

## URP 5716/4936

Fall 2007

### Transportation and Land Use

Meets: M, W 5:15 – 6:30pm

Room: Bellamy 033

Instructor: Jeffrey Brown

Office Hours: Mondays and  
Wednesdays 1pm to 2:30 pm, or by  
appointment

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Urban and Regional Planning 5716/4936 examines the critical relationships between the transportation system and the built environment. During the semester, we will explore the histories, theories, empirical research, models, and analytic tools that have emerged from this important field of urban planning research. **There is no prerequisite for the course**, although knowledge of basic statistical techniques, including multivariate regression, will make some of the class readings easier to understand.

### Course Objectives

By the end of the course, you will:

- Understand the theories of transportation and land use interaction
- Understand the nature of the effects of transportation infrastructure on land use and the effects of land use on the way we use the transportation system
- Be able to critically examine this relationship using established analytic techniques
- Be able to assess the likely effects of different transportation and/or land use policy decisions



### Course Materials

All readings that are available for free via the FSU library e-journals site or through the internet will be posted to the class **Blackboard** site (campus.fsu.edu) as Adobe .pdf files (denoted as **BB** in the syllabus). Other readings will be available in plastic magazine holders located in the DURP Reading Room (338 Bellamy) (denoted as **RR** in the syllabus). The access code for this room is 5-3-1. Supplementary readings may be distributed as needed. Please see me if you have any difficulties obtaining the readings. Topic schedules and readings are listed starting on page 17 of the syllabus.

### Course Requirements

The course is structured as a combined lecture-discussion course. You are expected to have read all the required readings ahead of time, and be prepared to actively participate in class discussions. For some topics, I will post discussion questions to Blackboard. The formal requirements of the class are listed below:

*Participation* 5%  
Your participation grade will be based on your demonstrated level of preparedness and **active participation** in class discussions. We will also have smaller group discussions, in order to further encourage all members of the class to participate.

*Midterm Examination* 25%  
There will be an in-class midterm examination on **October 24th**. The mid-term will cover readings and lecture material up to and including Topic 9.

*Assignments* two assignments worth 15% each = 30%  
You must complete two of the five assignments described on pages 4-14.

*Term Paper* 40%  
The final assignment for the course is the preparation of a 12-to-15-page double space term paper that examines some aspect of the transportation-land use relationship. For example, you may: prepare a case study report looking at one geographic region over time, explore the application of a particular policy in multiple locations, or present an empirical analysis of policies within a region or across regions. You will find a list of possible topics, as well as a few more details about this assignment starting on page 14 of the syllabus. You should discuss potential paper topics with me. I am pretty flexible on topics, as long as they relate in some way to the content of the course. Think of topics that interest you. **You will submit a short proposal 1) to the class for peer review on October 10<sup>th</sup>, and 2) to me by 5pm on October 19th. The final paper will be due by 5pm on December 7<sup>th</sup>.**

<b>URP 5711</b>	<b>Grade Scale</b>	<b>URP 4936</b>	<b>Grade Scale</b>
96 and above	A	95 and above	A
92 to 95.9	A-	90 to 94.9	A-
88 to 91.9	B+	86 to 87.9	B+
84 to 87.9	B	82 to 85.9	B
80 to 83.9	B-	78 to 81.9	B-
77 to 79.9	C+	75 to 77.9	C+
73 to 76.9	C	71 to 74.9	C
70 to 72.9	C-	68 to 70.9	C-
68 to 69.9	D+	66 to 67.9	D+
65 to 67.9	D	63 to 65.9	D
62 to 64.9	D-	60 to 62.9	D-

### **Course Policies**

#### **Late Assignments**

All late assignments will be penalized five points for every day they are late.

#### **Fairness**

It is unfair to other students in the class for you to ask for a deadline extension except when justified by extenuating circumstances.

#### **Readings and Class Attendance**

You are expected to complete the assigned readings prior to attending class. Failure to do so makes it difficult for you to understand the materials presented in the lecture or to fully participate in class discussions.

Attendance at all classes is ***required***. Unexcused tardiness or early departure from class will be recorded as absence. Unless approved by the instructor ahead of time, all absences will be unexcused. **Two unexcused absences will result in the loss of a letter grade.** Four unexcused absences will result in failure of the course. The following and only the following absences are eligible to be excused: religious holidays, as specified in FSU policy; absences due to representing FSU at official functions, including intercollegiate debating or varsity sports events; and verified emergencies and/or illness. While one is not penalized per se for excused absences, s/he is nevertheless responsible for all content missed, including any assignments, knowledge, or skills covered or assigned.

#### **Students with Disabilities**

Students with disabilities needing academic accommodation should:

1. Register with and provide documentation to the Student Disability Resource Center.
2. Bring a letter to me from SDRC indicating you need academic accommodations. This should be done during the first week of class.

### **Florida State Honor Code**

Students are expected to uphold the Academic Honor Code published in *The Florida State University Bulletin* and the *Student Handbook*. The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility to:

1. Uphold the highest standards of academic integrity in the student's own work
2. Refuse to tolerate violations of academic integrity in the academic community, and
3. Foster a high sense of integrity and social responsibility on the part of the university community

Any violation of the code, such as plagiarism (copying someone else's work and presenting it as your own, paraphrasing someone else's work without proper attribution) or cheating, will not be tolerated in this class. Violations will result in a grade of "F" for this course.

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### **Assignments**

You must complete any **two** of the following five assignments. Due dates vary based on the assignment, and are noted at the end of each assignment description.

#### **Option 1. Book Review**

Below is a list of books dealing with one or more aspects of the transportation-land use relationship. Your assignment is to prepare a review of one of these books. You should evaluate the main argument or arguments in the book in light of your own experiences and any related materials covered in class readings, class lectures, or non-class readings. *Your assignment is not to simply summarize the book's contents.* You should summarize the principal findings and conclusions of the author, but keep the amount of your review devoted to a summary to a minimum. Your primary task is to evaluate the author's argument and to assess the evidence the author uses in support of their assertions.

**If you are unsure what a book review should look like, consult the book review section in any issue of the *Journal of the American Planning Association* or *Journal of Planning Education and Research*. Use the reviews published in these leading planning journals as your model.** Your review should be approximately 1,000 words in length. See me if you have any questions.

The books listed below are available in Strozier library, or in Dirac library (if labeled as DIRAC). The Call Numbers are also noted. Please do not wait until the last minute to complete this assignment. *If there is a book not on the list that interests you, please see me. I will probably add it to the list.*

*Revised August 13th, 2007*

Bernick, Michael and Robert Cervero. 1997. *Transit Villages in the 21<sup>st</sup> Century*. New York: McGraw-Hill. **Call Number HT 167.B48 1997**

Bogart, William T. 2006. *Don't Call It Sprawl: Metropolitan Structure in the 21<sup>st</sup> Century*. New York: Cambridge University Press. **Call Number HT 334.U5 B64 2006**

Calthorpe, Peter. 1993. *The Next American Metropolis: Ecology, Community, and the American Dream*. New York: Princeton Architectural Press. **Call Number HT 167.C3 1993**

Cervero, Robert. 1986. *Suburban Gridlock*. New Brunswick: Center for Urban Policy Research. **Call Number HE355.3.C64 C47 1986**

Crane, Randall and Marlon Boarnet. 2000. *Travel by Design: The Influence of Urban Form on Travel*. New York: Oxford University Press. **Call Number HE305 .B63 2001**

Dittmar, Hank and Gloria Ohland. 2004. *The New Transit Town: Best Practices in Transit-Oriented Development*. Washington, DC: Island Press. **Call Number HE 4451.N478 2003**

Duany, Andres, Elizabeth Plater-Zybeck and Jeff Speck. 2000. *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream*. New York: North Point Press. **Call Number HT 384.U5 D83 2000**

Foster, Mark S. 1981. *From Streetcar to Superhighway: American City Planners and Urban Transportation, 1900-1940*. Philadelphia: Temple University Press. **Call Number HE308.F65**

Frank, Lawrence. 2003. *Health and Community Design: The Impact of the Built Environment on Physical Activity*. Washington, DC: Island Press. **DIRAC Call Number RA 566.7.F736 2003**

Jacobs, Allan B. 1993. *Great Streets*. Cambridge: MIT Press. **Call Number NA9053.S7 J23 1993**

Jakle, John A. and Keith A. Sculle. 2004. *Lots of Parking: Land Use in a Car Culture*. Charlottesville: University of Virginia Press. **Professor Brown's Collection**

Kay, Jane Holtz. 1997. *Asphalt Nation: How the Automobile Took Over America and How we can take it back*. New York: Crown. **Call Number HE4491.S46 Z94**

Newman, Peter and Jeffrey Kenworthy. 1999. *Sustainability and cities: Overcoming automobile dependence*. Washington, DC: Island Press. **Call Number HE305 .N483 1999**

Revised August 13th, 2007

Nozzi, Dom. 2003. *Road to Ruin: An Introduction to Sprawl and How to Cure It*. Westport: Praeger. **Call Number HT 384.U5 N68 2003**

Shoup, Donald. 2004. *The High Cost of Free Parking*. American Planning Association. **Call Number HE336.P37 S54 2005**

Transportation Research Board. 2005. *Does the Built Environment Influence Physical Activity?* TRB Special Report 282. **DIRAC TE7.N81 no. 282**

Vuchic, Vukan R. 1999. *Transportation for Livable Cities*. New Brunswick: Center for Urban Policy Research, Rutgers University. **Call Number HE308 .V83 1999**

Warner, Sam Bass. 1962. *Street Car Suburbs*. Harvard University Press. **Call Number HN80.B7 W3 1978**

**The book review is due in my office or my mailbox on September 28<sup>th</sup> by 5pm. You are to work alone on this assignment.**

## **Option 2. Measuring Sprawl**

You are a planner for the Metropolitan Council in Minneapolis-St. Paul. The Minneapolis-St. Paul region has exemplified progressive regional governance, having enabled property-tax sharing and other measures explicitly designed to increase cooperative regional governance and aimed at decreasing sprawl.

One day, the director of the Metropolitan Council comes into your office with blood in his eyes waving a Wall Street Journal article that lists Minneapolis-St. Paul as “one of the most sprawling cities of the U.S.” The article cites a report called *The Costs of Sprawl* (TCRP Report #74), available on Blackboard in the Topic 6 Readings folder, in the DURP Reading Room and at the TCRP website ([www.tcrponline.org](http://www.tcrponline.org)). In Appendix E of the report, the authors have created a series of composite variables that are then used to calculate a “composite sprawl index.” The ratings of this new report show that the Twin Cities Minneapolis has the 34th highest (most sprawling) score, way above places like Las Vegas (#141), Los Angeles (#150), and Phoenix (#151)! In fact, the 2nd lowest city in the sprawl index is San Jose -- where you lived for several years. San Jose! You moved from San Jose to the Twin Cities partly because you saw that Silicon Valley city as the apotheosis of auto-oriented development and dismal-looking tract housing that many people associate with sprawl.

Your supervisor would like you to write him a memo that:

1. Describes the method for creating the index and rankings in a concise—and non-technical—manner so that he can explain it to the mayor. The method for creating the sprawl index is laid out in the report text.

2. Evaluates the index in terms of its explanatory power. That is, does the index measure what it claims to measure? Is it a good basis for evaluating sprawl? Your supervisor suggests that you use the data from Appendix D of the report on population and land areas to construct simpler measures of residential density for both inside and outside the central city. Then rank those. How do these measures correspond to the composite sprawl indices in Appendix E? Construct a table of the top and bottom ten for the simple measure you have constructed and the composite measures. Which is more believable?

3. A few days go by, and one of your smart coworkers says in front of the supervisor, “Hey, that composite sprawl index only considers how autos can disperse land uses. Bus rapid transit or rail can spread land uses, too, especially when combined with park-and-ride facilities. Is that anywhere in the index?” Your supervisor likes this question, and wants you to discuss this in the memo. Do any of the indicator variables used in the index control for the possibility that *any* motorized transit can disperse human activity? Why should this problem with the index concern us? Or shouldn’t it? How do you think transit should be factored in to measures of sprawl?

4. Finally, given your research and the data from the Costs of Sprawl study, what would you propose as a reasonable way to measure sprawl. Be specific and show how the results of your sprawl index would rank Minneapolis, San Jose, and ten other cities of your choice.

You should consult the cost of sprawl study (in the DURP reading room) as well as the required readings listed under **Sprawl** and **Alternatives to Sprawl** before you complete this assignment. **This assignment is due in my office (or mailbox) by 5pm on October 5<sup>th</sup>, 2007. You are to work alone on this assignment.**

### **Option 3. Level of Service (LOSPLAN) Assignment**

#### **Background**

This exercise requires you to perform level-of-service analysis using the LOSPLAN software developed by Florida Department of Transportation. LOSPLAN is a fairly user-friendly diagnostic tool, and consists of ARTPLAN (for arterial roads), HIGHPLAN (for highways), and FREEPLAN (for freeways). You will use the ARTPLAN module to examine multimodal level-of-service on a hypothetical arterial road. Consult the LOSPLAN Handout sheets and the FDOT Level-of-Service Handbook (posted to Blackboard under Topic 8) for guidance. **You are to work on this exercise alone. (Note: We will use this tool as a class on October 8<sup>th</sup>.) LOSPLAN is installed on computers in the DURP Lab. To work at home, download LOSPLAN from the course library to your local computer.**

#### **Premise**

You are a transportation planner for a city named Collegeville. Collegeville is a rapidly growing community with more than 200,000 residents. Your supervisor has asked you to conduct a series of level of service analyses for various facility design scenarios in the two-mile long Suburban Boulevard travel corridor, and then to make a policy

recommendation that selects from among the three design scenarios. Suburban Boulevard is an east-west arterial road that serves a rapidly growing suburban area.

You should present the results of your analysis in the form of a memo addressed to your supervisor. Any tables or graphs you include must be referenced in the text of the memo.

**1. Current Conditions Analysis**

The first analysis will be to determine the current levels of service for automobiles, bus, bike, and pedestrian travel modes. Your study hour is the 100<sup>th</sup> highest traffic volume hour, one of the most commonly examined study periods for planning purposes. Most of the input values are taken from the FDOT Level of Service Tables for Urbanized Areas.

**Current Condition Data for Suburban Boulevard Corridor**

Peak Direction: Westbound	Arterial Class: Class I
Posted Speed: 50 miles per hour	Number of through lanes (both directions): 4
Median Type: Restrictive	Left Turn Lanes: Yes
AADT: 27,500	K Factor: .095
D Factor: .55	PHF: .925
Percent Turns from Exclusive Lanes: 12	Base Sat Flow Rate: 1900
Percent Heavy Vehicles: 8	Local Adjustment Factor: 1
Control Type: Actuated	Signals per mile: 2
Arrival Type: 3	Cycle Length: 120
Through g/c: .44	Paved shoulder/bike lane: No
Sidewalk: No	Outside Lane Width: Typical
Pavement Condition: Typical	Bus Frequency: 1 per hour
Bus Service: 13 hours per day	

The corridor has no sidewalks and no bike lanes.

Cross Streets (spaced at ½ mile intervals): Alpine, Birch, Cedar, Dogwood, and Eucalyptus. Total length of the corridor is two miles.

Be sure to Apply General Facility Data to “Edit Intersection and Segment Data”

Be sure to Apply Multimodal Facility Data to “Multimodal Segment Data”

Note: If you don’t click these two apply buttons after you make design changes, they will not be applied to the segments of your corridor.

When you report the baseline conditions (traffic volumes, traffic speeds, multimodal LOS), be sure to comment on whether the LOS is desirable or undesirable from a planning point of view, and note some of the design features or control features that you suspect lead to poor level of service for your various travel modes.

Over the next several years, large population increases are expected in the communities along the Suburban Boulevard corridor as new development comes on line. Your supervisor wants you to incorporate this increased growth into your analysis as you

consider three proposed facility design scenarios: roadway expansion, bike/ped friendly, and mixed. You should conduct the level of service analyses and make a recommendation for developing the road to encompass the design features incorporated in one scenario. Be sure to justify your decision to your supervisor, who will then have to present the information to local policymakers.

## **2. Roadway Expansion Scenario**

The first scenario calls for an expansion of roadway capacity in the corridor. For this scenario, assume that AADT will increase by 35 percent above current conditions as new development occurs in the corridor. You should increase the number of through lanes to eight to accommodate the increased travel. All other values are assumed to remain the same as for the current condition scenario. Conduct a level of service analysis for all four travel modes under this scenario and report the results in your memo. Comment on the desirability/undesirability of the resulting LOS for the various modes. **Note: be sure to double-check all of your input values and to apply them to all segments of your facility.**

## **3. Bike/Ped Friendly Scenario**

The second scenario calls for the adoption of a bike/ped friendly approach to transportation planning in the corridor. We will reclassify the arterial from Class I to Class III, to allow for a changed roadway design and signaling structure. For this analysis: assume that AADT will only increase by 4300 trips per day above current conditions (because of the smaller road capacity we will provide), drop the number of through lanes to four, change the posted speed to 40 mph, change the arrival type to 4, change the control type to semi-actuated, change the local adjustment factor to 0.95, add a paved shoulder/bike lane, add a sidewalk with wide separation, add a sidewalk protective barrier, and reduce bus headways from one hour to thirty minutes. The other signal and traffic settings remain unchanged from the first two scenarios. Conduct a level of service analysis for all four travel modes under this scenario and report the results in your memo. Comment on the desirability/undesirability of the resulting LOS for the various modes. **Note: be sure to double-check all of your input values and to apply them to all segments of your facility.**

## **4. The Mixed Scenario**

The third scenario lies somewhere between the first two. In this scenario, we reclassify Suburban Boulevard from a Class I to a Class II arterial. In this scenario, we assume that: AADT increases by 25 percent from current conditions, the number of through lanes is six, the posted speed is 45 mph, the local adjustment factor is 0.98, the arrival type is 4, the control type is semi-actuated, add a sidewalk with typical separation, do not add a sidewalk/roadway protective barrier, add a paved shoulder/bike lane with narrow width, and reduced bus headways to 30 minutes. All other values are assumed to remain the same as for the current condition scenario. Conduct a level of service analysis for all four travel modes under this scenario and report the results in your memo. Comment on the desirability/undesirability of the resulting LOS for the various modes. **Note: be sure to double-check all of your input values and to apply them to all segments of your facility.**

At the close of the memo, recommend one of these three scenarios to your supervisor. Be sure to justify your recommendation. **This assignment is due in class on October 29th, 2007. You are to work alone on this assignment.**

## **Option 4. Infill Project Traffic Impact Analysis Assignment**

This exercise requires you to forecast trip levels for different development configurations (using trip rates), load the trips into the HCS 2000 software, and evaluate the level of service for each scenario.

### **Premise**

You are the transportation planner for the city of Springfield. Local city officials are eager to develop vacant property in the center of the city, just downstream from the local nuclear plant. One 10-acre site appears to be particularly promising, but the city is concerned about the traffic impacts of development on the site. They are particularly concerned about traffic impacts on the intersection of Shelbyville Highway (a major arterial highway) and Old Krustie Road (a minor collector road). Your task is to conduct a series of analyses using the HCS2000 software to evaluate the traffic impacts of infill development on the site. *Note that each step will build from the results of the prior step, and not from the original base condition.* Our analysis is for the AM peak hour, so all the volumes are hourly volumes.

**Step 1** – Load the existing traffic volume and signal characteristics (Table 1) onto the intersection using the HCS2000 signals software (operations option).

**Table 1**

	<b>Southbound Shelbyville Hwy</b>	<b>Northbound Shelbyville Hwy</b>	<b>Eastbound Old Krustie Rd.</b>	<b>Westbound Old Krustie Rd.</b>
<b>Lane Configuration</b>	1. Shared R/Thru 2. Thru 3. Shared Thru/Protected L	1. Shared R/Thru 2. Thru 3. Shared Thru/Protected L	1. Shared R/Thru 2. Thru (no left)	1. Shared R/ Thru 2. Thru (no left)
<b>R Turn Volume</b>	200	40	7	5
<b>Thru Volume</b>	1600	600	50	20
<b>L Turn Volume</b>	40	20		
<b>Phase setup Green</b>	Phase 5 Th/R/L 120	Phase 5 Th/R/L 120	Phase 1 Th/R 70	Phase 1 Th/R 70
<b>Yellow</b>	5	5	5	5
<b>Red*</b>	0	0	0	0

*\*Indicates time for which signals in all directions are red at the end of that phase. For this case, assume this is 0, although it may be a bit dangerous for it to be configured this way in the real world.*

Save a file with the existing parameters: traffic volume, signal setup, delay, level of service, etc.

**Step 2** – Calculate the AM Peak trip generation rates for the development described in Table 2 using the trip rates in Table 3a and the pass-by percentages in Table 3b. Use the excel spreadsheet to help run your analysis, but construct your own tables to report results. When you calculate trip generation, round the result to two decimal places. Be sure to enter the pass-by percentages as decimals in the spreadsheet: ex. enter .15 for 15%.

Assumptions:

- Residential units are all *apartment building*
- Retail is all *specialty retail* and a single store more than 100,000 sq. ft
- Office is all *general office building*.

The following assumptions are built into the spreadsheet template.

- For the household trips, 70% go North on Shelbyville Hwy, with the share turning left and right equal to the current proportions. (See site map)
- For the retail and office trips, assume that 60% approach from the North (Southbound on Shelbyville Hwy.)

Table 2

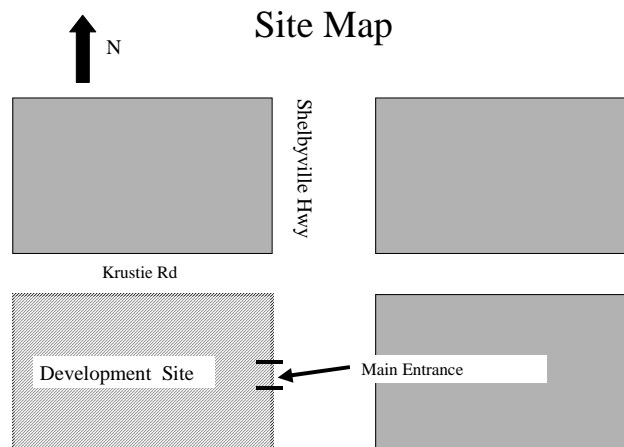
<b>Proposed Development</b>	
<b>Background data</b>	
10	Land Area (Acres)
<b>Units for Calculating Trip Rates</b>	
<b>436</b>	<b>Residential units</b>
<b>130,680</b>	<b>Retail sq ft</b>
<b>523</b>	<b>Office employees</b>

Table 3a

<b>Land Use</b>	<b>Base Unit</b>	<b>AM Peak</b>	<b>PM Peak</b>
<i>Residential</i>			
Single Family Home	per dwelling unit	0.75	0.87
Apartment Building	per dwelling unit	0.41	0.48
Condo/Town Home	per dwelling unit	0.44	0.76
Retirement Community	per dwelling unit	0.29	0.33
<i>Retail</i>			
Shopping Center	per 1,000 sq. ft.	1.03	4.12
Discount Club	per 1,000 sq. ft.	65	260
Restaurant (High-turnover)	per 1,000 sq. ft.	9.27	37.08
Convenience Market	per 1,000 sq. ft.	65.3	
Specialty Retail	per 1,000 sq. ft.	6.41	25.64
<b>Office</b>			
General Office Bldg	per employee	0.48	0.41
Medical-Dental	per 1,000 sq. ft.	3.6	3.6
Movie Theatre	per movie screen	0	89.48
Day Care Center	per 1,000 sq. ft.	13.5	15.8

**Table 3b**

<u>Land Use</u>	<u>Pass-by Percentages</u>
<i>Specialty Retail (configuration)</i>	
100,000 to 400,000 GLA	25
Smaller than 100,000 GLA	35
<b><u>Other Uses</u></b>	
<b><u>Convenience Market</u></b>	40
Fast Food Restaurant	40
Sit Down Restaurant	15
Supermarket	20



**Step 3** – Load the additional trips onto the intersection. What happens to the level of service?

**Step 4** - How much is the traffic impact mitigated if we assume the surrounding area has a higher density and better accessibility?

1. Let’s assume that the ITE trip rates are based on a density of 750 persons per square mile but that our area has a density of 7500 persons per square mile. We should expect to find a higher share of trips using transit, bike, and walk modes at this higher density, and thus a decline in the automobile share. Based on research conducted by Urban Land Institute in 1995, let’s assume that the number of auto trips is reduced by **15 percent** due to increased density. (Enter this value in your spreadsheet as **.15** in the appropriate cell.)

*Enter the new level of trips onto the network and evaluate the new LOS.*

2. The long-term objective is to improve accessibility. Let’s suppose we were able to improve accessibility at the site through a combination of increased density (as noted above) and more diverse uses on the site. Assume that we are able to reduce the number

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of auto trips by **9 percent** under our increased accessibility (“better urban design”) scenario. (Enter this value in the spreadsheet as **.09** in the appropriate cell.)

*Enter the new level of trips onto the network and evaluate the new LOS.*

**Step 5** – Change the land use type of the project and analyze how that would change the number of additional trips added to the intersection?

- Make half the residential units a retirement oriented complex.
- Break up the specialty retail into several tenants of less than 100,000 sq. ft. each.

This step requires you to change your trip generation calculations. Load the trips onto the intersection, but be sure to apply the pass-by, density, and design reduction factors to the new trip totals—before you run the final intersection analysis.

Write a memo summarizing the results of the analysis for Mayor Quimby. Be sure to highlight the potential points of controversy the project may face as the public hearing and approval process moves forward.

**This assignment is due November 9<sup>th</sup> by 5pm. You are to work alone on this assignment.**

## **Option 5. How does urban form influence travel behavior?**

You are a staff member to the House Committee on Transportation and Infrastructure. Last summer several of the committee members went on a junket to Europe and Asia to do “first-hand” research on the transportation systems in Eurasian cities. Several members concluded from this trip that promulgating legislation encouraging cities to increase population and/or employment densities would significantly increase transit use and substantially reduce auto dependence. Other members, however, argue that land use control is and should be a local issue. They argue instead that legislation should be promulgated to significantly increase investment in public transit systems and decrease investment in highways. This, they argue, will help to gradually transform sprawling American cities into the more compact, dense cities of Europe and Asia.

Your boss (the lead staff person to the committee) is concerned about promulgating such legislation without a clearer understanding of the causal links between urban form and travel behavior. She has asked you to analyze the relationship between urban form and transportation using data from a widely cited 1999 study by Newman and Kenworthy (**Chapter 3 and Appendix 1 are available in one of our class readings holders in the DURP Reading Room**), which provides various measures of urban form and transportation in thirteen large U.S. cities and a number of international cities. Your job is to explore the relationships between the urban form and transportation variables for the US cities and to develop some hypotheses that could be tested by subsequent in-depth study. The hypotheses should express a relationship between one land use variable and one transportation variable (be sure to note the direction(s) of causality).

Use quantitative analysis techniques to explore three or four relationships. These can include descriptive statistics, graphs and plots of relationships between variables, and

calculating correlation coefficients. Think of this work as your preliminary exploration of the data before defining a major research project for the House Committee on Transportation and Infrastructure. Because so much data are provided, you must decide (and defend) which variables are of the greatest interest, and focus your investigations on these variables.

For each relationship you examine, write a clear statement of the hypothesis, report on your visual analysis of the data, including comments on outliers, report on the calculated correlation coefficients, and provide a written commentary on whether the analysis supports or does not support your initial hypothesis. In concluding your memo comment on the degree to which your exploration shows that urban form indicators are related to travel behavior, and if they are, whether the relationships are consistent with the literature we discussed in class for **The Effects of Land Use on Transportation**. You may wish to consult the additional readings under **The Effects of Land Use on Transportation (available in the DURP Reading Room)** as you prepare to complete this assignment, including the Newman and Kenworthy book. You might also skim the required readings under **The Effects of Transportation on Land Use** to see the other direction of the relationship.

**This assignment is due in class on November 19th, 2007. You are to work alone on this assignment.**

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## Term Paper

**The major assignment for this course is a term paper. There are two milestones for this paper prior to the final due date of December 7<sup>th</sup>, 2007. Please see me to discuss any questions you have about potential topics or expectations for the paper.**

### Proposal

**On October 10th**, a draft paper proposal is due for peer review in class. You should bring two copies of the proposal. You will give and receive feedback from your classmates on your proposals. This draft proposal will not be turned in to me. You will have the opportunity to refine your proposal subsequent to the in-class peer review. **The paper proposal will be due to me by 5pm on October 19th.**

The proposal should outline the following:

- General introduction to the topic your interested in
- Proposed scope of examination (single case, multiple cases, study area for empirical paper)
- Proposed sources of information for case evaluations
- Proposed data and method for empirical studies

**Some Example Paper Topics (But do not feel limited by this list)**

- Infill development

- Transportation related barriers to infill development
- Innovative programs to overcome such barriers
- Concurrency and infill development
- Successful models for mitigating the impacts of transportation infrastructure on environmentally sensitive lands
  - Wetlands offset/banking programs
  - Storm water runoff treatment
  - Avoiding habitat fragmentation / impact mitigation
- Effective integration of travel demand models with land use simulation models
- Innovative transit agency programs
  - Land development programs
  - TOD planning
  - More flexible transit systems or effective transit models for lower density/suburban areas
  - Marketing / service design to attract non-traditional customers (e.g. tourists, high income commuters)
- Transportation impact fees
  - The impact of impact fee structure on infill development
  - The adequacy of impact fees in supporting infrastructure expansion
  - Innovate policies / assessment structures
- Urban design innovations
  - Traffic calming / pedestrian safety
  - Transit station design
  - Pedestrian / bicycle corridors and networks
  - Design standards / ordinances to improve alternative transit accessibility
- Regional planning initiatives
  - Creating a town center network / retrofitting the suburbs (e.g. San Diego “City of Villages” concept)
  - Other regional transportation / land use programs (Eastward Ho! – Southwest FL, Envision Utah – Salt Lake, Sound Move - Seattle, etc.)
  - Parking and road pricing reform
- Educational initiatives to change behaviors and attitudes
  - Encouraging non-motorized travel
  - Softening “neighborhood resistance” to increased density (e.g. visual preference surveys or other outreach / educational programs)
  - Increasing citizen involvement in transportation / land use planning
- Combining economic development and transportation investments
  - Employment center co-location with transit
  - The use of infill / brownfields development for neighborhood revitalization / job creation
- Spatial mismatch
  - The effectiveness of welfare to work and other employment accessibility programs

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- Regional / State initiatives to improve jobs housing balance

**Final Paper**

The final paper will be between 12 and 15 double-spaced pages in length, and is due on **December 7<sup>th</sup> at 5pm**. All sources must be cited in the text and in a Bibliography.

You should use the APA method of citation. A useful guide to APA citation may be found at [http://www.dianahacker.com/resdoc/social\\_sciences/overview.html](http://www.dianahacker.com/resdoc/social_sciences/overview.html)

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## Topic Schedule and Class Readings

*Note: This schedule is subject to revision, based on class needs.*

**Required Readings** are the key readings we will use in our discussion of each topic. **Additional Readings** are other articles or manuscripts you should consult if you are particularly interested in a topic. **References** are materials that serve as background materials, and are mainly used in the context of our discussion of various analytic techniques. You are **expected** to read all required readings before each class session.

### **Topic 1: Course Introduction and Overview (Week 1a)**

This topic provides a general overview of the literature on the link between transportation and land use. **Please read the Giuliano and Cervero and Landis pieces for the first class meeting.** We will jump right in to the course material on the first day of class.

#### **Required Readings**

Giuliano, Genevieve. 1995. "The Weakening Transportation-Land Use Connection," in *Access* 6: 3-11. (BB)

Cervero, Robert and John Landis. 1995. "The Transportation-Land Use Connection Still Matters," in *Access* 7: 2-10. (BB)

(**Note: Access is a reader-friendly research synopsis publication—which you can subscribe to for free! I recommend it. Visit [www.uctc.net](http://www.uctc.net) and click on Access Magazine.**)

#### **Additional Readings**

Boarnet, Marlon and Randall Crane. 2001. *Travel by Design: The Influence of Urban Form on Travel*. Oxford University Press.

Deakin, Elizabeth. 1991. "Jobs, Housing, and Transportation: Theory and Evidence on Interactions Between Land Use and Transportation," in *Transportation, Urban Form, and the Environment*. TRB Special Report 231.

### **Topic 2: Fundamentals of Travel Behavior (Week 1b)**

This topic provides some context for our subsequent class discussions by discussing why we travel, what factors influence our decisions to travel, and how we travel. This is the first of two topics that apply economic concepts to transportation. We also discuss the issue of traffic congestion.

#### **Required Readings**

Downs, Anthony. 2004. "Why Traffic Congestion is Here to Stay and Will Get Worse." From *Access* 25: 19-25. (BB)

Meyer, Michael and Eric Miller. 2001. "Analysis of Transportation Demand" from *Urban Transportation Planning: A Decision-Oriented Approach*. Pages 256-264. **(BB)**

Pucher, John and John Renne. 2003. "Socioeconomics of Urban Travel: Evidence from the 2001 NHTS," in *Transportation Quarterly* 57(3): 49-77. **(BB)**

Taylor, Brian D. 2002. "Rethinking Traffic Congestion." From *Access* 21:8-16. **(BB)**

**Topic 3: Fundamentals of Urban Economic Theory (Week 2b)**

This topic applies insights from urban economic theory to the relationship between transportation and land use.

**Required Readings**

Heilbrun, James and Patrick A. McGuire. 1987. "Site Rent, Land Use Patterns, and the Form of the City," in *Urban Economics and Public Policy*, Third Edition. Saint Martin's Press. **(BB)**

**Additional Readings**

Alonso, William. 1964. *Location and Land Use: Toward a General Theory of Land Rent*. Harvard University Press.

Mitchell, R.B. and Rapkin, C. (1954) *Urban Traffic: A Function of Land Use*. Columbia University Press.

**Topic 4: Accessibility (Week 3a)**

This topic introduces the concept of accessibility. We will discuss the concepts of access and accessibility, note the different ways people have measured accessibility, and consider the influence of two kinds of accessibility on travel behavior. Bring a calculator to class.

**Required Readings**

Handy, Susan. 1992. "Regional Versus Local Accessibility: Neo-traditional Development and Its Implications for Non-work Travel." *Built Environment* 18(4): 253-267. **(BB)**

Huisman, Otto. 2005. "Operational Definition of Accessibility." Technical Report for Study *Reduced CO2 from Sustainable Household Travel*. **(BB)**

Lynch, Kevin. 1981. "Access" from *Good City Form*. Cambridge: The MIT Press. Pages 187-204. **(BB)**

*Additional Readings*

Geurs, Kerst and Bert van Wee. 2004. "Accessibility Evaluation of Land Use and Transport Strategies: Review and Research Directions," in *Journal of Transport Geography* 12: 127-140.

Handy, Susan. 1993. "Regional versus Local Accessibility: Implications for Non-work Travel," in *Transportation Research Record* 1400: 58-66.

Handy, Susan. 2002. *Accessibility vs Mobility: Enhancing Strategies for Addressing Automotive Dependence in the US*. ITS-Davis Publication No. UCD-ITS-RR-02-15.

*Journal of Transportation and Statistics*. 2001. Special Issue on Methodological Issues in Accessibility. Volume 4, Numbers 2/3. Available online at <http://www.bts.gov>

**Topic 5: The Evolution of Transportation and Urban Form (Week 3b)**

This topic explores the evolving relationship between transportation and urban form in the United States.

*Required Readings*

Jackson, Kenneth. 1985. "The Transportation Revolution and the Erosion of the Walking City." From *Crabgrass Frontier: The Suburbanization of the United States*. New York: Oxford University Press. **(BB)**

Muller, Peter. 2004. "Transportation and Urban Form: Stages in the Spatial Evolution of the American Metropolis," in *The Geography of Urban Transportation*, Third Edition. Guilford Press. **(RR)**

Schaeffer, K. and Elliott Sclar. 1980. "The Walking City, the Tracked City, and the Rubber City." From *Access for All: Transportation and Urban Growth*. New York: Columbia University Press. **(RR)**

*Additional Readings*

Foster, Mark. 1981. *From Streetcar to Superhighway: American City Planners and Urban Transportation*. Temple University Press.

Schaeffer, K. and Elliott Sclar. 1980. *Access for All: Transportation and Urban Growth*. New York: Columbia University Press.

Warner, Sam Bass. 1962. *Street Car Suburbs*. Harvard University Press.

**Topic 6: Sprawl and Its Alternatives (Weeks 4a, 4b)**

***Sprawl and the Sprawl Debate: Week 4a Required Readings***

Ewing, Reid, Rolf Pendall, and Don Chen. 2002. *Measuring Sprawl and Its Impact*. Smart Growth America. (BB)

Gordon, Peter and Harry Richardson. 1997. "Are Compact Cities a Desirable Planning Goal?" *Journal of the American Planning Association* 63 (1): 95-106. (BB)

Ewing, Reid. 1997. "Is Los Angeles Style Sprawl Desirable?" *Journal of the American Planning Association* 63 (1): 107-126. *Note: This piece is a response to the Gordon and Richardson article.* (BB)

***Alternatives to Sprawl: Week 4b Required Readings***

Congress for the New Urbanism. 2001. *Charter of the New Urbanism*. Available at [www.cnu.org](http://www.cnu.org). (BB)

Cox, Wendell. 2003. "Opiate of the Planners: Smart Growth and Urban Containment." (BB)

Downs, Anthony. 2005. "Smart Growth: Why We Discuss It More than We Do It." *Journal of the American Planning Association* 71 (4): 367-378. (BB)

Ye, Lin, Sumedha Mandpe, and Peter Meyer. 2005. "What is Smart Growth?—Really?" in *Journal of Planning Literature* 19 (3): 301-315. (BB)

***Additional Readings***

Calthorpe, Peter. 1993. *The Next American Metropolis: Ecology, Community, and the American Dream*. Princeton Architectural Press.

Calthorpe, Peter and William Fulton. 2001. *The Regional City*. Island Press.

Handy, Susan. 2002. "Smart Growth and The Transportation-Land Use Connection: What Does the Research Tell Us?" in *New Urbanism and Smart Growth: A Research Symposium*.

Lund, Hollie. 2003. "Testing the Claims of New Urbanism: Local Access, Pedestrian Travel, and Neighboring Behaviors," in *Journal of the American Planning Association* 69 (4): 414-429.

TCRP. 2000. Costs of Sprawl. TCRP Report 74. Available at <http://www.tcrponline.org> (Posted on Blackboard in Topic 6 Folder)

**No classes during week 5—due to the Florida Department of Transportation’s Research Conference. Use the time to work on your term paper proposal.**

**Topic 7: Trip Generation (Week 6a)**

This topic introduces one tool that planners use to assess the effects of land use (different kinds of development) on the transportation system: the ITE Trip Generation Manual. We will discuss the manual, apply it to calculate trips, and discuss some of its strengths and weaknesses as a means of estimating travel activity. Bring a calculator to class.

**Required Readings**

Institute of Transportation Engineers. *Trip Generation Handbook*  
(Excerpts are in the Reading Room in two folders: parts one and two)

**Additional References**

Institute of Transportation Engineers. *Trip Generation*, 7<sup>th</sup> Edition.

Transportation Research Board. 2000. *Highway Capacity Manual*, 2000.

**Topic 8: Measuring Transportation System Performance: LOS (Weeks 6b, 7a)**

This topic introduces the notion of level of service (LOS) as a means of grading transportation system performance. Level of service is at the core of Florida’s transportation concurrency requirements instituted through the Growth Management Act. We will introduce LOSPLAN, a software package developed by FDOT for assessing LOS, and we will use the software’s ARTPLAN module to examine multimodal level of service for arterial roads.

**References**

Florida Department of Transportation (FDOT). 2002. Quality/Level of Service Handbook. (BB)

FDOT. 2002 LOS Tables (BB)

Tallahassee LOS Standards (BB)

**Topic 9: Transportation and Land Use in Florida (Weeks 8a, 8b)**

This topic examines the link between transportation and land use in Florida, focusing on the state’s transportation concurrency requirements. In the first session, we will discuss the origins and evolution of transportation concurrency. In the second session, we will critique it and debate its future.

**Transportation Concurrency: Rationale and Evolution—Week 8a Required Readings**

Nicholas, James and Ruth Steiner. 2000. “Growth Management and Smart Growth in Florida.” *Wake Forest Law Review*. (BB)

Steiner, Ruth. 2001. "Florida's Transportation Concurrency: Are the current tools adequate to meet the need for coordinated land use and transportation planning?" *University of Florida Journal of Law and Public Policy*: 269-297. (BB)

Greenberg Traurig. 2005. "The Florida legislature makes major changes in growth management law." (BB)

FDOT Summary document (BB)

***Debating the Future of Transportation Concurrency—Week 8b Required Readings***

Chapin, Timothy, Gregory Thompson and Jeffrey Brown., 2007. *The Future of Transportation Concurrency*. DCA White Paper. (BB)

Downs, Anthony. 2003. "Why Florida's Concurrency Principles for Controlling New Development by Regulating Road Construction) Do Not and Cannot Work Effectively." *Transportation Quarterly* 57 (1): 13-18. (BB)

**Topic 10: The Effects of Land Use on Transportation: Overview and The 3Ds (Weeks 10a, 10b)**

This topic provides a detailed examination of the literature on the influence of land use on our use of the transportation system.

***Overview and Density: Week 10a Required Readings***

Cervero, Robert and Kara Kockelman. 1997. "Travel Demand and the 3Ds: Density, Diversity, and Design," in *Transportation Research D* 2(3): 199-219. (BB)

Ewing, Reid and R Cervero. 2002. "Travel and the Built Environment: A Synthesis," in *Transportation Research Record* 1780: 87-114. (BB)

Transit Cooperative Research Program (TCRP). 2003. Land Use and Site Design. Report 95. Chapter 15. "Density." Pages 15-13 to 15-38. (BB)  
(note: You can order all TCRP reports for free at <http://www.tcrponline.org>)

***Diversity and Design: Week 10b Required Readings***

TCRP Report 95. Chapter 15. "Diversity." Pages 15-39 to 15-58. (BB)

TCRP Report 95. Chapter 15. "Design." Pages 15-58 to 15-90. (BB)

Jacobs, Allan. 1995. Chapter One (Requirements for Great Streets) and Chapter Two (Qualities that Contribute) from *Great Streets*. MIT Press. (RR)

*Additional Readings*

Boarnet, M and R. Crane. 2001. "The Influence of Land Use on Travel Behavior: Specification and Estimation Strategies," in *Transportation Research Part A* 35: 823-845.

Boarnet, M and S Sarmiento. 1998. "Can Land-use Policy Really Affect Travel Behavior? A Study of the Link Between Non-work travel and Land-use Characteristics," in *Urban Studies* 35(7): 1155-1169.

Crane, Randall. 2000. "The Influence of Urban Form on Travel: An Interpretive Review," in *Journal of Planning Literature* 15(1): 3-23.

Ewing, Reid, Eric Dumbaugh, and Mike Brown. 2002. "Internalizing Travel by Mixing Uses: A Study of Master-Planned Communities in South Florida," in *Transportation Research Record* 1780: 115-120.

Newman, Peter and Jeffrey Kenworthy. 1999. *Sustainability and Cities: Overcoming Automobile Dependence*. Washington, DC: Island Press. Pages 68-127 and Appendix 1.

Southworth, Michael. 1997. "Walkable Suburbs? An Evaluation of Neotraditional Communities at the Urban Edge," in *Journal of the American Planning Association* 63 (1): 28-44.

Southworth, Michael and Eran Ben-Joseph. 1995. "Street Standards and the Shaping of Suburbia," in *Journal of the American Planning Association* 61(1): 65-81.

**Topic 11 Land Use, Transportation, and Health (Week 11a)**

This topic is an opportunity to extend the literature that relates land use to travel behavior to a consideration of the potential physical activity and public health consequences.

***Required Readings***

Frank, Lawrence, et al. 2006. "Many Pathways from Land Use to Health." *Journal of the American Planning Association* 72 (1): 75-87. (BB)

Handy, Susan. 2005. "Critical Assessment of the Literature on the Relationships Among Transportation, Land Use, and Physical Activity." Resource paper for *TRB Special Report* 282. (BB)

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**Topic 12: The Effects of Transportation on Land Use (Week 11b)**

This topic discusses the effects of transportation infrastructure on land use patterns.

**Required Readings**

Giuliano, Genevieve. 2004. "Land Use Impacts of Transportation Investments," in *The Geography of Urban Transportation*, Third Edition.

(RR)

Boarnet, Marlon and Andrew Haughwout. 2000. *Do Highways Matter? Evidence and Policy Implications of Highways' Influence on Metropolitan Development*.

(BB)

Ryan, Sherry. 1999. "Property Values and Transportation Facilities: Finding the Transportation-Land Use Connection." *Journal of Planning Literature* 13 (4): 412-427.

(BB)

**Additional Readings**

Cervero, Robert and Michael Duncan. 2002. *Land Value Impacts of Rail Transit Services in San Diego County*. Prepared for National Association of Realtors and Urban Land Institute.

Diaz, Roderick. 1999. "Impacts of Rail Transit on Property Values," from *APTA 1999 Rapid Transit Conference Proceedings*.

Parsons Brinkerhoff. 2001. *The Effect of Rail Transit Investment on Property Values: A Summary of Studies*. Research carried out for Project 21439S, Task 7 NEORail II, Cleveland, Ohio.

Polzin, Steve. 1999. "Transportation/Land-Use Relationships: Public Transit's Impact on Land Use," in *Journal of Urban Planning and Development* 125 (4): 131-151.

**Topic 13 Parking: Intersection of Transportation and Land Use (Week 12b)**

This topic discusses one of the most important intervention planners make in the built environment, one that has enormous implications for urban form and travel behavior, and one that until very recently has received precious little attention from anyone whose name isn't Donald Shoup: parking.

**Required Readings**

Mukhija, Vinit and Donald Shoup. 2006. "Quantity versus Quality in Off-Street Parking Requirements." *Journal of the American Planning Association* 72 (3): 296-308.

(BB)

Shoup, Donald. 2004. "Unnatural Selection," "The Pseudo-science of Planning for Parking," and "A Great Planning Disaster" from The High Cost of Free Parking. American Planning Association.

(RR)

*Additional Readings*

Shoup, Donald. 2004. The High Cost of Free Parking. American Planning Association.

**Topic 14: Transit-Oriented Development: Definitions, Policies, and an Assessment (Weeks 13a, 14a)**

This topic introduces the concept of transit-oriented development.

***Overview of TOD and Policy Environment: Week 13a Required Readings***

Dunphy, Robert, Deborah Myerson, and Michael Pawlukiewicz. 2003. *Ten Principles for Successful Development Around Transit*. Urban Land Institute. **(BB)**

Transit Cooperative Research Program (TCRP) Report 102. 2004. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. Chapters 1-6. **(BB)**

***Assessment: Week 14a Required Readings***

Transit Cooperative Research Program (TCRP) Report 102. 2004. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. Chapters 7-9. **(BB)**

Belzer, Dena and Gerald Autler. 2002. "Transit Oriented Development: Moving from Rhetoric to Reality." Brookings Institution. **(BB)**

Strickland, Eliza. "Ghost Town: What if they built the development of the future and no one came?" **(Handout)**

*Additional Readings*

Boarnet and Compin. 1999. "Transit-Oriented Development in San Diego County," in *Journal of the American Planning Association* 65(1): 80-95.

Cervero and Landis. 1997. "Twenty Years of the Bay Area Rapid Transit System: Land Use and Development Impacts," in *Transportation Research Part A* 31(4): 309-333.

Dittmar, Hank and Gloria Ohland. 2004. *The New Transit Town: Best Practices in Transit-Oriented Development*. Chapters 1-4, 8-11.

Porter, D. 1998. "Transit-Focused Development: A Progress Report," in *Journal of the American Planning Association* 64(4): 475-488.

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Transit Cooperative Research Program (TCRP) Report 102. 2004. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*.

**Topic 15: Transit-Oriented Development Case Study (Week 14b)**

This topic examines domestic case studies of using transit to shape land use and land use to support transit.

**Required Reading**

Case and readings to be determined.

**Topic 16: Adapting Transit to Fit Land Use (Week 15a)**

This topic explores research being conducted at FSU that explores the alternative (to TOD) strategy of adapting transit to fit land use—in an effort to make transit more viable to users and boost ridership.

**Required Readings**

Brown, Jeffrey and Gregory L. Thompson. 2007. “The Relationship between Transit Ridership and Urban Decentralization: Insights from Atlanta.” Forthcoming in *Urban Studies*. (BB)

Thompson, Gregory, Jeffrey Brown, Rupa Sharma, and Samuel Scheib. 2006. “Where Transit Use is Growing: Surprising Results.” *Journal of Public Transportation* 9 (2): 25-43. (BB)

Thompson, Gregory and Thomas Matoff. 2003. “Keeping up with the Joneses: Planning for Transit in Decentralizing Regions.” *Journal of the American Planning Association* 69 (3): 296-312. (BB)

**Topic 17: Modeling the Transportation-Land Use Relationship (Week 15b)**

This topic provides an overview of the forecasting tools that are used by practitioners and/or researchers to model the relationship between transportation and land use.

**Required Readings**

Author Unknown. Florida Urban Land Use Allocation Model Overview. Pages 1-5. (BB)

Beimborn, Edward, Rob Kennedy, and William Schaeffer. *Inside the Black Box: Making Transportation Models Work for Livable Communities*. Prepared for Citizens for a Better Environment and the Environmental Defense Fund. (BB)

Waddell, Paul and Gudmundur Freyr Ulfarsson. 2003. “Introduction to Urban Simulation: Design and Development of Operational Models,”

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from *Handbook in Transport, Volume 5: Transport Geography and Spatial Systems*. Pergamon Press. **(BB)**

*Additional Readings*

US Environmental Protection Agency. 2000. *Projecting Land-Use Change: A Summary of Models for Assessing the Effects of Community Growth and Change on Land Use Patterns*. Office of Research and Development.

Webster, FV, PH Bly, and NJ Paulley, eds. 1988. *Urban Land Use and Transport Interaction: Policies and Models*. Report of the International Study Group on Land Use/Transport Interaction (ISGLUTI). Avebury.

	<b>Week</b>	<b>Lecture 1</b>	<b>Lecture 2</b>	<b>Readings</b>	<b>Assignment</b>
1	August 27th - August 31	Overview of the TR/LU Relationship	Fundamentals of Travel Behavior	Giuliano 1995, Cervero and Landis 1995; Meyer and Miller 2001, Pucher and Renne 2003, Downs 2004, Taylor 2002	
2	September 3rd - September 7th	<b>Labor Day Holiday</b>	Fundamentals of Urban Economic Theory	Heilbrun and McGuire 1987	
3	September 10th - September 14th	Accessibility	Evolution of Transportation and Urban Form	Handy 1992, Huisman 2005, Lynch 1981; Muller 2004, Jackson 1985, Schaeffer and Sclar 1980	
4	September 17th - September 21st	Sprawl	Alternatives to Sprawl	Ewing, et al 2002, Gordon and Richardson 1997, Ewing 1997; CNU 2001, Cox 2003, Downs 2005, Ye, Mandpe, and Meyer 2005	
5	September 24th - September 28th	<b>No Class--FDOT Research Conference</b>	<b>No Class--FDOT Research Conference</b>		<b>Assignment Option 1 due 9/28 by 5pm</b>
6	October 1st - October 5th	Trip Generation	Level of Service I	ITE; FDOT 2002, Tallahassee LOS	<b>Assignment Option 2 due 10/5 by 5pm</b>
7	October 8th - October 12th	<b>Level of Service II (Lab)</b>	<b>In-class peer review of draft paper proposals</b>		<b>Draft term paper proposal due for in-class peer review on 10/10</b>
8	October 15th - October 19th	Transportation and Land Use in Florida 1: Transp. Concurrency Rationale and Evolution	Transportation and Land Use in Florida 2: Debating the Future of Transportation Concurrency	Nicholas and Steiner 2000, Steiner 2001, Greenberg Traurig 2005, FDOT Summary; Chapin, Thompson, and Brown 2007, Downs 2003	<b>Term Paper Proposal due 10/19 by 5pm</b>
9	October 22nd - October 26th	<b>HCMS (Lab)</b>	<b>Midterm Exam</b>		<b>Midterm on October 24th</b>
10	October 29th - November 2nd	Effects of Land Use on Transportation: Overview and Density	Effects of LU on Transportation: Diversity and Design	Cervero and Kockelman 1997, Ewing and Cervero 2002, TCRP 95:Ch 15; Jacobs 1995;	<b>Assignment Option 3 due 10/29 in class</b>
11	November 5th - November 9th	Land Use, Transportation, and Health	The Effects of Transportation on Land Use	Frank 2006, Handy 2005; Giuliano 2004, Boarnet and Haughwout 2000, Ryan 1999;	<b>Assignment Option 4 due 11/9 by 5 pm</b>
12	November 12th - November 16th	<b>Veterans Day Holiday</b>	Parking: The Intersection of Transportation and Land Use	Shoup 2004, Mukhija and Shoup 2006;	
13	November 19th - November 23rd	TOD: Overview and Policy Environment	<b>No Class: Thanksgiving</b>	Dunphy, et al 2003, TCRP 2004	<b>Assignment Option 5 due 11/19 in class</b>
14	November 26th - November 30th	TOD: Assessment	TOD Case Study	TCRP 2004, Belzer and Autler, Strickland	
15	December 3rd - December 7th	Adapting Transit to Fit Land Use	Modeling the Transportation-LU Relationship	Brown and Thompson 2007, Thompson and Matoff 2003, Thompson, et al 2006; Beimborn, et al; Waddell and Ulfarsson; FULUAM Overview	<b>Term Paper due 12/7 by 5pm</b>
FW	Finals Week				

**Note: This schedule is subject to change based on class needs.**