URBPLAN-692 (LEC 001): Pedestrian and Bicycle Transportation
Syllabus (1/27/13)

Spring 2013—3.0 Credits
Monday, 1:30 p.m. to 4:10 p.m., AUP Room 191

Course Instructor: Dr. Robert Schneider (rjschnei@uwm.edu)
Office Hours: Monday, 11:00 a.m. to 12:30 p.m. & Tuesday, 1:30 p.m. to 3:00 p.m., AUP Room 334

Course Background

Walking and bicycling are essential components of a sustainable transportation system. In response to growing concerns about personal mobility and safety, access to transit, equity between socioeconomic groups, air quality, public health, and other issues of community sustainability, many government agencies are developing plans to improve pedestrian and bicycle transportation.

Pedestrian and bicycle transportation are influenced by micro-scale elements of the built environment, such as sidewalks, bicycle lanes, traffic speeds, and roadway crossings, as well as by macro-scale characteristics, such as community-wide pathway systems and regional land use patterns. As a result, walking and bicycling issues bridge the disciplines of urban planning, urban design, and civil engineering.

This graduate-level course is structured to provide students with information about current practices in the pedestrian and bicycle transportation field. It will cover historical and institutional frameworks, benefits and obstacles to pedestrian and bicycle planning, policy development, perceived and actual safety, facility design, network development, and practical methods of estimating demand and evaluating walking and bicycling conditions. Students will be challenged to evaluate the existing methods critically and develop ideas for improving pedestrian and bicycle planning practices. The course will focus mainly on practices in the United States, though it will include examples of innovative international strategies.

The course will include lectures, guest speakers, field visits, and several assignments. Most classes will include a presentation by the course instructor. References from the reading list will also be discussed in class. To facilitate discussions, students will be selected to the "Expert" for specific readings in the next class period. The "Expert" should be prepared to provide a brief overview and two discussion questions for the readings. As the "Expert," the student may also field questions on the class topic from the rest of the students. Guest speakers (and panels of speakers) will be professionals working in local, regional, and state agencies, advocacy organizations, and academic settings who will provide a practical perspective on the issues discussed in class. When guest speakers are scheduled, the last portion of the class period will be reserved for their presentation and discussion.

I am looking forward to a great term with all of you!
Bob

Readings and Class Participation

A different topic from the pedestrian and bicycle planning field will be covered each class session. The readings listed under each session below are required readings. Readings will be available under "Content" on the class D2L website (http://d2l.uwm.edu/, Special Topics in UrbPlan - UWMIL_2132_15B_URBPLAN_692_SEC001_46208). All students are expected to read all the assigned readings BEFORE class and to actively participate in the discussion. A separate list of references titled, "Supplemental References," will also be posted online.

Active participation in class is an important component of this course. Being able to express concepts and opinions clearly and ask good questions are critical skills in the professional world. Class attendance will be recorded on a sign-in sheet. However, class participation grades are based on the quality of active participation in class discussion, not simply on attendance. In the interest of promoting a productive learning environment for all, please:

- Arrive on time and stay for the duration of class.
- Turn off or mute audible cell phones, pagers, and watch alarms for the duration of class.
- Turn off laptops unless instructed otherwise and refrain from accessing the internet on any other device during class.

Behaviors that detract from class learning will be penalized in the class participation grade.

Class Assignments

The three assignments are designed to give practical experience with elements of the non-motorized transportation realm, including political, research, and design aspects. All work should have a practical focus. For example, work should be done with the intention of presenting findings to planners and engineers at a municipal agency or distributing the results to members of the Association of Pedestrian and Bicycle Professionals. All assignments should be e-mailed to rjschnei@uwm.edu by midnight on the due dates listed. The assignments are described below.

Assignment #1: Attend a local transportation meeting and turn in a 2-page summary memo (Due Friday, February 15th)

This assignment is designed as an introduction to the political realm of decision-making. The final product should be a two-page, single-spaced memorandum in a standard memo form with a meeting summary and analysis. You should address the memo to the executive director of an advocacy organization (real or fictitious) of your choice. The final memo should be submitted as a Microsoft Word document so that comments can be provided in Track Changes. Your memo should contain the following three sections:

- A very brief description of the role and function of the organization whose meeting you attended (about 1 paragraph)
- A short summary of the purpose of the meeting and the specific topics discussed. If the agenda included a large number of items you may choose to focus on one or two key topics. (1 to 2 paragraphs)
- Your detailed comments on the following question: What did this experience teach you about citizen participation and public decision-making with regard to bicycle and pedestrian planning? (1 to 1.5 pages)

Before attending the meeting, skim a few background materials about the group sponsoring the meeting and any reports and analyses prepared specifically for the meeting. Also obtain and review any materials that are handed out or presented at the meeting. Examples of appropriate meetings include:

- City of Milwaukee Bicycle and Pedestrian Task Force Meeting (Fri., Feb. 1, 2013, 9 a.m., Milwaukee Municipal Building, 841 N. Broadway, Seventh Floor)
- Village of Shorewood Pedestrian & Bicycle Safety Committee Meeting (Tue., Feb. 12, 2013, 7 p.m., Village Committee Room, 3930 North Murray Avenue, Shorewood, Third Floor)
- Any other meeting of local municipalities, the Milwaukee County Trails Council, or the Southeast Wisconsin Regional Planning Commission that has a bicycle or pedestrian issue on the agenda (*ask instructor first to check*)

Assignment #2: Paper on Topic of Choice
(Proposal Due Friday, February 8th; Final Paper Due Friday, March 15th)
This assignment will involve researching and synthesizing a pedestrian and/or bicycle topic of interest. It provides an opportunity to showcase prior experience or a chance to pursue a subject of particular interest. The result should be an 8- to 10-page (maximum), double-spaced paper. A brief (half-page) project proposal or outline will be due on Friday, February 8th. The instructor may provide guidance on how to refine or narrow the topic based on this proposal. The paper will be due Friday, March 15th. Both the proposal and final paper should be submitted as a Microsoft Word documents so that comments can be provided in Track Changes. Possible project topics include, but are not limited to:

- Detailed description of past experience working with non-motorized transportation, and lessons learned
- Evaluation of a local, small-area pedestrian and bicycle plan (roadway corridor or neighborhood)
- Profile of innovative city and its work to increase pedestrian and bicycle mode share and safety
- Photographic essay and summary of a specific pedestrian or bicycle facility design issue (e.g., median islands, bicycle lane design approaching intersections, "road diets", etc.) *(Note: if this option is chosen, there should be 6 to 8 pages of text, excluding pictures, and the total length of the document should be longer than 10 pages after the pictures are included)*
- Summary of existing research on a category of factors related to pedestrian or bicycle activity (e.g., land use, transportation facilities, socioeconomic characteristics, weather, topography, individual attitudes, social norms, or perceptions of safety and security)
- Analysis of an existing source of pedestrian or bicycle use, safety, user characteristics, or facility data (American Community Survey Commuting Data, National Household Travel Survey, Statewide/Regional Crash Databases, International Databases, etc.)

Assignment #3: Intersection Analysis
(Proposal Due Wednesday, March 27th; Final PowerPoint & Documentation Due Wednesday, May 15th)
The intersection analysis should be conducted in groups of 3-4 students, and it will involve planning, design, and engineering skills. The goal of the assignment is to recommend, illustrate, and justify a set of pedestrian and bicycle improvements at and near an intersection in the Milwaukee area. Project limits will include the intersection plus the street segments approaching the intersection (e.g., a four-way intersection includes four approach legs—design of the intersection approaches may be even more important for pedestrian and bicyclist safety and convenience than the intersection itself). Groups should choose an intersection where improvements are needed, not one that already accommodates pedestrians and bicyclists fairly well. The project will involve several field visits, so an accessible location is very important.

The final product will be a 15-minute presentation (additional time will be taken for questions) that is delivered during the last week of class. Time limits on presentations will be strictly enforced. The presentation should be given from a carefully-constructed PowerPoint file. This PowerPoint file will be the main product of this assignment, but it should be accompanied by necessary supporting documentation. Required components of the project to be included in the final presentation include:

- A brief discussion of why the intersection should be improved for pedestrians and bicyclists.
- An illustration of the current design of the intersection and approaching street segments in plan view, including key roadway and sidewalk measurements.
- An illustration of the cross-section existing conditions on at least one of the approaches, including key roadway and sidewalk measurements.
- Two-hour traffic counts for autos, pedestrians, and bicyclists during a morning or afternoon "peak" travel period.
- An illustration of the proposed redesign of the intersection and approaching street segments in plan view, including key roadway and sidewalk measurements.
- An illustration of the cross-section of the proposed redesign of at least one of the approaches, including key roadway and sidewalk measurements.
- Multimodal level of service analysis of pedestrian, bicycle, and automobile level of service on one of the intersection approach streets under 1) existing conditions and 2) redesigned conditions.
- Rough, order-of-magnitude cost estimates for the improvements.
- Other education or enforcement strategies that may complement the physical changes.
- Justification of the design changes: 1) appropriate for surrounding roadway and land use context (e.g., does the improvement improve route network connectivity, access to transit, a connection between activity centers?), 2) improves suitability for all roadway users without significant deterioration of conditions for a certain user group, 3) reduces crash risk, 4) is not excessively costly, 5) recommendations from previous pedestrian or bicycle plans, etc.
- Challenges to implementing the recommendations: 1) citizens or groups who may oppose changes, 2) physical design constraints, 3) cost constraints, etc.
- Future phases of the project that could be completed with more public support and funding.

One member from each group should email the instructor with the group members' names and the proposed intersection before Wednesday, March 27th. The final group presentations will be given in class during the final exam period. These presentations will be delivered professionally, as they would be given to public agency staff and elected officials. The final PowerPoint presentation plus supporting documentation for cost estimates, level of service analysis, and other conclusions should be submitted by Wednesday, May 15th. Grading will be done based half on the formal presentation and half on the final materials submitted.

Note that accuracy will be more important than precision in this exercise; i.e., it is more important to demonstrate knowledge of the difference in magnitude of costs between various infrastructure types, rather than know exactly how much each type costs. In addition, Illustrations should include key dimensions, such as street and lane widths, to communicate the existing conditions and proposed changes accurately, but they do not need to be developed using special software. Base aerial photos from Google Earth plus PowerPoint illustrations are sufficient for this project. AutoCAD and other design software is optional.

Grading

Grades will be given on an A to F scale based on the following components of the class:

- Overall class attendance and participation (10%)
- Assignment #1: Memo summarizing agency pedestrian or bicycle meeting (10%)
- Assignment #2: Paper on topic of your choice (40%)
- Assignment #3: Group intersection analysis project (40%)

Assignments are due by midnight on the dates listed above. Each calendar day late will result in loss of one grade (i.e., an "A" assignment will be given a "B"). A paper received at 12:01 a.m. on the day after the due date is considered one day late.

The grading scale will be based on points earned out of 100 possible points in each component area. This scale is:

The overall grading scale is:

98 and above = A+
93 to 97.9 = A
91 to 92.9 = A-
88 to 90.9 = B+
83 to 87.9 = B
81 to 82.9 = B-
78 to 80.9 = C+
73 to 77.9 = C
(and so on)

Class Topics and Reading List

Class 1: Pedestrian and Bicycle Transportation Institutions and Trends (1/28/13)

1.1. US Department of Transportation. *The National Bicycling and Walking Study: 15-Year Status Report*, Federal Highway Administration, Washington, DC. Available online: http://katana.hsrc.unc.edu/cms/downloads/15-year_report.pdf, 2010.

1.2. US Department of Transportation. "United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations," Signed on March 11, 2010 and Announced on March 15, 2010, Available online: http://www.fhwa.dot.gov/environment/bikeped/policy_accom.htm, 2010.

1.3. America Bikes. "Analysis of the New Transportation Bill: MAP-21," Blog post, Available online: http://www.americabikes.org/analysis_of_the_new_transportation_bill_map_21, 2012.

1.4. Wisconsin Department of Transportation. *Trans 75: Bikeways and Sidewalks in Highway Projects*, Available online, http://www.dot.wisconsin.gov/projects/state/docs/complete-streets-rules.pdf, 2010.

1.5. Wisconsin Department of Transportation. "Wisconsin's Pedestrian and Bike Accommodation Law: SS 84.01(35) Complete Streets," Presentation slides, http://www.dot.wisconsin.gov/projects/state/docs/complete-streets-presentation.pdf, 2010.

1.6. Pucher, J., R. Buehler, and M. Seinen, "Bicycling Renaissance in North America? An Update and Re-Assessment of Cycling Trends and Policies," *Transportation Research A*, Vol. 45, No. 6, pp. 451-474, 2011.

1.7. McDonald, N.C., A.L. Brown, L.M. Marchetti, M.S. Pedroso, "U.S. School Travel 2009: An Assessment of Trends," *American Journal of Preventive Medicine,* Vol. 41, No. 2, pp. 146-151, August 2011.

Class 2: Benefits of Pedestrian and Bicycle Transportation & Advocacy Movements (2/4/13)

2.1. Transportation for America. *Dangerous by Design: Solving the Epidemic of Preventable Pedestrian Deaths*, Available online: http://t4america.org/docs/dbd2011/Dangerous-by-Design-2011.pdf, 2011.

2.2. Bicycle Federation of Wisconsin. *2011 Wisconsin Bicycling Benchmarking Report*, Available online, http://bfw.org/wp-content/uploads/2012/03/2011-Wisconsin-Bicycling-Benchmarking-Report-FINAL.pdf, 2011.

2.3. Gotschi, T., and K. Mills. *Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking*, Rails-to-Trails Conservancy and Bikes Belong, Available online: http://www.railstotrails.org/resources/documents/whatwedo/atfa/ATFA_20081020.pdf, 2008. (pp. 3-17)

2.4. Centers for Disease Control and Prevention. "U.S. Obesity Trends: Trends by State, 1985-2010," Website, Available online: http://www.cdc.gov/obesity/data/adult.html#History, Accessed January 18, 2013. (Use the interactive map to explore years before 2010)

2.5. Garrett-Peltier, H. *Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts*, Political Economy Research Institute, University of Massachusetts, Amherst, Available online: http://www.peri.umass.edu/fileadmin/pdf/published_study/PERI_ABikes_June2011.pdf, June 2011.

>>>Paper Topic for Assignment #2 due on Friday, 2/8/13.

Class 3: Travel Behavior: Shifting Automobile Travel to Walking and Bicycling (2/11/13)

3.1. Schneider, R.J. "Theory of Routine Mode Choice Decisions: An Operational Framework to Increase Sustainable Transportation," *Transport Policy*, Volume 25, pp. 128-137, 2013.

3.2. Dill J. and N. McNeil. "Four Types of Cyclists? Testing a Typology to Better Understand Bicycling Behavior and Potential," Working Paper, Portland State University, Oregon Transportation Research and Education Consortium, Available online, http://web.pdx.edu/~jdill/Types_of_Cyclists_PSUWorkingPaper.pdf, 2012.

3.3. Smith, P., M. Wilson, and T. Armstrong. "'I'll just take the car': Improving Bicycle Transportation to Encourage its use on Short Trips, New Zealand Transport Agency, NZ Transport Agency Research Report 426, Available online: http://www.nzta.govt.nz/resources/research/reports/426/docs/426.pdf, 2011. (pp. 114-120)

>>>Memo for Assignment #1 due on Friday, 2/15/13.

Class 4: Pedestrian and Bicycle Safety: Crash Data and Risk Perceptions (2/18/13)

4.1. Wilson, M. "I am not a Bicyclist," Commute Orlando: Encouragement, Education & Advocacy for Bicycling in the Real World, Blog post, July 7, 2011. Available online: http://commuteorlando.com/wordpress/2011/07/07/i-am-not-a-bicyclist/. (Read main post and skim comments.)

4.2. Jacobsen, P.L. "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling," *Injury Prevention*, Volume 9, pp. 205-209, 2003.

4.3. Bhatia, R. and M. Wier. "'Safety in Numbers' Re-examined: Can we Make Valid or Practical Inferences from Available Evidence?" *Accident Analysis and Prevention*, Volume 43, Number 1, pp. 235-240, 2010.

4.4. Audirac, I. "Sharing Fast-Speed and Slow-Speed Roads with Bicyclists and Pedestrians: A Source of Female and Male Driver Frustration?" *Transportation Research Record 2067*, Transportation Research Board, pp. 65-74, 2008.

Class 5: Pedestrian Design Fundamentals (2/25/13)

5.1. Association of American State Highway and Transportation Officials, *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*, First Edition, 2004.

5.2. Pedestrian and Bicycle Information Center. "Engineer Pedestrian Facilities." Web page, Available online: http://www.walkinginfo.org/engineering/, 2013. (read all pages under Section 1: "Roadway and Pedestrian Facility Design" and Section 3: "Street Crossings")

5.3. US Department of Transportation, Federal Highway Administration. *Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations*, FHWA-RD-04-100, Authors: Zegeer, Charles V., J. Richard Stewart, Herman Huang, and Peter Lagerwey, John Feaganes, and B.J. Campbell, Available online: http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf, 2005. (pp. 1-11; pp. 51-61)

5.4. US Department of Transportation, Federal Highway Administration. *Designing Sidewalks and Trails for Access, Part I of II: Review of Existing Guidelines and Practices*, 1999. Available online: http://www.fhwa.dot.gov/environment/sidewalks/sidewalks.pdf. (skim pp. 31-69)

Class 6: Bicycle Design Fundamentals (3/4/13)

6.1. Association of American State Highway and Transportation Officials, *AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities*, Fourth Edition, 2012. (skim document)

6.2. Pedestrian and Bicycle Information Center. "Engineer Bicycle Facilities." Web page, Available online: http://www.bicyclinginfo.org/engineering/, 2013. (skim all pages under "On-Street Facilities", "Shared Use Paths (Trails)", and "Intersections")

6.3. Association of Pedestrian and Bicycle Professionals. *Bicycle Parking Guidelines*, Second Edition, 2010.

Class 7: Pedestrian and Bicycle Facility Design Innovations and Cost Considerations (3/11/13)

7.1. National Association of City Transportation Officials. *NACTO Urban Bikeway Design Guide*. Available online: http://nacto.org/cities-for-cycling/design-guide/, 2011. (skim through several designs)

7.2. Fitzpatrick, K., S.T. Chrysler, R. Van Houten, W.W. Hunter, and S. Turner. *Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report,* Federal Highway Administration, FHWA-HRT-11-039, Available online: http://www.fhwa.dot.gov/publications/research/safety/pedbike/11039/11039.pdf, April 2011. (skim pp. 13-50)

7.3. Los Angeles County. *Model Design Manual for Living Streets*, Available online: http://www.modelstreetdesignmanual.com/download.html, 2011. (Skim document. You must register to download the document, but it is free.)

>>>Paper for Assignment #2 due on Friday, 3/15/13.

Class 8: Pedestrian and Bicycle Programs & Anatomy of a Pedestrian and Bicycle Plan (3/25/13)

8.1. League of American Bicyclists. *Bicycle Friendly America Guidebook*, Available online: http://www.bikeleague.org/members/pdfs/AB-mar-apr2012-forweb.pdf, 2012. (read p. 24-43)

8.2. League of American Bicyclists. *May is National Bike Month: Getting Started*, Available online: http://www.bikeleague.org/programs/bikemonth/pdf/national_bike_month_guide.pdf, 2011.

8.3. Pedestrian and Bicycle Information Center. *Safe Routes to School Guide Introduction to Safe Routes to School: the Health, Safety and Transportation Nexus*, Available online: http://guide.saferoutesinfo.org/pdf/SRTS-Guide_Introduction.pdf, February 2007. (skim document)

8.4. Safe Routes to School San Francisco. *San Francisco Bike to School Day 2011 Organizer Handbook*, Available online: http://www.casaferoutestoschool.org/wp-content/uploads/2012/02/2011Handbook.pdf, 2011. (skim document)

Groups will be assigned one of the following plans to read and review:

A. Chicago Department of Transportation. Chicago Pedestrian Plan, Available online, http://chicagopedestrianplan.org/, 2012.

B. Chicago Department of Transportation. Chicago Streets for Cycling 2020 Plan, Available online, http://www.cityofchicago.org/content/dam/city/depts/cdot/bike/general/ChicagoStreetsforCycling2020.pdf, 2012.

C. City of Milwaukee, WI. Milwaukee By Bike, 2010 Bicycle Master Plan, Plan and Maps, Available online, http://www.city.milwaukee.gov/ImageLibrary/User/milbtf/Milwaukee_by_Bike__Plan_Only__Public_Draft.pdf, 2010.

D. City of Madison, WI. Mayor's Platinum Bicycling Committee Report: Making Madison the Best Place in the Country to Bicycle, Final Report, Adopted by Madison Common Council, Available online: http://www.cityofmadison.com/trafficEngineering/documents/PlatinumAdopted040808sm.pdf, 2008.

E. Madison Area Metropolitan Planning Organization. Madison Urban Area and Dane County Bicycle Transportation Plan, Available online, http://www.cityofmadison.com/trafficEngineering/documents/BikePlan2000.pdf, 2000.

F. Wausau Metropolitan Planning Organization. Wausau MPO Bicycle and Pedestrian Plan, 20-Year Planning and Implementation Guide, Available online, http://www.co.marathon.wi.us/LinkClick.aspx?fileticket=_fdaICy60TI%3d&tabid=382, 2009.

G. City of West Allis, WI. City of West Allis Bicycle and Pedestrian Master Plan, Prepared by the Bicycle Federation of Wisconsin for the City of West Allis, WI, Available online: http://www.westalliswi.gov/DocumentCenter/View/638, 2008.

H. Village of Shorewood, WI. Village of Shorewood Bicycle Implementation Plan, Available online, http://www.villageofshorewood.org/vertical/sites/%7B5230848F-4209-4497-9E80-89EC90BA64AE%7D/uploads/Shorewd_Bicycle_Implementation_Plan_Oct_2012.pdf, 2012.

Small group discussion questions will include:

- Why did the agency develop the plan? (What motivated them to develop the plan?)
- What was your favorite part of the plan? What was the "strongest" part of the plan?
- What was your least favorite part of the plan? What was the "weakest" part of the plan?

Full class discussion will address:

- Common strengths & weaknesses (2-3 from each group)
- Differences between local and regional plans

>>>Proposed intersection and group members for Assignment #3 due on Wednesday, 3/27/13.

Class 9: Field Trip—Walking Field Trip in area south of UWM (4/1/13)

9.1. U.S. Department of Transportation, Federal Highway Administration. *How to Develop a Pedestrian Safety Action Plan*, Available online: http://katana.hsrc.unc.edu/cms/downloads/howtoguide2006.pdf, March 2008. (skim document)

9.2. Clifton, K.J., A.D. Livi Smith, and D. Rodriguez. "The Development and Testing of an Audit for the Pedestrian Environment," *Landscape and Urban Planning*, Volume 80, 2007, pp. 95-110.

Class 10: Pedestrian and Bicycle Data Collection and Performance Measures (4/8/13)

10.1. Schneider, R.J., L.S. Arnold, and D.R. Ragland. "A Methodology for Counting Pedestrians at Intersections: Using Automated Counters to Extrapolate Weekly Volumes from Short Manual Counts," *Transportation Research Record 2140*, pp. 1-12, 2009.

10.2. Alliance for Biking and Walking, *Bicycling and Walking in the United States: 2012 Benchmarking Report*. Available online, http://www.peoplepoweredmovement.org/site/index.php/site/memberservices/2012_benchmarking_report/, 2012. (pp. 8-19)

10.3. City of Portland, OR. *2011 Portland Bicycle Counts Report*, Available online: http://www.portlandoregon.gov/transportation/article/386265, 2012.

Class 11: Pedestrian and Bicycle Suitability Assessment Methods (4/15/13)

11.1. Dowling, R., D. Reinke, A. Flannery, P. Ryus, M. Vandehey, T. Petritsch, B. Landis, N. Rouphail, and J. Bonneson. *Multimodal Level of Service Analysis for Urban Streets*, National Cooperative Highway Research Program Report 616, Transportation Research Board, Available online: http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_616.pdf, 2008. (pp. 1-16; pp. 82-91)

11.2. Gehl, J. *Public Spaces & Public Life Studies*, City of Adelaide, City Council, Australia, Available online, http://www.adelaidecitycouncil.com/assets/acc/Council/docs/public_spaces_and_public_life_report.pdf, 2002. (pp. 48-67)

11.3. US Department of Transportation, Federal Highway Administration. *Pedestrian and Bicyclist Intersection Safety Indices: Final Report*, Authors: D.L. Carter, W.W. Hunter, C.V. Zegeer, R. Stewart, and H. F. Huang, Pedestrian and Bicycle Information Center, Available online: http://www.fhwa.dot.gov/publications/research/safety/pedbike/06125/, 2006. (p. 1; pp. 49-50)

Class 12: Pedestrian and Bicycle Prioritization Methods (4/22/13)

12.1. Goodman, D., R. Schneider, and T. Griffiths. "Put Your Money Where the People Are," *Planning*, June 2009.

12.2. City of Seattle, WA. Seattle Pedestrian Plan, Appendix A: Methodology and Analysis, Available online: http://www.seattle.gov/transportation/pedestrian_masterplan/docs/Methodology_Appendix040209_fixed.pdf, 2009. (skim appendix)

12.3. City of Alexandria, VA. *City of Alexandria Pedestrian and Bicycle Mobility Plan*, "Appendix I: Prioritization of Recommended Improvements," Available online: http://www.alexandriava.gov/uploadedFiles/localmotion/info/gettingaround/Appendix_060108.pdf, 2008. (skim appendix)

Class 13: Pedestrian and Bicycle Demand Estimation Methods (4/29/13)

13.1. Schneider, R.J., T. Henry, M.F. Mitman, L. Stonehill and J. Koehler. "Development and Application of Volume Model for Pedestrian Intersections in San Francisco, California," Transportation Research Record, Transportation Research Board, Volume 2299, pp. 65-78, 2012.

13.2. Griswold, J.B., A. Medury, and R.J. Schneider. "Pilot Models for Estimating Bicycle Intersection Volumes," *Transportation Research Record*, Transportation Research Board, Volume 2247, pp. 1-7, 2011.

Class 14: International Pedestrian and Bicycle Transportation & Work Session (5/6/13)

14.1. Pucher, J., J. Dill, and S. Handy. "Infrastructure, Programs, and Policies to Increase Bicycling: An International Review," *Preventative Medicine*, Volume 50, pp. S106-S125, 2010.

14.2. Buehler, R. and J. Pucher. "Cycling to Sustainability in Amsterdam," *Sustain: A Journal of Environmental and Sustainability Issues*, Fall 2009/Winter 2010, pp. 36-40, Available online: http://policy.rutgers.edu/faculty/pucher/amsterdam.pdf, 2010.

14.3. City of Copenhagen, Denmark. *Copenhagen City of Cyclists: Bicycle Account 2010*, Available online: http://www.cycling-embassy.dk/wp-content/uploads/2011/05/Bicycle-account-2010-Copenhagen.pdf, 2010.

14.4. European Platform on Mobility Management. "TEMS: The EPOMM Modal Split Tool", Available online: http://www.epomm.eu/tems/, 2013.

Class 15: In-Class Presentations of Class Projects/Course Wrap-Up (5/13/13 or Final exam period)

>>>Presentation file and supporting documentation for Assignment #3 due on Wednesday, 5/15/13.