

# CE 474 – Class 03

August 27, 2015

# TRANSPORTATION .... in the news

Amy, who lives in Sherwood but works in downtown Portland, has a rule. If she arrives at an intersection and the pedestrian timer has counted down to four or less, she stays put and waits for the next walking phase. Five or more, she crosses.

"I like it," Amy says of the countdown signal at Southwest 10th Avenue and Burnside Street, right in front of Powell's City of Books.

Randy Wagoner, a tourist from Cherryvale, Kan., favors countdown pedestrian signals as well, though for a different reason.

As he waits to cross Burnside on his way to Powell's, Wagoner explains that the countdown tells him how fast he has to walk, or maybe even run.

"I always push it," he says. "If there's less time I hustle."

Portland pedestrians used to see only Walk or Don't Walk, or a walking or standing figure telling them what to do. But in 2002 Portlanders started getting what traffic professionals call countdown signal timers. About 870 of the city's 1,080 traffic signals feature the countdown.

Sometime next year, the transition will be complete and all pedestrians will be confronting the countdown, except for jaywalkers. The countdowns are supposed to keep pedestrians safer. And they do, according to a slew of studies. Whether they keep drivers safer is a matter of which study you believe.



by: TRIBUNE PHOTO: JONATHAN HOUSE - Peter Koonce is in charge of traffic signals for the city of Portland, where all pedestrian signals will have countdowns by the end of 2014.

## Walkers benefit; drivers don't

A large-scale study by the Michigan Department of Transportation looked at intersection crash reports and found fewer pedestrians getting hit by cars where countdown signals were employed.

The Toronto Transportation Division in Canada looked at every accident at 1,794 Toronto intersections during the course of five years and found that while pedestrians were safer with countdown signals, car crashes at countdown intersections increased 5 percent — an extra 21 collisions citywide. More cars were hitting other cars at intersections with countdown signals.

According to the study, the crash increase is greatly due to an increase in tailgating among drivers who, because of the countdowns, know when their green is about to turn yellow and speed up to try to make the light. In fact, the authors of the Canadian study suggest that engineers consider a device that would hide the pedestrian countdown from oncoming drivers.

# Today's outline

- Hour 1: Activities #3 and #4
- Hour 2: Activity #5
- Hour 3: Activity #6

## Class 03 (8.27)

Do: A03, A04

Do: A05

Do: A06

Homework (due 8.31)

- Read STM chapters 1, 2
- Do: A07 CTQ
- Read: Chapter 2 overview
- Read A08
- Do: A08 CTQ

ACTIVITY  
**3**

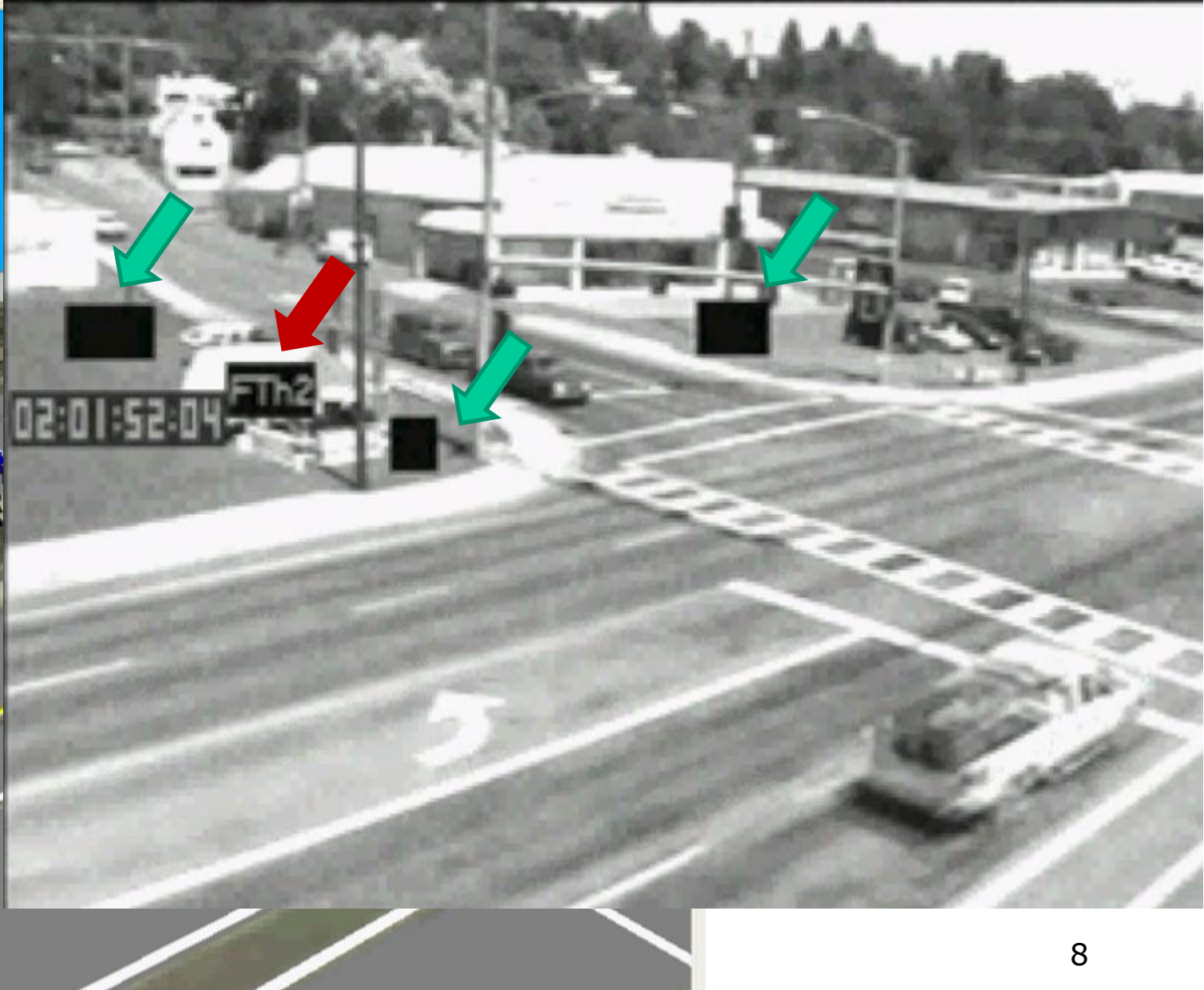
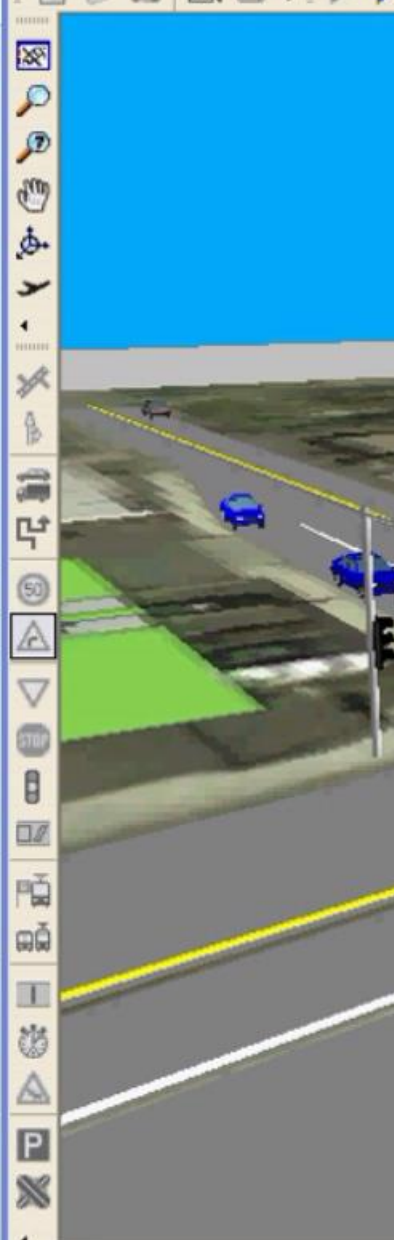
# Exploring the System: Driving Along an Arterial and Noting What You See















- Good teamwork doesn't just happen...

# Working Together: Team Building for Effective Learning and Design



Name	Reading
Hansen Morris Cornwell Keller	Designing Teams and Assigning Roles
Grote Hartzell Lecates	Team Reflection
Larrea Cupps Saras Skinner	Teamwork Methodology
Scheel Kury Landa Geibel	Designing Teams and Assigning Roles

Name	Reading
Bode Hale Dashti Maffey	Teamwork Methodology
Alzufairi Almakrab Crow Elmore	Team Reflection
Ryu Alrashdi Bernauer Taylor-Stiffarm	Designing Teams and Assigning Roles



### PURPOSE

In this activity, you will learn about effective team building and the factors that contribute to successful teams.

Task	Group/Team	Time
Gather in group		
Identify 3-5 things that you learned that will help you create an effective team/group [Roles: captain, recorder, spokesperson]	Group discussion	15 min
Report on group list to class	Group	5 min

Name	Group	Team	Intersection	System
Hansen Morris	A	1	SH 8/Warbonnet	SH 8, Airport to Farm
Cornwell Keller		2		
Grote Hartzell	B	3	Palouse River Drive	US 95, SH 8 to PR Drive
LeCates		4		
Larrea Cupps	C	5	SH 8/Line	SH 8, Farm to Jackson
Saras Skinner		6		
Scheel Kury	D	7	US 95/Sweet	US 95, SH 8 to PR Drive
Landa Geibel		8		
Bode Hale	E	9	SH 8/US 95	SH 8, US 95 to Mt View
Dashti Maffey		10		
Alzufairi Almakrab	F	11	SH 8/Warbonnet	SH 8, Airport to Farm
Crow Elmore		12		
Ryu Alrashdi	G	13	SH 8/Line	SH 8, Farm to Jackson
Bernauer Taylor-Stiffarm		14		



Task	Group/Team	Time
Prepare individual answers to Critical Thinking Questions	Individual	5 min
Discuss answers and prepare synthesis that represents group ideas	Group	15 min
Prepare team agreement (Word document); due at end of class today	Team	

**IN MY PRACTICE...***by Tom Urbanik*

Traffic signal timing has several aspects ranging from a simple signalized intersection to traffic signals adjacent to railroad grade crossings. While the timing engineer may work regularly on isolated and coordinated intersections, occasionally a special problem may arise that the engineer has not worked on such as railroad preemption of a traffic signal. The *Traffic Signal Timing Manual* has practical guidance which the signal timing engineer can use to determine the requirements for operating the traffic signal. It should be noted that there may be situations that are too complex for the timing engineer to comfortably address. By referring to the *Traffic Signal Timing Manual*, the engineer may conclude that they are not comfortable with tackling the problem, but can become knowledgeable enough to seek the appropriate assistance to create a safe and efficient solution.

**Critical Thinking Questions (revised)**

1. What is the purpose of the STM2.
2. Describe the outcomes based approach to signal timing.
3. List each of the chapters of the STM2 and describe the purpose of each in one sentence. Briefly describe the three parts into which the chapters are organized.
4. Which two chapters do you think are most pertinent to your work in this class?
5. Identify an advanced traffic control concept in part 3 of the STM2. Conduct a web search and write a one paragraph summary of this concept. Identify your web source.

Number and Title	Type
8 Modeling Traffic Flow at Signalized Intersections	<i>Reading</i>
9 What Do You Know About Queuing Systems?	<i>Assessment</i>
10 Using High Resolution Field Data to Visualize Traffic Flow	<i>Discovery</i>
11 From Model to the Real World: Field Observations	<i>Field</i>
12 Basic Operational Principles	<i>In Practice</i>

## ACTIVITY

## 8

## Modeling Traffic Flow at Signalized Intersections



# What's next...

## Due Monday (Class 04)

- Activity #7
  - Read chapter 1 of STM, skim table of contents of other chapters
  - Critical Thinking Questions [revised, individual]
- Read Chapter 2 overview
- Complete Activity #8 [individual]
  - Glossary ("terms" only – write in book)
  - Critical Thinking Questions (Word document)



# Reflection

- Based on the variety of activities that we completed today, what one point was most meaningful to you?

[Email short answer to each question: [mkyte@uidaho.edu](mailto:mkyte@uidaho.edu)]