Tactical Urbanism

Atlanta

5th Street

Fall 2015

ACKNOWLEDGMENTS

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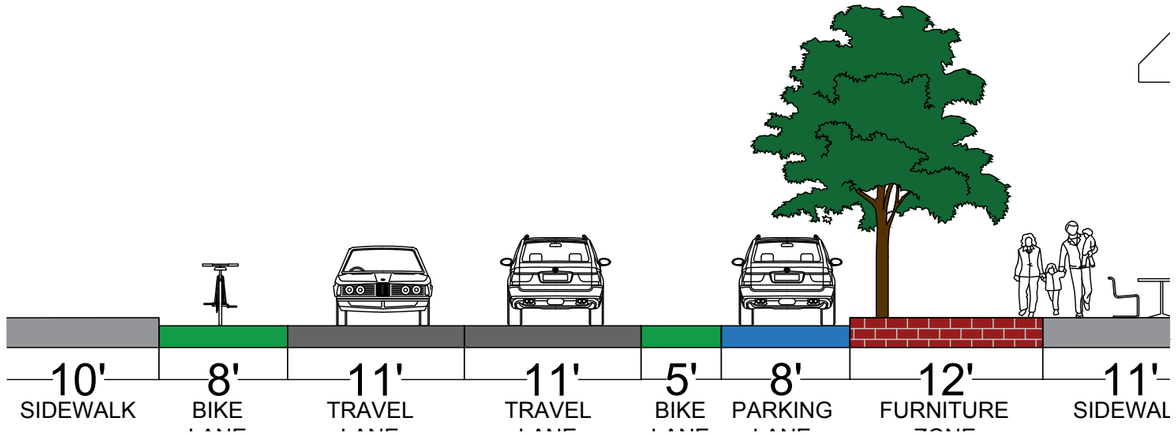
INTRODUCTION

This report not only documents the methodology, results, and conclusions of our tactical urbanism project, but also seeks to serve as a reference for future tactical urbanism projects. Tactical urbanism is a wonderful tool for citizens wanting to improve their city or draw attention to unsafe or unpleasant incomplete streets. Planners can use urban planning both as an tool to educate the public about new infrastructure, or the potential of complete streets and public spaces. Tactical urbanism can be used from an incremental planning approach, as a tool to test run a potential improvement before putting it into a long range plan.

We encourage you to use our project as a case study for your own tactical urbanism project. We hope you are inspired to change your city for the better.

SITE description

The block we chose to study is the northern half of 5th Street between Spring Street and Peachtree Road West. This block consists of a sidewalk, 8-foot bike lane, and 11 foot automobile lane. Even though the road is property of the City of Atlanta, it is surrounded by Georgia Tech property. The adjacent land use to the northern half of the block is surface parking and the Georgia Tech Parking Facility Building.



The block itself is small in length and has stoplights typically giving priority to the cross streets on either end. Due to this, while vehicular volume can be at times high, vehicular speeds are typically low. Bicyclists typically ride at a moderate pace, 10 - 13mph, while vehicular speeds were, when not decelerating for a stop, were also typically low.

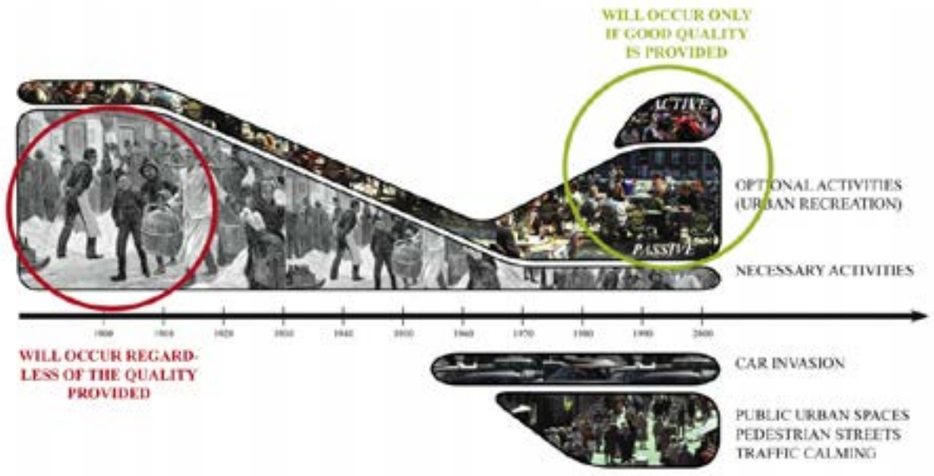
This block is part of a major entrance to campus, and is used by a variety of modes throughout the day.

Pedestrians walking to or from the Midtown MARTA station are likely to take this route. The public parking lot is a large generator of pedestrian traffic as well. Various shuttles (Tech Trolley, private) use this block, however there are not trolley or MARTA bus stops on the northern side of the block.

This block is also an essential segment of the 5th Street bike route connecting Midtown to the Georgia Tech Campus via a bike lane.

The land use surrounding this block is zoned high density commercial, and consists of several land uses that generate high pedestrian traffic throughout the day.

SITE current conditions



THE PEDESTRIAN EXPERIENCE

The initial assessment of the site shows not only a bike lane that is regularly blocked, but also an inhospitable pedestrian environment. The long blank facade, fenced off surface parking lot, and lack of street trees or furniture make this side of the street an uninviting public space that falls into Category F - Inactive on Jan Gehl' public life street facade scale.

Based on prior observation, unlike all of the surrounding blocks in Tech Square, that have a higher facade category, a larger more inviting sidewalk with furniture, street trees, and bike racks; pedestrians do no stop to linger on this section of the block. The 5th Street and Spring Street intersection is always full of pedestrians lingering while waiting for the light to change, but the opposite intersection hardly ever had pedestrians waiting to cross. Most people either crossed against he light, or turned left down Peachtree St.

Standing on a street corner waiting for a light to change is considered a necessary activity within public space. We observed hardly any incidences of occurrences of optional activities.

THE BICYCLE EXPERIENCE

While the 8 foot bicycle lane provides more than enough room for bicyclists to safely traverse this corridor, the lane is often blocked by vehicles parked within the lane.

SITE problem identification

Within the past few years, both the bicycling culture and amount of bicycling infrastructure within the city has grown, and will continue to do so in the future. With this increase in infrastructure requires both education of all users on the proper use of these new lanes, and proper enforcement. Unfortunately, the city has lagged in both of these areas, leading to a rash of vehicles parking in bike lanes. A regular bike commuter often sees this occurrence daily.

Communication with the relevant authorities has shown results in some cases, for example, after talks with the Georgia Tech Parking Department, the drivers of campus transit vehicles, such as the Stingerettes, were instructed to no longer park in bike lanes. However, repeated calls to Atlanta Police and Park Atlanta typically do not yield any results, and enforcement of this matter has not been seen to be taken seriously yet. Some members of the bicycle commuter community have taken to calling 911 in order for their reports to be taken seriously.

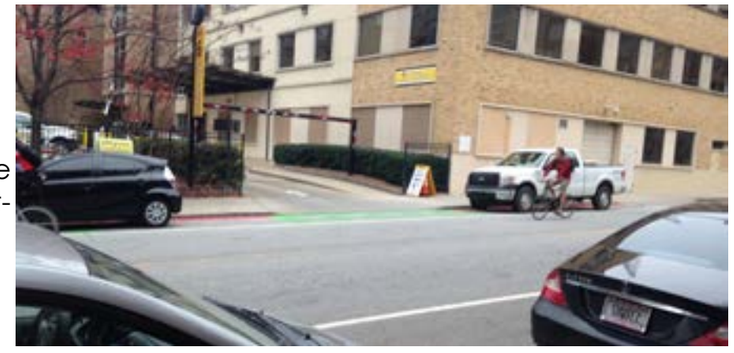
When vehicle park in bike lanes, bicycles are forced to merge out of their dedicated lane and merge into vehicular traffic. This forced and often unexpected interactions can lead to crashes. The merging out of a protected lane can also be intimidating for the new or more cautious bicyclists that infrastructure propotes to encourage to become more regular bicyclists. From a bicyclists perspective, the regular lack of enforcement of such violations and lack respect for dedicated road space leads one to become discouraged, and believe that although, bicycles do have a right to the road, they are seen as second class citizens by the city when it comes to safety prioritization . For example, would the same people parking in bike lanes be willing to park in a vehicular lane of travel? How long would this behavior be tolerated by both citizens and authorities?

While a lack of enforcement is a main cause of this behavior, design can influence behavior, such as the case of the 5th Street bike lane. The bike lane on our study block appears to be an 8 foot parking lane that was converted to become a bike lane. While this width provides ample room for bicyclists, 3 feet more than the typical 5 foot bike lanes, because the lane was not narrowed, it is the ideal size for vehicles to pull into and be completely out of the flow of traffic in the travel lane. One small no parking sign was installed mid-block, but it is largely ignored.

This block contains several commercial businesses and restaurants which rely on freight and deliveries. There currently no designated loading zone close by, so delivery vehicles often use this wide section of bike lane to park and unload.

While metered parking is enforced heavy handedly, Park Atlanta, the enforcement authority for parking within the city, does not ticket vehicles illegally parked in bike lanes. We observed several times, Park Atlanta officers actively ignore vehicle parked in the bike lane, as seen in the photo to the left.

Delivery vehicles and those running short errands such as the ones seen to the left often park in the bike lane forcing bicyclists out of their protected lane and into traffic.



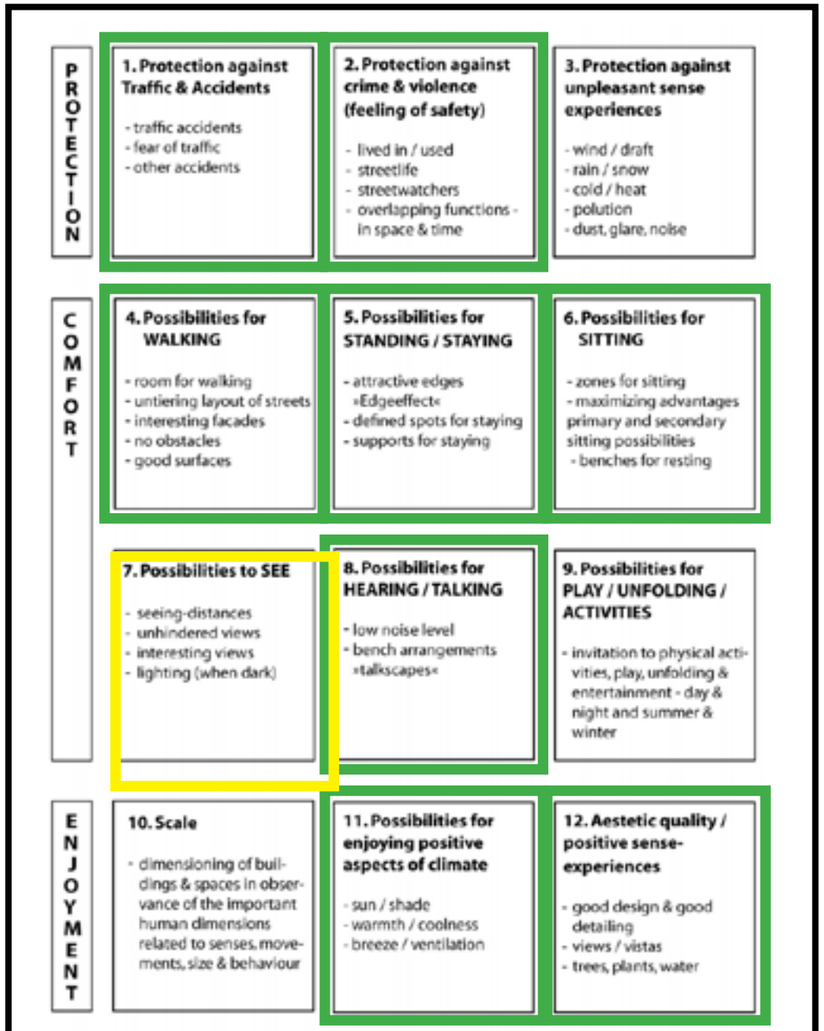
The occurrence of vehicles parking in this particular bike lane happens so regularly, it is captured on a variety of aerial imagery - nearmap and google - as well as google street view.

SITE treatment design

In keeping with the principals of complete streets - we wanted to design our treatment to address the failings of this block for all users of the road. We chose to focus on the pedestrian and bicycle experience, and created our design accordingly.

To address the identified problem we evaluated the structural source of the problem, a bike lane wide enough to accommodate parking by motorist. Initially we considered creating a protected bike lane to physically separate motorist from the bike lane. While this treatment would likely prevent the undesired behavior of motorists it would also present a potential road hazard. If our treatment malfunctioned during our intervention period it could cause harm to persons or property.

We decided that the best way to attempt to improve the road, is to widen the sidewalk through the creation of a furniture zone.



Of the 12 Criteria for a quality public space developed by Jan Gehl, the block only satisfied one, highlighted in yellow. We hope with our treatment to improve upon 8 of these criteria, creating a more inviting and activated street.

The most realistic simulated sidewalk expansion is shown here. A layer of bricks creates raised furniture zone that is flush with the sidewalk, and mimics the brick across the street. The planters place a vertical structure closer into driver's cone of vision forcing them to pay more attention to the bike lane. The planters also provide a vertical buffer from traffic for the occupants of the tables and chairs, creating a safer more inviting catalyst for engaging in optional activities.

Due to material and labor restrictions, we also simulated an expansion of the sidewalk through the use of paint. The entire bike lane was re-stripe to be 5 feet wide, and the space between the sidewalk was filled in with red paint. At driveways, green sections were painted to make drivers aware that they are turning through a bike lane, and the bike lane is striped to signal for bicyclists to be aware of turning cars.

The actual treatment installed at 5th Street was comprised of three different sections. Section One was a no treatment section from West Peachtree Street to the entrance driveway for the adjacent parking lot. Section Two was a full sidewalk extension from the motorcycle driveway to the exit driveway of the parking lot. This section incorporated bricks as the sidewalk extension, planters and Poinsettia plants as a barrier between the roadway and the sidewalk, and the table and chairs along the sidewalk. Section Three was a red zone from the exit driveway of the parking lot to the end of the sidewalk. This section incorporated a three foot wide red zone between the curb and the bike lane.

STRATEGY permits and permissions

Unlike more typical tactical urbanism projects we were limited in project scope by personal and university liability considerations. In fact, our original project proposal - to simulate a raised crosswalk with a hawk signal on a phantom crosswalk location on 10th Street, while agreed that it was a needed treatment was tabled due to concerns about pedestrian and vehicle crashes due to the roadway consisting of four lanes.

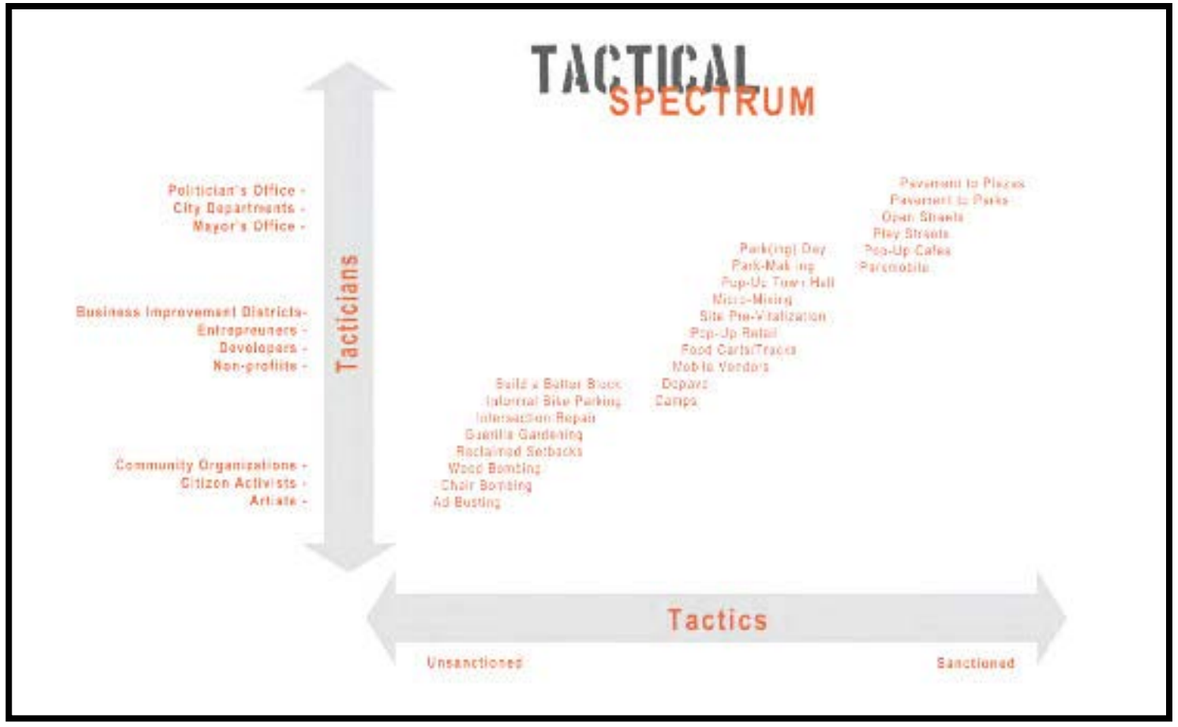
LIABILITY ISSUES

Because this project was a sanctioned project of our Complete Streets class at Georgia Tech, the potential issues of liability for both ourselves and our professor was a concern we had to consider when choosing a site and treatment. We had to ensure our design would not put pedestrians or bicyclists in any potential conflicts with vehicles. As the intent of the treatment is to keep vehicles out of the lane, we did not worry about liability from potential harm to vehicles colliding with our treatments, since they would be illegally driving in the bicycle lane to begin with.

OBTAINING PERMITS AND PERMISSION

5th Street, while being completely surrounded by Georgia Tech property, is still a City of Atlanta roadway. Through our professor, we sought blanket permission for our project from Becky Katz, the new Chief Bicycle Officer for the City of Atlanta, which we received. Because we were not seeking to put on an event or close any of the roads to vehicular traffic, official permits from the city were not needed for this project.

We received permission to proceed with our project as long as we did not actually install anything in the roadway. This was duly noted, however, we made the decision to proceed with our original plan, making sure that our treatments would not cause any bodily harm to the users of the bicycle lane or sidewalk.



On the tactical urbanism spectrum, our project falls on the low end of tacticians, and the mid point of tactics.

DURING THE BUILD

During the implementation of our project, we were reported to the police who came out to make sure we had permission for this project. We gave them the contact information for professor and ourselves. Since we were installing on a Sunday, they had to wait until Monday to check our credibility, however, after we explained the scope of the project and the goals, assuring them that we were not going to block the travel lanes, they let us continue. The policeman we spoke with was actually personally in support of our treatment, however, his duty required him to make sure we had adequate permissions.

In the future, we suggest getting permission in writing, if permission is obtained.

STRATEGY supplies and budget

SUPPLY LIST

FURNITURE ZONE

Planters
- *6 wooden pallets*
- *wood screws*
- *drywall screws*
- *tools*
- *gloves*
- dust mask
- 6 poinsettia plants

Furniture
- *2 tables*
- *4 chairs*

Road
- *1 pallet bricks*

ROAD STRIPING

16 cans Pro 2X Marking Paint
- 3 cans white
- 6 cans red
- 7 cans green

chalk line
measuring tape
safety vest
orange cones

****Italics indicate found or free items****

The original budget for the tactical urbanism project was $100.00 per group. Based on the project designs of the three other participating groups and their respective needs for funding an additional $100.00 was given to the 5th Street bike lane project, bringing the total funding available to $200.00. Prior to the purchasing of supplies we evaluated the potential cost of supplies for the intervention on 5th Street to ensure that we would keep costs below budget. The projected and actually cost for the intervention can be found below.

Due to many items being already owned, found, or borrowed, we were able to keep costs below our original budget. The temporary marking paint ended up being the bulk of our costs.

MATERIALS	Cost	Est. Quantity	Est. Cost	True Quantity	True Cost	Amount Spent
SIDEWALK EXTENSIONS						
red chalk paint	$5.26	8	$42.08	6	$5.26	$31.56
white chalk paint	$5.26	3	$15.78	7	$5.26	$36.82
green chalk paint	$5.26	6	$31.56	3	$5.26	$15.78
bricks	$0.00	1 stack	$0	1 stack	$0.00	$0.00
STREET AMENITIES						
Planters						
soil	$1.57/1 cubic ft	18	$28.26	0	$0.00	$0.00
L brackets	$2.67	5	$13.35	0	$0.00	$0.00
plants	$15.00	3	$45.00	6	$4.00	$24.00
wood	$0.00		$0.00	6 palates	$0.00	$0.00
screws	$8.47	1	$8.47			
Amenities						
tables	$0.00	3	$0.00	2	$0.00	$0.00
chairs	$0.00	6	$0.00	4	$0.00	$0.00
PROTECTIVE EQUIPMENT						
face mask	$0.00	0	$0.00	1	$5.47	$5.47
safety vest	$0.00	1	$0.00	1	$0.00	
orange cones	$0.00	4	$0.00	4	$0.00	
Bulk Discount on Marking Paint			0			-$15.84
Tax			0			$7.81
Total			**$184.50**			**$105.60**

STRATEGY build

Pallets were broken down and built into planters, and other materials were collected from around campus.

5 feet was measured from the outer bike lane striping and the bike lane was re-striped. The remaining 3 feet was filled with bricks to level with the curb and paint. Intersections were painted green and the bike lane was striped green.

Jeshua and a volunteer take a well earned rest after lots of hauling of bricks.

STRATEGY build

The build and installment of the treatment took approximately 21 work hours to complete. The largest amount of time was spent on building the planters for the sidewalk extension. It took nearly 12 hours to set up the work station, break down the wooden pallets, and construct the planters out of the wood. Two planters were constructed. The first planter was approximately 12 inches wide, 36 inches in length, and 2 feet tall. The second planter was approximately 18 inches wide, 48 inches in length, and 2 feet tall. A minimum of 2 feet in height used as a design criteria to meet the roadway standards for objects visible by motorists.

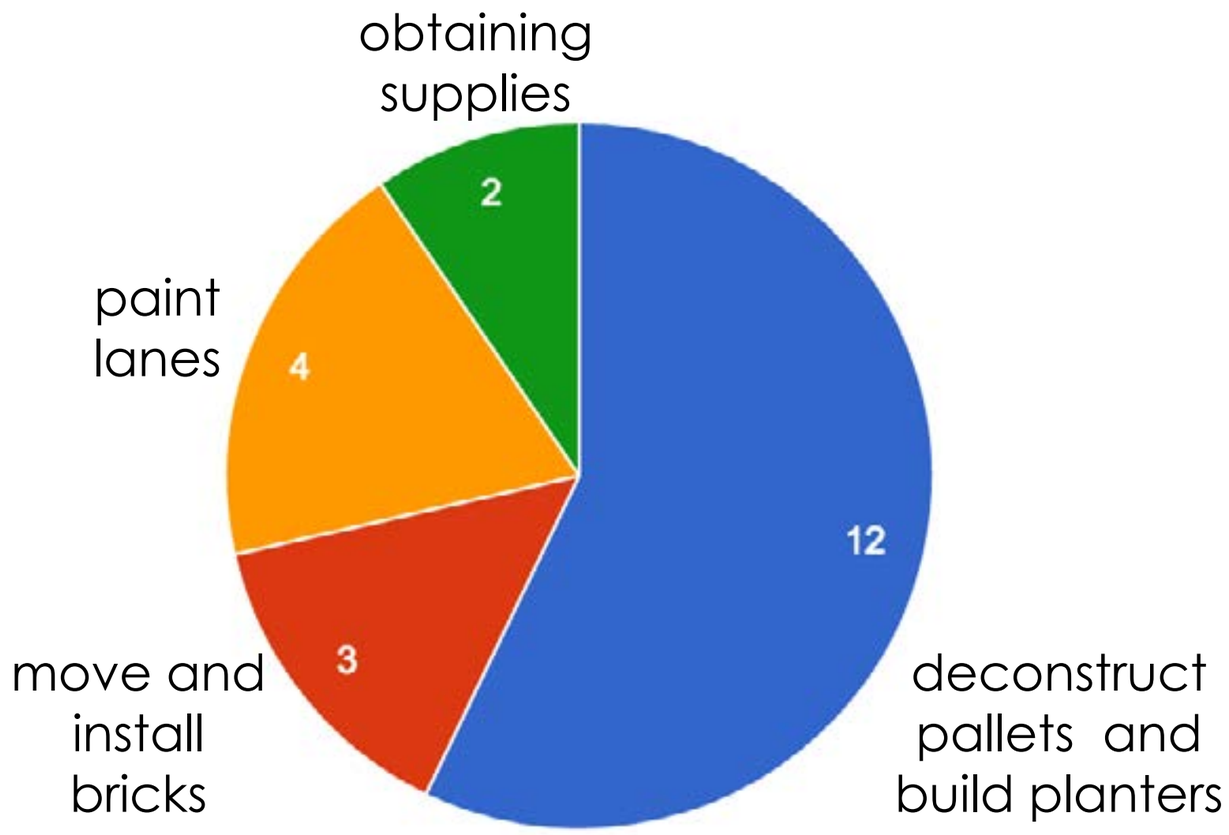
Brick movement and installation took approximately three hours, with the majority of time spent on moving bricks. This portion of the installment was highly labor intensive. A wheel cart was used to assist with the movement of bricks from their original location to a vehicle that would transport them to the study site.

Spray painting the road treatment required approximately 4 hours. This portion of the installment involved restriping the inside of the bike lane, paining a no parking red zone, and a green bike zones at driveways.

The study area was accented by two tables, 4 chairs, and 6 Poinsettia plants. Movement of the tables and chairs also required a wheel cart. Obtaining supplies and installing them took approximately 2 hours.

Activities for the build and installation of the treatment occurred concurrently.

breakdown of time spent building



ANALYSIS performance measures

QUESTIONS	METRICS
Which treatment is most effective at keeping people from parking in the bike lane?	*Count of vehicles parked in the bike lane pre and post treatment.* *Count of vehicles parked on the sidewalk pre and post treatment.* *Location of vehicles parked in the bike lane pre and post treatment.*
Is there an increase in the amount of optional activities that take place on this block after the treatment?	*Count of number of activity types observed pre and post treatment .* *Location of activities observed pre and post treatment.*

ANALYSIS data collection plan

To gather hard and observational data that can help us answers to these questions, we observed the block from a cafe across the street, and used the activity map below to capture data on the following areas of behavior and activity:

BICYCLE DATA

The number of bicycles that passed by was recorded, as well as their behavior if they interacted with a vehicle parked in the bike lane - either by merging into traffic or passing on the sidewalk.

PEDESTRIAN DATA

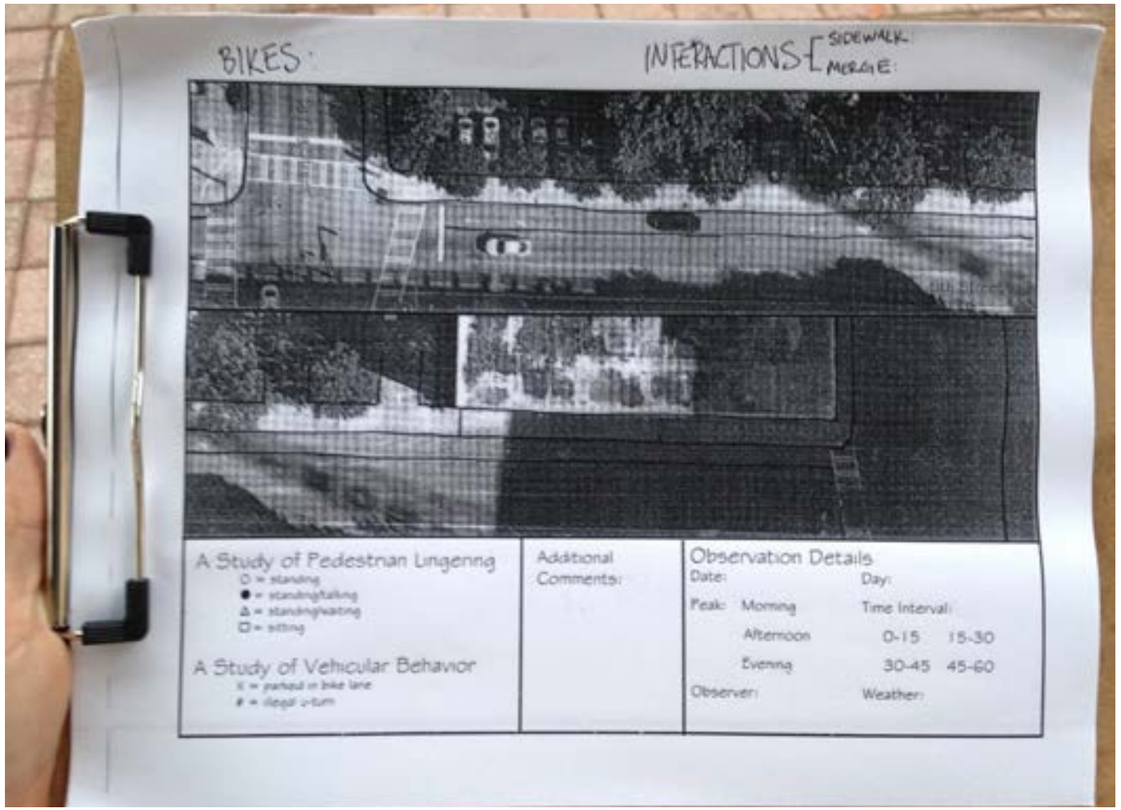
Pedestrian activity data was collected by marking on the Activity Map where within the block and what type of behavior they were exhibiting. Necessary activity included standing and standing and weighting, while optional actives included standing/talking, and sitting. Jaywalking was also recorded - and while our survey did not originally attempt to change this behavior, it happened so often we felt it was necessary to make a note of it.

VEHICULAR DATA

The location of each vehicle that parked in the bike lane was noted and counts of the number of vehicles parked on the sidewalk and in the bike lane were collected. The location of illegal u-turns was also noted. We also observed and noted the number of people who used the bike lane as a lane to pass vehicles turning left onto Spring Street.

SURVEY SCHEDULE

Observations of the study site were conducted during peak hours of travel. Peak hours of travel considered to be 8:00 AM - 9:00 AM (morning peak), 12:00 pm - 1:00 pm (afternoon peak), and 5:00 pm - 6:00 pm (evening peak). Pre-treatment observations were conducted from November 18 - 20, 2015. Prior to the treatment we observed traffic behaviour for a total of 8 hours. Post-treatment observations were conducted during the same morning, afternoon, and evening peak hours. Observation dates from November 30 - December 1, 2014. Post-treatment observations lasted for a total of 6 hours.



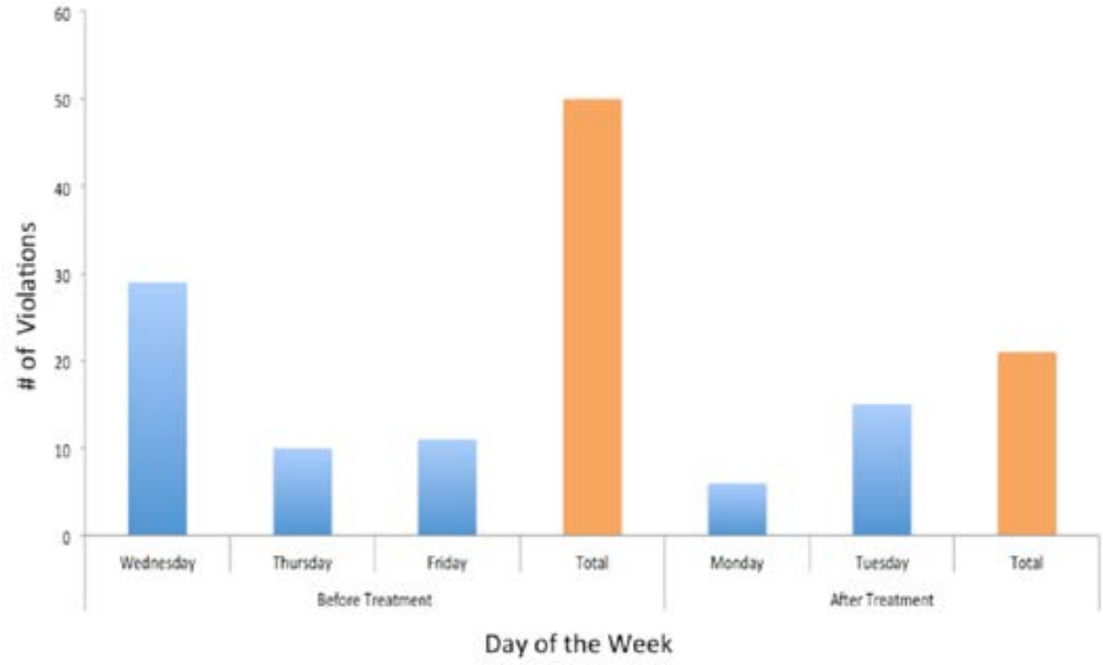
ANALYSIS observational analysis

PRE-TREATMENT
Within the pre-treatment observational period we observed **50 bike lane parking** violations, **4 sidewalk parking** violations, and **45 illegal u-turns**. This resulted in a bike lane violation rate of **6.25 violations per hour**. During this same time period we observed **153 cyclists** utilize the bike lane at our study site. Of these 153 cyclists, **21 (14%) interacted with vehicles illegally parked in the bike lane**. When faced with the decision of how to respond to illegally parked vehicles **14 (67%) cyclists merged with traffic** traveling westbound and **7 (33%) used the sidewalk** as a supplement to the obstructed bike lane.

POST-TREATMENT
During the post-treatment observations we observed **21 bike lane parking** violations, **2 sidewalk parking** violations, and 39 illegal u-turns. This resulted in a violation rate of **3.50 violations per hour**. Within the post-treatment observation period, **103 cyclists** used the bike lane of 5th Street. Of these cyclists, **32 (31%) interacted with illegally parked vehicles**. When interacting with illegally parked vehicles, **23 (72%) cyclists merged** with westbound traffic and **9 (28%) used the sidewalk** as a supplement to the obstructed bike lane.

In response to the treatments we observed pedestrians walking and looking at the treatment. Several pedestrians discussed the treatment as they passed by. Notably during the installation of the treatment we were frequently asked what the treatment was intended to accomplish and what group were we a part of.

We did not see people using the table and chairs provided during the observation hours, and pedestrian lingering location did not change significantly from the before survey. However, outside of the hours we saw one person sitting at the table. We think that the placement of the furniture treatment mid block instead of closer to the Spring St. intersection, where more pedestrians lingered already, had an effect on the furniture's lack of utilization.



Post treatment, delivery vehicles still parked in the bike lane, however, violations per hour were down from 6.25 to 3.5.

CONCLUSIONS recommendations

IBIKE LANE/SIDEWALK RECOMMENDATIONS
Based on this findings of this intervention we recommend a sidewalk extension along 5th Street between West Peachtree Street and Spring Street. This sidewalk is underdeveloped when compared to other sidewalks in the Tech Square area. A sidewalk extension can physically limit the width of the bike lane and therefore decrease the space that motorists can park in, deterring this behavior.

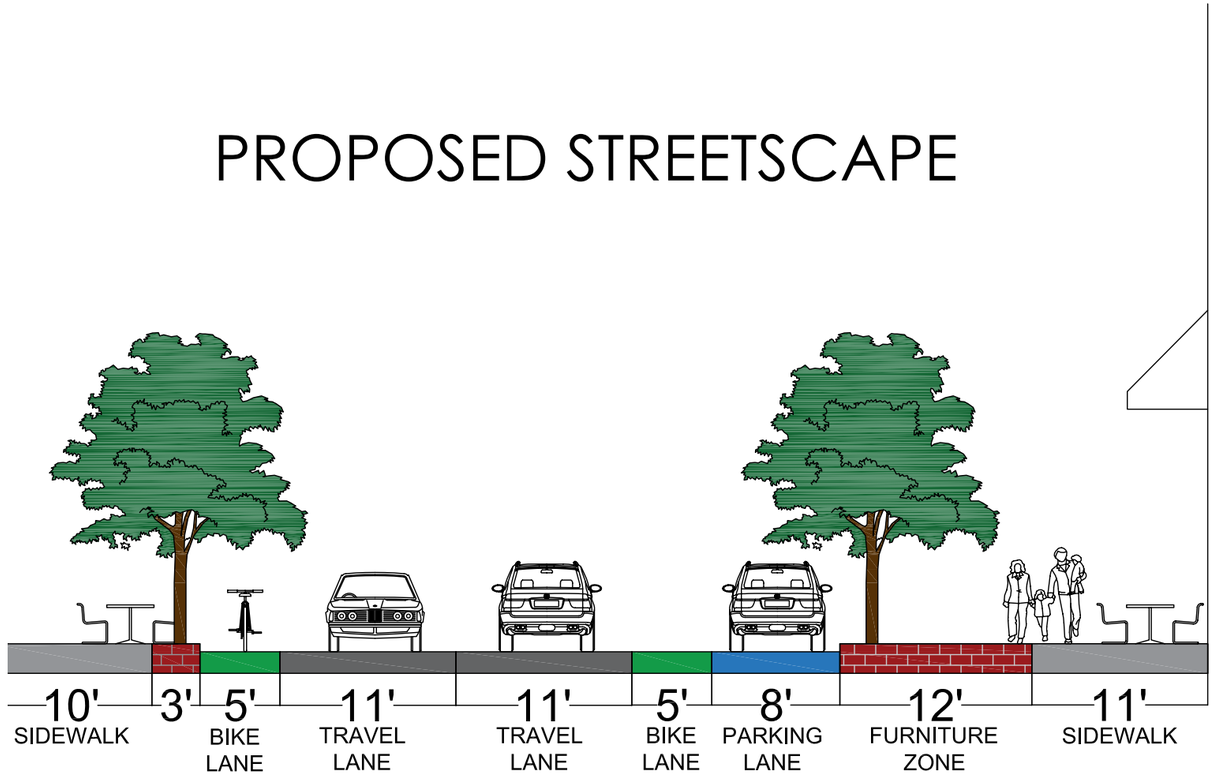
Other physical barriers such as bollards and raised medians may also prevent motorists from parking in the bike lane, but are not nessicary for a road with such low vehicular travel speeds.

A road restriping that increases the width of the eastbound bike lane, shift the center line of the road to maintain 11 foot travel lanes, and decreases the width of the westbound bike lane may also prevent parking in the bike lanes. While a road restriping may resolve the issue of illegally parked vehicles it does not enhance the pedestrian experience in the study site.

PARKING LOT RECOMMENDATIONS
The parking lot adjacent to the study area could be restructured to allow for a "kiss and ride" type drop off location, where the first 15 minutes of parking are free.

The parking lot could also be reshaped to provide for a freight loading zone. The high number of freight and delivery trucks who park and unload in the bike lane are a symptom of a lack of proper freight loading area within this area. While it is often overlooked, a complete street is one that provides for all users including delivery trucks. If we can provide a safe separate loading zone, we can ensure further safety by separating a heavy high intensity vehicle from vulnerable road users.

PROPOSED STREETSCAPE



CONCLUSIONS lessons learned

One of the main lessons learn from this tactical urbanism project is to understand the limitations of a project. The 5th Street project required more time and supplies than we initially expected. Future tactical urbanism projects should over estimate the time it takes to complete the project to ensure that they can properly build, installed, and evaluated properly.

Having an understanding of tactical urbanism and a pre-planned description of the project will come in handy. During the installation of the treatment we were stopped by a Georgia Tech police officer and asked what we were doing and if we had permission to conduct our project. Being stopped by police is a likely occurrence in tactical urbanism projects and therefore people should expect to explain their project to them. Having written permission and a point of contact will be helpful when interacting with police officers.

Metrics are a key part of a good tactical urbanism project. When in the field it is likely that you will observe a wide range of behaviors. Having an extensive legend of the type of behavior you expect to see and a standardized data recording strategy will help to ensure that the data collected can be used in the analysis. It also facilitates data analysis and increases the ease of communicating your findings. Lastly, leave room for the unexpected. People behave in unpredictable ways and leaving room to record unexpected behavior can help discover unique characteristics of your study area.