



Game Day Traffic

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Agenda

1. The Problem
2. Locations of Study
3. Our Experiment
4. Data Analysis
5. The Solution
6. Overall Conclusion



The Problem

- **Gameday Traffic Management**
- **Three Critical Locations of Congestion Concerns**
- **Key Ideas To Consider:**
 - Update/Expand Existing Gameday Parking Lots
 - Add More Traffic Direction Signs
 - Shuttle Service for Parking Lots at Further Distances
 - Adaptable Congestion Alleviation Plans With The Evolving Campus Construction

CIE 498/598: Transportation Planning Methods and Practices (Fall 2025)

Group Project Description

Topic 1: Gameday traffic management

Figure 1 marks out three critical locations of congestion concerns.

- Location 1 (College Ave * Stillwater Ave): Signal timing update (i.e., switching to flashing yellow) is initiated with Old Town for congestion alleviation with impacts to be evaluated.
- Location 2 (College Ave * Park St): This is the most critical bottleneck with the parking plan implemented in the current game season.
- Location 3 (Rangeley Rd * Park St): The built roundabout helps with congestion alleviation but is hard to replicate at other locations in recent years due to construction costs.

The problems to be solved include whether the lots allocated for gameday parking should be updated/expanded for congestion alleviation, whether/where parking and traffic direction signs are needed for congestion alleviation, whether shuttle service is needed if parking lots far away from the arena will be used, how the congestion alleviation plan needs to be adapted in considering the ongoing/new construction on campus, etc.

The research output should help create a [Gameday Parking Map](#) for public direction and help improve gameday visitors' transportation experience on campus.

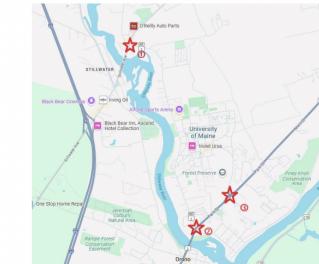


Figure 1 Critical Locations

Main Focus: Men's Hockey

Every single men's hockey home game this season has been a **SELL-OUT!**

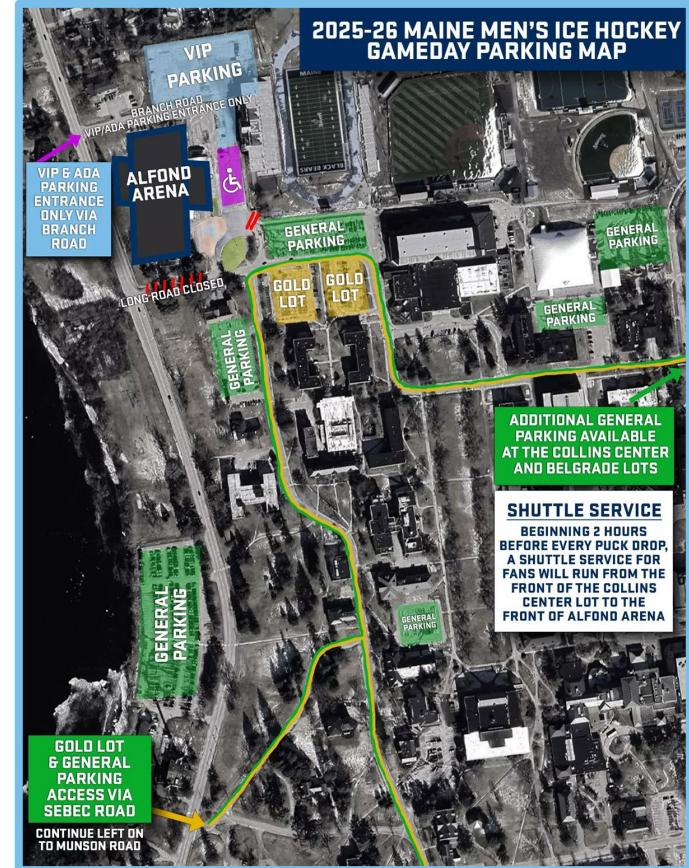


That means over 5,000 fans trying to leave campus at the exact same time.

Parking Overview

Four Main Parking Zones:

- Gold Lots
- Steamplant/Roadside General Parking
- Central Campus Lots
- Collins Center (CCA) & Belgrade



Study Area

Three Critical Locations:

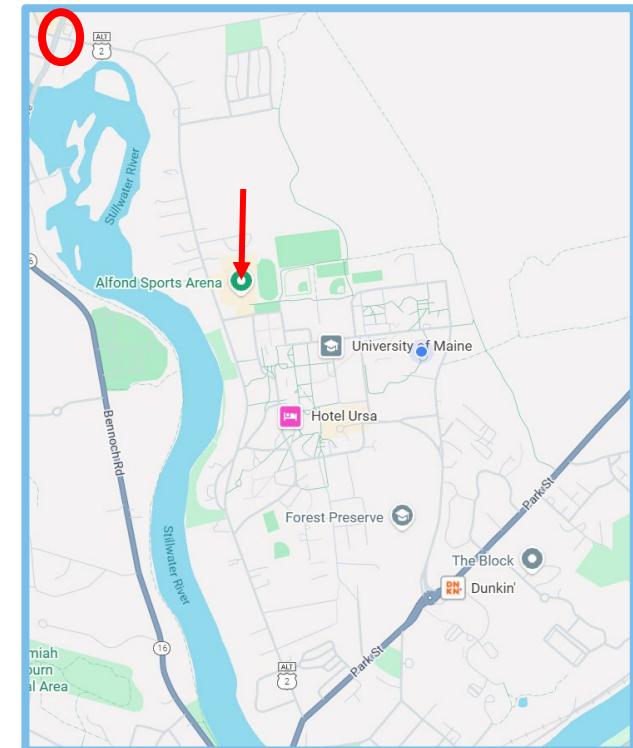
- **Location 1:** College Ave & Stillwater Ave
- **Location 2:** College Ave & Park Street
- **Location 3:** Rangeley Road & Park Street (Roundabout)



Location 1: College Ave & Stillwater

Problems:

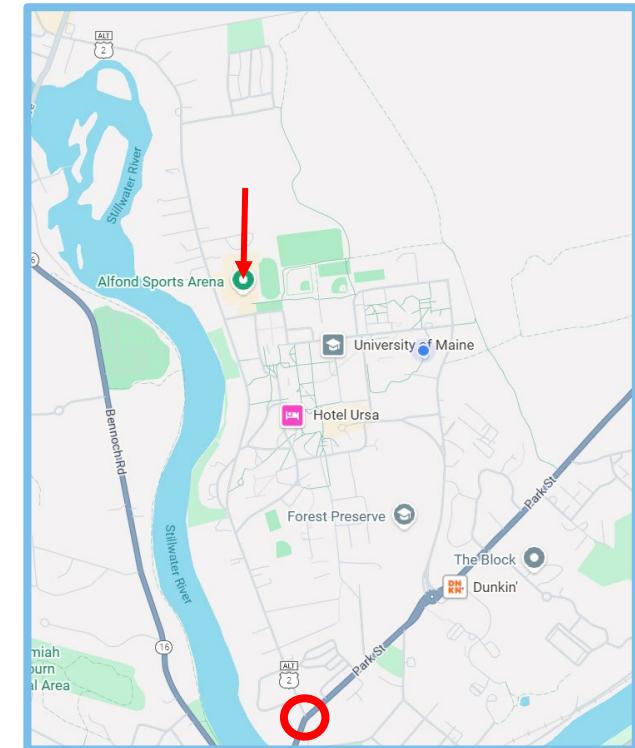
- Over saturated quickly
- No post game signal timing
- Slow travel towards Old Town & I-95



Location 2: College Ave & Park Street

Problems:

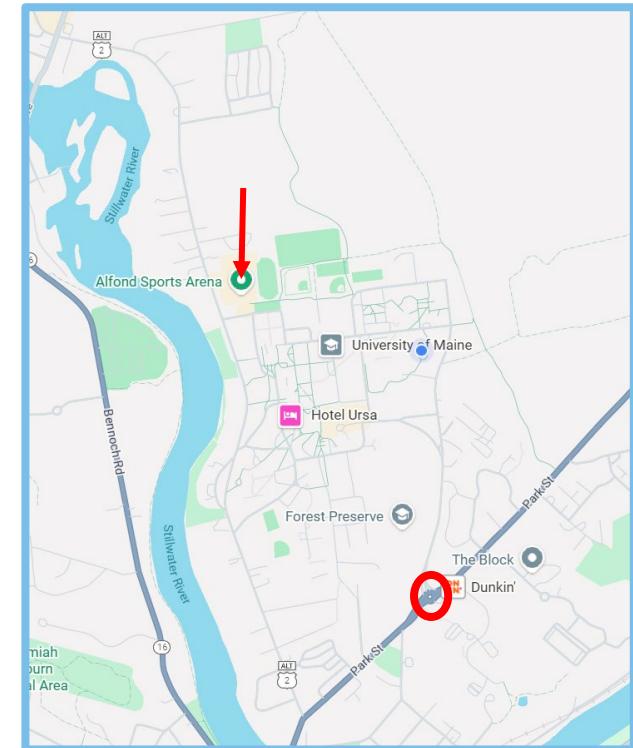
- Primary bottleneck
- Signal timing is not design for event surges
- Queues rapidly grow in every direction



Location 3: Rangeley Road Roundabout

Problems:

- Simultaneous multi-direction surges
- Queue spills back into campus
- Entry lanes jammed



Our Experiment

Plan:

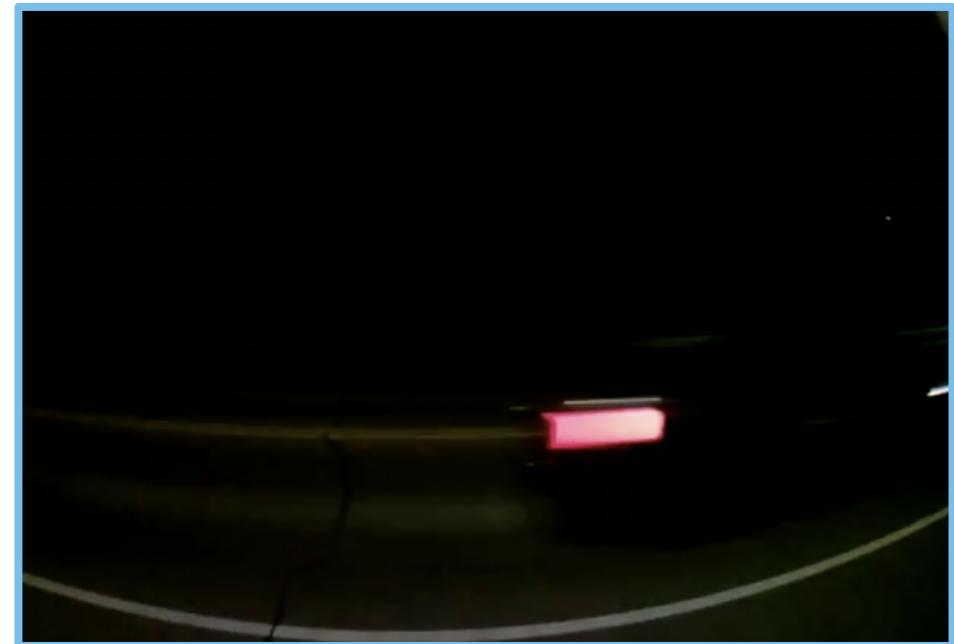
- Set CountCam4 devices at each intersection
- Obtain recordings of passing cars before & after game time
- Count the cars & get sufficient data



Our Experiment

Reality :

- Set CountCam4 devices at each intersection
- Recordings were too dark
- Not enough data for comparisons
- Seek an alternate route



Data Analysis

If We Received Sufficient Data :

Use softwares such as SUMO to test signal timing changes of the intersections

New Approach :

- Watch videos and identify busiest location
- Utilize our own experiences & peer feedback

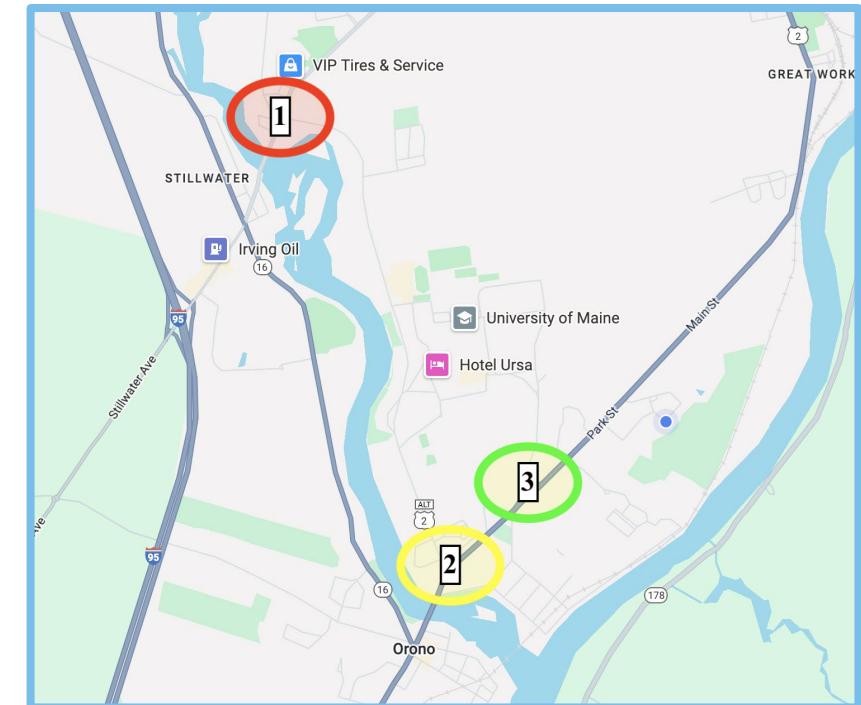


SUMO
SIMULATION OF URBAN MOBILITY

Data Analysis

Results:

- **Busiest:** Location 1 College Ave & Stillwater Ave
- **Least Busiest:** Location 3 Rangeley Road & Park Street (Roundabout)

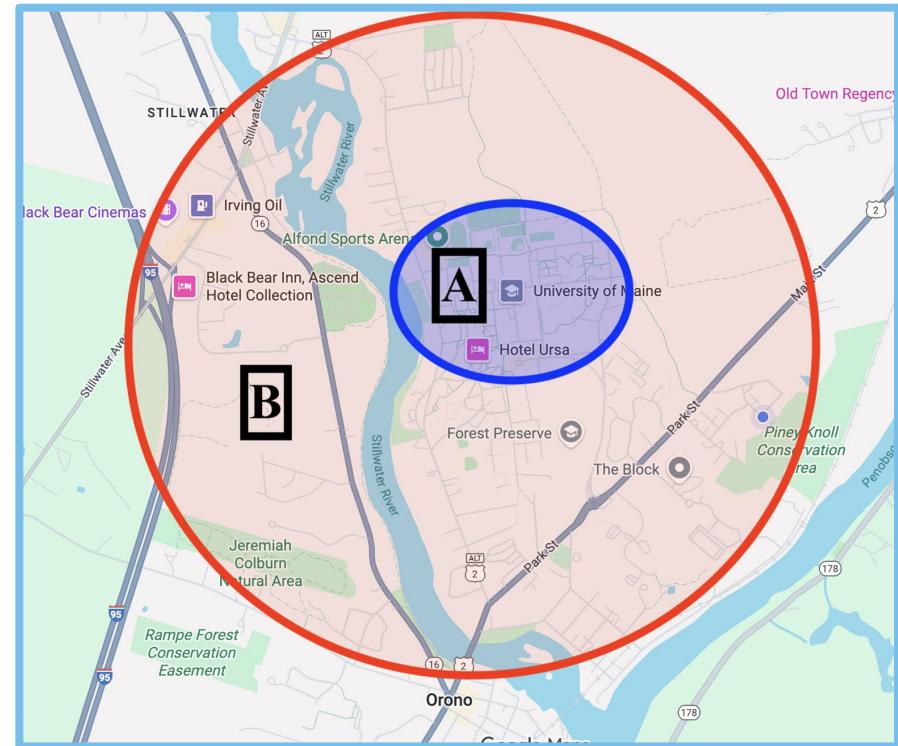


The Solution

Two Major Components :

A. Managing traffic flow
inside campus

A. Managing traffic flow
outside campus



Solution Breakdown - Part A: Within Campus

Manage the Exit Routes:

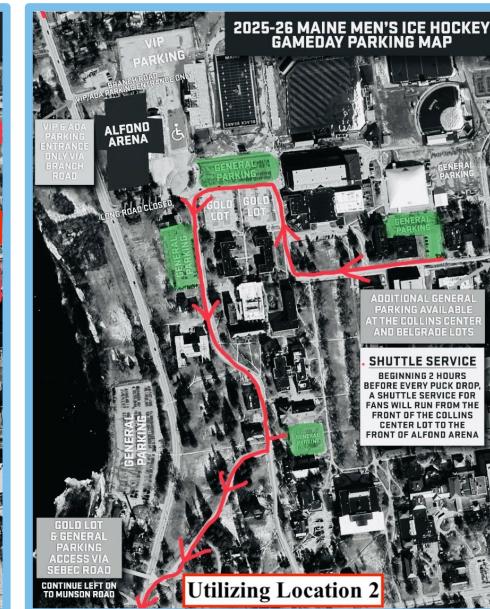
- Map out travel paths

Eliminate Cross -Traffic Interactions:

- Mitigate left -turns
- Increase right turns
- Have police help monitor & guide these areas

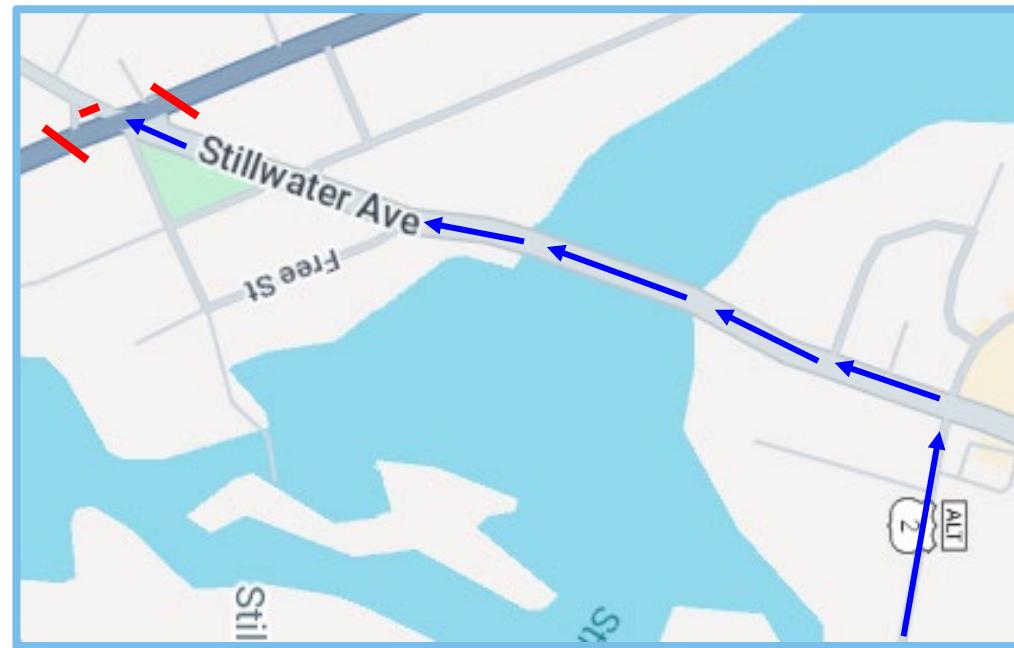
Utilize Rangeley Road Roundabout:

- Constant flow
- Safer



Solution Breakdown - Part B: Outside Campus

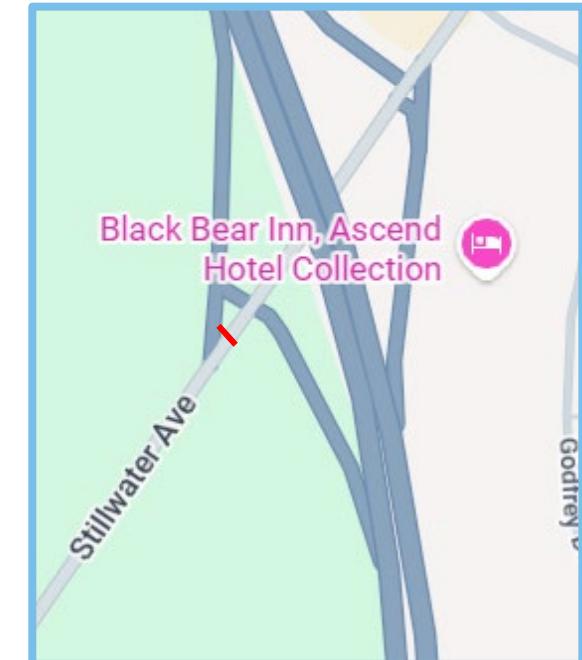
Temporary Eastbound Shutdown of Stillwater Ave:



Solution Breakdown - Part B: Outside Campus

Temporary Eastbound Shutdown of Stillwater Ave:

- Video Boards
- Police Officers
- 1 Hour Shutdown



Overall Conclusion

- The goal of transportation is to move people from one place to another in a **safe** and **effective manner of time** .
- While there are many other possible solutions, we believe this was the solution that best aligned with our **community** .
- If you **add time by being safe** , you will always **reach your destination faster** than if you **cut time by not being safe**

Thank You!

Any Questions or Comments?
