, work submitted after the deadline will receive a five-percentage-point deduction, and work submitted later than five days after the deadline may not be considered for grading. **Please communicate with me** proactively about any challenges, illnesses, or emergencies that arise—I am here to work with you and help you do your best!

## Readings

There is no required text for this course. All readings will be posted on Canvas and/or available through the University of Illinois library. Readings for each session are listed at the conclusion of this syllabus.

## Course Policies and Other Items/Resources

Attendance. Attendance and active participation are necessary for adequate performance in this course. Flexibility will be given for absences related to illness and emergencies. However, students are expected to **notify the instructor in advance** of any sessions that will be missed. It is the instructor’s decision as to when a student’s absences, without proactive communication with the instructor, become excessive and should be reported. If in the opinion of an instructor the attendance of a student becomes so irregular that their scholarship is likely to be impaired, the instructor may submit an irregular attendance form to the Associate Dean of the student’s college. A copy is forwarded to the student, who should contact the instructor immediately to work out a solution. If irregular attendance continues without excuse, the instructor may request the student be withdrawn from the course. This request for withdrawal would result in a grade of E for the course. Extenuating circumstances will always be considered when supporting evidence is presented. See Rule 1-501 and Rule 1-502 in the Student Code for more information.

**If you feel ill or are unable to come to class or complete class assignments due to issues related to COVID-19**, including but not limited to testing positive yourself, feeling ill, caring for a family member with COVID-19, or having unexpected child-care obligations, you should contact your instructor immediately, and you are encouraged to copy your academic advisor.

COVID-19 Expectations. Face coverings are strongly recommended in classrooms during in-person class time, but not required. Please abide by safety and hygiene standards, particularly hand washing, sanitizing regularly, and staying home if you have symptoms.

*Academic Accommodations.* This course will accommodate students with documented disabilities. To obtain disability-related academic adjustments and/or auxiliary aids, students should contact both the instructor and the Disability Resources and Educational Services (DRES) as soon as possible. You can contact DRES at 1207 S. Oak Street, Champaign, by phone at (217) 333-1970, or via email at [disability@illinois.edu](mailto:disability@illinois.edu).

*Academic Integrity.* This course follows the guidelines set forth by the University Student Code. See [http://www.admin.uiuc.edu/policy/code/article\\_1/a1\\_1-401.html](http://www.admin.uiuc.edu/policy/code/article_1/a1_1-401.html) for specific guidelines, examples, and punishment associated with academic dishonesty. In written work, any ideas that are not your own must be properly cited. The consequences for plagiarism may include receiving no credit for an assignment or, at the discretion of the instructor, failure of the course.

*Counseling.* The University Counseling Center is committed to providing a range of services intended to help students develop improved coping skills in order to address emotional, interpersonal, and academic concerns. The Counseling Center provides individual, couples, and group counseling. All of these services are paid for through the health services fee. The Counseling Center offers primarily short term counseling, but they do also provide referrals to the community when students could benefit from longer term services.  
<https://counselingcenter.illinois.edu/>.

*Class Climate.* The Department of Urban and Regional Planning (DURP) is committed to maintaining a learning environment that is rooted in the goals and responsibilities of professional planners. By enrolling in a class offered by DURP, students agree to be responsible for maintaining an atmosphere of mutual respect in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. See Student Code Article 1-Student Rights and Responsibilities, Part 1. Student Rights: §1-102.

*Safety and Security in the Classroom.* Emergencies can happen anywhere and at any time. It is important that we take a minute to prepare for a situation in which our safety or even our lives could depend on our ability to react quickly. When we're faced with any kind of emergency—like fire, severe weather, or if someone is trying to hurt you—we have three options: run, hide, or fight. For more information please refer to the General Emergency Response Recommendations at <http://police.illinois.edu/emergency-preparedness/run-hide-fight/resources-for-instructors/>.

*Netiquette.* In any social interaction, certain rules of etiquette are expected and contribute to more enjoyable and productive communication. The following are tips for interacting via email or other online messages, adapted from guidelines originally compiled by Chuq Von Rospach and Gene Spafford (1995):

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.
- Be brief; succinct, thoughtful messages have the greatest effect.
- Your messages reflect on you personally; take time to make sure that you are proud of their form and content.
- Use descriptive subject headings in your emails.
- Think about your audience and the relevance of your messages.

- Be careful when you use humor and sarcasm; absent the voice inflections and body language that aid face-to-face communication, internet messages are easy to misinterpret.
- Cite appropriate references whenever using someone else's ideas, thoughts, or words.

## Course Schedule

(Subject to revision)

Week	Date	Topic	Notes
<b>Section I: Transportation Planning Foundations</b>			
1	17-Jan	Course Overview and Major Themes	
	19-Jan	Core Concepts	
2	24-Jan	Travel Behavior	Lab 1
<b>Section II: Where We Are and How We Got Here</b>			
2	26-Jan	History Part 1: Walking City + Transit	
3	31-Jan	History Part 2: Rise of the Automobile	
	2-Feb	Transportation Finance	
4	7-Feb	Separate and Unequal Neighborhoods	
	9-Feb	Spatial and Transportation Mismatch	Assignment 1.1 (2/12)
5	14-Feb	Political Economy Part 1	
	16-Feb	Political Economy Part 2	Assignment 1.2 (2/17)
<b>Section III: Multimodal Planning Considerations</b>			
6	21-Feb	Transportation Planning Process	
	23-Feb	Travel Data	Lab 2.1 & 2.2
7	28-Feb	Congestion	Lab 3
	2-Mar	Transit	Assignment 2 (3/3)
8	7-Mar	Parking and Rural Transit (Guest Lecture)	
	9-Mar	Walking and Biking	
9	14-Mar	<b>NO CLASS</b> – Spring Break	
	16-Mar	<b>NO CLASS</b> – Spring Break	
<b>Section IV: System Concerns and Impacts</b>			
10	21-Mar	Group 1 Presentation: Low-Income Behaviors & Barriers	Assignment 3
	23-Mar	Group 2 Presentation: Gender & Race Behaviors & Barriers	
11	28-Mar	Group 3 Presentation: Seniors and People with Disabilities	
	30-Mar	Group 4 Presentation: Beyond Peak-Hour Commute	
12	4-Apr	Group 5 Presentation: Traffic Crash Hot Spots	
	6-Apr	Group 6 Presentation: Transportation and Housing	
13	11-Apr	Group 7 Presentation: Increasing Vehicle Access for Disadvantaged	
	13-Apr	Group 8 Presentation: TBD	
<b>Section V: Anticipating the Future</b>			
14	18-Apr	Operationalizing New Measures	Lab 4
	20-Apr	Equity Frameworks	Assignment 4 (4/21)
15	25-Apr	Autonomous Vehicles (Guest Lecture)	
	27-Apr	Call to Action for Planners	
16	2-May	Course Wrap-Up + Exam Review	
	5-May	<b>Final Exam (7:00-10:00 PM)</b>	<b>Final Exam</b>



## Required Readings

---

### Introduction and Core Concepts

- Hanson, S. (2017). Introducing Urban Transportation. Introduction in *The Geography of Urban Transportation*, Fourth Edition, Genevieve Giuliano and Susan Hanson, Editors. New York: The Guilford Press. (30 pages) (<https://uofi.app.box.com/file/1104348613035>)

### Travel Behavior

- U.S. Department of Transportation. (2015). "How We Move" (pages 8-24) and "Why Do People Travel" (pages 132-135) in *Beyond Traffic 2045*.
- Grengs, J. (2019). On the Way but Not There Yet: Making Accessibility the Core of Equity Planning in Transportation Chapter in *Advancing Equity Planning Now* (p. 127-148), Norman Krumholz and Kathryn Wertheim Hexter, Editors. Cornell University Press.

### History Part 1: Walking City + Transit

- Muller, P. (2017). "Transportation and Urban Form: Stages in the Spatial Evolution of the American Metropolis" (pages 57-69 only), Chapter 3 in *The Geography of Urban Transportation*, Fourth Edition, Genevieve Giuliano and Susan Hanson, Editors. New York: The Guilford Press.
- Morris, E. (2007). From horse power to horsepower. *Access 30*: 2-9.

### History Part 2: Rise of the Automobile

- Norton, P. (2011). Traffic Efficiency Versus Motor Freedom. Chapter 6 in *Fighting Traffic*.
- Brown, J., Morris, E., and B. Taylor. (2009). Paved with good intentions: Fiscal politics, freeways and the 20th century American city. *Access 35*: 30-37.
- Muller, P. (2017). "Transportation and Urban Form: Stages in the Spatial Evolution of the American Metropolis" (pages 69-83 only), Chapter 3 in *The Geography of Urban Transportation*, Fourth Edition, Genevieve Giuliano and Susan Hanson, Editors. New York: The Guilford Press.

### Transportation Finance

- Kirk, R.S., and W.J. Mallett. (2019). "Funding and Financing Highways and Public Transportation." Congressional Research Service. (p.1-13)
- Brown, J., Morris, E., and B. Taylor. (2009). Paved with good intentions: Fiscal politics, freeways and the 20th century American city. *Access 35*: 30-37.
- Sorenson, P. (2013). From fuel taxes to mileage fees. *Access 43*: 13-19.
- Sanchez, T. W., Stolz, R., Ma, J. S. (2003). Moving to Equity: Addressing Inequitable Effects of Transportation Policies on Minorities. <https://escholarship.org/uc/item/5qc7w8qp> (4-6, 11-16)

### Separate and Unequal Neighborhoods

- Turner, M. A., and Greene, S. (n.d.) Causes and Consequences of Separate and Unequal Neighborhoods. <https://www.urban.org/racial-equity-analytics-lab/structural-racism-explainer-collection/causes-and-consequences-separate-and-unequal-neighborhoods>
- Bullard, R. D., Johnson, G. S., Torres, A. O. (2004). Highway Robbery. Cambridge, MA: South End Press. (Pages 1-20)
- Sanchez, T. W., Stolz, R., Ma, J. S. (2003). Moving to Equity: Addressing Inequitable Effects of Transportation Policies on Minorities. <https://escholarship.org/uc/item/5qc7w8qp> (pages 1-22)

- Springs, M. A. (2007). Inequity in Transport: The Problem with Auto Hegemony.

### **Spatial and Transportation Mismatch**

- Wang, L., Wu, C., & Zhao, S. (2022). A Review of Spatial Mismatch Research: Empirical Debate, Theoretical Evolution and Connotation Expansion. *Land*, 11(7), 1049. <https://doi.org/10.3390/land11071049>
- Ong, P. M., & Gonzalez, S. R. (Eds.). (2019). Employment and Spatial Transportation Mismatch. In *Uneven Urbanscape: Spatial Structures and Ethnoracial Inequality* (pp. 109–142). Cambridge University Press. <https://doi.org/10.1017/9781316756225.004>
- Blumenberg, E., and Pierce, G. (2016). A Driving Factor in Moving to Opportunity. *Access Magazine*.

### **Political Economy: Part 1**

- Mattioli, G., Roberts, C., Steinberger, J. K., & Brown, A. (2020). The political economy of car dependence\_ A systems of provision approach | Elsevier Enhanced Reader. <https://doi.org/10.1016/j.erss.2020.101486>.
- David-Barrett, E. (2021). State Capture and Inequality. (p.7-12)

### **Political Economy: Part 2**

- Springs, M. A. (2007). Inequity in Transport: The Problem with Auto Hegemony.
- Whipple., A. B. C. (1970). Superhighway-Superhoax. *The New York Times*.
- David-Barrett, E. (2021). State Capture and Inequality. (p.7-12)
- Harvey, D. Labor, Capitol, and Class Struggle Around the Built Environment in Advance Capitalist Societies. *Politics and Society*, Vol.6(3), p.265-295. (p. 278-288 and skim the rest)

### **Transportation Planning Process**

- Federal Highway Administration. (2018). “Part I: Overview of Transportation Planning” (pages 2-15), in *The Transportation Planning Process Briefing Book: Key Issues for Transportation Decisionmakers, Officials, and Staff*. U.S. Department of Transportation.
- Federal Transit Administration. (2017). “Metropolitan, Statewide & Non-Metropolitan Planning” (browse “Overview” page and other sub-tabs on the left), U.S. Department of Transportation. <https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/metropolitan-statewide-non-metropolitan-planning>
- Dumbaugh, E., and M. King. (2018). Engineering livable streets: A thematic review of advancements in urban street design Download Engineering livable streets: A thematic review of advancements in urban street design. *Journal of Planning Literature* 33(4): 451-465.

### **Travel Data**

- NHTS. (2018). Summary of Travel Trends: 2017 National Household Travel Survey. [https://nhts.ornl.gov/assets/2017\\_nhts\\_summary\\_travel\\_trends.pdf](https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf)
- NHTS. (2019). Travel Profile: United States. [https://nhts.ornl.gov/assets/2017\\_USTravelProfile.pdf](https://nhts.ornl.gov/assets/2017_USTravelProfile.pdf)

### **Congestion, Speed, and Safety**

- Bellis, R. (2020).\_“The Congestion Con: How More Lanes and More Money Equals More Traffic.” *Transportation for America*. Transportation for America.

- Downs, A. (2004). Why traffic congestion is here to stay...and will get worse. Access 25: 19-25.
- Cambridge Systematics, and M. Meyer. (2008). Executive Summary (pages ES1-ES6) of "Crashes vs. Congestion: What's the Cost to Society?" American Automobile Association.
- NACTO. (2020). City Limits: Setting Safe Speed Limits on Urban Streets. (p. 13-21 and 27-31)
- FHWA. (2014). "Road Diet Informational Guide." FHWA-SA-14-028. (p. 1-12, 19-20; skim rest).
- Dumbaugh, E., and M. King. (2018). Engineering livable streets: A thematic review of advancements in urban street design. Journal of Planning Literature 33(4): 451-465.

### Transit

- Walker, J. (2012). Human Transit: How Clearer Thinking About Public Transit Can Enrich Our Communities and Our Lives. (p.13-37 & 85-90) <https://link-springer-com.proxy2.library.illinois.edu/book/10.5822/978-1-61091-174-0>
- Alam, B. M., Nixon, H., & Zhang, Q. (2018). Factors Affecting Travel Demand by Bus: An Empirical Analysis at U.S. Metropolitan Statistical Area Level. Transportation Research Record: Journal of the Transportation Research Board, 2672(8), (p. 818-819, 823-825) <https://doi.org/10.1177/0361198118798714>
- Link Houston. (2021). Equity in Transit: 2020. [https://linkhouston.org/wp-content/uploads/2020/12/LINKHouston\\_EIT2020\\_report.pdf](https://linkhouston.org/wp-content/uploads/2020/12/LINKHouston_EIT2020_report.pdf) (p.1-10: pay particular attention to Table 1)

### Parking and Rural Transit

- TBD

### Walking and Biking

- Smart Growth America. (2021). "Dangerous By Design 2021." <https://smartgrowthamerica.org/dangerous-by-design/>
- Vision Zero Network. (2018). "How Does Vision Zero Differ from the Traditional Approach to Traffic Safety?" <https://visionzeronetwork.org/how-does-vision-zero-differ-from-the-traditional-approach-to-traffic-safety/>
- Zegeer, C.V., Sandt, L., Scully, et al. (2008). How to Develop a Pedestrian Safety Action Plan. (p.7-18). [https://safety.fhwa.dot.gov/ped\\_bike/ped\\_focus/docs/fhwasa0512.pdf](https://safety.fhwa.dot.gov/ped_bike/ped_focus/docs/fhwasa0512.pdf).
- Engel, A., and B. Freer. (2021). "Pedestrian Safety Doesn't Have to Be a Nightmare." Bloomberg CityLab.
- Dumbaugh, E., and M. King. (2018). Engineering livable streets: A thematic review of advancements in urban street design. Journal of Planning Literature 33(4): 451-465.

### Low-income Behaviors and Barriers

- Agrawal, A. W., Blumenberg, E., A., Abel, S., Pierce, G., and Darrah, C. N. (2011) Getting Around When You're Just Getting By: The Travel Behavior and Transportation Expenditures of Low-Income Adults. (1-4 and 7-16)
- Matton, J. and Molina, A. (2022). Travel Behavior of Transportation-Disadvantaged Populations: Trends and Geographic Disparities. <https://www.ugpti.org/resources/reports/downloads/surtcom22-10.pdf>
- Assigned Community Needs Assessments

## Gender and Race Behaviors and Barriers

- LA Metro. (2019). Understanding How Women Travel. [http://libraryarchives.metro.net/DB\\_Attachments/2019-0294/UnderstandingHowWomenTravel\\_FullReport\\_FINAL.pdf](http://libraryarchives.metro.net/DB_Attachments/2019-0294/UnderstandingHowWomenTravel_FullReport_FINAL.pdf)
- Barajas, J. M. (2021). The Routes of Racialized Travel Behavior. Chapter One in *Social Issues in Transport Planning*, Rafael Pereira and Genevieve Boisjoly, Volume Editors in *Advances in Transport Policy and Planning*, Bert van Wee, Serial Editor: Academic Press, Cambridge, MA. <https://www.sciencedirect.com.proxy2.library.illinois.edu/bookseries/advances-in-transport-policy-and-planning/vol/8/suppl/C>
- TBD

## Seniors and People with Disabilities Behaviors and Barriers

- Mattson, J. and Molina, A. (2022). Travel Behavior of Transportation-Disadvantaged Populations: Trends and Geographic Disparities. <https://www.ugpti.org/resources/reports/downloads/surtcom22-10.pdf>
- Wheels for Wellbeing. (2021). Disability & Cycling: Report of 2021 National Survey Results. <https://wheelsforwellbeing.org.uk/wp-content/uploads/2022/05/Disability-and-Cycling-Report-of-2021-national-survey-results.pdf>
- DeGood, K. (2011). Aging in Place: Stuck without Options. Transportation for America. <https://t4america.org/docs/SeniorsMobilityCrisis.pdf>
- National Aging and Disability Transportation Center (NADTC). (2021). 2021 Trends Report. <https://www.nadtc.org/wp-content/uploads/2-Overcoming-Barriers-to-Walking-or-Rolling.pdf>

## Beyond Peak-Hour Commute

- NHTS. (2019). Travel Behavior Trend Analysis of Workers and Non-Workers. [https://nhts.ornl.gov/assets/FHWA\\_NHTS\\_Report\\_3B\\_Final\\_021119.pdf](https://nhts.ornl.gov/assets/FHWA_NHTS_Report_3B_Final_021119.pdf)
- APTA. (2019). Supporting Late Shift Workers: Their Transportation Needs and the Economy. [https://www.apta.com/wp-content/uploads/APTA\\_Late-Shift\\_Report.pdf](https://www.apta.com/wp-content/uploads/APTA_Late-Shift_Report.pdf)
- Levine, J., Grengs, J., and Merlin, L. A. (2019). Nonwork Accessibility. Chapter seven in *From Mobility to Accessibility: Transforming Transportation and Land-Use Planning*. Honathan Levine, Joe Grengs, and Louis A. Merlin Editors, Cornell University Press, Ithaca, New York. <https://academic.oup.com/cornell-scholarship-online/book/34004/chapter/288895785>

## Traffic Crash Hot Spots

- COSA. (2017). San Antonio Severe Pedestrian Injury Areas Report. <https://www.sanantonio.gov/portals/0/files/tci/Vision-Zero-SPIA-Report.pdf>
- Arlington County, Virginia. (2020). Vision Zero – Maps and Safety Data. [website]. (**go through all of the links and attachments**) <https://www.arlingtonva.us/Government/Programs/Transportation/Vision-Zero/Maps-and-Safety-Data#section-5>
- Hillsborough MPO. (2017). Safe Streets Now: Vision Zero Action Plan. [https://planhillsborough.org/wp-content/uploads/2017/08/VZ\\_ActionPlan\\_Final\\_Dec2017-smaller.pdf](https://planhillsborough.org/wp-content/uploads/2017/08/VZ_ActionPlan_Final_Dec2017-smaller.pdf)

## Transportation and Housing

- Lipman, B. (2006). Heavy Load: Combined Housing and Transportation. Center for Housing Policy <http://www.reconnectingamerica.org/assets/Uploads/pubheavyload1006.pdf>

- Yadudu, M. (2018). Transportation as Key to Housing Affordability. Tennessee Housing Development Agency. <https://thda.org/pdf/Transportation-as-a-Key-Feb.pdf>
- Link Houston. (). Where Affordable Housing and Transportation Meet in Houston. <https://linkhouston.org/wp-content/uploads/2020/05/Where-Affordable-Housing-and-Transportation-Meet-in-Houston.pdf>

### **Increasing Vehicle Access for Disadvantaged Populations**

- Bastiaanssen, J., Johnson, D., & Lucas, K. (2020). Does transport help people to gain employment? A systematic review and meta-analysis of the empirical evidence. *Transport Reviews*, 40(5), 607–628. <https://doi.org/10.1080/01441647.2020.1747569>
- Raphael, S. and Stoll, M. A. (2001). Can Boosting Minority Car-Ownership Rates Narrow Inter-Racial Employment Gaps. Chapter in *Brookings-Wharton Papers on Urban Affairs 2001*, William G. Gale and Janeth Rothenberg Pack Editors. Brookings Institution Press, Washington D.C. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=abb8a6be5eee6fc84ea13c0e96ede2b904479dfb>
- Blumenberg, E., Pierce, G., and Smart, M. (2015). Transportation Access, Residential Location, and Economic Opportunity: Evidence From Two Housing Voucher Experiments. *Cityscape* Vol. 17 (2) Affordable, Accessible, Efficient Communities (2015). <https://www.jstor.org/stable/pdf/26326941.pdf>
- Pendall, R., Blumenberg, E., and Dawkins, C. (2016). What if Cities Combined Car-Based Solutions with Transit to Improve Access to Opportunity. Urban Institute. <https://www.urban.org/sites/default/files/publication/81571/2000818-What-if-Cities-Combined-Car-Based-Solutions-with-Transit-to-Improve-Access-to-Opportunity.pdf>

### **TBD**

- TBD

### **Operationalizing New Measures**

- Venter, Christo. (2016) Developing a Common Narrative on Urban Accessibility: A Transportation Perspective. Brookings.

### **Equity frameworks**

- Williams, K., Boyd, T, Keita, Y., Kramer, J. (2021). Transportation Equity Needs Assessment Toolkit. Center for Transportation Equity, Decisions, and Dollars (CTEDD). [https://rosap.ntl.bts.gov/view/dot/60296/dot\\_60296\\_DS1.pdf](https://rosap.ntl.bts.gov/view/dot/60296/dot_60296_DS1.pdf)

### **Autonomous Vehicles**

- TBD

### **Call to Action for Planners**

- Thigpen, C., Ralph, K., Klein, N. J., and Brown, A. (2022). Can information increase support for transportation reform? Results from an experiment. *Transportation* (2022). <https://link.springer.com/article/10.1007/s11116-022-10265-0>
- TBD

## Recommended Readings

---

Norton, P. (2011). Fighting Traffic. The MIT Press.

Rothstein, R. (2017). The Color of Law. Liveright.

Manville, M., King, D. A., and Smart, M. J. (2017). The Driving Downturn: A Preliminary Assessment. Journal of the American Planning Association, 83:1, 42-55, <https://doi-org.proxy2.library.illinois.edu/10.1080/01944363.2016.1247653>

Grengs, J. (2018) On the Way but Not There Yet: [Making Accessibility the core of Equity Planning in Transportation](#). Chapter 6 in Advancing Equity Planning Now. Norman Krumholz and Kathryn Wertheim Hexter, Editors. Cornell University Press