North Carolina
Non-Motorized Volume Data Program

Phase I: Continuous Count Station Overview and Data Summary

ITRE

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Phase I of the NC Non-Motorized Volume Data Program was conducted in the geographic region which comprises NCDOT Divisions 7 and 9. Continuous Count Stations to monitor bicyclist and pedestrian traffic at twelve locations went live in late 2014. These stations cover a mix of sites across different land uses, travel patterns, and volume groups. Detailed technical information can be found in the **Phase I Final Report and Appendices.**

The following programmatic elements were piloted (i.e. the Triad region) to select, install and provide quality data for the twelve stations:

- Agency Coordination
- Pre – Installation (Site Selection and Procurement)
- Equipment Set Up (Installation and Onboarding
- Equipment Validation
- Data Handling (QA/QC Checks, Cleaning, and Correcting)
- Equipment Maintenance
- Data Reporting

Selected sites were installed with the assistance from local agency staff in the following NC municipalities: Carrboro, Chapel Hill, Greensboro, and Winston-Salem. For Phase I, sites were prioritized to utilize sensor technology and equipment for sites where both bicycle and pedestrian counts could be collected. Data was monitored for the 12-month reporting period. A data summary is provided based on the count data, with days of missing data and data related to equipment errors removed. The equipment at each CCS underwent a validation process to ground-truth each stream of non-motorized count data and correct it for errors related to data collection (such as undercounting or overcounting). The resulting Phase I corrected data is represented in the tables and graphs within this document.

Travel patterns and volume groups represented here are based solely on Phase I of NC's program and may change as the program expands and new information on bicycling and walking patterns and more research becomes available on a national level. The Annual Average Daily Traffic from the most current NCDOT record is given at the street location nearest to the CCS. Annual Daily Averages for Pedestrian Traffic (AADPT) and Bicycle Traffic (AADBT) have been calculated using the AASHTO method, and in many cases is very close to the straight average since little data missing at the stations. Due to the limited knowledge for segmentation of non-motorized data, these figures are only representative at the station and any generalizations or usage of data should keep this caveat in mind. Information given in the narrative for each station is based on interpretation of the data and cursory research on special events. Local agencies may have more information related to daily data outliers or trends.

Establishing a bicycle and pedestrian count program will assist the NCDOT in evaluating facility usage over time, inform the project prioritization process and provide quantifiable evidence to support non-motorized facility inclusion through the Complete Streets process, improving municipal and regional planning for active travel. In turn, these data can be fed into tools to measure existing trends and model future increases in non-motorized trips at site-, corridor-, and regional-levels. Phase II of the project has begun and stations are anticipated to come online in the summer of 2016.

For more information, see the program website at: **itre.ncsu.edu/focus/bike-ped/nc-nmvdp/**

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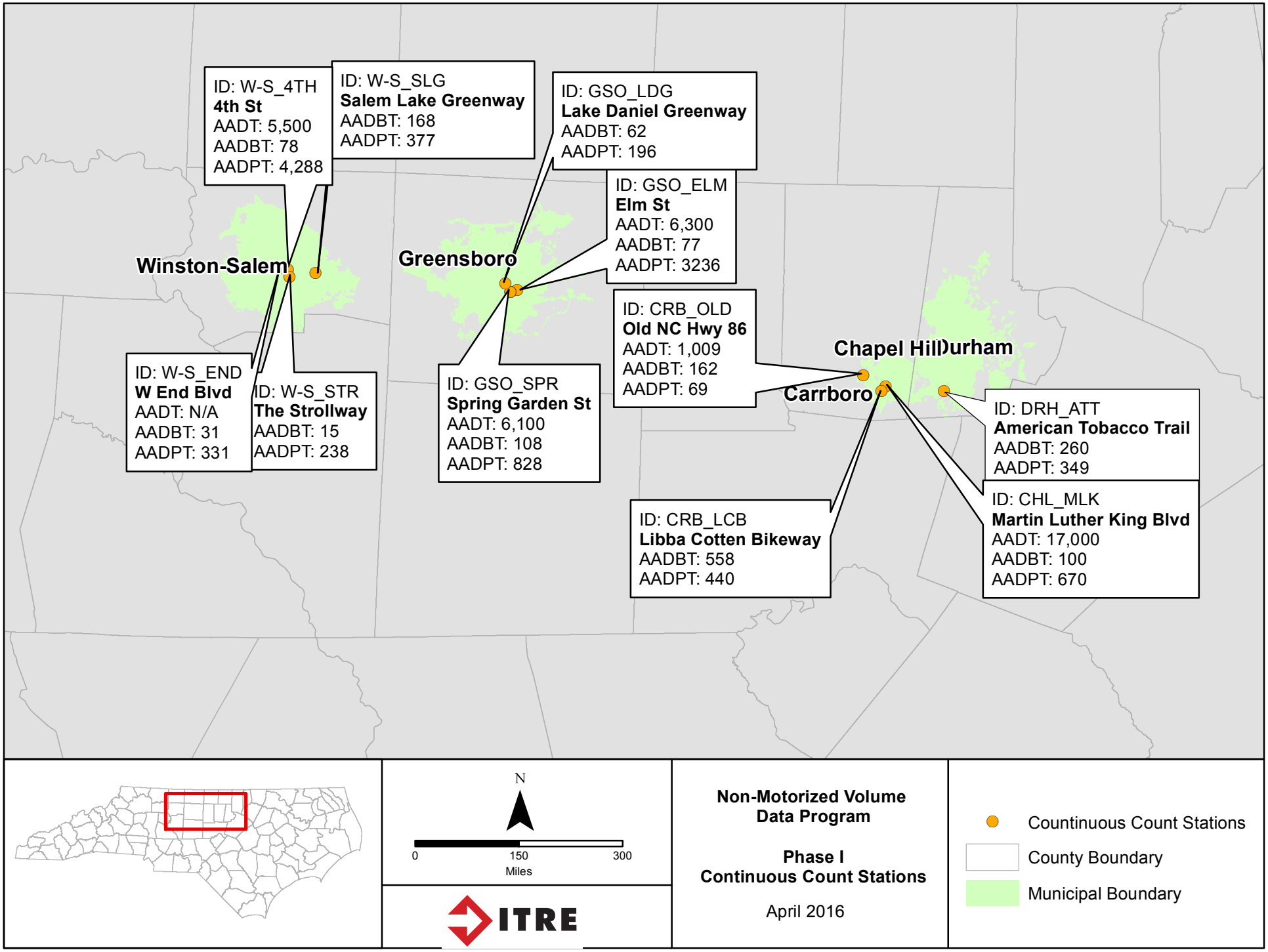
ID: W-S_4TH
4th St
AADT: 5,500
AADBT: 78
AADPT: 4,288
ID: W-S_SLG
Salem Lake Greenway
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AADPT: 377
ID: GSO_LDG
Lake Daniel Greenway
AADBT: 62
AADPT: 196
ID: GSO_ELM
Elm St
AADT: 6,300
AADBT: 77
AADPT: 3236
Winston-Salem
Greensboro
ID: CRB_OLD
Old NC Hwy 86
AADT: 1,009
AADBT: 162
AADPT: 69
Chapel Hill
Durham
Carrboro
ID: W-S_END
W End Blvd
AADT: N/A
AADBT: 31
AADPT: 331
ID: W-S_STR
The Strollway
AADBT: 15
AADPT: 238
ID: GSO_SPR
Spring Garden St
AADT: 6,100
AADBT: 108
AADPT: 828
ID: DRH_ATT
American Tobacco Trail
AADBT: 260
AADPT: 349
ID: CHL_MLK
Martin Luther King Blvd
AADT: 17,000
AADBT: 100
AADPT: 670
ID: CRB_LCB
Libba Cotten Bikeway
AADBT: 558
AADPT: 440
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150
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Miles
ITRE
Non-Motorized Volume Data Program
Phase I
Continuous Count Stations
April 2016
Countinuous Count Stations
County Boundary
Municipal Boundary

MARTIN LUTHER KING JR BLVD – CHAPEL HILL, NC

A continuous count station was installed on Martin Luther King Jr Blvd in Chapel Hill, NC just north of the Columbia St intersection. The location of this site connects the central business district of Chapel Hill and the University of North Carolina at Chapel Hill with neighborhoods to the north and the north campus area. The site is located on a primary transit and commute corridor for the town and university. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that comprise the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the lane (indicated as blue diamonds), bicyclists on the sidewalk are detected by an inductive loop positioned on the sidewalk (indicated as yellow diamonds), and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 10, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 14 days of bicycle data and 14 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation West (Left) and East (Right)

Table 1 Station Description		
Active Since	December 10, 2014	
Pedestrian Travel Pattern	University Mixed	
Pedestrian Volume Group	Medium	
Bicyclist Travel Pattern	University Commute	
Bicyclist Volume Group	Medium	
Station Location Coordinates	W – N35.91611 W079.05715 E – N35.91618 W079.05672	
Station Name / ID	CHL_MLK / 6700003	
Directional Distribution		
	West Side	*East Side*
	Pedestrians on Sidewalk (21%)	Pedestrians on Sidewalk (79%)
	Bicyclists SB in Roadway (27%) Bicyclists on Sidewalk (10%)	Bicyclists NB in Roadway (47%) Bicyclists on Sidewalk (16%)

Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 240,000 pedestrians and 25,765 bicycle counts were recorded at this site during the 12-month analysis period. The overall volume of non-motorized users on this facility varies from nearly 16,000 to over 36,000 counts per month. December is not figured into monthly or seasonal data statistics because data was not logged the first part of the month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site does not show a strong correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics [1] [2] [3]		
Annual Average Daily Traffic (AADT)		17,000 (NCDOT, 2013)
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	October	February
Day of Week	Saturday	Monday
Date	Oct 31, 2015 (6,091)	NA
Peak Period		Sat 10PM - Sun 2AM
12 Month Pedestrian Count		240,810
Annual Average Daily Pedestrian Traffic		670 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	September	February
Day of Week	Tuesday	Sunday
Date	Sept 22, 2015 (284)	NA
Peak Period		Weekdays 8-9AM, 3-6PM
12 Month Bicycle Count		35,770
Annual Average Daily Bicycle Traffic		100 AADBT

(1) Note: 14 days of bicycle data and 14 days of pedestrian data are not present in the 12-month analysis period. Missing data includes a portion of December.
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using the AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the highest volumes for pedestrians are recorded in the months of September and October. Lowest volumes for pedestrians are recorded in July, followed by June. The summer months likely see lower volumes due to the fact that university students and faculty are on summer break. Pedestrian volumes are highest on Saturdays and lowest during the week on Monday.

Bicycle Data

The lowest volumes for bicyclists are recorded during the winter months, also shown in **Figure 3**. February likely sees the lowest volumes because of cold temperatures that occur during that month. The autumn season has the highest overall average, with the highest volumes recorded in September. Bicyclist volumes are highest on weekdays, with Tuesdays averaging 120 counts per day. On a weekly basis, Saturdays have the lowest bicycle counts.

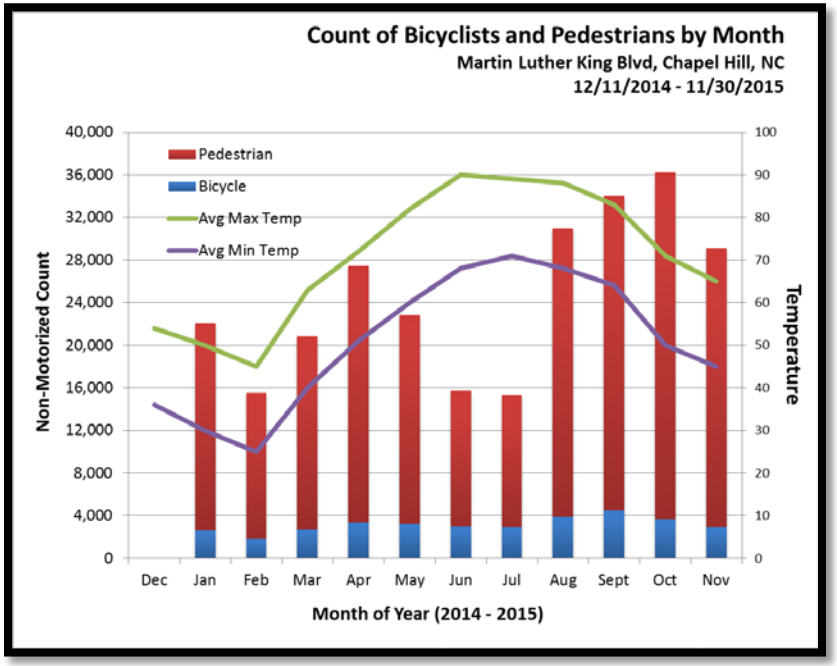


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays are the highest counts recorded, exceeding 800 counts per day. While Mondays are the lowest, over 600 counts are recorded on a daily basis. On average, 670 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on the weekend, beginning around 11PM on Saturday and continuing through 2AM on Sunday morning. This period exceeds 70 pedestrian counts per hour, likely the result of people and students getting to and from the nightlife downtown or returning from a night work shift at area restaurants and businesses. During the week, Mondays through Wednesdays see a 5PM peak that exceeds 50 counts per hour. Saturday early morning has a moderately high count from 12AM through 2AM due to Friday night activity.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in the late evening early morning on both Friday and Saturday night. Afternoon weekday peaking occurs around 5PM. The lowest pedestrian activity occurs between 3AM and 6AM although hourly pedestrian averages never fall to zero at any hour on any day of the week indicating the site has activity at all hours.

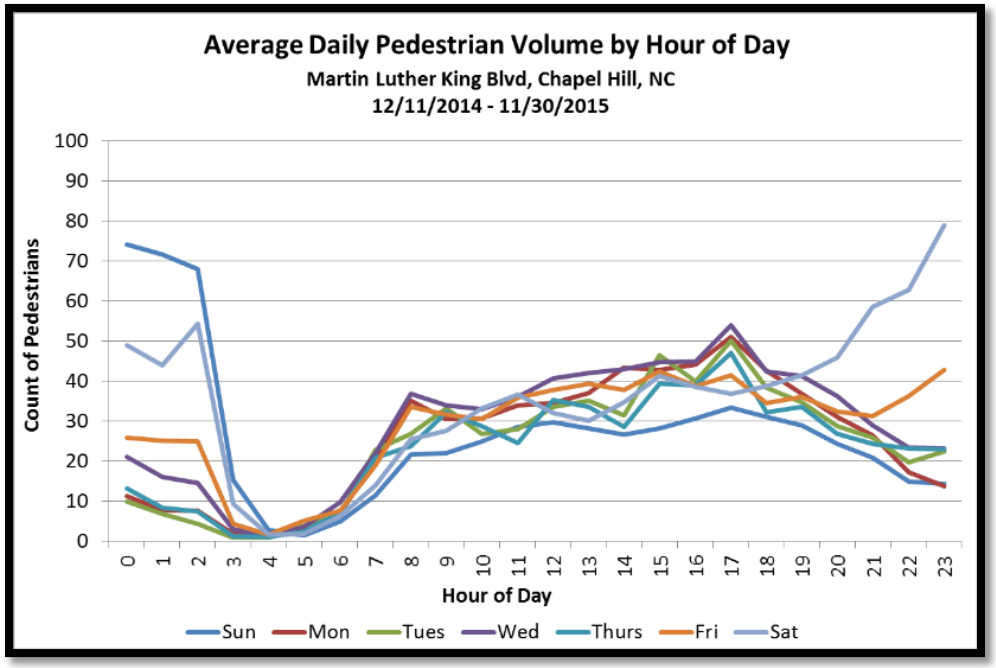


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	657
Mon	611
Tue	669
Wed	695
Thu	636
Fri	695
Sat	842
Average	**686**

Table 4. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	74	11	10	21	13	26	49	31
1	72	8	7	16	8	25	44	27
2	68	8	4	14	7	25	54	27
3	15	2	1	3	1	4	9	5
4	3	1	1	1	1	2	2	1
5	1	4	4	4	2	5	2	3
6	5	7	7	10	7	8	6	7
7	11	21	23	22	21	19	14	18
8	22	35	27	37	24	34	26	29
9	22	30	33	34	32	32	28	30
10	25	31	27	33	29	30	33	30
11	28	34	28	36	25	36	37	32
12	30	34	34	41	35	38	32	35
13	28	37	35	42	34	39	30	35
14	27	43	31	43	29	38	35	35
15	28	43	46	45	39	42	41	41
16	31	44	40	45	39	39	38	39
17	33	51	50	54	47	41	37	44
18	31	43	38	42	32	34	39	37
19	29	37	35	41	34	36	41	36
20	24	31	29	36	27	32	46	32
21	21	26	26	29	24	31	59	31
22	15	17	20	23	23	36	63	29
23	14	14	22	23	23	43	79	32
Avg	**27**	**25**	**24**	**29**	**23**	**29**	**35**	**28**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the autumn months (September – November). The start of the peak period begins just before the start of the fall semester commences in early August. During the spring it is not unusual to see volumes range between 500 and 750 pedestrian counts per day but the activity drops off at the end of the spring semester. In the autumn, daily volumes regularly reach 1,000 and sometimes exceed 1,000 pedestrian counts.

The weekend day that experienced a record number pedestrians was October 31st, 2015. This spike in counts was due to Chapel Hill's annual Halloween celebration which exceeded 6,000 counts. The weekday that experienced the highest record of pedestrian counts was Friday April 24, 2015. With over 1,500 counts recorded, this uptick in volumes could be explained by activity related to the end of classes for the spring semester.

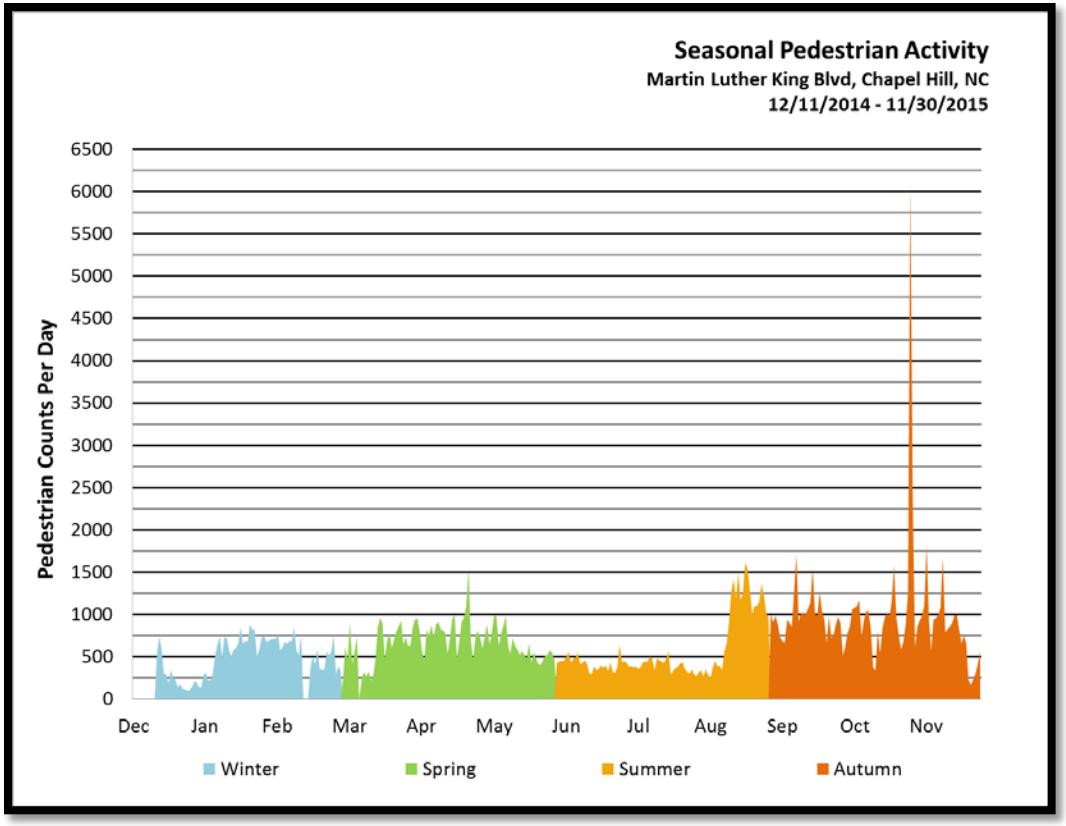


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Tuesdays have the highest count, averaging nearly 120 bicycle counts per day, followed closely by Wednesdays. While Saturdays have the lowest volume, weekends meet or exceed counts of 70 bicycle counts per day. At the site, the average day has over 100 bicycle counts.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekday mornings from 8AM to 9AM and on weekday evenings from 3PM to 6PM where counts typically exceed 8 bicycles per hour. Weekend days have the lowest volumes, averaging 3-4 bicycle counts per hour but experience moderate activity throughout the day.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday peaking in the morning and afternoon that is typical of a commute pattern. On the weekends, bicycle activity gradually picks up in the morning and slowly tapers off in the late evening hours. Both Saturdays and Sundays show a similar pattern. Bicycle activity does occur into the evening on both weekdays and weekends, dropping off in the early morning hours.

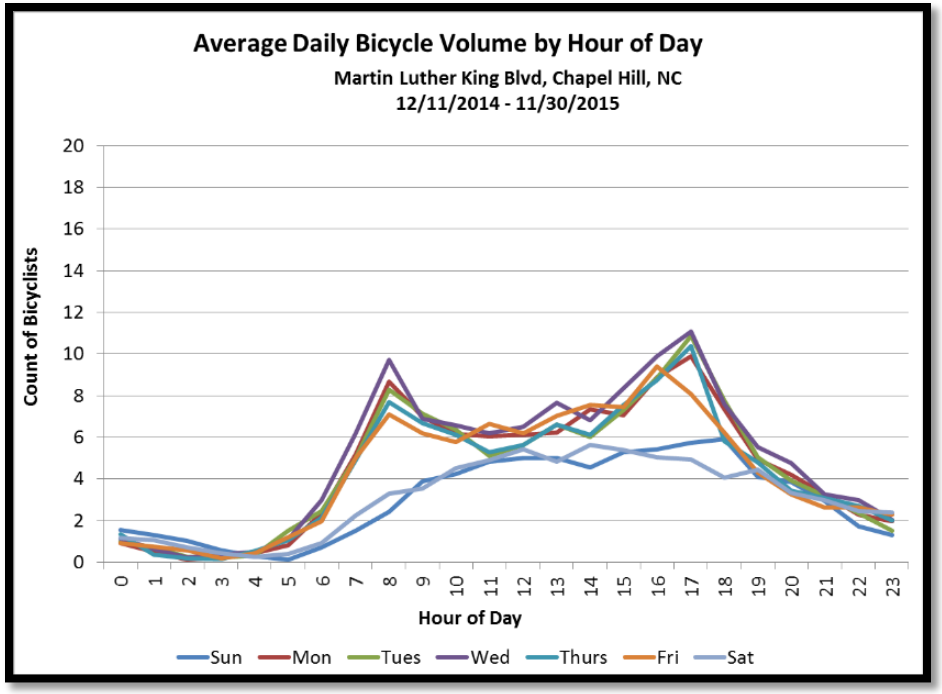


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	73
Mon	108
Tue	120
Wed	119
Thu	115
Fri	104
Sat	70
Average	**103**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	2	1	1	1	1	1	1	1
1	1	1	1	1	0	1	1	1
2	1	0	0	0	0	1	1	0
3	1	0	0	0	0	0	0	0
4	0	0	0	1	1	0	0	0
5	0	1	2	1	1	1	0	1
6	1	2	2	3	2	2	1	2
7	2	5	5	6	5	5	2	4
8	2	9	8	10	8	7	3	7
9	4	7	7	7	7	6	4	6
10	4	6	6	7	6	6	5	6
11	5	6	5	6	5	7	5	6
12	5	6	6	7	6	6	5	6
13	5	6	7	8	7	7	5	6
14	5	7	6	7	6	8	6	6
15	5	7	7	8	8	7	5	7
16	5	9	9	10	9	9	5	8
17	6	10	11	11	10	8	5	9
18	6	7	8	8	6	6	4	6
19	4	5	5	6	5	4	4	5
20	4	4	4	5	3	3	3	4
21	3	3	3	3	3	3	3	3
22	2	2	2	3	3	3	2	2
23	1	2	2	2	2	2	2	2
Avg	**3**	**5**	**4**	**5**	**4**	**4**	**3**	**4**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the late summer and autumn months (August – November), corresponding with the start of the fall semester. Winter bicycling appears to be influenced by cold and/or inclement weather, with activity decreasing in February and early March. Weekday volumes exceed 100 bicycles per day in all seasons and regularly reach over 150 bicycles per day in the peak autumn period.

On Tuesday September 22, 2015 over 250 bicycle counts were recorded, with high hourly counts occurring between 12 and 1pm. An explanation for this peak could be individuals taking part in World Carfree Day by using alternative transportation.

This site has loop detection installed in the sidewalk as well as the roadway to understand the amount of bicycle riding occurring on the sidewalk. As shown in Figure 8, over one quarter of all bicyclists are riding on the sidewalk, mostly on the east side of the street.

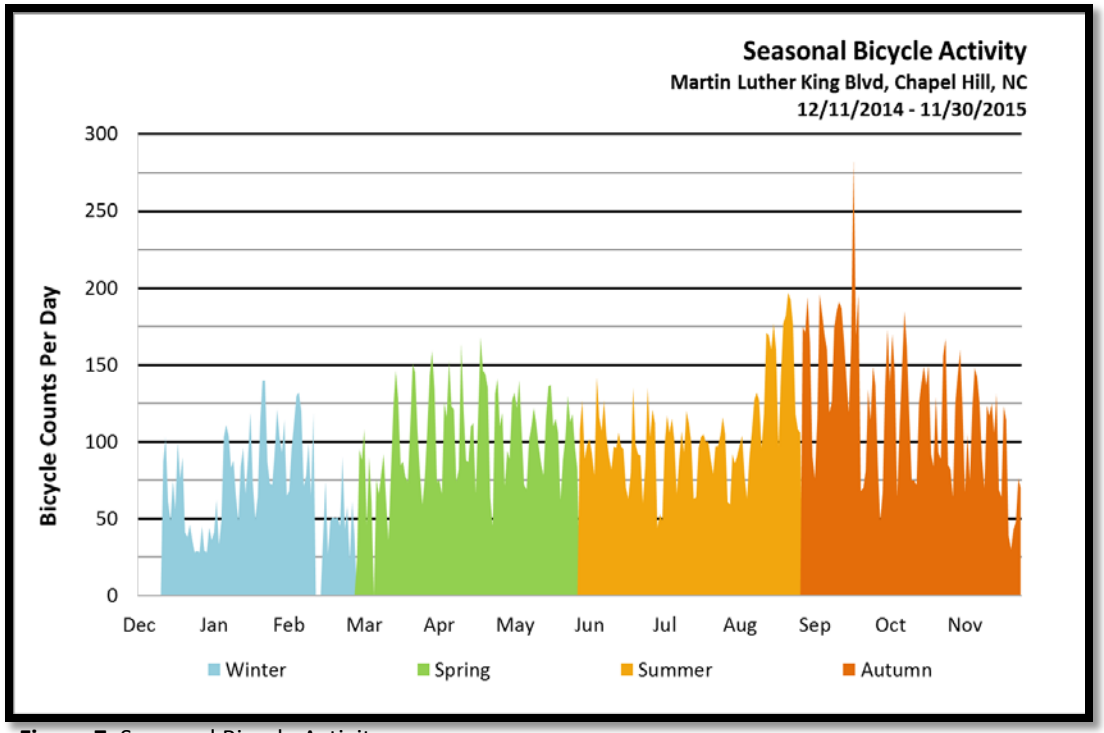


Figure 7. Seasonal Bicycle Activity

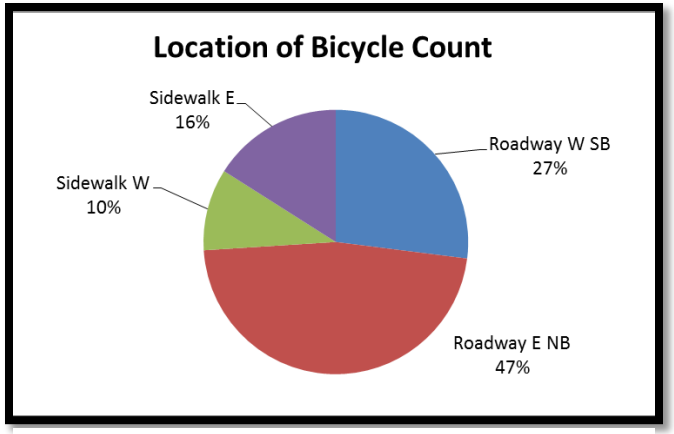


Figure 8. Bicycle count location

LIBBA COTTEN BIKEWAY – CARRBORO, NC

A continuous count station was installed on the Libba Cotten Bikeway in Carrboro, NC near Brewer Ln. This short shared-use bikeway path is built along an active rail right-of-way linking Carrboro's central business district to the west side of UNC Chapel Hill. **Table 1** contains information related to the site, a photograph of the completed station installation is shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the count station. Bicyclists on the greenway are detected by a set of three inductive loops positioned in the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) mounted in a post.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 11, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 12 days of bicycle data and 12 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation

Table 1 Station Description	
Active Since	December 11, 2014
Pedestrian Travel Pattern	University Mixed
Pedestrian Volume Group	Medium
Bicyclist Travel Pattern	University Commute
Bicyclist Volume Group	High
Station Location Coordinates	N35.90842 W079.06612
Site Name / Station ID	CRB_LCB / 6700002
Directional Distribution	
Westbound Pedestrians (48%) Bicyclists (44%)	*Eastbound* Pedestrians (52%) Bicyclists (56%)

Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 200,000 bicycle counts and 150,000 pedestrian counts were collected at the site during the 12-month analysis period. The overall volume of non-motorized users on this facility varies from 24,000 to just under 40,000 counts per month. December is not figured into monthly or seasonal statistics because data was not logged the first part of the month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community in relation to the count data, with some correlation between temperature and volume.

Table 2 Summary Volume Statistics (1) (2) (3)

Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Spring	Summer
Month	April	February
Day of Week	Tuesday	Sunday
Date	January 15, 2015 (984)	NA
Peak Period		Weekdays 4PM-7PM
12 Month Pedestrian Count		157,060
Annual Average Daily Pedestrian Traffic		440 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	April	February
Day of Week	Wednesday	Saturdays
Date	Sept 17, 2015 (1,273)	NA
Peak Period		Weekdays 8-10AM, 4-6PM
12 Month Bicycle Count		200,800
Annual Average Daily Bicycle Traffic		558 AADBT

(1) Note: 12 days of bicycle data and 12 days of pedestrian data are not present in the 12-month analysis period. Missing data includes a portion of December.
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in June and July. The summer months likely have lower volumes due to the University schedule, with students and faculty on summer vacation. Highest volumes for pedestrians are recorded in the months of April and October. Over 16,000 counts per month were recorded in these months. Pedestrian volumes are highest on Tuesdays and lowest during the weekend on Sunday.

Bicycle Data

The lowest volumes for bicyclists were recorded in February, also depicted in **Figure 3**. Autumn experiences the most bicycle activity at the site, with the highest bicycle volumes occurring in the month of September where they exceed 25,000 counts. Bicyclist volumes are highest on weekdays, with Wednesdays averaging the highest counts and are lowest on Saturdays.

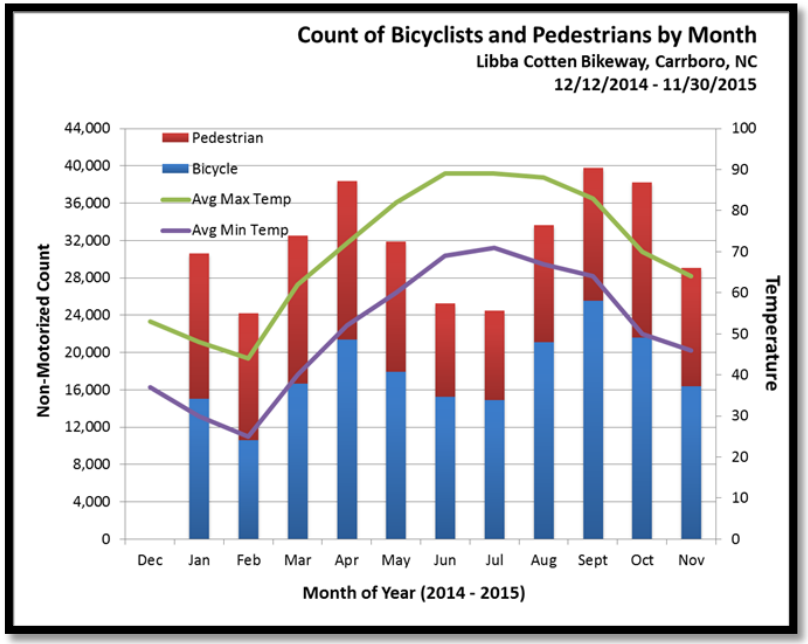


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Tuesdays are the highest counts recorded while Sundays are the lowest. On average, 445 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur during the week between 4PM and 7PM, averaging over 35 pedestrian counts per hour, likely the result of students leaving campus and professionals leaving the business district. On Mondays this peak occurs later in the day. On the weekend, there is less peaking except for Saturday mornings, with general activity occurring between the hours of 8AM and 3PM.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekday peaking in the morning and early evening. The lowest pedestrian activity occurs between 9PM and 6AM, though the site appears to remain active at all hours of the day with hourly pedestrian averages rarely falling to zero.

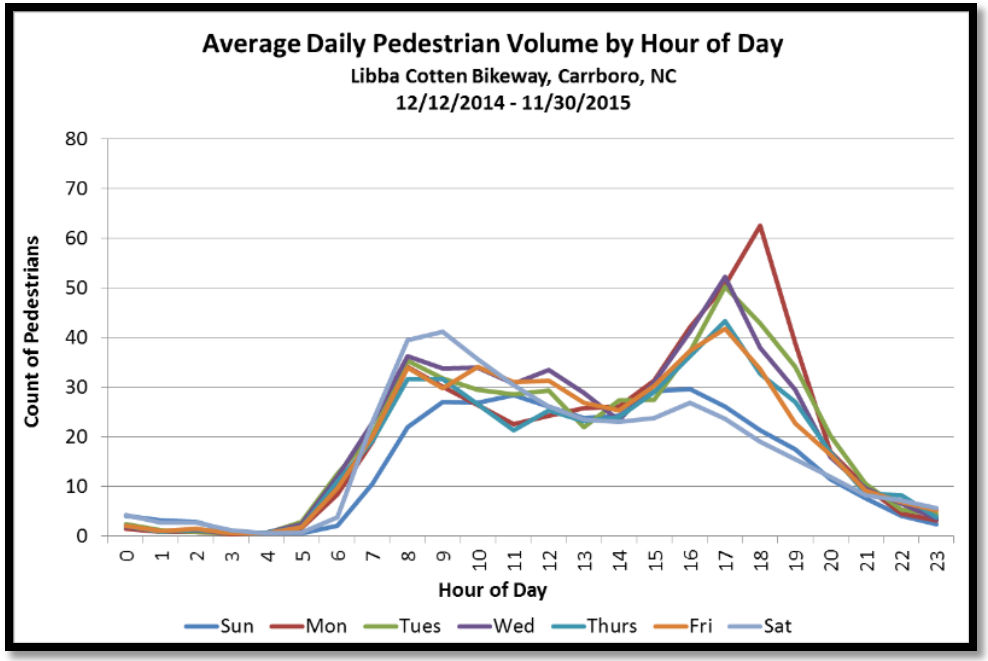


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	351
Mon	482
Tue	501
Wed	489
Thu	440
Fri	452
Sat	399
Average	**445**

Table 3. Average Daily Pedestrian Patterns by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	4	1	2	2	2	2	4	3
1	3	1	1	1	1	1	3	2
2	3	1	1	1	1	1	3	2
3	1	0	1	0	1	1	1	1
4	1	1	1	1	1	1	1	1
5	1	2	3	2	2	2	1	2
6	2	8	13	12	11	10	4	8
7	11	19	21	23	19	20	23	19
8	22	34	35	37	32	34	40	33
9	27	30	32	34	32	30	41	32
10	27	27	29	35	27	34	36	31
11	29	23	29	31	21	31	31	28
12	26	24	29	34	25	32	26	28
13	24	26	22	29	23	27	24	25
14	25	26	27	24	24	25	23	25
15	30	32	27	31	29	31	24	29
16	30	42	37	42	36	38	27	36
17	26	51	50	53	43	42	24	41
18	21	63	43	38	33	34	19	36
19	18	39	34	30	27	23	15	26
20	11	17	20	16	17	16	12	15
21	8	10	10	10	9	9	8	9
22	4	4	5	7	8	7	7	6
23	2	3	4	3	4	5	6	4
Avg	**15**	**20**	**20**	**21**	**18**	**19**	**17**	**18**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the spring months (March – May.) Pedestrian activity clearly drops off during the summer months. Perhaps surprisingly due to the colder temperautres, winter months see the highest peaks in volumes at the start of the school semester.

The first week of classes, volumes reach over 800 pedestrians per day at the beginning of the week on Monday January 5, 2015. Later the first week on Friday January 9 and the following Thursday January 15, pedestrians reach their highest volumes, at a daily count of over 900. Pedestrian volumes drop off after May commencement and pick back up again when the semester resumes in mid-August. It is not unusual to see daily pedestrian volumes regularly exceed 400 counts per day in seasons when classes are in session.

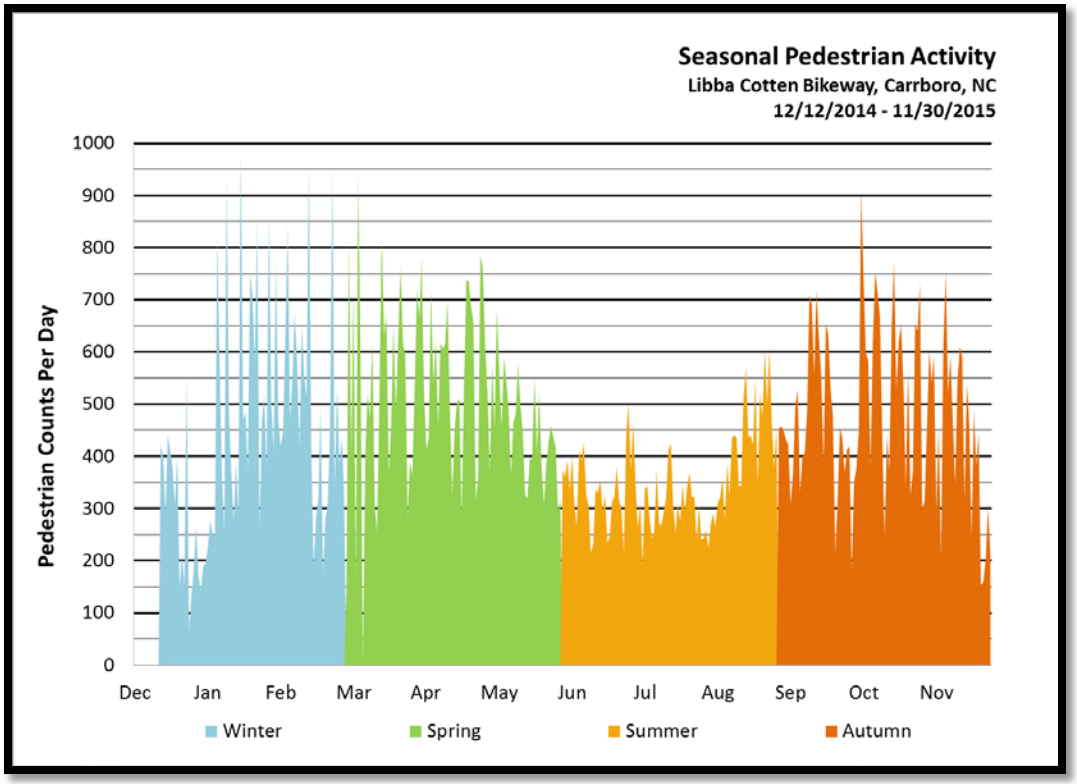


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Wednesdays have the highest counts, averaging over 750 bicycle counts per day. While Saturdays and Sundays have the lowest counts, all days of the week have average volumes in excess of 250 counts per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekday mornings from approximately 8AM to 10AM and on weekday evenings from 4PM to 6PM where counts typically exceed 50 bicycles per hour. Weekend days have activity throughout the daylight hours and into the evening.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday peaking in the morning and afternoon that is typical of a commute pattern. On the weekends, bicycle activity primarily occurs between the hours of 9AM and 7PM with Saturdays and Sundays showing a similar pattern, with no clear peaking. Bicycle activity does regularly occur late into the evening on both weekdays and weekends, dropping off in the early morning hours.

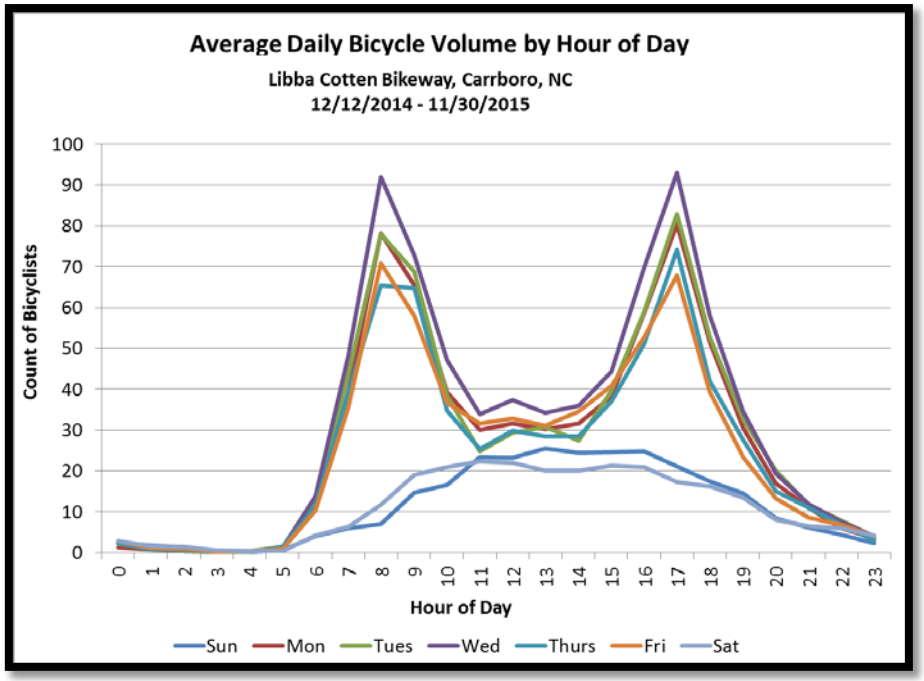


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	275
Mon	657
Tue	743
Wed	763
Thu	675
Fri	605
Sat	258
Average	**580**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	2	1	2	2	2	3	3	2
1	2	1	1	1	1	1	2	1
2	1	0	0	1	1	1	1	1
3	0	0	0	0	0	0	1	0
4	0	0	0	0	0	0	0	0
5	1	1	1	1	1	1	0	1
6	4	11	13	14	11	10	4	9
7	6	39	43	48	39	35	6	30
8	7	78	78	92	66	71	12	56
9	15	65	69	73	65	58	19	51
10	17	39	38	47	35	37	21	33
11	23	30	25	34	25	32	22	28
12	23	32	29	37	30	33	22	29
13	26	30	31	34	28	31	20	28
14	24	32	27	36	28	35	20	29
15	25	38	40	44	37	41	21	35
16	25	59	59	70	51	53	21	48
17	21	80	83	93	74	68	17	61
18	18	52	53	58	42	39	16	39
19	15	30	33	35	28	23	14	25
20	8	17	20	19	15	13	8	14
21	6	11	12	12	11	9	7	9
22	4	6	8	7	7	7	6	6
23	2	4	4	4	3	4	4	4
Avg	11	27	28	32	25	25	11	23

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7.** The highest bicyclist volumes occur during the autumn months (August - November), followed by the spring months (March – May). Peaks typically follow the Fall and Spring Semester class schedule, where volumes regularly exceed 800 counts per day. During the winter there are fewer bicyclists with a drop in bike activity occurring in late February, likely due to cold, wet and snowy weather conditions that occurred during this period. Weekday volumes exceed 700 bicycles per day in all seasons and reach over 1,000 bicycles per day in the peak late summer and autumn period.

While September 17, 2015 was the peak day on the Libba Cotton Bikeway with nearly 1,275 counts, weekday volumes start to exceed 1,000 counts per day at the start of the fall semester which begins on August 19, 2015 and consistently reach these volumes until they start to taper in November

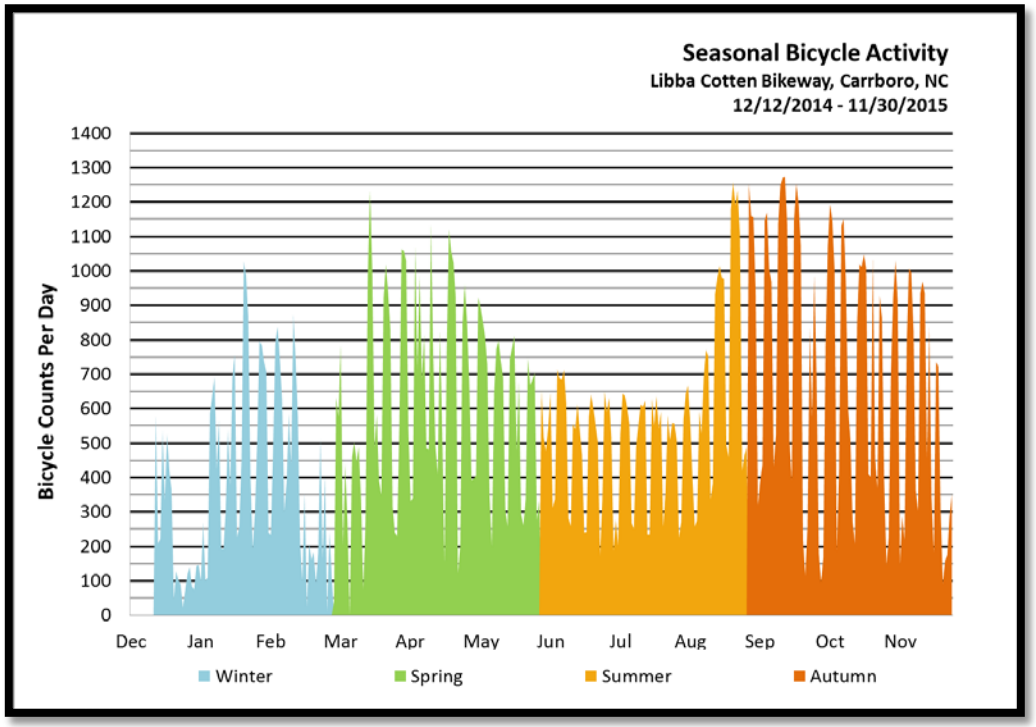


Figure 7. Seasonal Bicycle Activity

OLD NC HIGHWAY 86 – CARRBORO, NC

A continuous count station was installed on Old NC Highway 86 (Hillsborough Rd) in Carrboro, NC near Old Fayetteville Rd. This stretch of road has numerous popular recreational bicycling routes which branch out into rural Orange and Alamance County. **Table 1** contains information related to the site, and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that comprise this station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the lane (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the east side sidewalk, which ends just north of the site. There are no pedestrian facilities on the west side though the red circle indicates the placement of the data logger.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 11, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 12 days of bicycle data and 14 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation East (Left) and West (Right)

Table 1 Station Description	
Active Since	December 11, 2014
Pedestrian Travel Pattern	Urban Commute
Pedestrian Volume Group	Low
Bicyclist Travel Pattern	Rural Mixed
Bicyclist Volume Group	Medium
Station Location Coordinates	E- N35.93412 W079.10204 W- N35.93487 W079.10250
Station Name / ID	CRB_OLD/ 6700001
Directional Distribution	
West Side	*East Side*
No Sidewalk on West Side	Pedestrians on Sidewalk (100%)
SB Bicyclists in Roadway (38%)	NB Bicyclists in Roadway (62%)

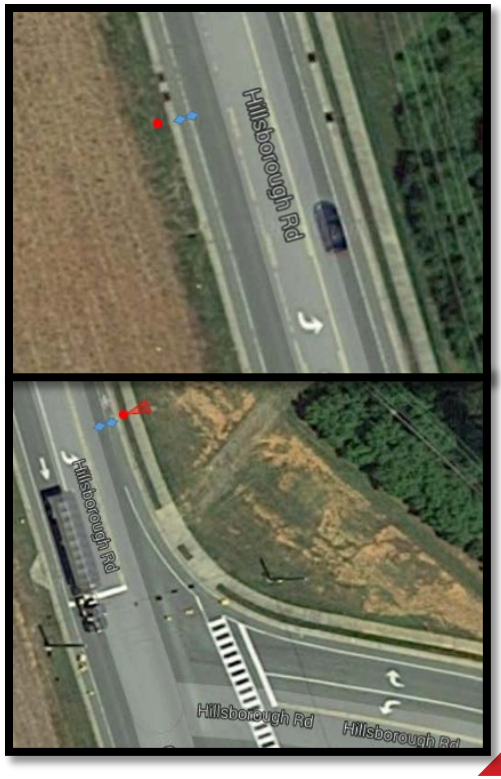


Figure 2. Site diagram showing bicycle count equipment placement on the East (top) and bicycle and pedestrian count equipment placement on the West (bottom).

Summary Count Data

Over 24,000 pedestrian counts and 57,000 bicycle counts were recorded in the 12-month analysis period. The overall volume of non-motorized users on this facility varies from approximately 4,000 to 9,000 counts per month. December is not figured into monthly or seasonal statistics because data was not logged the first part of the month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community, showing a correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics (1) (2) (3)		
Annual Average Daily Traffic (AADT)		1,009 (NCDOT, 2014)
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	September	February
Day of Week	Sunday	Monday/Thursday
Date	Tues. Nov 24, 2015 (156)	NA
Peak Period		Weekdays 7AM
12 Month Pedestrian Count		24,420
Annual Average Daily Pedestrian Traffic		69 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	May	February
Day of Week	Sunday	Monday
Date	Thurs. Jul 25, 2015 (537)	NA
Peak Period		Saturdays 9-10AM
12 Month Bicycle Count		57,790
Annual Average Daily Bicycle Traffic		160 AADBT

(1) Note: 12 days of bicycle data and 14 days of pedestrian data are not present in the 12-month analysis period. Missing data includes a portion of December.
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in February, followed by June and July. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. School being out of session may account for lower volumes in the summer. Highest volumes for pedestrians are recorded in the months of September and October, reaching over 2,400 pedestrian counts per month. Pedestrian volumes are highest on Sundays and lowest during the week on Mondays and Thursdays.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3**. While the summer has the highest overall seasonal average, the highest volumes are actually recorded in May. Bicyclist volumes are highest on weekends, with a distinct Saturday morning peak although, overall volumes are highest on Sunday. Bicycle volumes are lowest on weekdays, with Wednesdays averaging the highest weekday count.

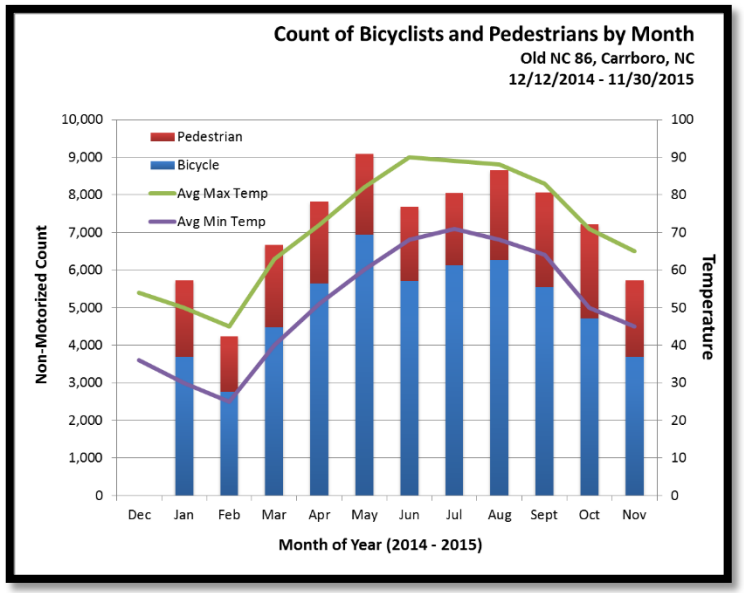


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Sundays are the highest counts exceeding 75 pedestrian counts per day. While Mondays and Thursdays typically have the lowest volume, counts exceed 65 counts per day indicating that there is not a large difference in daily activity at the site. On average, 70 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on weekdays between 8-9AM. These counts are likely school or work based trips with a return trip occurring sometime between 3 and 7PM.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekday morning peak at 7AM, a small peak around 3PM and a distribution of counts across the evening hours. On weekends counts are more distributed throughout the day, during daylight hours. The lowest pedestrian activity occurs between 8PM and 6AM when the sun is down.

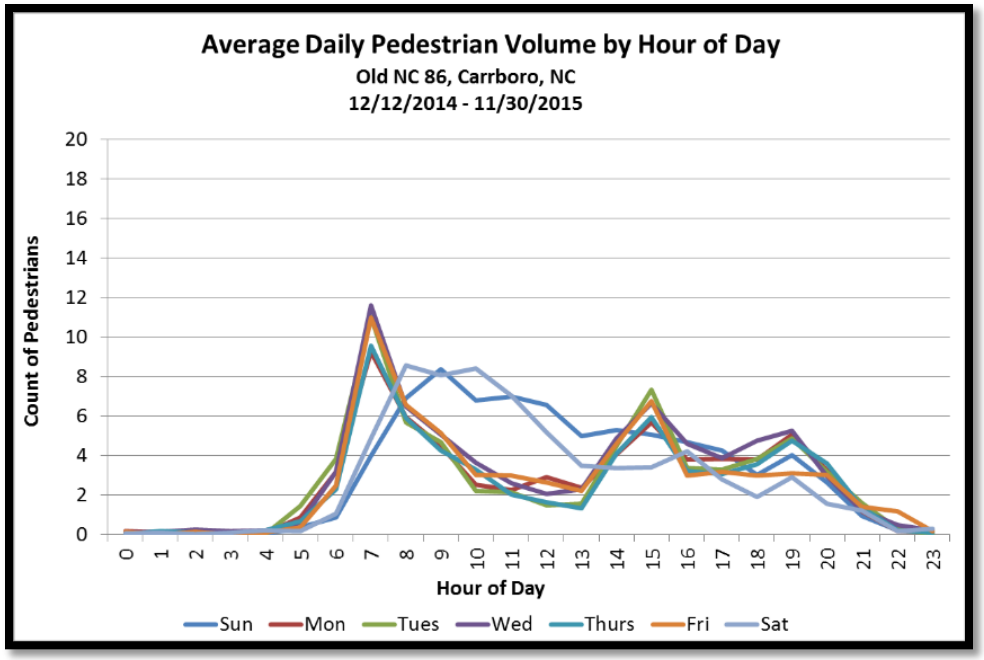


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	76
Mon	65
Tue	74
Wed	73
Thu	65
Fri	66
Sat	69
Average	**70**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	1	1	1	1	0	0	1
6	1	3	4	3	2	2	1	2
7	4	9	11	12	10	11	5	9
8	7	6	6	6	6	7	9	7
9	8	4	5	5	4	5	8	6
10	7	3	2	4	3	3	8	4
11	7	2	2	3	2	3	7	4
12	7	3	1	2	2	3	5	3
13	5	2	2	2	1	2	3	3
14	5	4	4	5	4	5	3	4
15	5	6	7	7	6	7	3	6
16	5	4	3	5	3	3	4	4
17	4	4	3	4	3	3	3	3
18	3	4	4	5	4	3	2	3
19	4	5	5	5	5	3	3	4
20	3	3	3	3	4	3	2	3
21	1	1	2	1	1	1	1	1
22	0	0	0	0	0	1	0	0
23	0	0	0	0	0	0	0	0
Avg	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the autumn months (September – November), although spring experiences volumes nearly as high as autumn, followed by summer. Winter appears to have the lowest volumes though a portion of winter data is missing. Pedestrian volumes regularly exceed 70 counts per day in ever season of the year, including the winter months.

Tuesday November 24th, 2015 had a record number of pedestrians between 10-11AM with over 156 pedestrians counted over the course of the day.

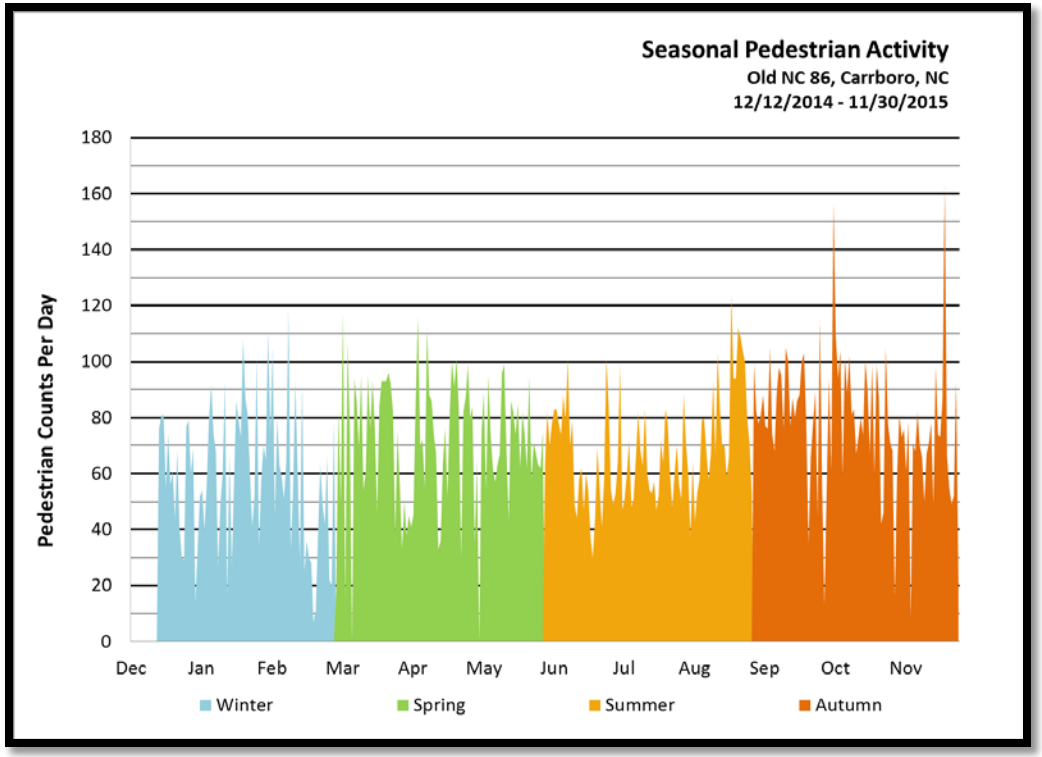


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Saturdays and Sundays have the highest counts, averaging over 200 bicycle counts per day. Weekdays have lower counts with Wednesdays being the highest, but on average the overall count exceeds 150 bicycles per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. There is consistent activity on weekdays with over 5 bicycles per hour during the daylight hours with a small evening peak. On Wednesdays from 5-7PM the evening peak is most pronounced and can reach over 20 bicyclists per hour, potentially due to the activity of a weekly group ride. On the weekends, Saturdays typically have the highest average bicycle volumes with steep peak around 9AM.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday peaking in the evenings from approximately 5-6PM. On the weekends, bicycle activity primarily occurs between the hours of 8AM and 6PM with Saturdays experiencing a high peak in the morning hours, tapering off in the evening. Sunday bicycle volumes are more consistent throughout the day.

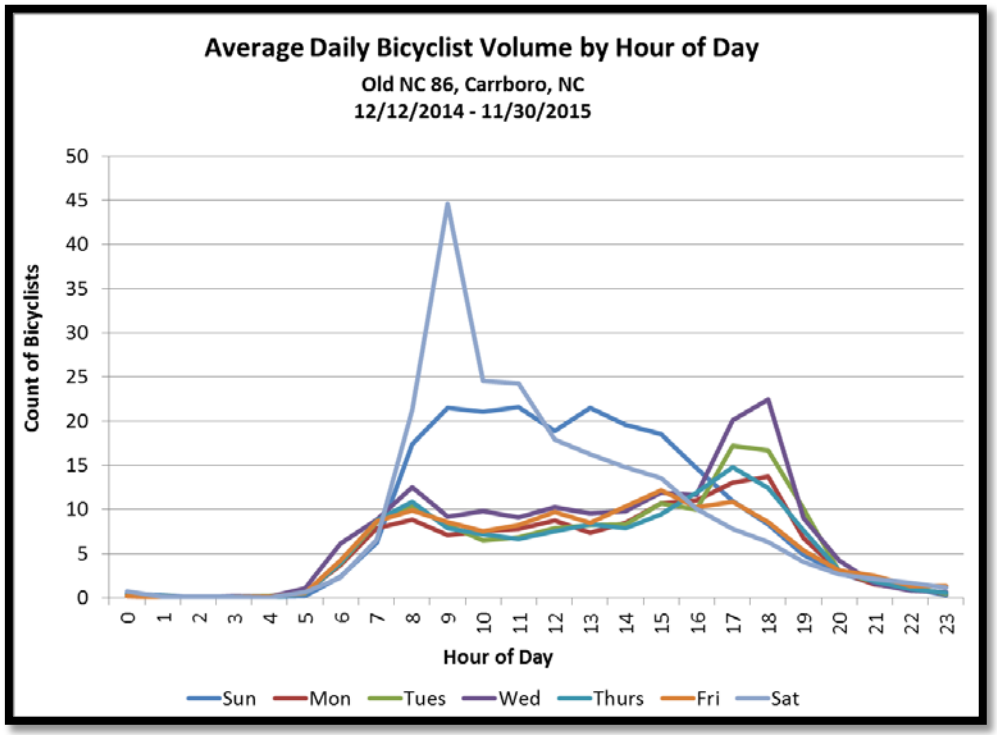


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	215
Mon	130
Tue	142
Wed	170
Thu	134
Fri	132
Sat	208
Average	**160**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	1	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	1	1	1	1	1	1	1
6	2	4	4	6	4	4	2	4
7	6	8	9	9	9	9	7	8
8	17	9	10	12	11	10	21	13
9	22	7	8	9	8	9	45	16
10	21	8	7	10	7	8	25	12
11	22	8	7	9	7	8	24	13
12	19	9	8	10	8	10	18	12
13	22	7	8	10	8	8	16	12
14	20	8	8	10	8	10	15	12
15	19	11	11	12	9	12	14	13
16	15	11	10	12	12	10	10	11
17	11	13	17	20	15	11	8	13
18	8	14	17	23	12	9	6	12
19	5	7	10	9	8	5	4	7
20	3	3	3	4	3	3	3	3
21	2	1	2	2	2	2	2	2
22	1	1	1	1	1	1	2	1
23	0	0	0	1	1	1	1	1
Avg	**9**	**5**	**6**	**7**	**6**	**6**	**9**	**7**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. Bicycling volumes are highest in the summer, though the overall spring count follows closely behind. It is typical for volumes exceed 200 bicycles per day on weekends from spring through the early fall.

On Saturday July 25th, 2015 over 500 bicycle counts were recorded, with several hundred occurring at between 9-10AM. This is likely due to a large cycling event; the particular event could not be determined.

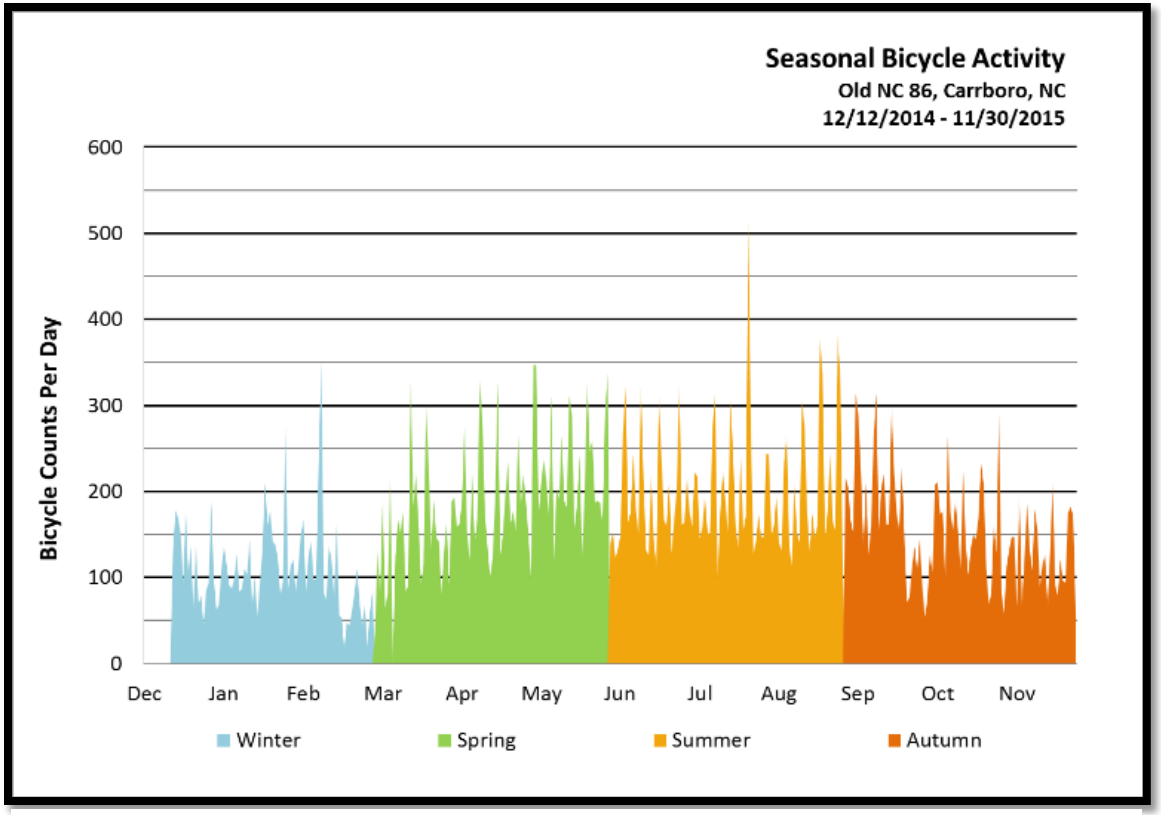


Figure 7. Seasonal Bicycle Activity

AMERICAN TOBACCO TRAIL – DURHAM, NC

A continuous count station was installed on the American Tobacco Trail in Durham, just south of I-40. It is located between the I-40 bicycle and pedestrian overpass and Highgate Dr. This site is located in an area that contains a variety of single and multi-family housing and connects to local and regional shopping destinations. The American Tobacco Trail is approximately 22 miles long and receives both local and long distance trail users. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the count station. Bicyclists on the greenway are detected by a set of two inductive loops positioned in the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) mounted in a post.

Table 1 Station Description	
Active Since	September 17, 2014
Pedestrian Travel Pattern	Rural Recreation
Pedestrian Volume Group	Low
Bicyclist Travel Pattern	Rural Recreation
Bicyclist Volume Group	Medium
Station Location Coordinates	N35.90903 W078.94175
Station Name / ID	DRH_ATT/ 3100001
Directional Distribution	
Northbound	*Southbound*
Pedestrians (47%)	Pedestrians (53%)
Bicyclists (48%)	Bicyclists (52%)

ANALYSIS PERIOD

Data analyzed for this site includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 1 day of bicycle data and 3 days of pedestrian data are not present in the 12-month analysis period.

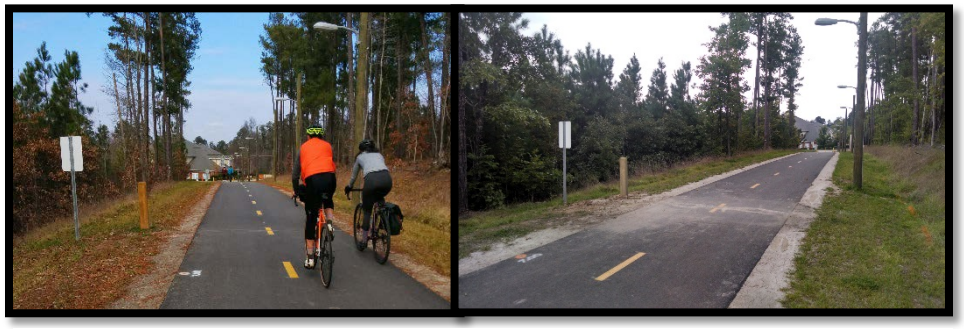


Figure 1. Continuous Count Station Installation

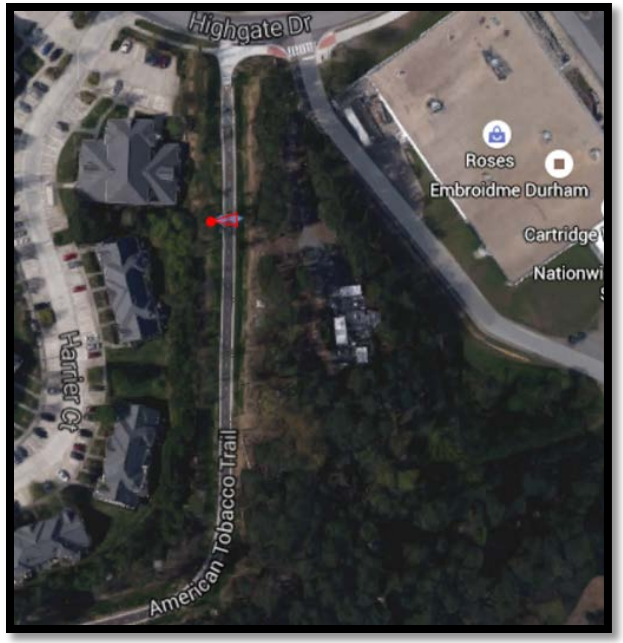


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 100,000 pedestrian counts and 90,000 bicycle counts were recorded in the 12-month analysis period. The overall volume of non-motorized users on this facility varies from over 9,000 to 28,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows a correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics (1) (2) (3)

Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Spring	Winter
Month	May	February
Day of Week	Saturday	Friday
Date	Sun. Feb 8, 2015 (1,056)	NA
Peak Period		Weekends 8AM-5PM
12 Month Pedestrian Count		101,720
Annual Average Daily Pedestrian Traffic		349 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Sunday	Thursday
Date	Mon. May 25, 2015 (1,038)	NA
Peak Period		Sundays 10AM-4PM
12 Month Bicycle Count		92,480
Annual Average Daily Bicycle Traffic		260 AADBT

(1) Note: 1 day of bicycle data and 3 days of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in December, January, and February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. The summer months may have lower volumes due to temperatures and humidity exceeding outdoor comfort. Highest volumes for pedestrians are recorded in May exceeding 14,000 counts recorded. Pedestrian volumes are highest on Saturdays and lowest during the week on Friday.

Bicycle Data

The lowest volumes for bicyclists are recorded during the winter months, also shown in **Figure 3**. The summer season has the highest overall average, with the highest volumes recorded in August. Bicyclist volumes are highest on the weekends, with both Saturday and Sunday experiencing peak periods occurring during daylight hours from 8AM-4PM. Bicyclist volumes are lowest during the week on Fridays.

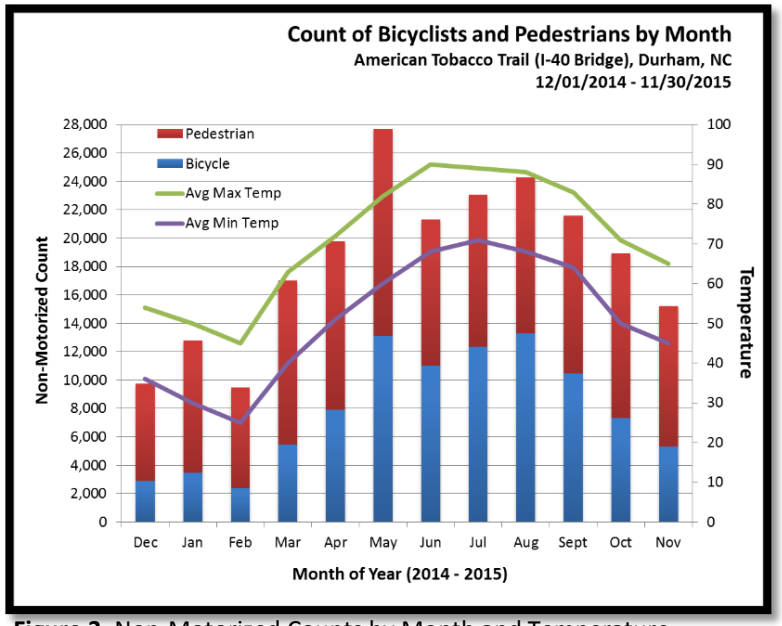


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays and Sundays have the highest counts, exceeding 500 pedestrian counts per day. While Fridays have the lowest volume, over 250 counts are typically recorded on all weekdays. On average, over 340 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on the weekend, both Saturday and Sunday from 8AM to 4PM averaging over 40 pedestrian counts per hour in the peak period, likely the result of weekend recreational activity. During the week, Wednesdays have the highest average, with weekday peaking occurring at approximately 25 counts per hour. This occurs on all weekdays except Friday.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking early Saturday morning and on Sunday during the mid-morning and early afternoon. Afternoon weekday peaking occurs between 5PM and 7PM. The lowest pedestrian activity occurs between 9PM and 5AM though some pedestrian activity occurs later into the evening. Between 12AM and 5AM, hourly pedestrian averages fall to zero.

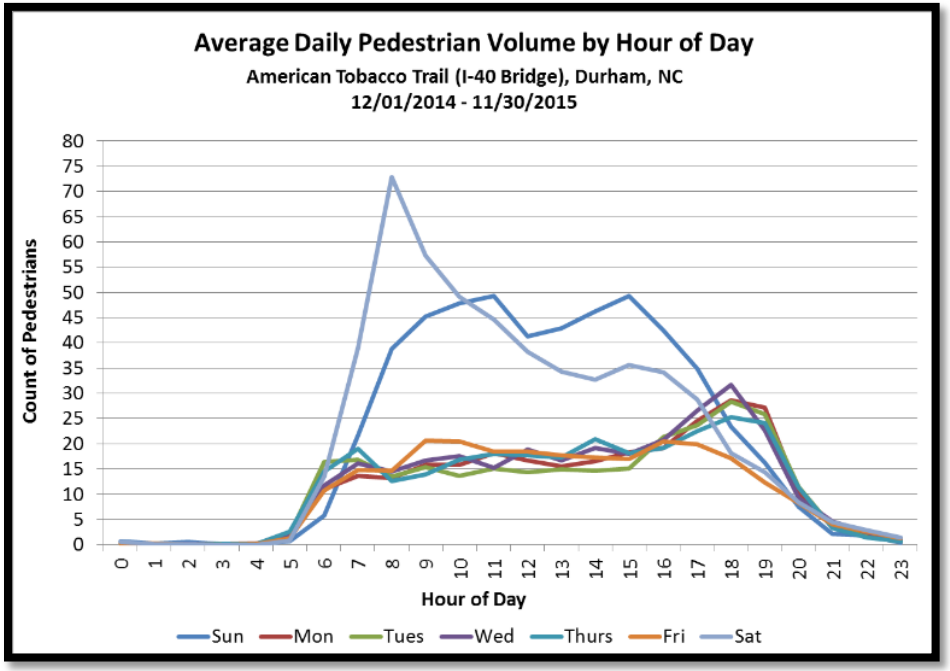


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	519
Mon	273
Tue	275
Wed	286
Thu	297
Fri	258
Sat	531
Average	**348**

Table 3. Average Pedestrian count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	1	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	1	1	2	2	3	1	1	1
6	6	11	16	12	15	11	14	12
7	22	14	17	16	19	15	39	20
8	39	13	13	14	13	15	73	27
9	45	16	15	17	14	21	57	27
10	48	16	14	18	17	21	49	27
11	49	18	15	15	18	18	45	26
12	41	17	14	19	18	18	38	24
13	43	15	15	17	17	18	34	23
14	46	17	15	19	21	17	33	24
15	49	18	15	18	18	17	36	25
16	42	19	21	21	19	20	34	26
17	35	25	24	27	22	20	29	26
18	23	29	28	32	25	17	18	24
19	16	27	26	23	24	12	14	20
20	8	10	12	9	11	8	8	9
21	2	4	3	5	3	4	5	4
22	2	2	2	2	1	3	3	2
23	0	1	1	1	1	1	1	1
Avg	**22**	**11**	**11**	**12**	**12**	**11**	**22**	**15**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the spring months (March-May). Summer and autumn experience approximately the same amount of pedestrian activity while winter has the lowest amount of seasonal activity.

Sunday February 8th, 2015 had a record number of pedestrians, over 1,200 counts, likely due to an unseasonably warm and sunny winter day reaching over 70 degrees after a period of cold and snow. On Sunday March 15, Saturday May 2, and Sunday May 3 pedestrian volumes exceeded 1,000 counts.

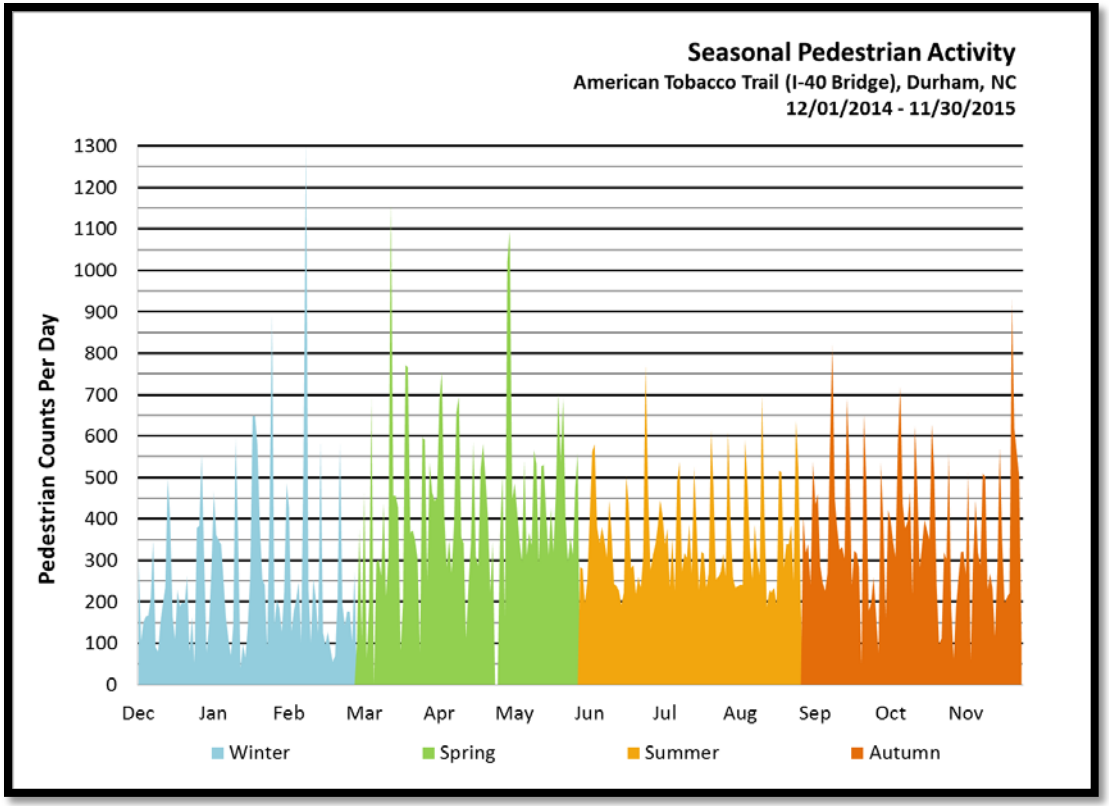


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Sundays have the highest count, averaging 500 bicycle counts per day. Saturdays average nearly 350 counts per day. Weekday volumes average over 150 counts per day on all days of the week. An average day sees approximately 250 counts per day recorded at the site.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on the weekends from 10AM to 3PM where counts average over 35 bicyclists per hour though Sunday sees higher volumes tapering off later in the evening, around 4PM. Peaks occur on weekday evenings at approximately 6PM where they typically reach or exceed 20 bicyclists per hour, except on Friday.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday peaking in the evenings after working hours. On the weekends, bicycle activity primarily occurs between the hours of 8AM and 4PM with Saturdays and Sundays showing a similar pattern, although counts are higher on Sundays. Some bicycle activity does occur into the late evening on both weekdays and weekends, dropping off in the early morning hours.

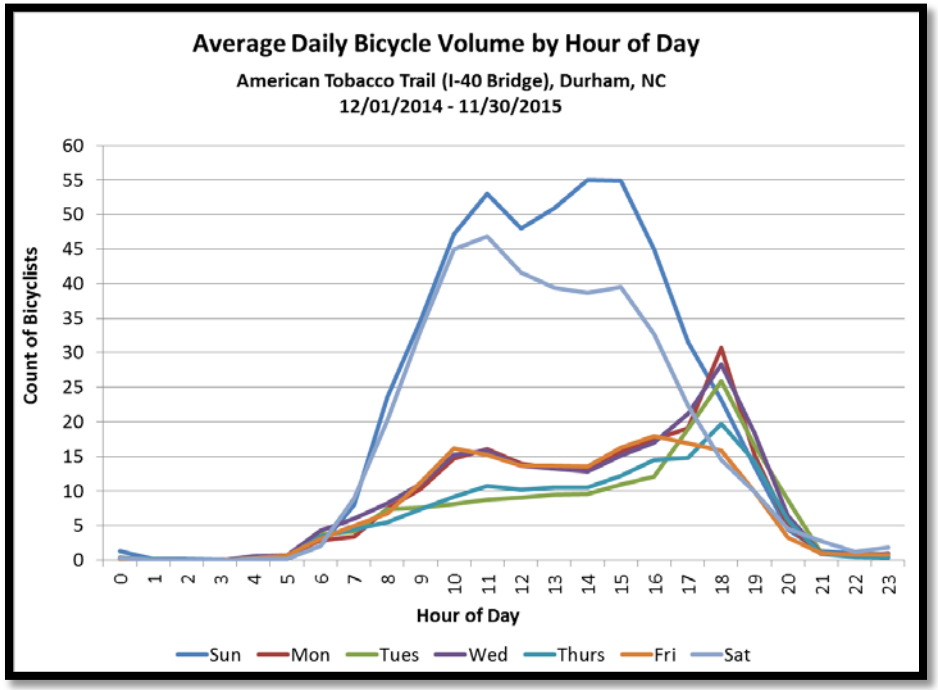


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	500
Mon	203
Tue	168
Wed	211
Thu	161
Fri	183
Sat	349
Average	**249**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	1	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	1	0	1	0	0	0	0
5	0	1	0	1	0	1	0	0
6	2	3	4	4	3	3	2	3
7	8	3	4	6	4	5	9	6
8	24	8	7	8	6	7	20	12
9	35	10	8	11	7	11	33	17
10	47	15	8	15	9	16	45	23
11	53	16	9	16	11	15	47	25
12	48	14	9	14	10	14	42	22
13	51	13	9	13	11	14	39	22
14	55	13	10	13	11	14	39	23
15	55	16	11	15	12	16	40	24
16	45	17	12	17	14	18	33	23
17	32	19	19	21	15	17	22	21
18	23	31	26	28	20	16	14	23
19	14	15	17	18	14	10	10	14
20	4	5	9	6	6	3	5	5
21	1	1	1	1	1	1	3	1
22	1	1	1	1	0	1	1	1
23	1	1	1	1	0	1	2	1
Avg	**21**	**8**	**7**	**9**	**7**	**8**	**17**	**11**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicycle volumes occur in the summer where weekend peaks exceed 600 bicycles per day. Activity at this site appears to be highly seasonal and weather related with repeated cold and or wet weekends greatly affecting a season's overall activity levels. February 8, 2015 experienced counts of over 900 bicycles, likely related to a seasonably warm day after a period of cold and snow.

Weekday volumes exceed 700 bicycles per day in all seasons and reach over 900 bicycles per day in the peak spring/summer period. On Monday May 25, 2015 and Monday September 7, 2015 over 1,000 bicycle counts were recorded. These peaks are most likely explained by recreational activity related to the Memorial Day and Labor Day holidays as opposed to specific trail-related events.

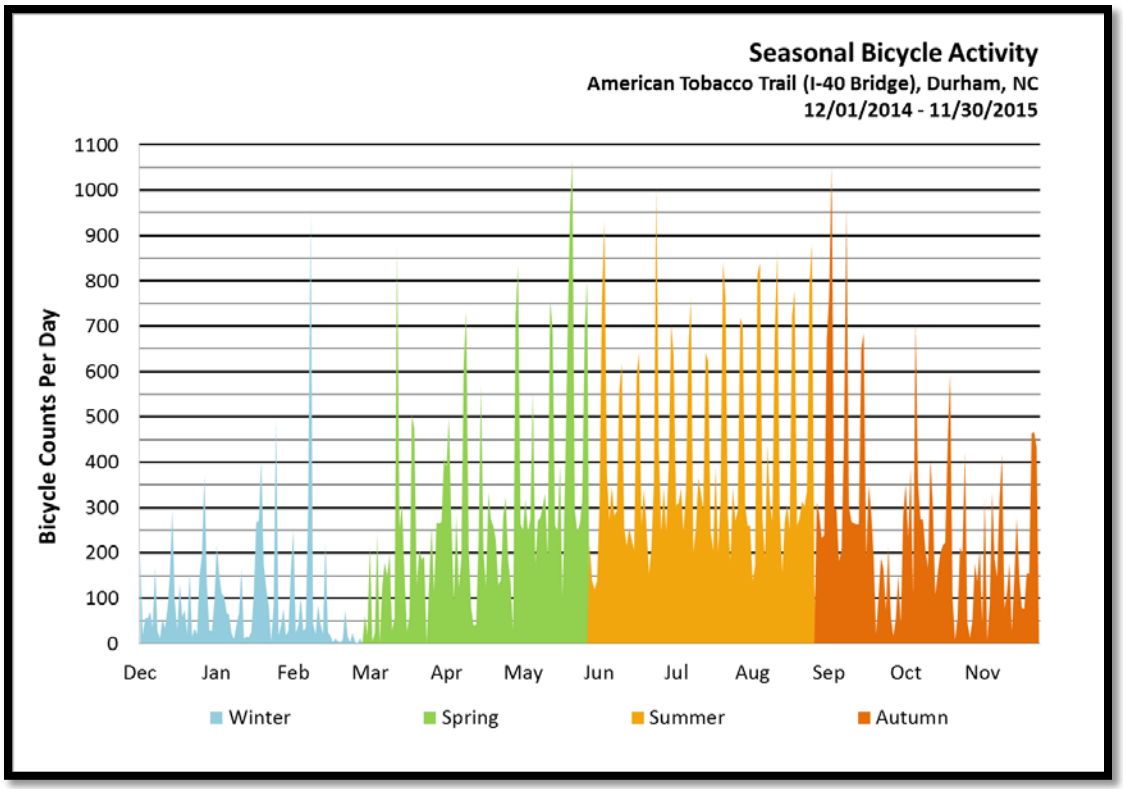


Figure 7. Seasonal Bicycle Activity

SOUTH ELM STREET – GREENSBORO, NC

A continuous count station was installed on South Elm Street in Greensboro, NC between Washington and McGee Street in the heart of Greensboro's downtown business district which has a mix of shops, restaurants, offices, and entertainment. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that comprise the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the lane (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 18 days of bicycle data and 4 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation East (Left) and West (Right)

Table 1 Site Description	
Active Since	September 18, 2014
Pedestrian Travel Pattern	Urban Mixed
Pedestrian Volume Group	High
Bicyclist Travel Pattern	Urban Mixed
Bicyclist Volume Group	Medium
Station Location Coordinates	E- N36.06926 W079.79048 W- N36.06926 W079.79048
Station Name / ID	GSO_ELM/ 4000001
Directional Distribution	
West Side	*East Side*
Pedestrians on Sidewalk (60%)	Pedestrians on Sidewalk (40%)
SB Bicyclists in Roadway (47%)	NB Bicyclists in Roadway (53%)

Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 1.1 million pedestrian counts and 26,000 bicycle counts were recorded in the 12-month analysis period. The overall volume of non-motorized users on this facility varies from nearly 60,000 to over 130,000 counts per month. December is not figured into monthly or seasonal data statistics because data was not logged the first part of the month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year and average monthly bicycle and pedestrian counts.

Table 2 Summary Volume Statistics (1) (2) (3)

Annual Average Daily Traffic (AADT)		6,300 (NCDOT, 2013)
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	May	February
Day of Week	Friday	Monday
Date	Sat. Jul 4, 2015 (14,009)	NA
Peak Period		Fridays 7-9PM
12 Month Pedestrian Count		1,168,830
Annual Average Daily Pedestrian Traffic		3,236 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	June	February
Day of Week	Tues-Thurs	Saturday
Date	Thurs. Jun 25, 2015 (181)	NA
Peak Period		Weekdays 11AM-2PM
12 Month Bicycle Count		26,530
Annual Average Daily Bicycle Traffic		77 AADBT

(1) Note: 18 days of bicycle data and 4 days of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in January and February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. Highest volumes for pedestrians are recorded in the months of May and September. Volumes stay relatively high during the summer months but dip after the May peak. Pedestrian volumes are highest on Fridays and lowest on Mondays.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3**. The summer season has the highest overall average, with the volumes exceeding 2,000 counts per month in June, August, and September. Bicyclist volumes are highest on weekdays, with peak periods occurring in the late morning and mid-afternoon. Saturdays have the lowest bicycle counts.

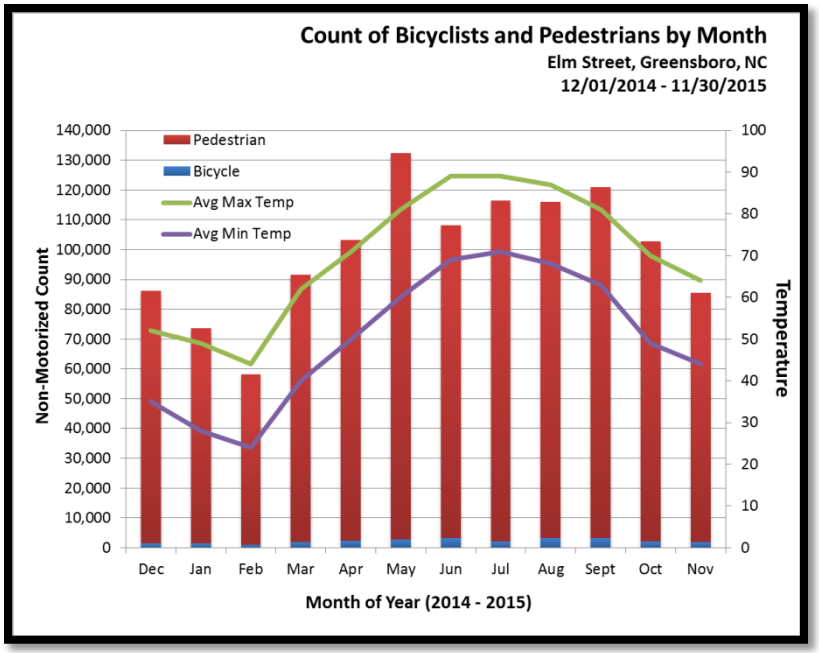


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. Saturdays have the most activity with over 5,000 counts per day. Fridays experience, on average, over 4,500 counts per day. During the weekdays, while Mondays are the lowest, they average over 2,000 counts per day throughout the year. On average, over 3,200 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on Friday and Saturday evenings Over 350 counts per hour are recorded beginning around 6PM on Friday continuing through 11PM, then again most hours 2PM Saturday through 1AM on Sunday. These evening counts are likely the result of people going to and from restaurants, events, and entertainment in the Central Business District. On all days of the week, volumes exceed 150 counts per hour in the peak period.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in the late evening early morning on both Friday and Saturday night, into Sunday morning. Afternoon weekday peaking occurs between 11AM and 2PM. The lowest pedestrian activity occurs between 3AM and 6AM. Hourly pedestrian averages never fall to zero indicating the site is active at all hours.

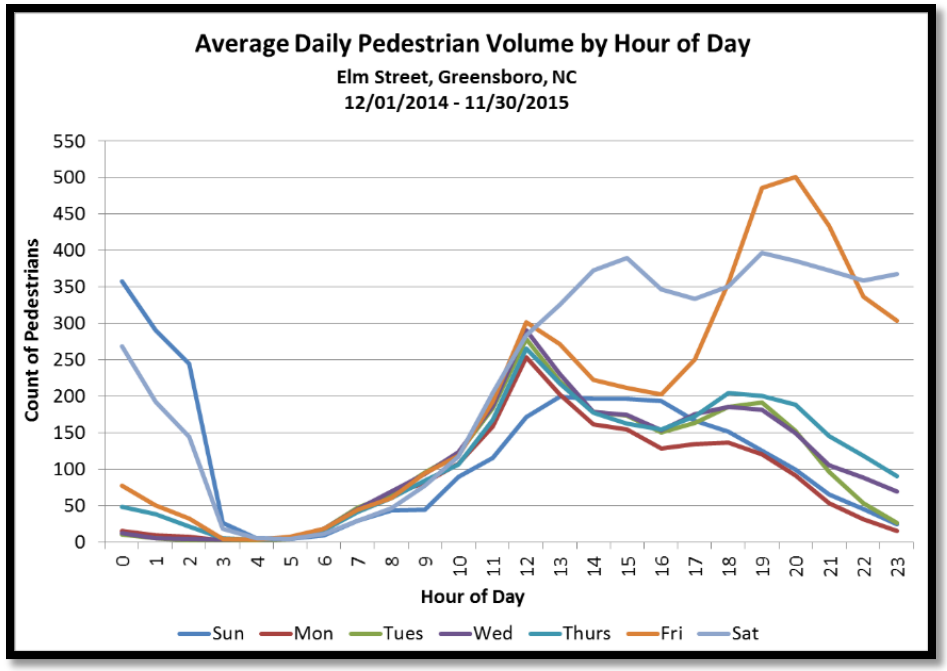


Figure 4. Average Daily Pedestrian Volumes by Hour of day

Day of Week	Pedestrian Count
Sun	2901
Mon	2010
Tue	2435
Wed	2560
Thu	2736
Fri	4587
Sat	5408
Average	**3238**

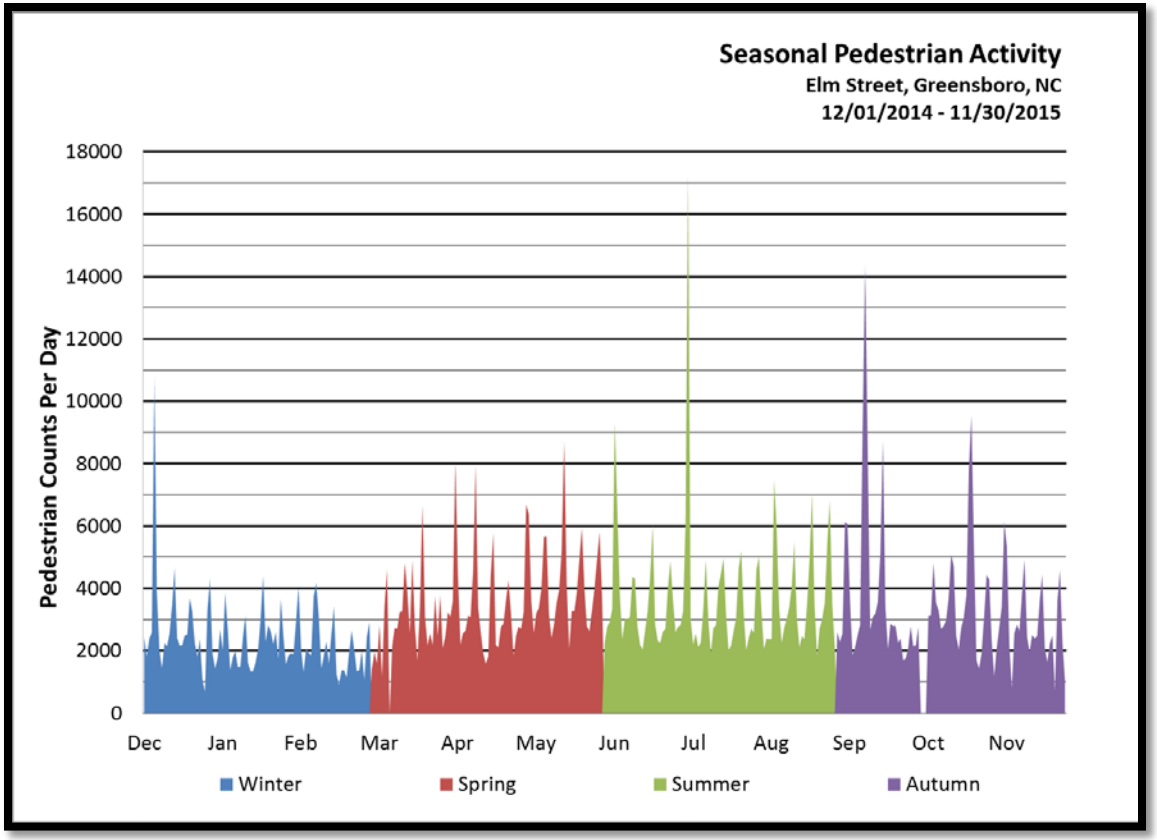
Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	357	16	10	13	49	78	269	118
1	291	10	6	6	39	50	192	88
2	245	8	3	4	21	33	144	69
3	26	3	3	4	6	5	18	9
4	5	4	3	4	4	3	5	4
5	5	6	5	6	6	8	5	6
6	10	18	19	19	17	19	12	16
7	30	44	48	45	42	45	30	40
8	44	66	65	69	61	61	47	59
9	44	82	95	94	85	94	78	81
10	90	107	122	124	106	119	118	112
11	116	159	184	187	168	193	205	173
12	172	254	279	291	265	302	283	264
13	200	203	220	231	218	271	326	240
14	197	161	179	179	178	223	373	215
15	197	154	174	175	163	212	390	212
16	193	129	150	154	154	203	347	193
17	167	135	164	176	173	251	334	202
18	152	137	186	186	205	356	351	227
19	125	121	192	182	201	486	397	248
20	100	92	152	150	189	501	386	229
21	65	54	97	105	146	433	373	187
22	45	32	54	89	119	336	358	153
23	24	16	26	70	90	304	367	134
Avg	**121**	**84**	**102**	**107**	**113**	**191**	**225**	**137**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. There is little difference in count volumes between spring, summer, and fall, though the summer season experiences slightly higher counts overall. May, on average, has the highest volume of pedestrians with nearly 130,000 counts recorded. Weekend days from March through November prior to Thanksgiving see volumes that regularly exceed 4,000 counts per day.

Saturday July 4th, 2015 had a record number of pedestrians. This was likely due to activity surrounding Greensboro's FunFourth Festival, which exceeded 13,000 pedestrian counts in a single day.



Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Tuesdays, Wednesdays, and Thursdays have the highest volumes, averaging 82-83 bicycle counts per day. Weekend activity does not vary greatly from weekday activity with Saturdays and Sundays experience slightly lower volumes. On average, over 75 bicycle counts are recorded at the site each day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekday mornings at approximately 11AM and through the early afternoon until 2PM. A small 8AM bump in activity is observed around 8AM.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday and weekend peaking period from the late morning to the early afternoon, between the hours of 10AM and 4PM. Bicycle activity does occur into the evening on both weekdays and weekends, dropping off in the early morning hours.

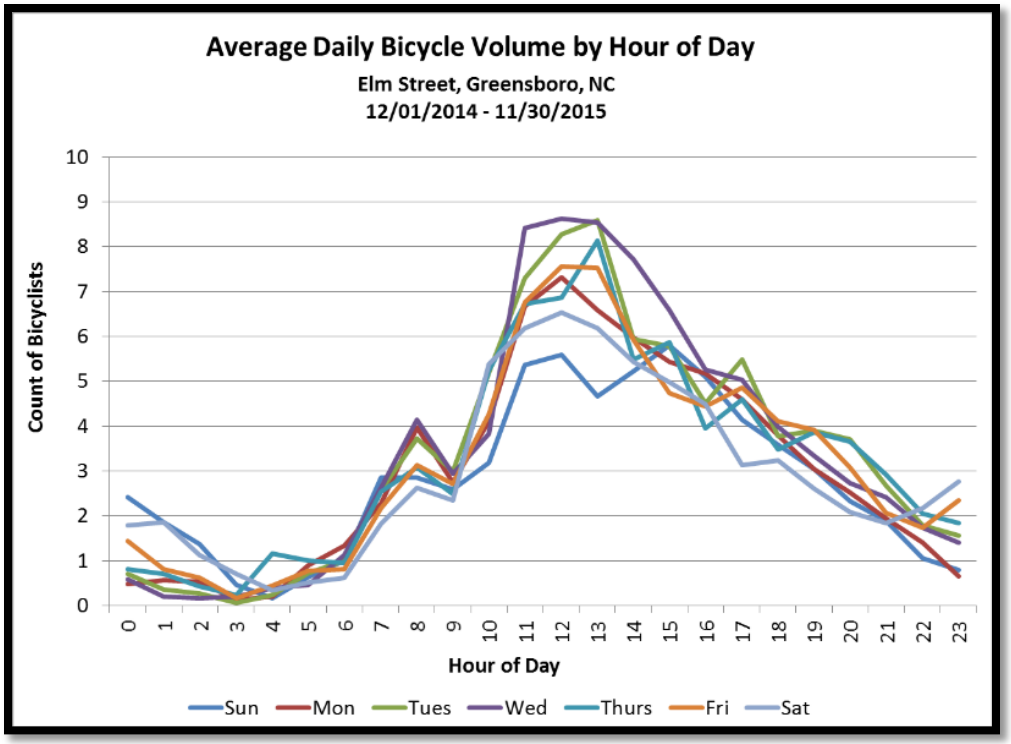


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	68
Mon	72
Tue	82
Wed	82
Thu	83
Fri	76
Sat	64
Average	**76**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	2	0	1	1	1	1	2	1
1	2	1	0	0	1	1	2	1
2	1	1	0	0	0	1	1	1
3	0	0	0	0	0	0	1	0
4	0	0	0	0	1	0	0	0
5	1	1	1	0	1	1	1	1
6	1	1	1	1	1	1	1	1
7	3	2	3	3	3	2	2	2
8	3	4	4	4	3	3	3	3
9	3	3	3	3	2	3	2	3
10	3	4	5	4	5	4	5	4
11	5	7	7	8	7	7	6	7
12	6	7	8	9	7	8	7	7
13	5	7	9	9	8	8	6	7
14	5	6	6	8	5	6	5	6
15	6	5	6	7	6	5	5	6
16	5	5	5	5	4	4	5	5
17	4	5	5	5	5	5	3	5
18	4	4	4	4	3	4	3	4
19	3	3	4	3	4	4	3	3
20	2	3	4	3	4	3	2	3
21	2	2	3	2	3	2	2	2
22	1	1	2	2	2	2	2	2
23	1	1	2	1	2	2	3	2
Avg	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the summer months (September- November). Volumes exceed 60 bicycles per day in all seasons and regularly exceed 100 bicycles per day in the summer and early autumn.

On Thursday June 25, 2015 approximately 180 bicycle counts were recorded with most of the activity occurring between 8-9PM. This could be due to a special event or large group ride but the exact event could not be determined.

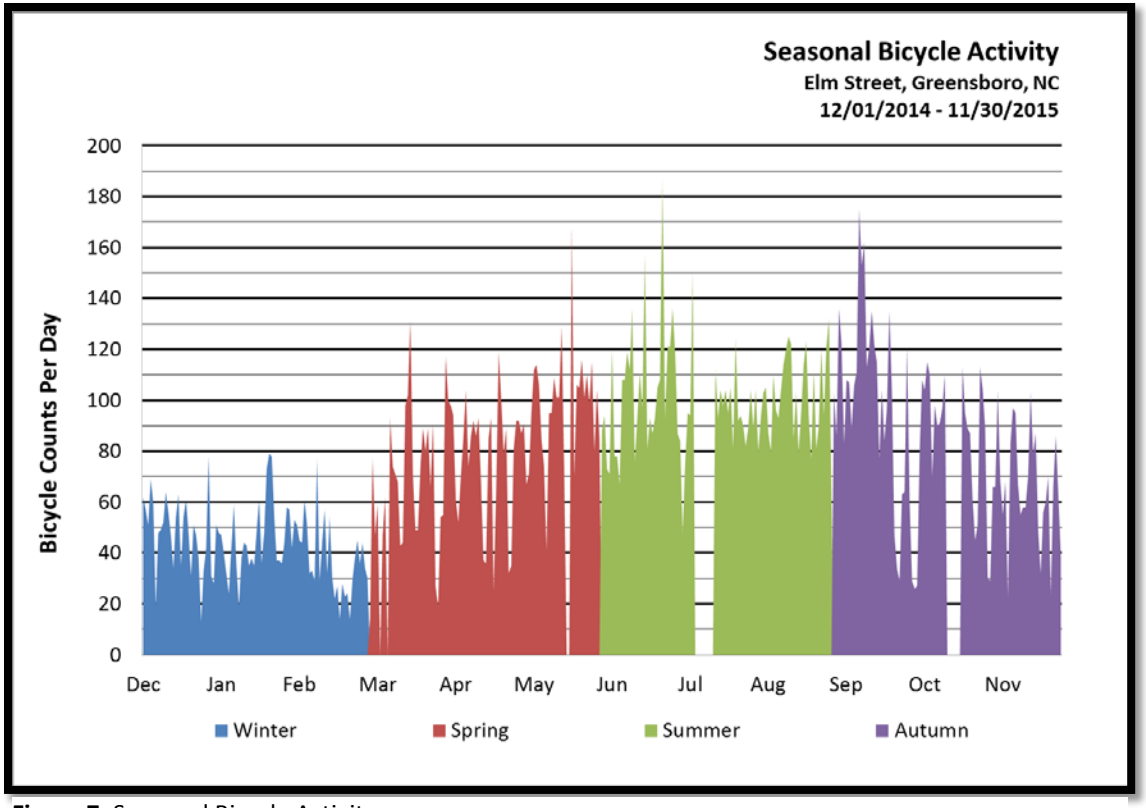


Figure 7. Seasonal Bicycle Activity

LAKE DANIEL GREENWAY – GREENSBORO, NC

A continuous count station was installed on the Lake Daniel Greenway in Greensboro, NC near Aycock St. This greenway starts at the Wesley Long Hospital and runs along North Buffalo Creek north of UNC-Greensboro, linking to the Latham Park Greenway and the Moses Cone Memorial Hospital. **Table 1** contains information related to the site and a photograph of the completed site installation is shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the count station. Bicyclists on the greenway are detected by a set of two inductive loops positioned in the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) mounted in a post.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 1 day of bicycle data and 2 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation

Table 1 Station Description		
Active Since	September 18, 2014	
Pedestrian Travel Pattern	Urban Mixed	
Pedestrian Volume Group	Low	
Bicyclist Travel Pattern	Urban Recreation	
Bicyclist Volume Group	Low	
Station Location Coordinates	N36.07977 W079.81432	
Station Name / ID	GSO_LDG / 4000002	
Directional Distribution		
	Westbound	*Eastbound*
	Pedestrians (55%)	Pedestrians (45%)
	Bicyclists (54%)	Bicyclists (46%)

Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 70,000 pedestrian counts and 22,00 bicycle counts were recorded during the 12-month analysis period. The overall volume of non-motorized users on this facility varies from over 4,000 to nearly 11,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows some correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics [(1) (2) (3)]

Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Spring	Winter
Month	May	February
Day of Week	Saturday/Sunday	Friday
Date	Nov 21, 2015 (1,229)	NA
Peak Period		Weekends 8A – 7P
12 Month Pedestrian Count		71,080
Annual Average Daily Pedestrian Traffic		196 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Sunday	Friday
Date	May 30, 2015 (239)	NA
Peak Period		Weekends 9AM-4PM
12 Month Bicycle Count		22,490
Annual Average Daily Bicycle Traffic		62 AADBT

(1) Note: 1 day of bicycle data and 2 days of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded during the winter months. February has the lowest activity, but volumes still exceed 3,400 counts. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. Spring experiences the highest volumes but summer and autumn are close, indicating that from March – November, there is little variation in activity level during the warmer months. The highest monthly volumes for pedestrians are recorded in May where pedestrian volumes exceeded 7,500 counts. Pedestrian volumes are highest on Saturdays and Sundays and lowest during the week on Friday.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3**. The summer season has the highest overall average of bicycle counts, with the highest monthly volume for the year exceeding 3300 counts occurring in August. Bicyclist volumes are highest on Sundays and lowest on Friday

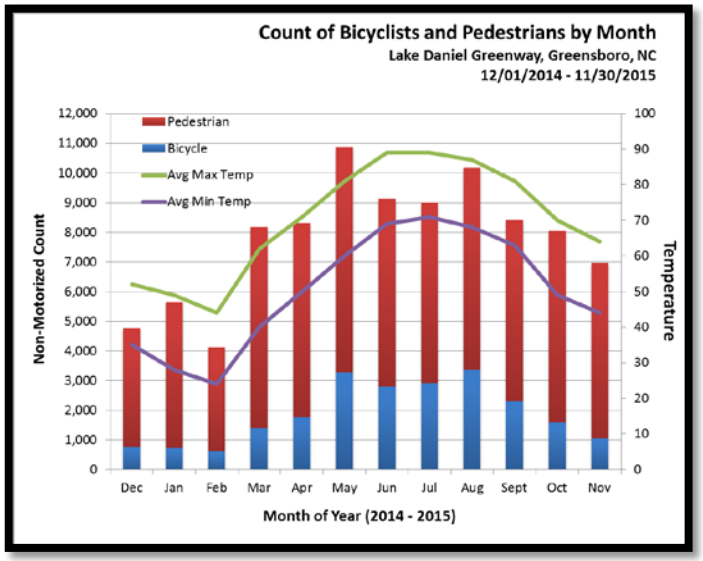


Figure 1. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays are the highest counts recorded followed closely by Sunday where volumes regularly exceed 200 counts per day. Fridays have the lowest volumes, but still exceed 150 counts per day. On average, nearly 200 counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on the weekend, where activity increases rapidly between 7 and 8AM and remains very active until the late afternoon reaching over 20 counts per hour in the peak period. On weekdays, there is activity occurring by 6AM which remains relatively consistent until a peak that occurs in the early evening typically reaching over 20 counts per hour.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in the morning on Saturday and throughout the afternoon on Sunday. Afternoon weekday peaking occurs around 5PM. The lowest pedestrian activity occurs between 9PM and 6AM with hourly pedestrian averages falling to zero between 11PM and 5AM.

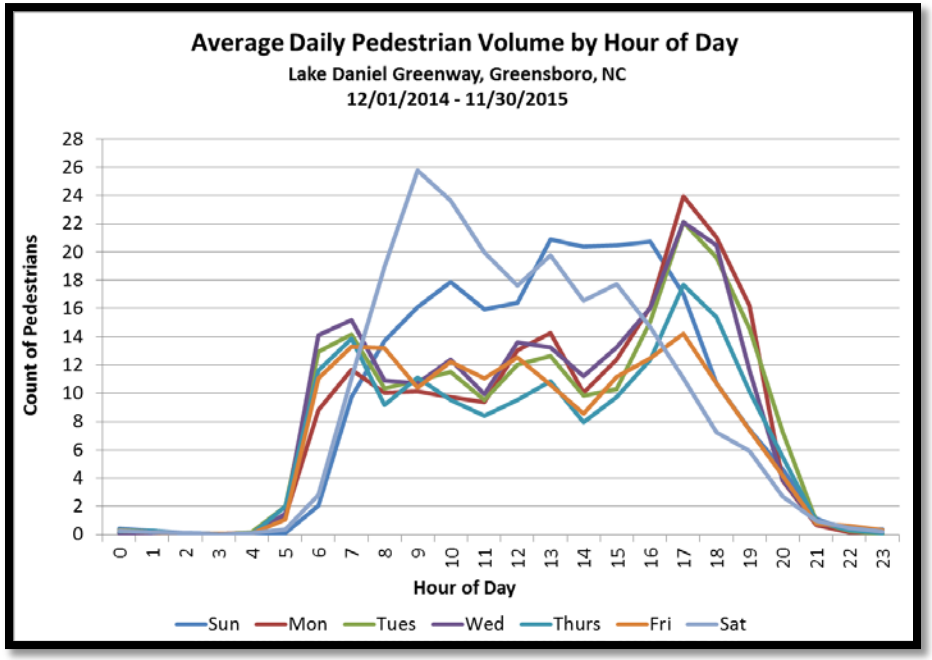


Figure 2. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	217
Mon	193
Tue	195
Wed	202
Thu	179
Fri	166
Sat	218
Average	**196**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	1	2	1	2	1	0	1
6	2	9	13	14	12	11	3	9
7	10	12	14	15	14	13	11	13
8	14	10	10	11	9	13	19	13
9	16	10	11	11	11	10	26	14
10	18	10	12	12	10	12	24	14
11	16	9	10	10	8	11	20	12
12	16	13	12	14	10	13	18	14
13	21	14	13	13	11	11	20	15
14	20	10	10	11	8	9	17	12
15	20	12	10	13	10	11	18	14
16	21	16	15	16	12	12	15	15
17	17	24	22	22	18	14	11	18
18	11	21	20	20	15	11	7	15
19	7	16	15	12	10	7	6	10
20	5	4	7	4	6	4	3	4
21	1	1	1	1	1	1	1	1
22	0	0	0	1	0	1	0	0
23	0	0	0	0	0	0	0	0
Avg	**9**	**8**	**8**	**8**	**7**	**7**	**9**	**8**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the spring months (March-May) although spring and summer see similar activity levels indicating that there is not much variation in activity in months when the weather is warmer. From March through November, volumes can regularly exceed 200 pedestrian counts per day. This also occasionally occurs during the winter months.

Saturday November 21st, 2015 had a record number of pedestrians likely due to the Zero Prostate Cancer Run/Walk which used the greenway as part of its route. The event had over 350 participants in 2015.

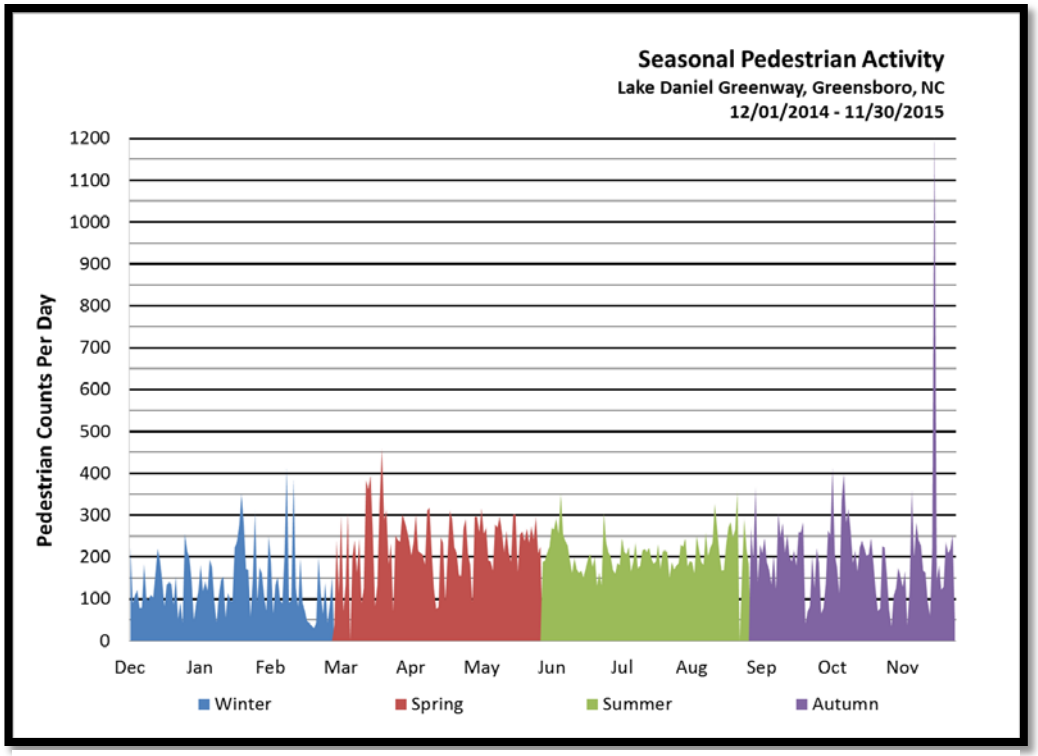


Figure 3. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Sundays have the highest volume, averaging over 90 bicycle counts per day. Weekdays have lower averages, although counts generally meet or exceed 50 counts per day. On average, 60 bicycle counts per day are recorded at the site.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on the weekends during the daytime hours where volumes generally reach over 10 bicycles per hour on Sunday. Weekdays have similar volumes with activity starting around 6AM and peaking in the early evening hours around 5PM.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** On the weekdays, there activity beginning at 6AM and tapering off in the evening around 8PM. On the weekends, bicycle activity primarily occurs between the hours of 9AM and 4PM where Saturdays have a morning peak and Sundays experiencing a peak through the early afternoon hours. On all days of the week, bicycling activity occurs during the daylight hours.

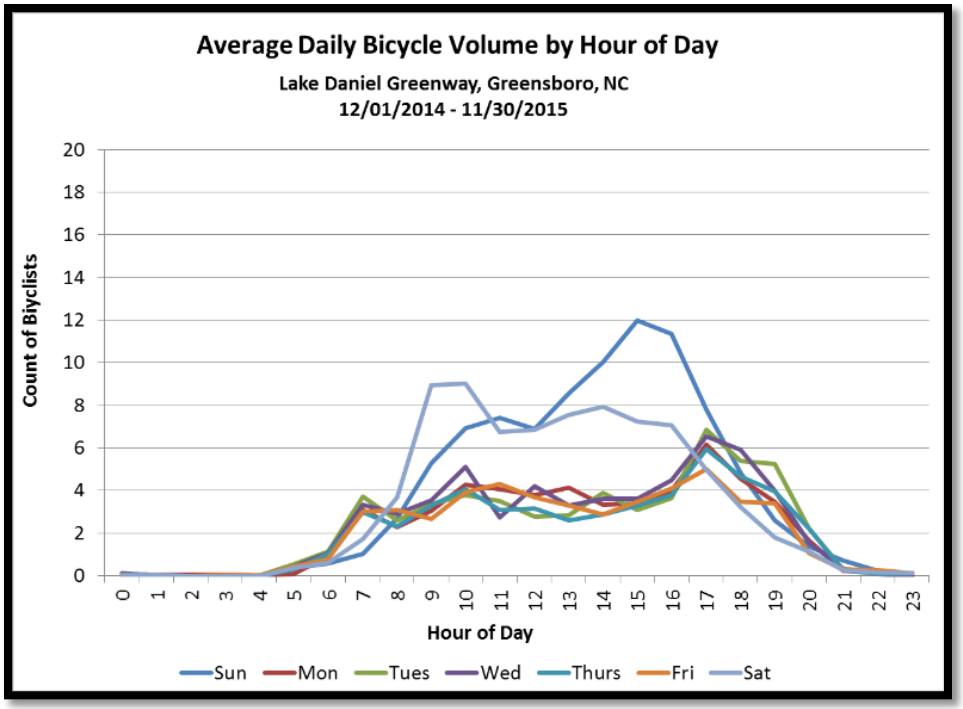


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	91
Mon	53
Tue	53
Wed	57
Thu	50
Fri	49
Sat	68
Average	**60**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0
6	1	1	1	1	1	1	1	1
7	1	3	4	3	3	3	2	3
8	3	2	3	3	2	3	4	3
9	5	3	3	4	3	3	9	4
10	7	4	4	5	4	4	9	5
11	7	4	4	3	3	4	7	5
12	7	4	3	4	3	4	7	5
13	9	4	3	3	3	3	8	5
14	10	3	4	4	3	3	8	5
15	12	3	3	4	3	3	7	5
16	11	4	4	4	4	4	7	6
17	8	6	7	7	6	5	5	6
18	5	5	5	6	5	3	3	5
19	3	3	5	4	4	3	2	3
20	1	2	2	2	2	1	1	2
21	1	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
Avg	**4**	**2**	**2**	**2**	**2**	**2**	**3**	**3**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the summer months (June – August) where volumes regularly exceed 100 bicycle counts per day. Spring experiences the second highest volume, by season.

On Sunday February 8th and Saturday May 30th, 2015 over 230 bicycle counts were recorded at the site. Counts were spread throughout the day so these peaks are not likely attributed to any single special event but may be explained by exceptionally good weather.

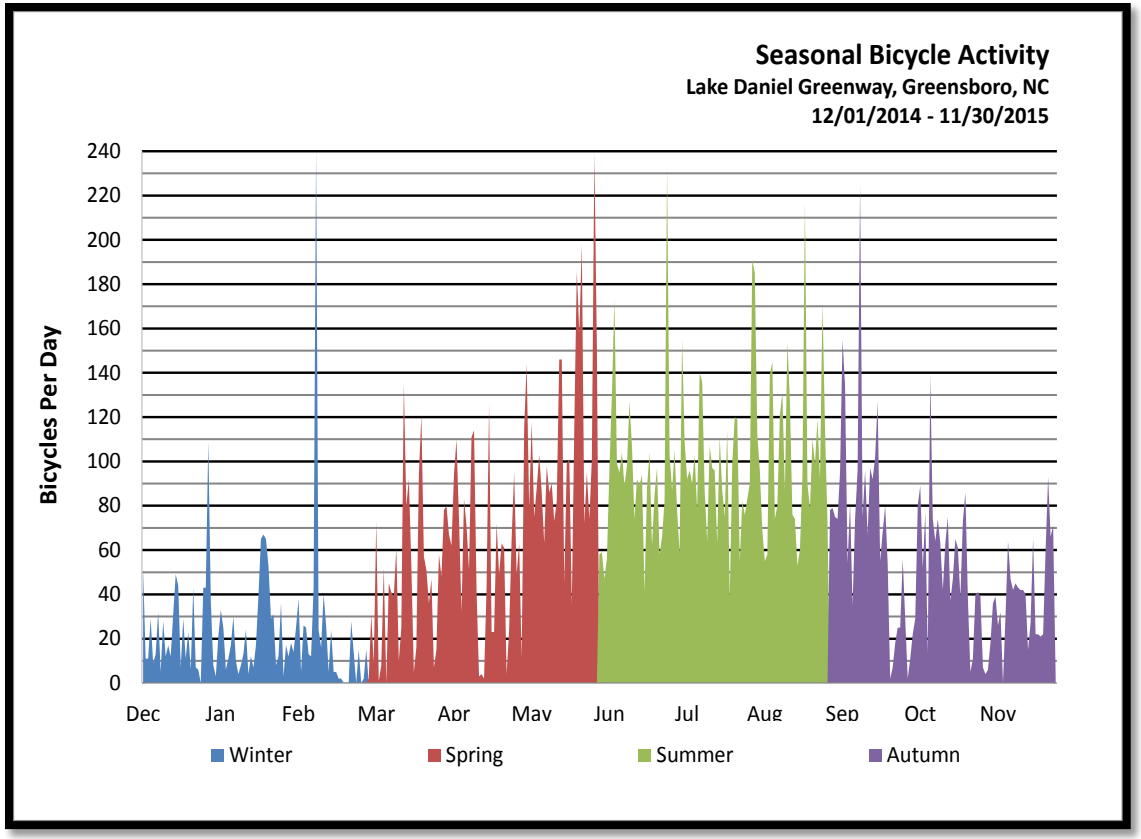


Figure 7. Seasonal Bicycle Activity

SPRING GARDEN STREET – GREENSBORO, NC

A continuous count station was installed on Spring Garden Street in Greensboro, NC between Springdale Ct and Mendenhall St. This site is situated between downtown Greensboro and UNC Greensboro's campus in a residential area with local businesses nearby. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that makes up the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this site includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 6 days of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation North (Left) and South (Right)

Table 1 Station Description	
Active Since	September 19, 2014
Pedestrian Travel Pattern	University Commute
Pedestrian Volume Group	Medium
Bicyclist Travel Pattern	University Commute
Bicyclist Volume Group	Medium
Station Locations	N- N36.06657 W079.80379 S- N36.06649 W079.80411
Station Name/ ID	GSO_SPR / 4000003
Directional Distribution	
North Side	*South Side*
Pedestrians on Sidewalk (60%)	Pedestrians on Sidewalk (40%)
EB Bicyclists in Roadway (49%)	WB Bicyclists in Roadway (51%)

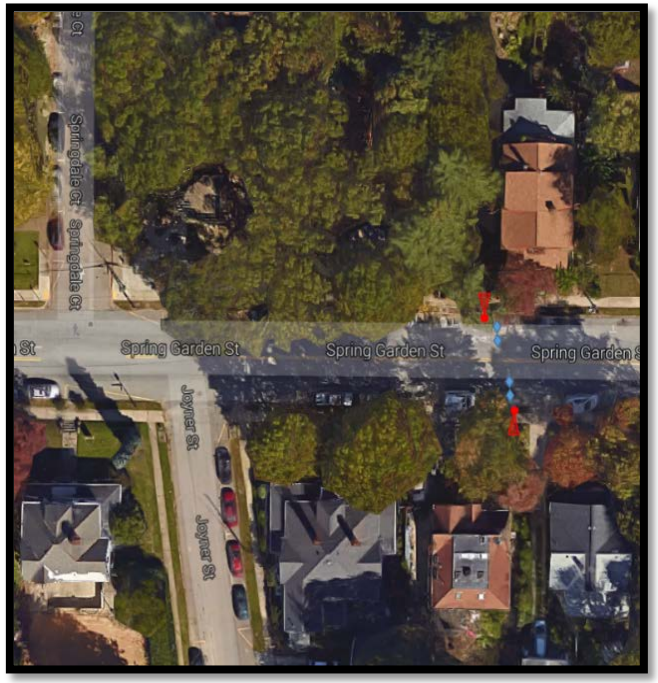


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 300,000 pedestrian counts and nearly 40,000 bicycle counts were collected at the site during the 12-month analysis period. The overall volume of non-motorized users on this facility varies from 14,000 to 44,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site does not show a strong correlation between temperature and non-motorized volumes for pedestrians, but there is some correlation for bicyclists.

Table 2 Summary Volume Statistics [(1) (2) (3)]

Annual Average Daily Traffic (AADT)	6,100 (NCDOT, 2013)	
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Autumn	Summer
Month	September	December
Day of Week	Wednesday	Sunday
Date	Aug 26, 2015 (1,922)	NA
Peak Period	Mon, Wed 8AM-3PM	
12 Month Pedestrian Count	301,740	
Annual Average Daily Pedestrian Traffic	828 AADPT	
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	September	February
Day of Week	Wednesday	Saturday/Sunday
Date	Sept 15, 2015 (274)	NA
Peak Period	Daily 8AM-7PM	
12 Month Bicycle Count	39,080	
Annual Average Daily Bicycle Traffic	108 AADBT	

(1) Note: 6 days of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in December, June, and July. The summer months likely have lower volumes due to the University schedule. Highest volumes for pedestrians are recorded in the months of September and October. Over 35,000 counts per month were recorded in September and October. Pedestrian volumes are highest on Wednesdays and lowest during the weekend on Sunday.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3**. The autumn months of September, October, and November have the highest overall volumes, with over 4,000 counts recorded in September and October. Bicyclist volumes are highest on Wednesdays, with peak periods occurring during normal school and work hours. Saturdays and Sundays have the lowest bicycle counts.

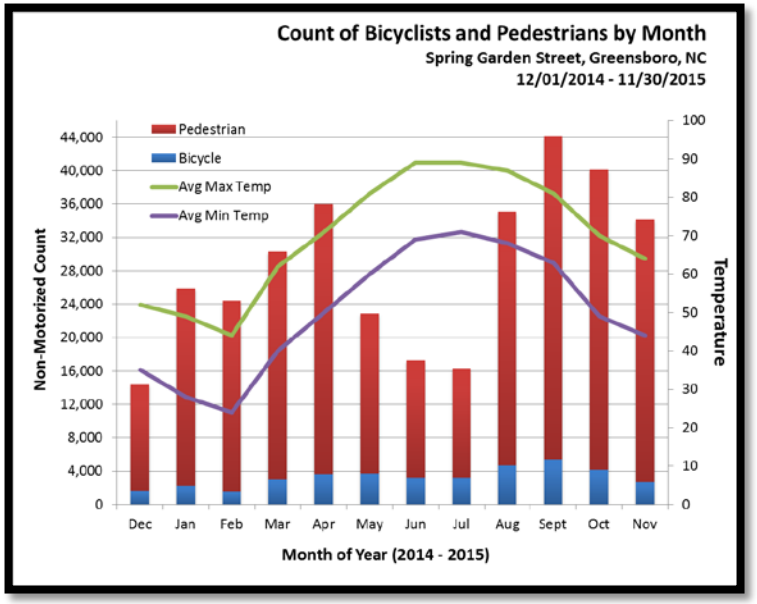


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Wednesdays are the highest counts recorded, followed by Tuesdays. While Saturdays and Sundays are the lowest volumes, they still average over 450 counts per day. On average, in excess of 800 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on weekdays, beginning around 8AM and continuing through 5PM. Monday and Wednesday peaks at over 50 pedestrians per hour, are indicative of the university class schedule. The weekday volumes are likely the result of students getting to and from the UNCG campus. Saturday and Sundays experience pedestrian activity from late morning through the early morning hours.

Hourly pedestrian volumes are depicted graphically in **Figure 4** and show the unique weekday peaks which follow the university schedule and taper off by 7PM. The lowest pedestrian activity occurs between 3AM and 6AM but hourly pedestrian averages never fall to zero on any day or hour of the week, indicating the site is active at all hours.

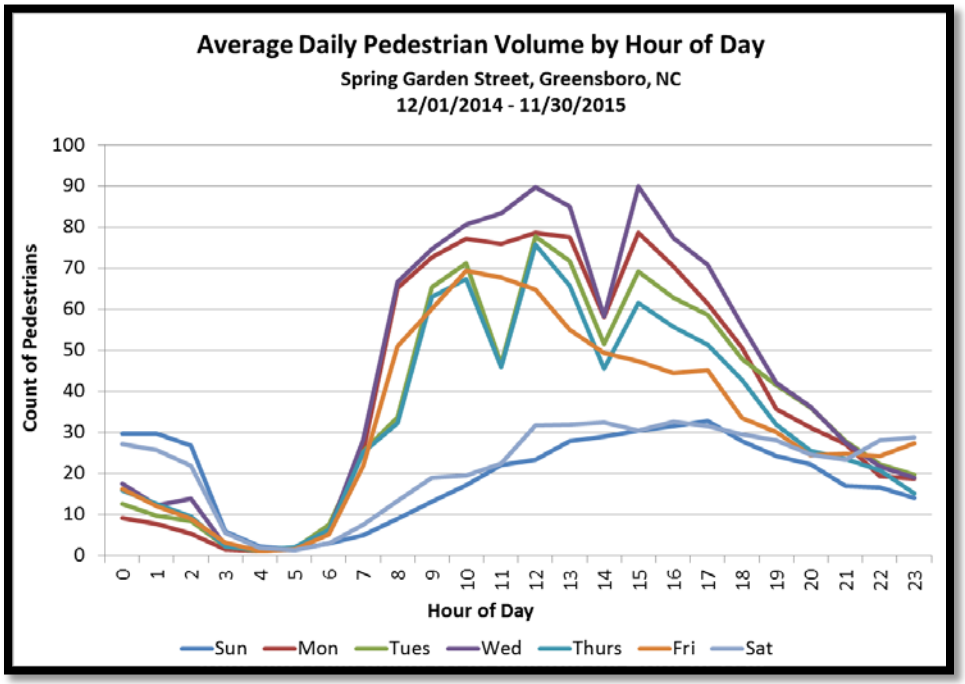


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	461
Mon	956
Tue	1037
Wed	1062
Thu	970
Fri	788
Sat	520
Average	**829**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	30	9	13	17	16	16	27	19
1	30	8	10	12	12	12	26	16
2	27	5	8	14	10	9	22	14
3	6	1	2	2	2	3	5	3
4	2	1	1	2	1	1	2	1
5	1	2	2	2	2	1	1	2
6	3	6	8	6	6	5	3	5
7	5	25	25	28	25	22	8	19
8	9	65	34	67	32	51	13	39
9	13	73	65	75	63	60	19	52
10	17	77	71	81	67	69	20	57
11	22	76	47	83	46	68	22	53
12	23	79	78	90	76	65	32	62
13	28	78	72	85	66	55	32	59
14	29	58	51	58	45	49	32	46
15	30	79	69	90	61	47	30	58
16	31	70	63	77	56	44	33	53
17	33	61	59	71	51	45	32	50
18	28	51	48	56	43	34	30	41
19	24	36	42	42	32	30	28	33
20	22	31	36	36	26	24	25	28
21	17	27	28	28	23	25	23	24
22	16	19	22	22	21	24	28	22
23	14	19	20	19	15	27	29	21
Avg	**19**	**40**	**36**	**44**	**33**	**33**	**22**	**32**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**, where activity appears highly correlated to the university class schedule. The highest pedestrian volumes occur during the autumn months (September – November) with the start of this period beginning just before the Fall Semester in the August timeframe.

Wednesday August 26th, 2015 had a record number of pedestrians with over 1,856 counts. The spring break holiday is clearly present, with lower than average volumes from March 7-March 15, with normal activity volumes on each side of the period. Tuesday March 17 saw a peak of over 1,800 pedestrian counts, likely due to the St. Patrick's Day holiday. At this site, it is not uncommon to see pedestrian counts regularly exceed 1,500 counts per day in the late summer and early fall.

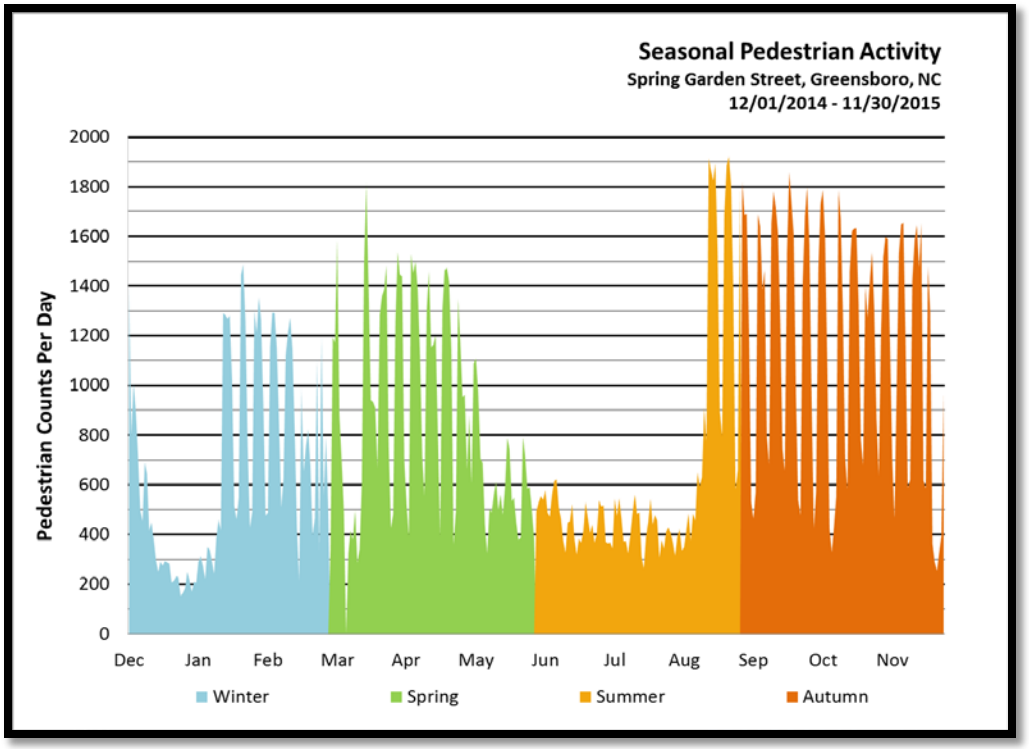


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Wednesdays have the highest count, averaging 130 bicycle counts per day though all weekdays average over 100 counts per day. Saturdays and Sundays have the lowest counts, but still average over 75 counts per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Bicycle volumes pick up around 8AM on weekday mornings and drop off at approximately 7PM. In the peak period on Wednesday evenings, counts average over 10 bicycles an hour. Weekend days have periods which may reach 6-8 bicycles per hour.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** There is not a large variation in daily bicycling activity. It shows bicycling activity is generally consistent throughout the day, on a daily basis. Bicycle activity does occur into the evening on both weekdays and weekends, dropping off in the early morning hours.

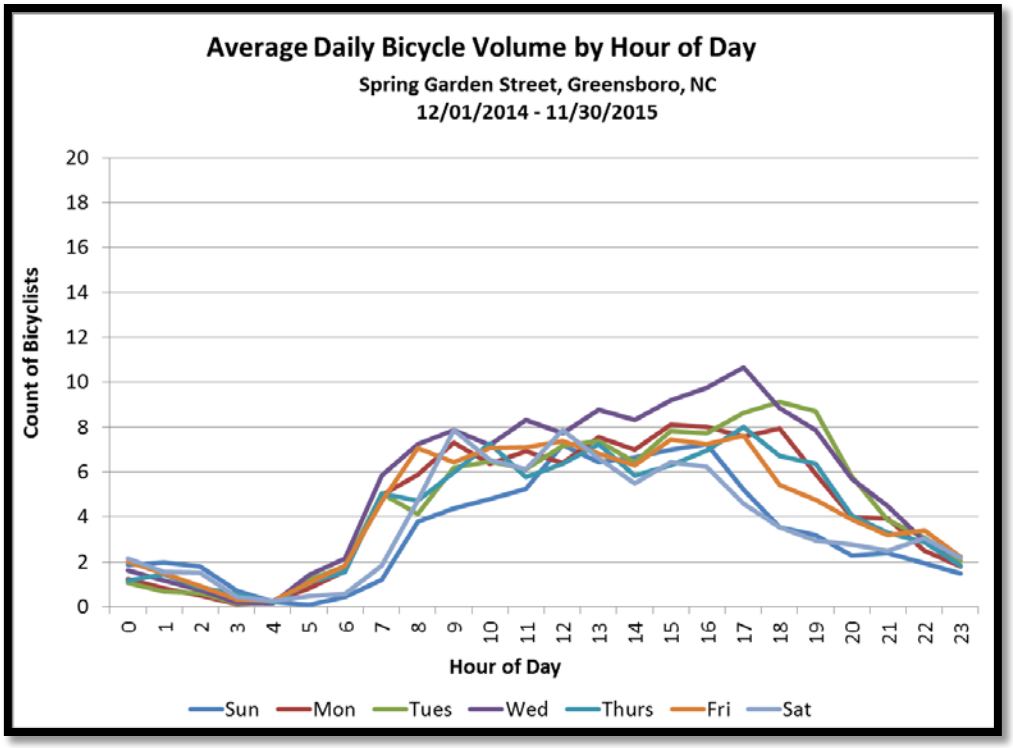


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	81
Mon	107
Tue	125
Wed	130
Thu	123
Fri	106
Sat	81
Average	**109**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	2	1	1	2	1	2	2	2
1	2	1	1	1	1	1	2	1
2	2	1	1	1	1	1	2	1
3	1	0	0	0	1	0	0	0
4	0	0	0	0	0	0	0	0
5	0	1	1	1	1	1	0	1
6	0	2	2	2	2	2	1	1
7	1	5	5	6	5	5	2	4
8	4	6	4	7	5	7	5	5
9	4	7	6	8	6	6	8	7
10	5	6	6	7	7	7	7	7
11	5	7	6	8	6	7	6	7
12	7	6	7	8	6	7	8	7
13	6	8	7	9	7	7	7	7
14	7	7	6	8	6	6	5	7
15	7	8	8	9	6	7	6	8
16	7	8	8	10	7	7	6	8
17	5	8	9	11	8	8	5	7
18	4	8	9	9	7	5	4	6
19	3	6	9	8	6	5	3	6
20	2	4	6	6	4	4	3	4
21	2	4	4	4	3	3	3	3
22	2	3	3	3	3	3	3	3
23	1	2	2	2	2	2	2	2
Avg	**3**	**4**	**5**	**5**	**4**	**4**	**4**	**4**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the late summer when the university class schedule starts and into the autumn months (September – November). Volumes in relation to the spring class schedule are more closely linked with cold winter weather, with students likely using other modes such as carpool, transit or walking.

It is not uncommon for volumes to reach over 120 bicycles per day from March through November and exceed 220 bicycles per day in the peak autumn period. On Tuesday September 15, 2015 over 260 bicycle counts were recorded although this peak is likely not attributed to any particular special event.

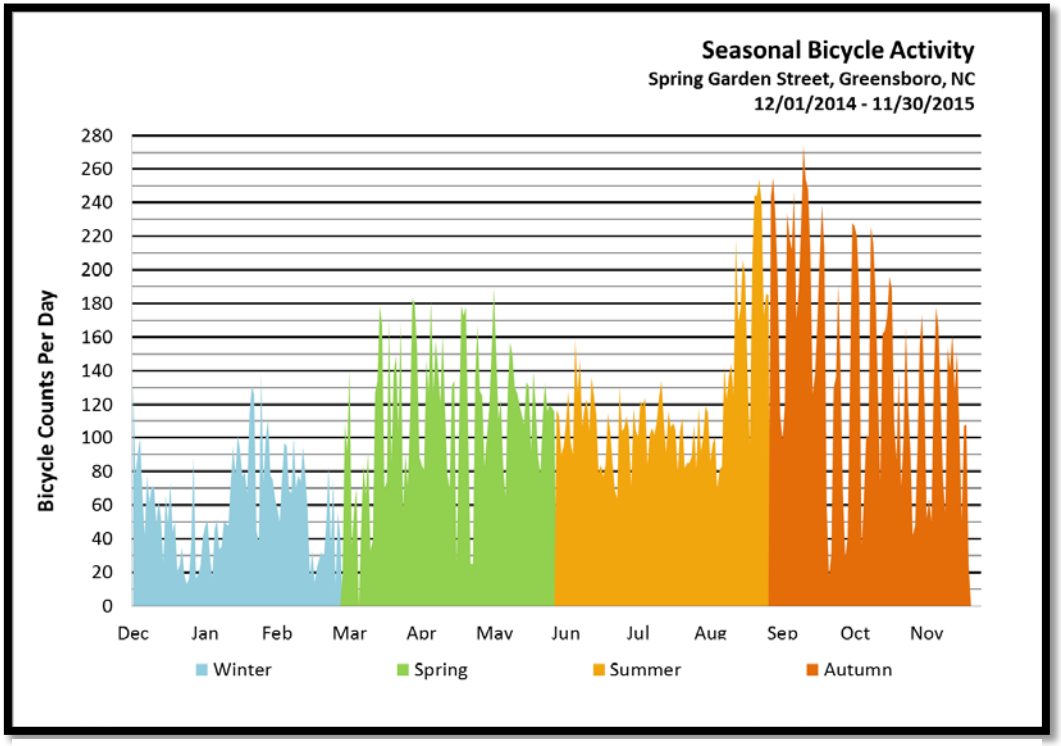


Figure 7. Seasonal Bicycle Activity

WALKER AVENUE – GREENSBORO, NC

A continuous count station was installed on Walker Ave in Greensboro, NC between Scott Ave and the Southwest Greenway. This site is situated in the Lindley Park neighborhood adjacent to pedestrian-scale commercial node which includes a grocery store, local restaurants, and shops. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that makes up the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this station includes the period from November 10, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 2 days of bicycle data and 5 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation North (Left) and South (Right)

Table 1 Station Description	
Active Since	November 10, 2014
Pedestrian Travel Pattern	Urban Mixed
Pedestrian Volume Group	Medium
Bicyclist Travel Pattern	Urban Mixed
Bicyclist Volume Group	Low
Station Location Coordinates	N - N36.06881 W79.82862 S - N36.06871 W79.82763
Station Name / ID	GSO_WAL / C4000004
Directional Distribution	
North Side	*South Side*
Pedestrians on Sidewalk (50%)	Pedestrians on Sidewalk (50%)
WB Bicyclists in Roadway (44%)	EB Bicyclists in Roadway (56%)

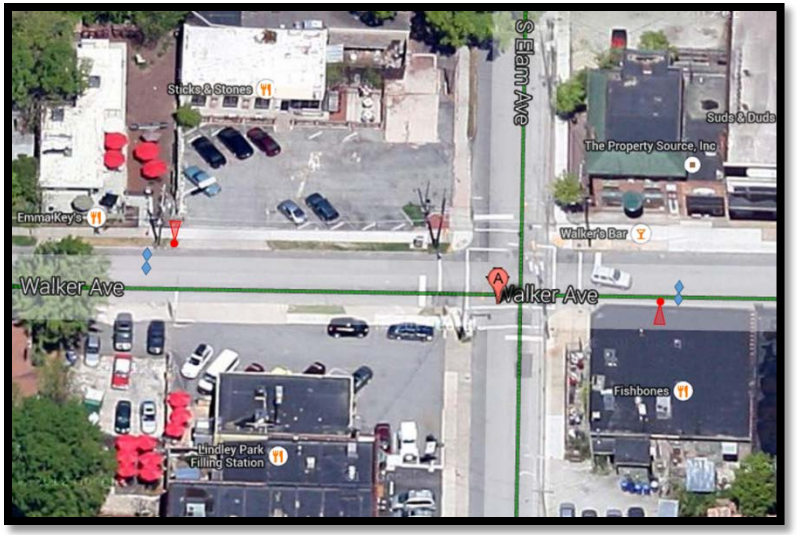


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 325,000 pedestrian counts and nearly 8,500 bicycle counts were recorded during the 12-month analysis period. The overall volume of non-motorized traffic on this facility varies from 22,000 to almost 36,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows some correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics (1) (2) (3)

Annual Average Daily Traffic (AADT)	2,200 at Lindell Rd (NCDOT, 2013)	
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Spring	Winter
Month	May	February
Day of Week	Saturday	Monday
Date	April 11, 2015 (2,001)	NA
Peak Period	Fri 6PM – 8PM	
12 Month Pedestrian Count	326,980	
Annual Average Daily Pedestrian Traffic	906 AADPT	
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Tuesday/Wednesday	Saturday
Date	March 17, 2015 (56)	NA
Peak Period	Weekdays 8AM – 9AM	
12 Month Bicycle Count	8,460	
Annual Average Daily Bicycle Traffic	24 AADBT	

(1) Note: 2 days of bicycle data and 5 days of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in December, January, February, and November. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. Highest volumes for pedestrians are recorded in the month of May where they reach nearly 35,000 counts. Pedestrian volumes are highest on Fridays and Saturdays and lowest during the week on Monday.

Bicycle Data

The lowest volumes for bicyclists are recorded during the winter months, also shown in **Figure 3**. Spring, summer, and fall have similar average counts. The highest volumes recorded in August and September which exceed 1,000 bicycle counts per month. Bicyclist volumes are lowest on weekends. Tuesdays and Wednesdays have the highest bicycle counts during the week.

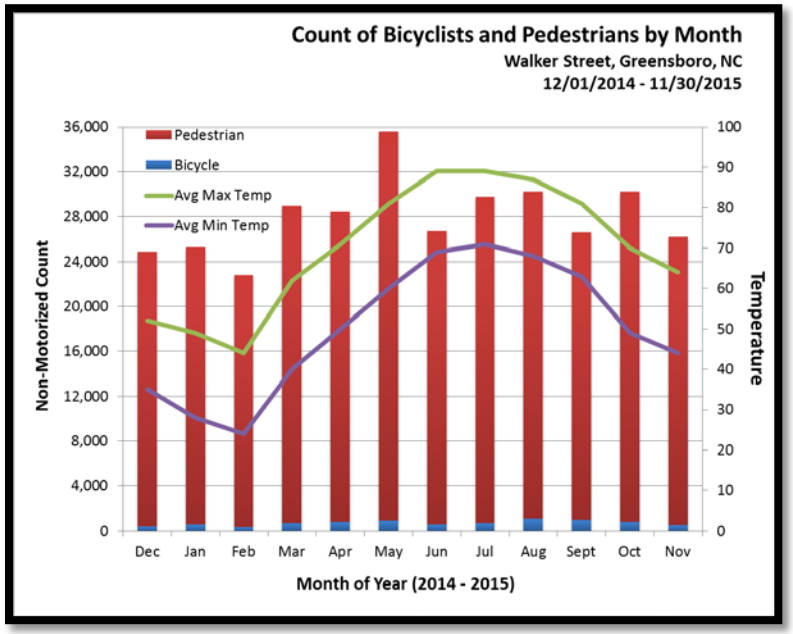


Figure 3. Non-Motorized counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays are the highest counts recorded with over 1,300 counts per day, while Mondays are the lowest with over 650 counts per day. On average, over 900 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on Friday and Saturday, beginning around 6PM and continuing through 8PM generally averaging over 100 pedestrian counts per hour, likely the result of people going to and from neighborhood restaurants and bars in the area. On Saturdays, pedestrian activity starts earlier than the other days of the week. Weekdays and Sundays also see a 6PM to 8PM peak.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing a lunch and evening hours peaking pattern that occurring every day of the week. Pedestrian activity occurs through the evening into the morning indicating that this site is active at nearly all hours of the day.

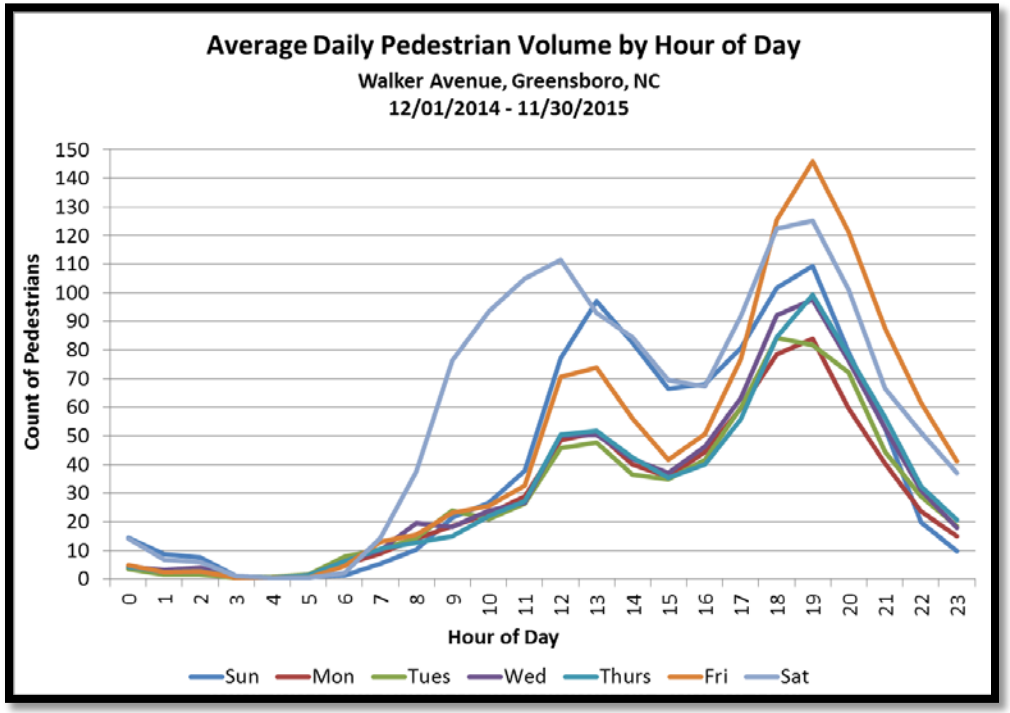


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	981
Mon	689
Tue	707
Wed	774
Thu	741
Fri	1079
Sat	1379
Average	**908**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	14	4	3	4	4	5	14	7
1	9	2	2	3	2	2	7	4
2	8	2	2	4	3	3	6	4
3	1	1	1	1	1	1	1	1
4	0	0	1	0	0	0	1	0
5	1	1	2	1	1	1	0	1
6	1	5	8	6	6	5	2	5
7	5	9	10	10	11	13	15	10
8	10	14	14	19	13	16	38	18
9	21	18	24	18	15	23	76	29
10	27	23	21	24	22	26	94	35
11	38	29	27	27	27	33	105	42
12	77	48	46	50	50	71	112	66
13	97	51	48	50	52	74	93	68
14	83	40	36	42	42	56	84	56
15	66	36	35	37	35	42	70	47
16	68	44	42	46	40	51	67	52
17	81	60	60	63	56	77	92	71
18	102	78	84	92	84	125	123	100
19	109	84	82	98	99	146	125	107
20	79	60	72	76	78	121	101	85
21	53	40	44	52	56	88	66	58
22	20	24	29	31	33	61	51	36
23	10	15	19	18	21	41	37	23
Avg	**41**	**29**	**30**	**32**	**31**	**45**	**57**	**38**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the spring months (March through May) although pedestrian volumes are relatively consistent throughout the seasons, including during the winter months. Weekends in all seasons of the year see pedestrian counts in excess of 1,000 counts per day.

On April 10 and 11, 2015 high pedestrian volumes were recorded (counts of over 1,400 and 2,000 respectively) spread throughout the day. This spike in activity is likely due to a warm spring weekend.

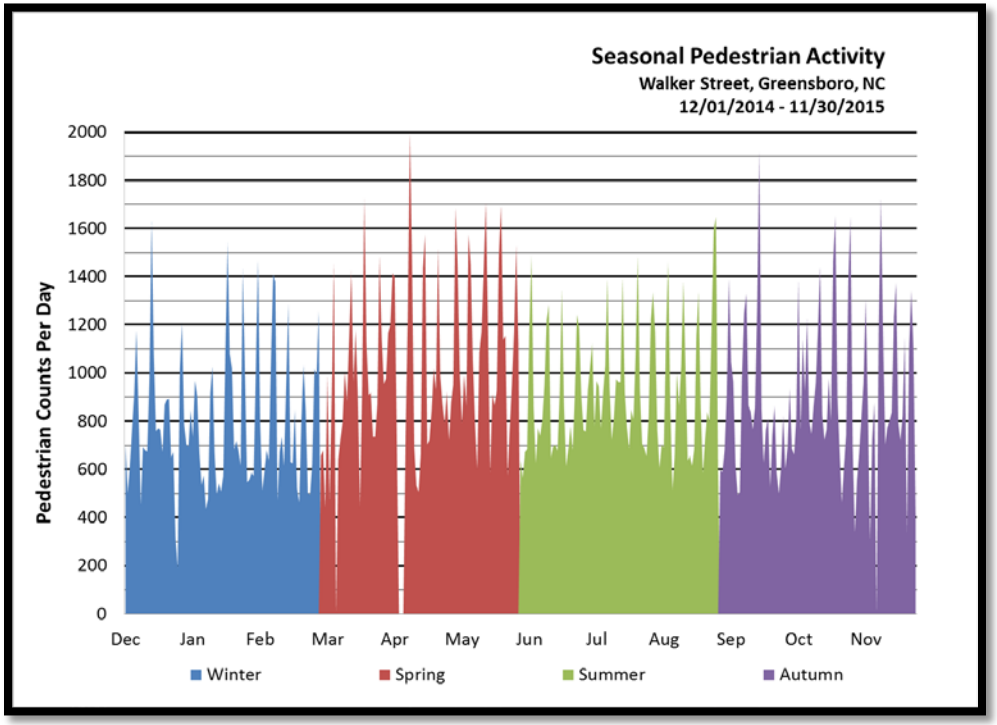


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Tuesdays, Wednesdays, and Thursdays have the highest count, averaging over 25 bicycle counts per day. Though Saturdays and Sundays have the lowest counts, the average counts remain at 24 bicycles per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekday mornings at approximately 8AM and on weekday evenings at 5PM where counts average 3-4 bicyclists per hour.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows a weekday peak that is typical of a morning commute. On the weekends, bicycle activity primarily occurs between the hours of 9AM and 7PM with Saturdays and Sundays showing a similar pattern. Bicycle activity occurs into the evening but primarily occurs during daylight hours.

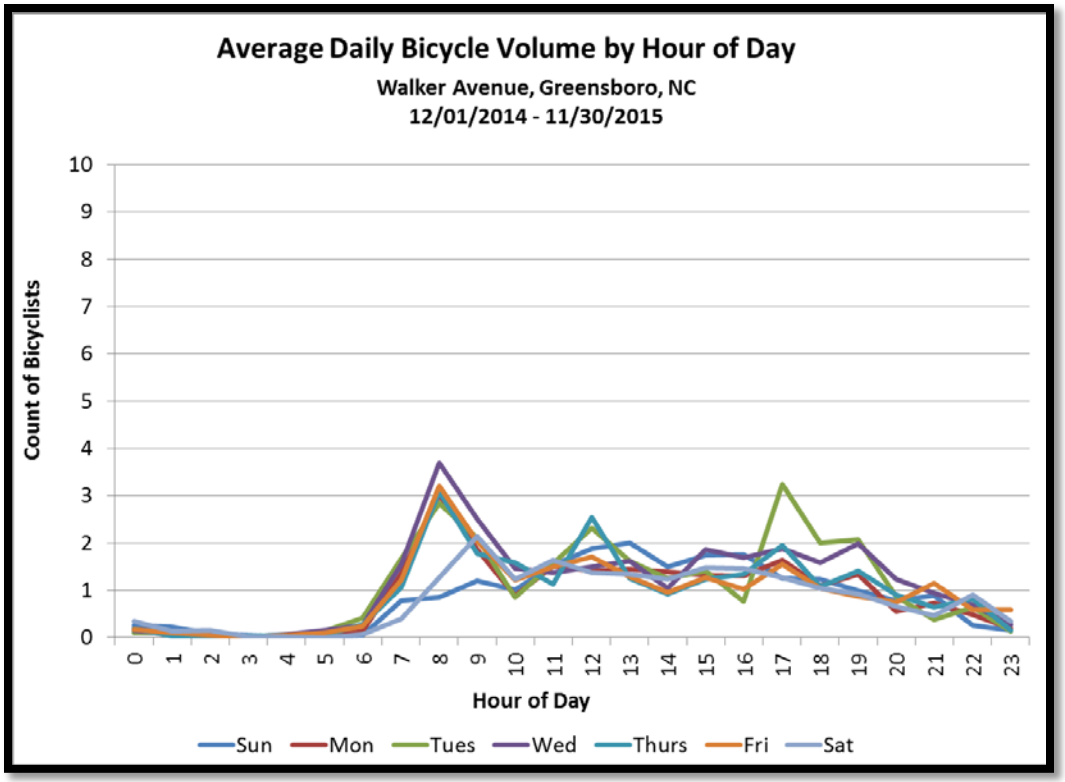


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	20
Mon	22
Tue	28
Wed	28
Thu	26
Fri	23
Sat	18
Average	**24**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	1	1	2	2	1	1	0	1
8	1	3	3	4	3	3	1	3
9	1	2	2	3	2	2	2	2
10	1	1	1	1	2	1	1	1
11	2	2	2	1	1	2	2	1
12	2	1	2	2	3	2	1	2
13	2	1	2	2	1	1	1	2
14	1	1	1	1	1	1	1	1
15	2	1	1	2	1	1	1	1
16	2	1	1	2	1	1	1	1
17	1	2	3	2	2	2	1	2
18	1	1	2	2	1	1	1	1
19	1	1	2	2	1	1	1	1
20	1	1	1	1	1	1	1	1
21	1	1	0	1	1	1	0	1
22	0	0	1	1	1	1	1	1
23	0	0	0	0	0	1	0	0
Avg	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicycle volumes occur during the spring months (March through May) although bicycle volumes are relatively consistent through summer and into autumn.

Winter volumes are lowest though Tuesday January 20 and Wednesday January 21 saw the highest volumes of the year. Volumes in excess of 60 counts occurred on January 20 and are not clustered at any particular hour of the day indicating that this is likely not a special event. All seasons of the year see days where bicycle volumes exceed 40 counts.

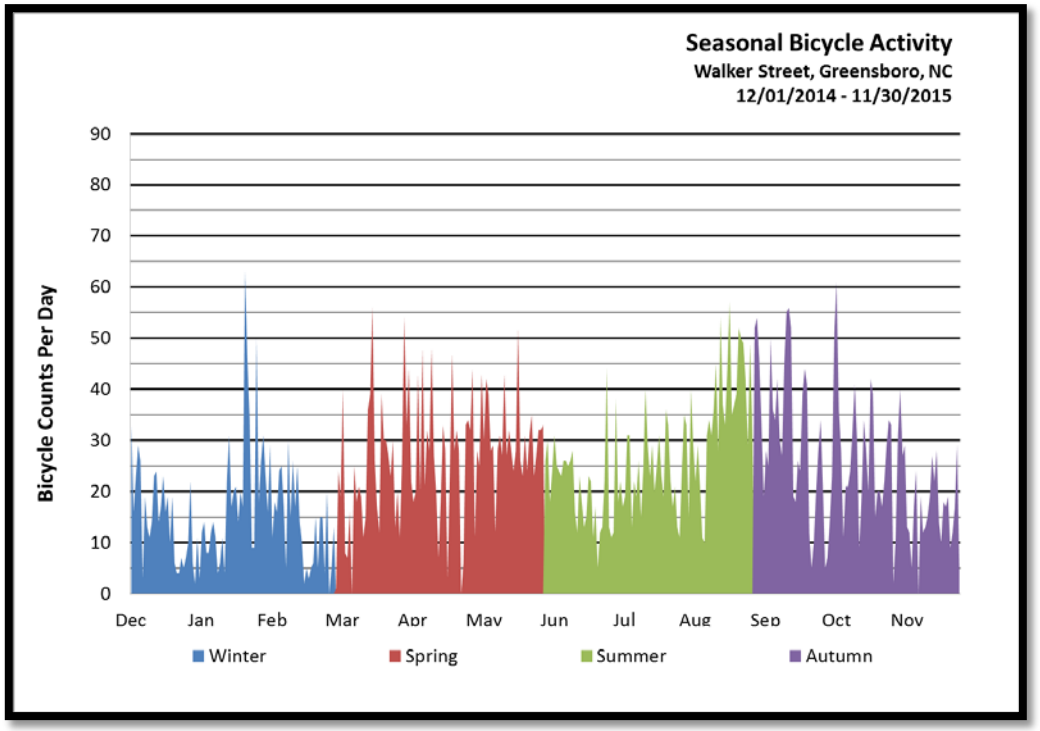


Figure 7. Seasonal Bicycle Activity

FOURTH STREET – WINSTON-SALEM, NC

A continuous count site was installed on Fourth Street in Winston-Salem, NC in between Marshall St and Cherry St. The site is located in the central business district of Winston-Salem with shopping, restaurants, and entertainment in close proximity. **Table 1** contains information related to the site, and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that comprise the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the lane (indicated as blue diamonds), and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 2 days of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous count Station Installation North (Left) and South (Right)

Table 1 Station Description	
Active Since	September 17, 2014
Pedestrian Travel Pattern	Urban Mixed
Pedestrian Volume Group	High
Bicyclist Travel Pattern	Urban Commute
Bicyclist Volume Group	Low
Station Location Coordinates	S - N36.098167 W080.247567 N - N36.098017 W080.24748
Station Name / ID	W-S_4TH / 3300003
Directional Distribution	
North Side	*South Side*
Pedestrians on Sidewalk (46%)	Pedestrians on Sidewalk (54%)
WB Bicyclists in Roadway (38%)	EB Bicyclists in Roadway (62%)

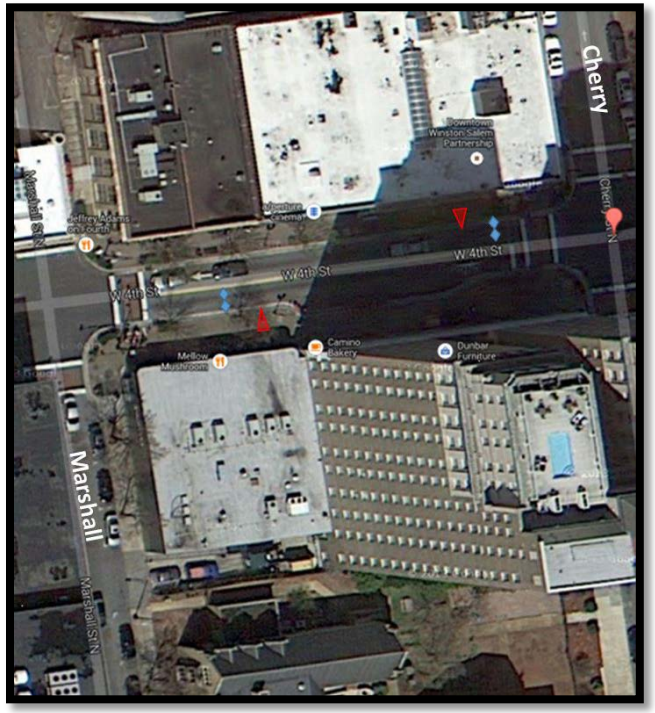


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 1.5 million pedestrian counts and nearly 30,000 bicycle counts were recorded in the 12-month analysis period. The overall volume of non-motorized users on this facility varies from 80,000 to over 180,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows some correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics[(1) (2) (3)]

Annual Average Daily Traffic (AADT)		5,500 (NCDOT, 2013)
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Saturday	Monday
Date	August 8, 2015 (18,619)	NA
Peak Period		Sat 12PM - Sun 1AM
12 Month Pedestrian Count		1,562,540
Annual Average Daily Pedestrian Traffic		4,288 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Spring	Autumn
Month	May	February
Day of Week	Friday	Sunday
Date	May 30, 2015 (389)	NA
Peak Period		Weekdays 11AM-3PM
12 Month Bicycle Count		28,450
Annual Average Daily Bicycle Traffic		78 AADBT

(1) Note: 2 days of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in January and February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. Seasonally, the summer months have the highest volumes. August and May experience monthly volumes that exceed 150,000 counts. Pedestrian volumes are highest on Saturdays and even at their lowest on Monday, they average over 3,000 counts per day.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the autumn months, also shown in **Figure 3**. The spring season has the highest overall average, with the highest volumes recorded in May. Bicyclist volumes are highest Fridays, with peak periods occurring during in the middle of the day around noon. Sundays have the lowest bicycle counts.

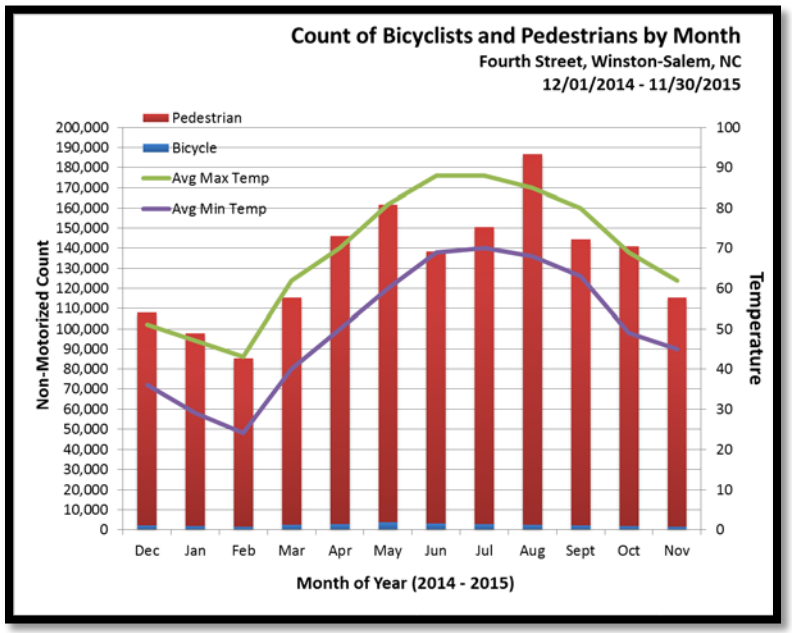


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays are the highest counts recorded at over 6,400 counts per day while Mondays are the lowest. Fridays also experience high counts averaging over 5,000 counts per day. On average, over 4,000 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on the Saturday, beginning around 12PM and peaking through 1AM on Sunday morning. Friday is the second highest day of the week, with peaking between 5PM and 1AM These peak times on Friday and Saturday average over 350 pedestrian counts per hour, likely the result of activity related to businesses, events, and entertainment. A lunch peak is most pronounced Monday through Saturday.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in the late evening early morning on both Friday and Saturday night. Afternoon weekday peaking occurs around 11:30PM. Hourly pedestrian averages never fall to zero indicating the site is active at all hours.

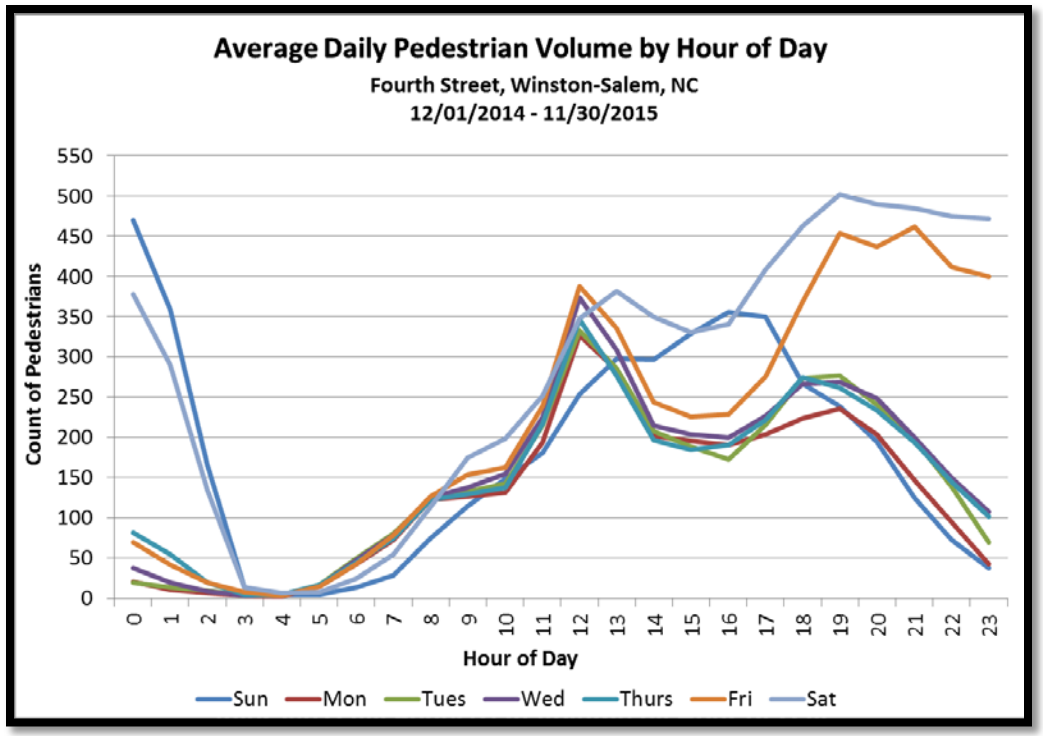


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	4399
Mon	3100
Tue	3445
Wed	3632
Thu	3607
Fri	5193
Sat	6698
Average	**4293**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	470	21	20	38	82	70	378	161
1	359	11	14	20	55	42	290	118
2	166	7	10	9	20	20	135	55
3	14	4	4	4	5	7	14	8
4	5	3	4	4	5	4	6	4
5	5	14	17	16	16	14	7	13
6	13	42	50	47	45	43	25	37
7	29	73	81	79	75	79	55	66
8	74	123	123	126	123	126	114	115
9	115	126	133	137	130	154	175	139
10	149	132	143	154	137	162	199	155
11	181	193	215	225	216	238	252	218
12	254	327	333	374	347	388	348	339
13	298	284	286	309	277	336	382	312
14	297	202	208	215	197	244	350	248
15	329	196	188	204	185	226	331	241
16	356	191	173	200	191	229	341	244
17	350	203	216	227	222	276	409	275
18	267	223	274	267	275	369	463	308
19	239	236	277	269	262	454	501	324
20	195	204	241	249	234	437	490	297
21	125	147	197	199	194	462	485	263
22	73	95	138	150	145	412	475	218
23	38	43	69	108	102	400	472	183
Avg	**183**	**129**	**142**	**151**	**148**	**216**	**279**	**181**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. Although activity at the site occurs year round, the highest pedestrian volumes occur during the summer months (June-August) where volumes regularly exceed 4,000 pedestrian counts per day likely due to events and programming.

Friday August 7th and Saturday August 8th, 2015 had record numbers of pedestrians potentially due to the National Black Theatre Festival (held from August 3-8), where volumes exceeded 13,000 counts each day.

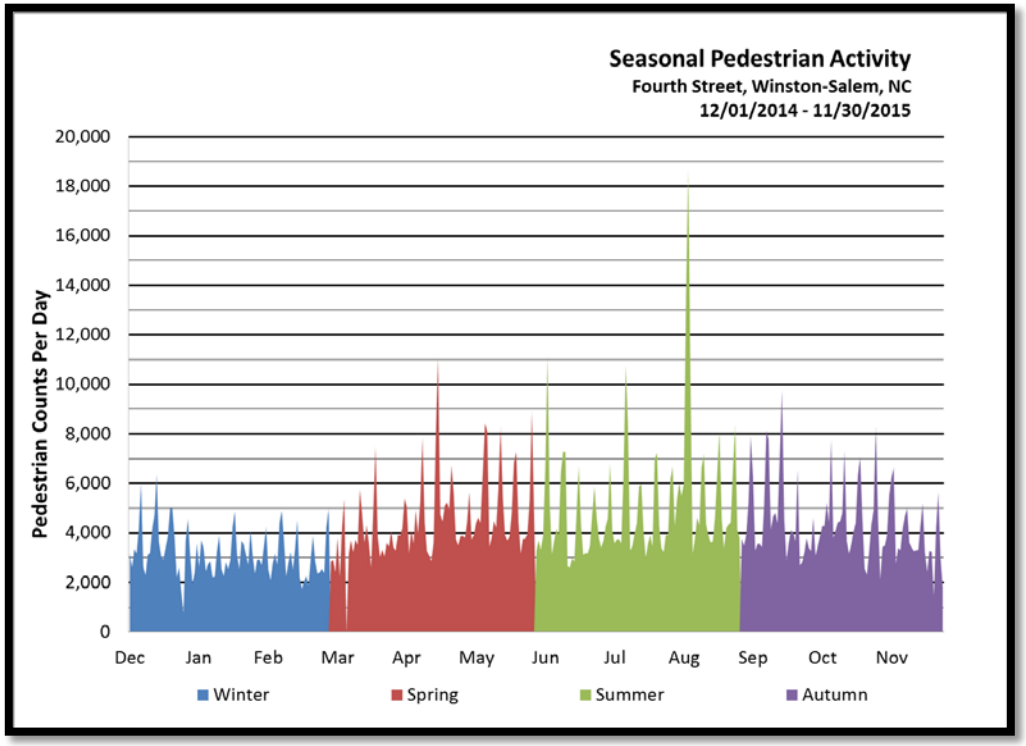


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Fridays and Saturdays have the highest count, averaging 81-89 bicycle counts per day. Sundays are the lowest, averaging 60 bicycle counts per day. The site averages over 75 bicycle counts recorded per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekdays from approximately 11AM to 3PM where counts average 6-8 bicyclists per hour. During the week, Fridays typically have the highest average bicycle volumes with an additional peak around 5-6PM.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows the mid-day peaking and slight peak in the early evening on weekdays. On the weekends, bicycle activity primarily occurs between the hours of 11AM and 6PM with higher volumes on Saturdays. Bicycle activity does occur into the evening on both weekdays and weekends, dropping off in the early morning hours.

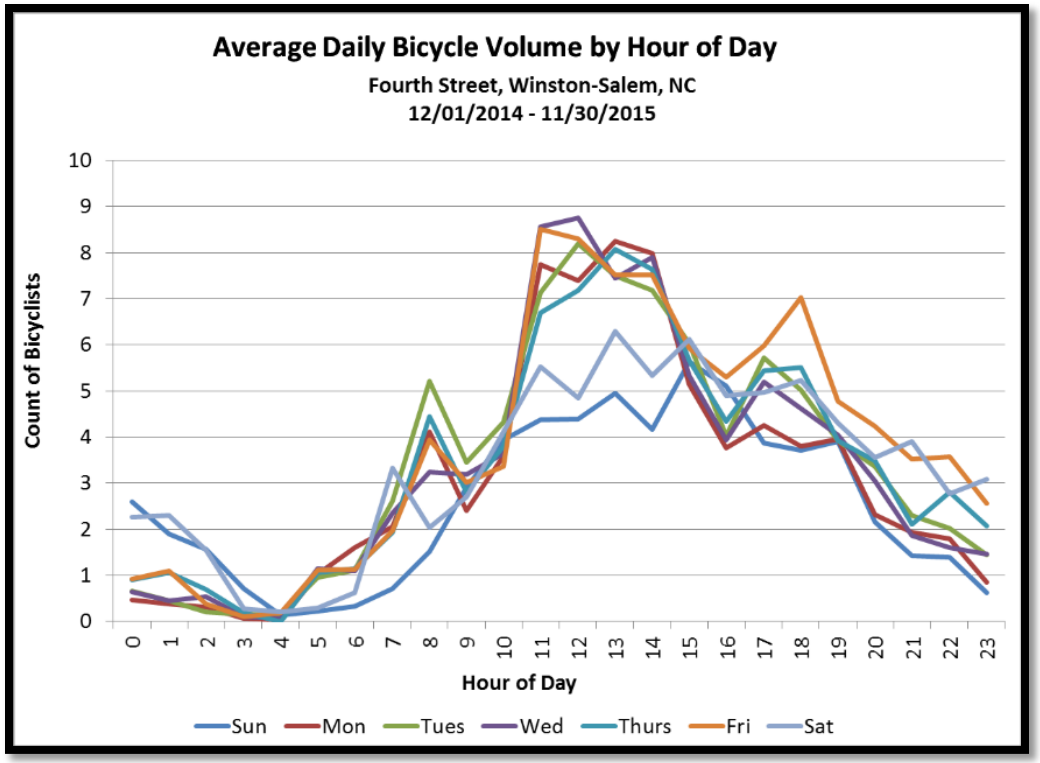


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	60
Mon	72
Tue	77
Wed	77
Thu	76
Fri	89
Sat	81
Average	**76**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	3	0	1	1	1	1	2	1
1	2	0	0	0	1	1	2	1
2	2	0	0	1	1	0	2	1
3	1	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	1	1	1	1	1	0	1
6	0	2	1	1	1	1	1	1
7	1	2	3	2	2	2	3	2
8	1	4	5	3	4	4	2	3
9	3	2	3	3	3	3	3	3
10	4	3	4	3	4	3	4	4
11	4	7	7	8	6	8	5	7
12	4	7	8	8	7	8	5	7
13	5	8	7	7	8	7	6	7
14	4	7	7	8	8	7	5	6
15	5	5	6	5	6	6	6	5
16	5	4	4	4	4	5	5	4
17	4	4	6	5	5	6	5	5
18	4	4	5	4	5	7	5	5
19	4	4	4	4	4	5	4	4
20	2	2	3	3	3	4	3	3
21	1	2	2	2	2	4	4	2
22	1	2	2	2	3	4	3	2
23	1	1	1	1	2	3	3	2
Avg	**2**	**3**	**3**	**3**	**3**	**4**	**3**	**3**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the spring and early summer months (March-August). Weekday volumes exceed 100 bicycles per day in all seasons except for autumn and reach over 150 bicycles per day in the peak spring period.

On Saturday May 30, 2015 over 350 bicycle counts were recorded, with high hourly counts occurring in the morning. An explanation for this peak is the Winston-Salem Cycling Classic, a professional cycling event. The day prior and day following the event also saw high numbers of cycling, with approximately 150 bicycle counts each.

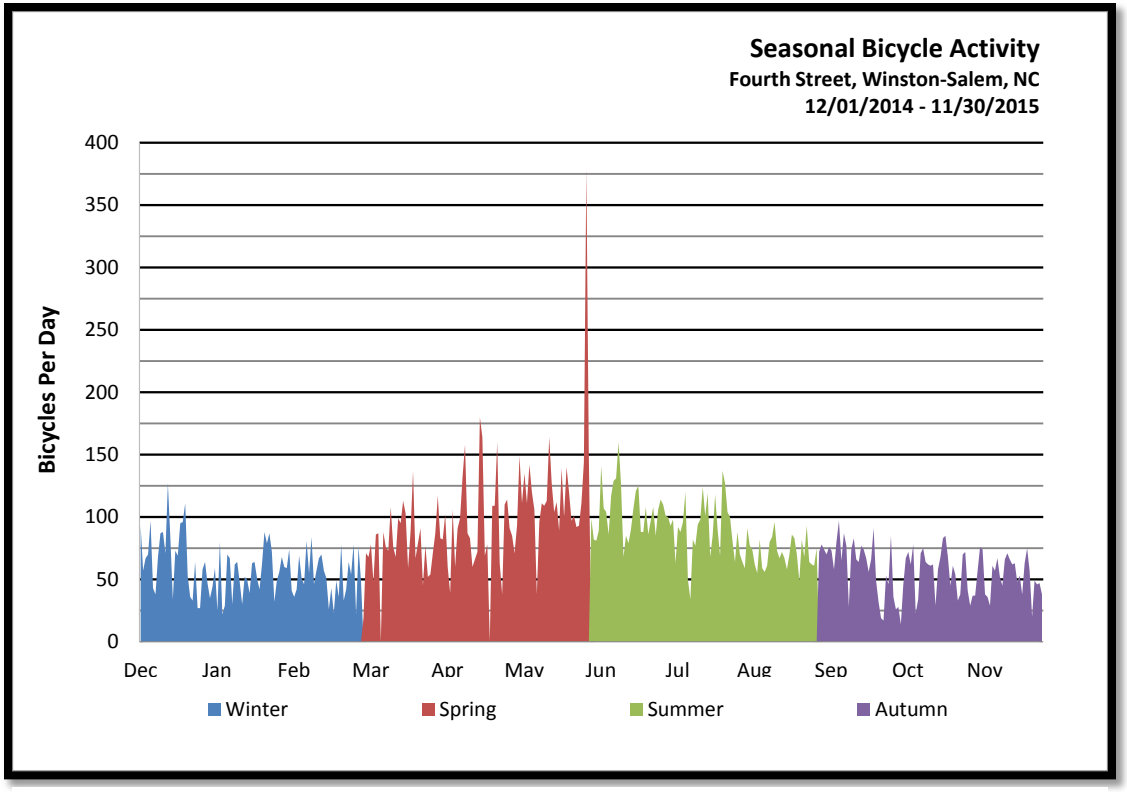


Figure 7. Seasonal Bicycle Activity

WEST END BOULEVARD – WINSTON-SALEM, NC

A continuous count station was installed on West End Blvd in Winston-Salem, NC between Pilot View St and Brookstown Ave. This site is located adjacent to Hanes Park and is located near a node of neighborhood businesses. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the two count sites that comprise the station. Bicyclists in the roadway are detected by a set of two inductive loops positioned to the rightmost side of the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) on the sidewalk.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 1 day of bicycle data and 2 days of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation West (Left) and East (Right)

Table 1 Site Description	
Active Since	November 14, 2014
Pedestrian Travel Pattern	Urban Mixed
Pedestrian Volume Group	Low
Bicyclist Travel Pattern	Urban Mixed
Bicyclist Volume Group	Low
Station Location Coordinates	W- N36.10050 W080.26083 E- N36.10020 W080.26087
Station Name / ID	W-S_END / 3300005
Directional Distribution	
West Side	*East Side*
Pedestrians on Sidewalk (96%)	Pedestrians on Sidewalk (4%)
SB Bicyclists in Roadway (60%)	NB Bicyclists in Roadway (40%)

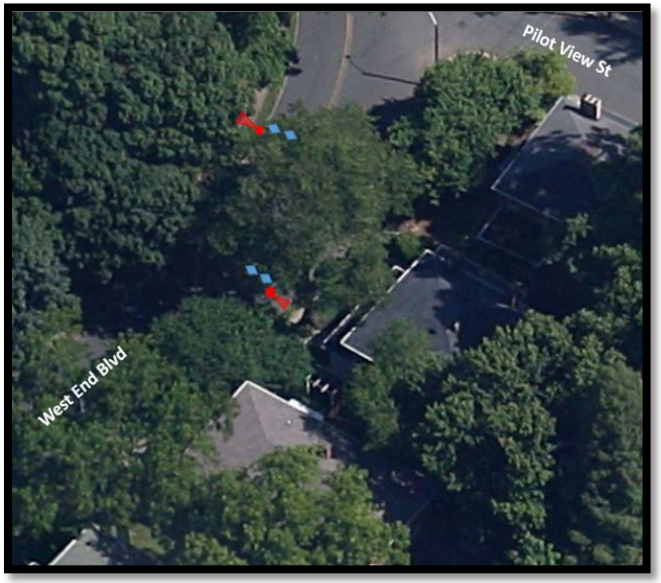


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 120,000 pedestrian counts and nearly 12,000 bicycle counts were recorded during the 12 month analysis period. The overall volume of non-motorized users on this facility varies from 6,000 to over 14,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows a correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics [1] [2]		
Annual Average Daily Traffic (AADT)		12,000 (NCDOT, 2013)
Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Autumn	Winter
Month	May	February
Day of Week	Tuesday	Friday
Date	Dec 6, 2014 (1,733)	NA
Peak Period		Weekdays 4PM-7PM
12 Month Pedestrian Count		120,350
Annual Average Daily Pedestrian Traffic		331 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	May	February
Day of Week	Tuesday	Monday
Date	May 31, 2015 (279)	NA
Peak Period		Weekdays 4PM-6PM
12 Month Bicycle Count		11,560
Annual Average Daily Bicycle Traffic		31 AADBT

(1) Note: 1 day of bicycle data and 2 days of pedestrian data are not present in the 12-month analysis period

(2) Data has been adjusted based on correction factors

(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. It is unclear why the summer months experience a drop in volumes, although it could be related to hot temperatures or summer vacations. Highest volumes for pedestrians are recorded in the month of May, followed by October. Pedestrian volumes are highest on Tuesdays and lowest on Friday.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3,** with February experiencing the lowest monthly volume. The summer season has the highest overall average, but the highest monthly volume is actually recorded in May. Bicyclist volumes are highest on Tuesdays. Mondays have the lowest bicycle counts.

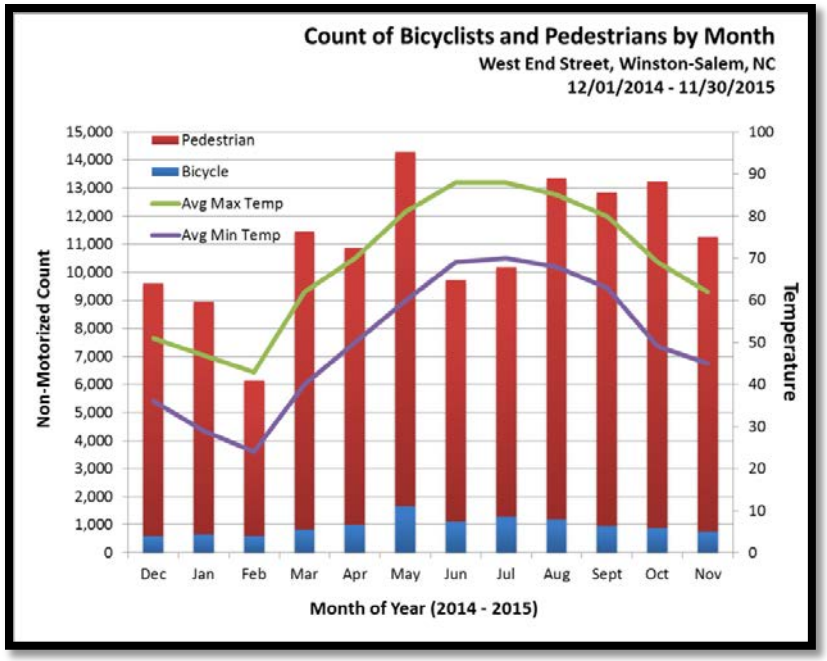


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Tuesdays are the highest counts recorded. On average, over 330 pedestrian counts are recorded at the site each day. While Fridays are the lowest volume recorded, over 250 counts per day are typically recorded.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. On most weekdays a peak occurs from 4PM and continuing through 7PM reaching an average of 70 pedestrians per hour at 6PM on Thursdays. This weekday activity is likely the result of recreation and exercise after work hours. Saturday counts peak in the early to mid-morning, reaching over 50 counts per hour.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing steady weekday use with evening peaking. Saturdays and Sundays differ in use patterns with Saturday experiencing an earlier peak in the day than Sundays. Pedestrian activity drops off in the late evening hours picking up again around 5AM.

Day of Week	Pedestrian Count
Sun	270
Mon	351
Tue	378
Wed	341
Thu	358
Fri	261
Sat	359
Average	**332**

Table 3. Average Pedestrian Count by Day of Week

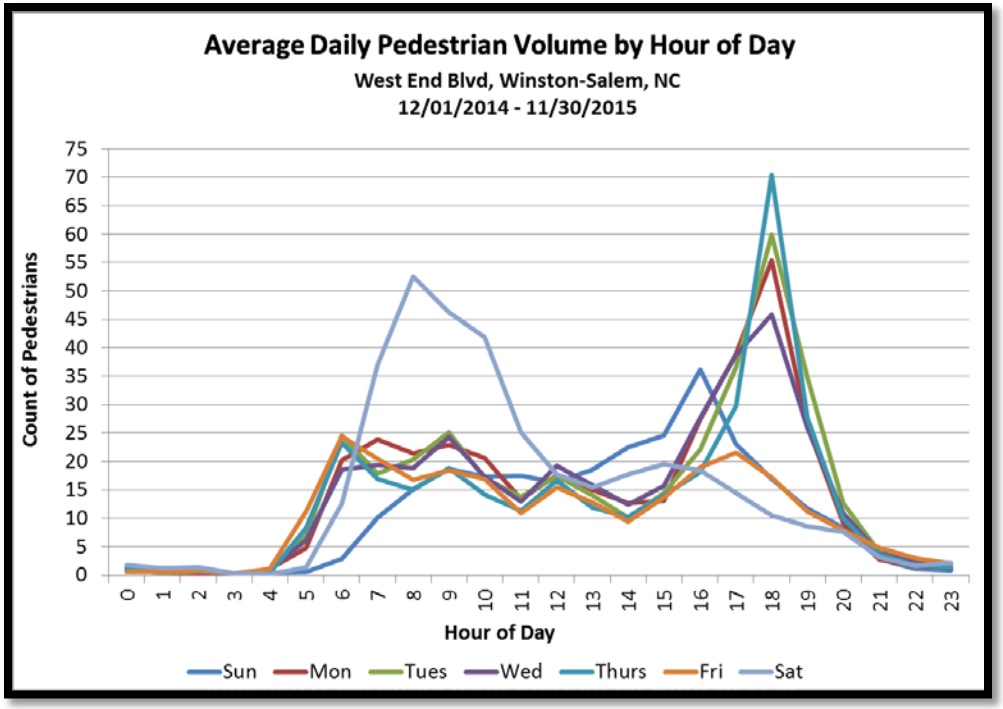


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	1	1	1	1	1	1	2	1
1	1	0	0	1	1	1	1	1
2	1	0	1	1	1	1	1	1
3	0	0	0	0	0	0	0	0
4	0	1	1	1	0	1	0	1
5	1	5	7	6	8	11	1	5
6	3	20	25	19	23	24	13	18
7	10	24	18	19	17	21	37	21
8	15	21	20	19	15	17	53	23
9	19	23	25	24	19	18	46	25
10	17	21	17	17	14	17	42	21
11	18	13	14	13	11	11	25	15
12	16	18	17	19	17	15	18	17
13	19	15	14	16	12	13	15	15
14	23	13	10	12	10	9	18	14
15	25	13	14	16	14	14	19	17
16	36	27	22	28	18	19	18	24
17	23	39	37	39	30	22	14	29
18	17	55	60	46	70	17	11	38
19	12	26	35	26	28	11	9	20
20	8	9	13	11	10	8	8	9
21	3	3	4	4	4	5	3	4
22	1	2	3	3	2	3	2	2
23	1	1	2	1	1	2	2	2
Avg	**11**	**15**	**15**	**14**	**14**	**11**	**15**	**13**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the autumn months (September – November), although the total number of counts in the spring season are proximate. Saturday

December 6th, 2014 had a record number of pedestrians due to the Mistletoe Half Marathon, 5K and fun run. Volumes on this day peaked at over 17,000 counts. Many days throughout spring and autumn see peaks of up to 400 pedestrian counts per day.

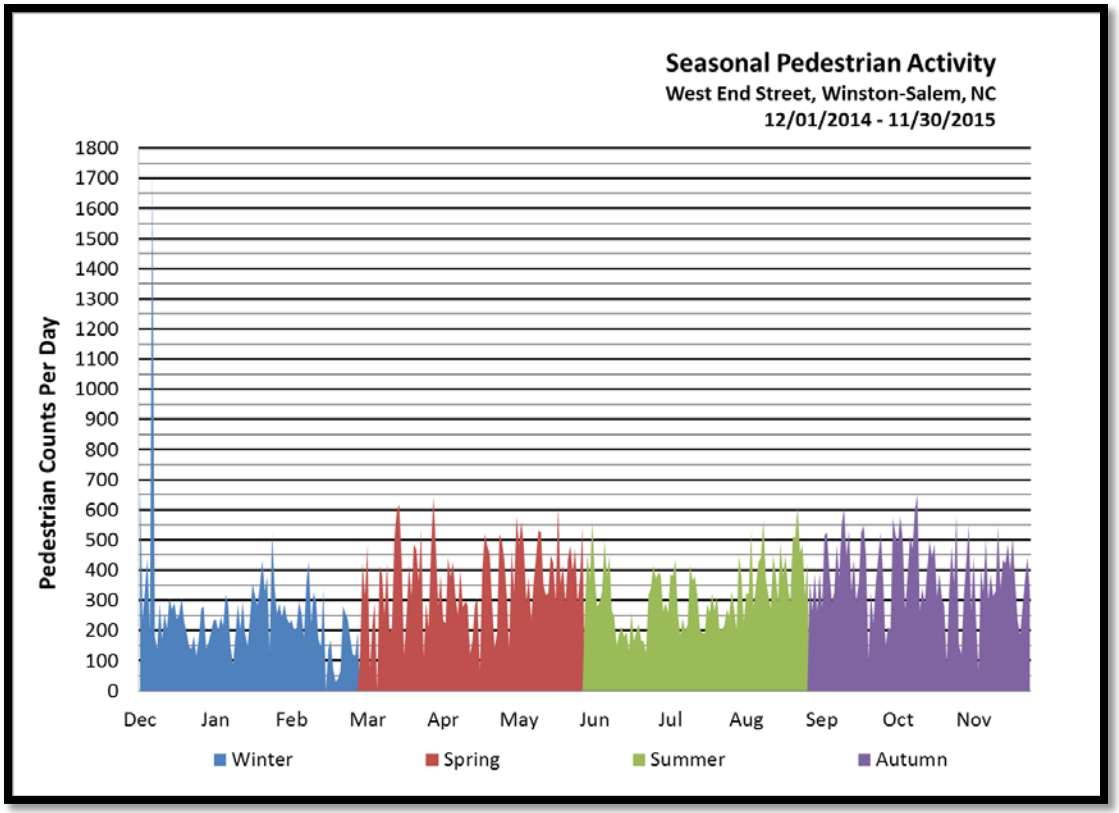


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Tuesdays have the highest count at an average of nearly 35 bicycles per day, though there is not high variation through the days of the week in terms of volume. Mondays have the lowest bicycle counts on a daily basis.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on weekday evenings from 4PM-6PM where counts may reach 5 bicycles per hour. Saturdays see bicycle activity ramp up earlier than on Sundays.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows volumes that grow throughout the weekday, peaking in the evening. A Saturday peak occurs at 10-12AM while Sunday activity starts later in the day and extends later into the evening. On all days of the week, bicycle activity tapers off by 8PM. On weekdays, there is regularly early morning bicycle activity between 4-6AM.

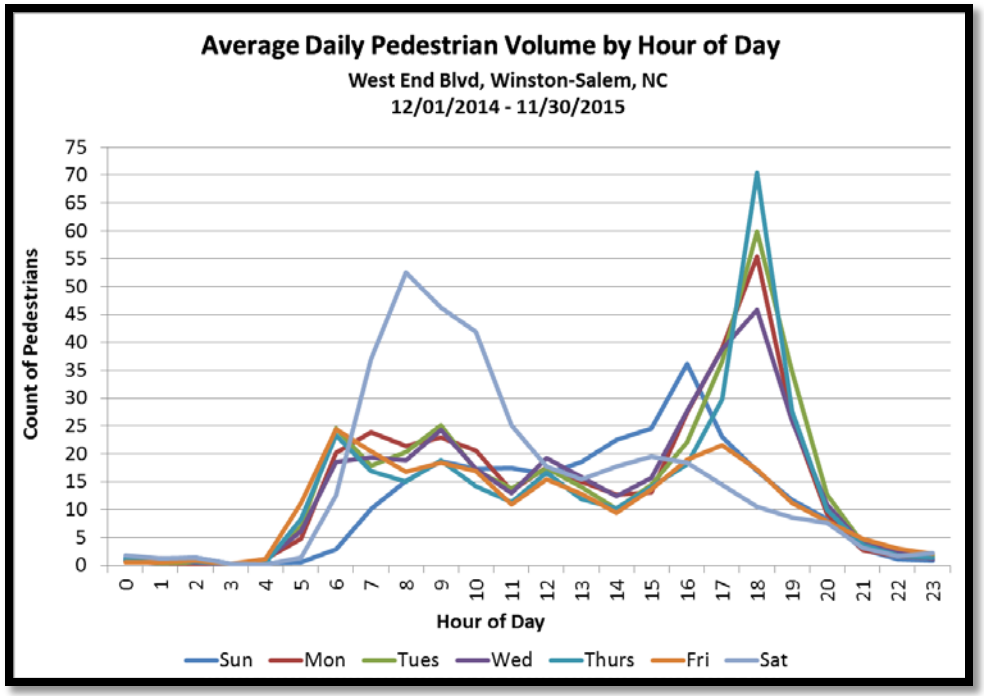


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	31
Mon	29
Tue	34
Wed	33
Thu	31
Fri	31
Sat	32
Average	**32**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	1	1	1	1	1	0	0
5	0	1	1	1	1	1	0	1
6	0	1	2	1	1	1	1	1
7	1	1	1	1	1	1	1	1
8	1	1	1	1	1	2	1	1
9	1	2	1	2	1	1	2	2
10	1	2	1	1	1	2	3	2
11	2	1	2	2	1	2	4	2
12	2	2	2	2	2	2	3	2
13	3	2	2	2	2	2	3	3
14	3	2	2	2	2	2	2	2
15	3	2	2	2	2	2	2	2
16	4	2	2	2	2	3	3	3
17	3	3	3	4	2	2	2	3
18	2	3	5	4	3	3	1	3
19	2	2	2	3	2	2	1	2
20	0	1	2	1	1	1	0	1
21	0	1	1	1	1	0	0	1
22	0	0	0	0	0	1	0	0
23	0	0	0	0	0	0	0	0
Avg	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the summer months (June through August) followed closely by the spring season. Weekday volumes reach 40 bicycles per day in all seasons and it is not uncommon for volumes to regularly exceed 40 bicycles per day in the spring and summer.

On Sunday May 31, 2015 over 275 bicycle counts were recorded, with high hourly counts occurring between 12 and 1pm. An explanation for this peak is likely individuals taking part in the Winston-Salem cycling Classic, a 2-day professional cycling event.

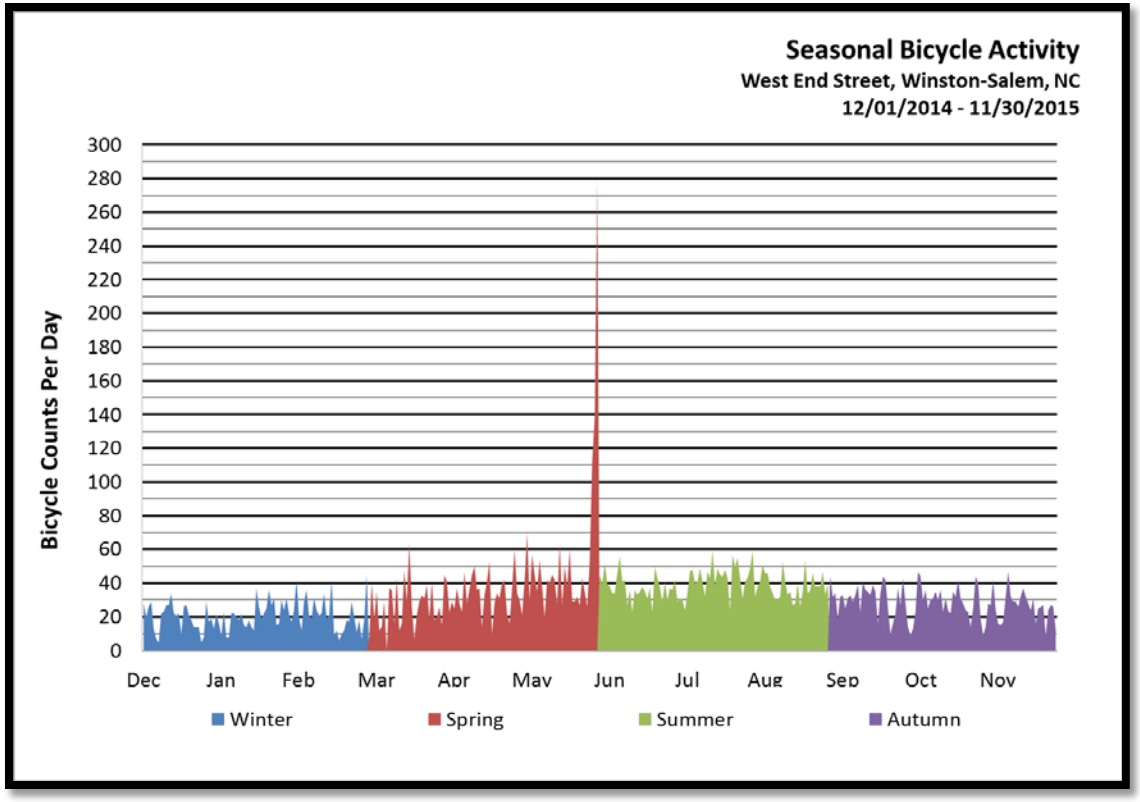


Figure 7. Seasonal Bicycle Activity

SALEM LAKE GREENWAY – WINSTON-SALEM, NC

A continuous count station was installed on the Salem Lake Greenway in Winston-Salem, NC east of parking lot on Salem Lake Rd. This unpaved trail circles Salem Lake and connects to the paved Salem Creek Greenway, Winston-Salem's longest paved trail, which extends six miles west of the Lake. **Table 1** contains information related to the site and photographs of the completed site installation are shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the count station that comprises the site. Bicyclists on the greenway are detected by a set of two inductive loops positioned in the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) mounted in a post.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 1 day of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period.

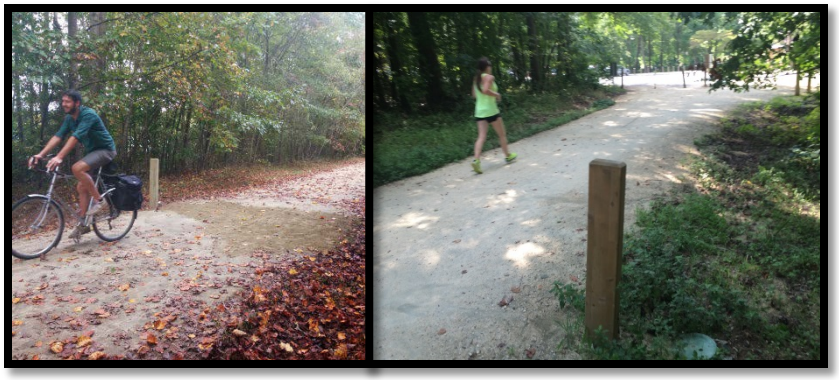


Figure 1. Continuous count Station Installation

Table 1 Site Description		
Active Since	October 16, 2014	
Pedestrian Travel Pattern	Rural Recreation	
Pedestrian Volume Group	Low	
Bicyclist Travel Pattern	Rural Recreation	
Bicyclist Volume Group	Medium	
Station Location Coordinates	N36.09288 W080.19205	
Station Name / ID	W-S_SLG /3300004	
Directional Distribution		
	Westbound	*Eastbound*
	Pedestrians (47%)	Pedestrians (53%)
	Bicyclists (56%)	Bicyclists (44%)

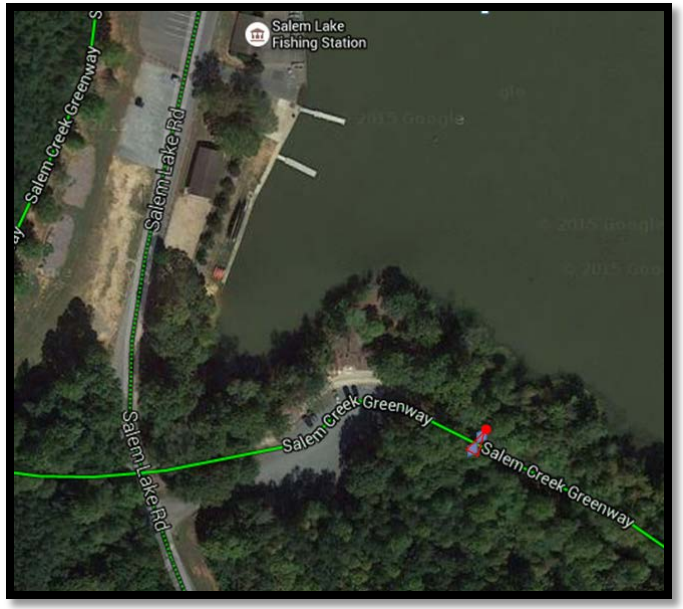


Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 130,000 pedestrian counts and 60,000 bicycle counts were recorded in the 12-month analysis period. The overall volume of non-motorized users on this facility varies from approximately 7,000 to over 26,000 counts per month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. Correction factors have been applied to the data based on a site-specific logger validation study. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site shows some correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics (1) (2) (3)

Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Sunday	Tuesday
Date	Feb 8, 2015 (1,739)	NA
Peak Period		Weekends 8AM-4PM
12 Month Pedestrian Count		137,310
Annual Average Daily Pedestrian Traffic		377 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Sunday	Tuesday
Date	June 28, 2015 (630)	NA
Peak Period		Weekends 10AM-4PM
12 Month Bicycle Count		61,550
Annual Average Daily Bicycle Traffic		163 AADBT

(1) Note: 1 day of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in December, January, and February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. Highest volumes for pedestrians are recorded in the months of May and August exceeding 15,000 pedestrian counts per month. Pedestrian volumes are highest on Saturdays and Sundays and lowest during the week on Tuesday.

Bicycle Data

The lowest volumes for bicyclists are recorded in during the winter months, also shown in **Figure 3**. The summer season has the highest overall average, with the highest volumes recorded in August. Bicyclist volumes are highest on weekends, with peak periods occurring during the morning and afternoon hours. Peak periods on weekdays occur in the early evening hours. Tuesdays have the lowest bicycle counts.

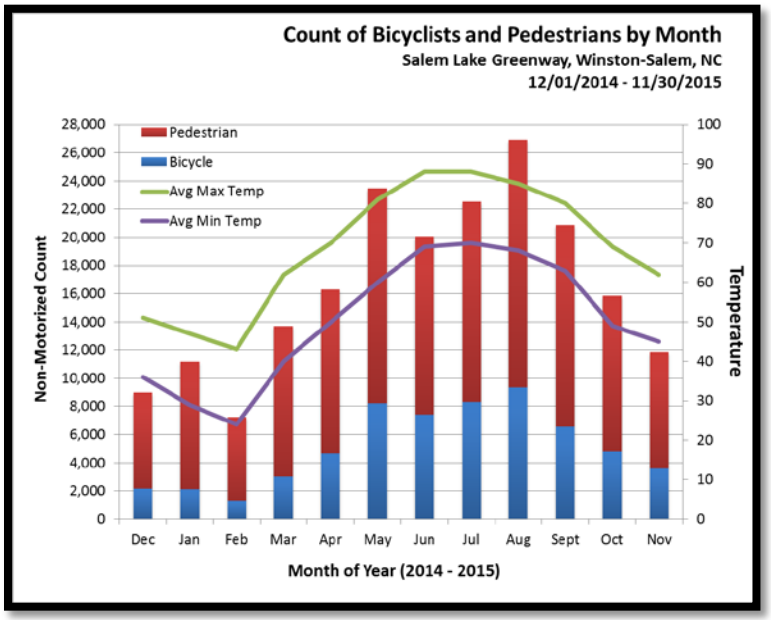


Figure 3. Non-Motorized counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays and Sundays have the highest counts, exceeding 700 pedestrian counts per day recorded while Tuesdays are the lowest with just over 200 counts per day. On average, over 375 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on the weekend, beginning around 8AM and continuing through 4PM on both Saturday and Sunday averaging over 50 pedestrian counts per hour, likely related to recreational activity. During the week, Mondays have the highest average at approximately 5PM with nearly 40 pedestrian counts per hour.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in morning hours on Saturday morning and on Sunday which has activity spread throughout the day with less pronounced peaking. No pedestrian activity occurs between 9PM and 6AM when the sun is down and the Salem Lake Park is closed.

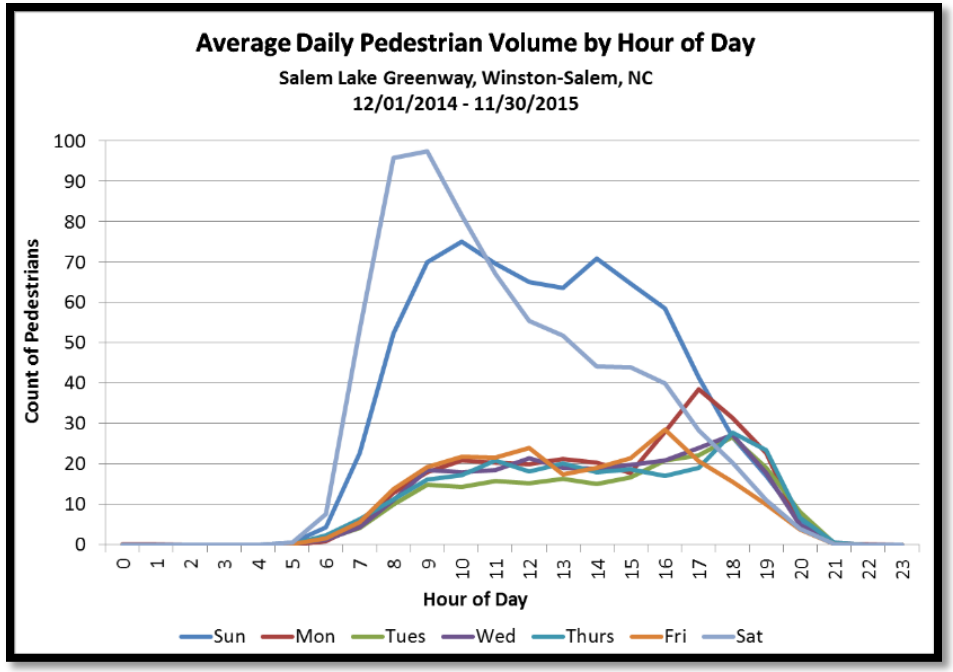


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	709
Mon	283
Tue	217
Wed	246
Thu	247
Fri	244
Sat	703
Average	**377**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	4	1	1	1	2	2	8	3
7	23	5	4	4	6	6	53	15
8	52	13	10	11	11	14	96	31
9	70	18	15	19	16	19	97	38
10	75	21	14	18	17	22	82	37
11	70	20	16	18	21	22	67	34
12	65	20	15	21	18	24	56	32
13	64	21	16	19	20	17	52	31
14	71	20	15	19	18	19	44	30
15	65	18	17	20	19	21	44	30
16	59	28	21	21	17	29	40	31
17	41	39	22	24	19	21	28	28
18	27	31	27	27	28	16	20	25
19	17	23	19	18	23	10	11	17
20	6	5	8	5	7	4	4	5
21	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
Avg	**30**	**12**	**9**	**10**	**10**	**10**	**29**	**16**

Table 4. Pedestrian Patterns by Day of Week and Hour of day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the summer months (June-August). Pedestrian volumes exceed 800 counts per day in every season of the year, including the winter months.

Sunday February 8th, 2015 had a record number of pedestrians, likely due to unseasonably warm weather. Many weekend days from March through November see peaks regularly meeting or exceeding 600 pedestrian counts per day.

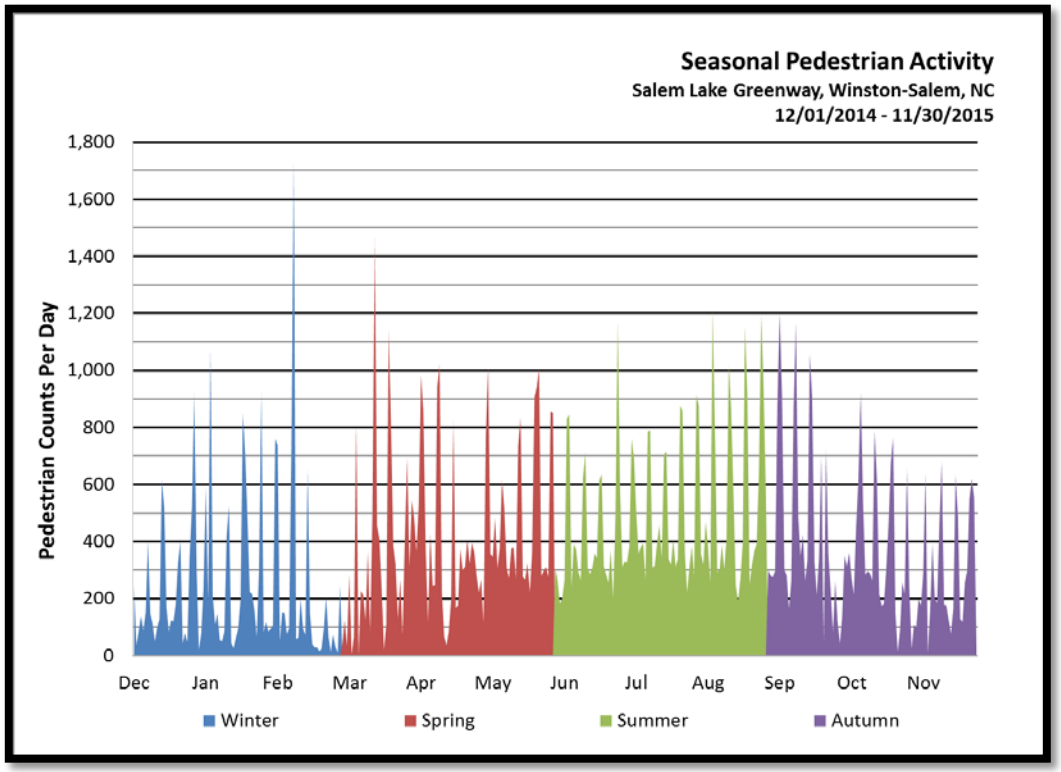


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Sundays have the highest count, averaging over 300 bicycle counts per day. Tuesdays and Fridays are the lowest, averaging just over 120 bicycle counts per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on the weekends from 10AM to 4PM where counts regularly exceed 20 bicycles per hour. Another peak occurs on weekday evenings from 5PM to 6PM with average counts meeting or exceeding 20 bicyclists per hour on Tuesdays, Wednesdays, and Thursdays. During the week, Thursdays typically have the highest average bicycle volumes.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** It shows the weekday peaking in the evening hours. On the weekends, bicycle activity is relatively consistent throughout the day dropping off in the early evening. Bicycle activity does not occur between the hours of 9PM and 6AM when the sun is down and the Salem Lake Park is closed.

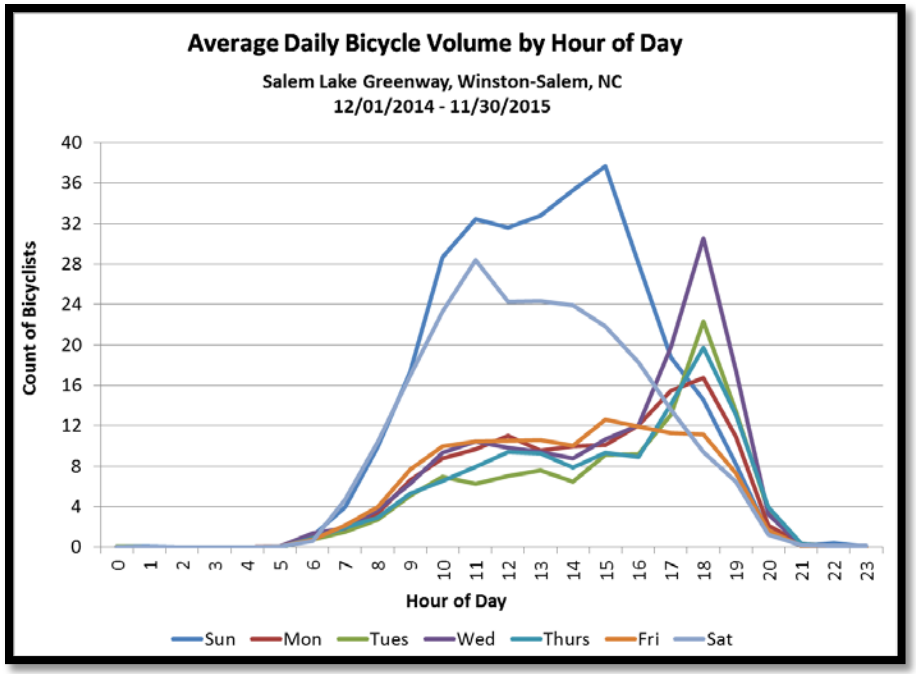


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	303
Mon	129
Tue	121
Wed	155
Thu	130
Fri	122
Sat	190
Average	**163**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	1	1	1	1	1	1	1	1
7	4	2	2	2	2	2	5	3
8	10	3	3	4	3	4	10	5
9	17	7	5	6	5	8	17	10
10	29	9	7	9	7	10	23	14
11	32	10	6	10	8	10	28	16
12	32	11	7	10	9	11	24	15
13	33	10	8	9	9	11	24	15
14	35	10	6	9	8	10	24	15
15	38	10	9	11	9	13	22	16
16	28	12	9	12	9	12	18	15
17	19	15	13	20	14	11	14	15
18	15	17	22	31	20	11	9	18
19	8	11	13	18	13	7	7	11
20	1	2	4	3	4	2	1	2
21	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
Avg	**13**	**5**	**5**	**6**	**5**	**5**	**10**	**7**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the late spring, summer, and early autumn months (May-September). Bicycle volumes exceed 200 counts per day multiple times per season and all seasons have days where volumes reach over 200 bicycles per day. In the peak summer period, is not uncommon to see volumes regularly exceed 400 counts per day on the weekend. Special events occur regularly throughout the year at this site.

On Sunday June 28, 2015 over 600 bicycle counts were recorded, with higher than average hourly counts spread throughout the daylight hours.

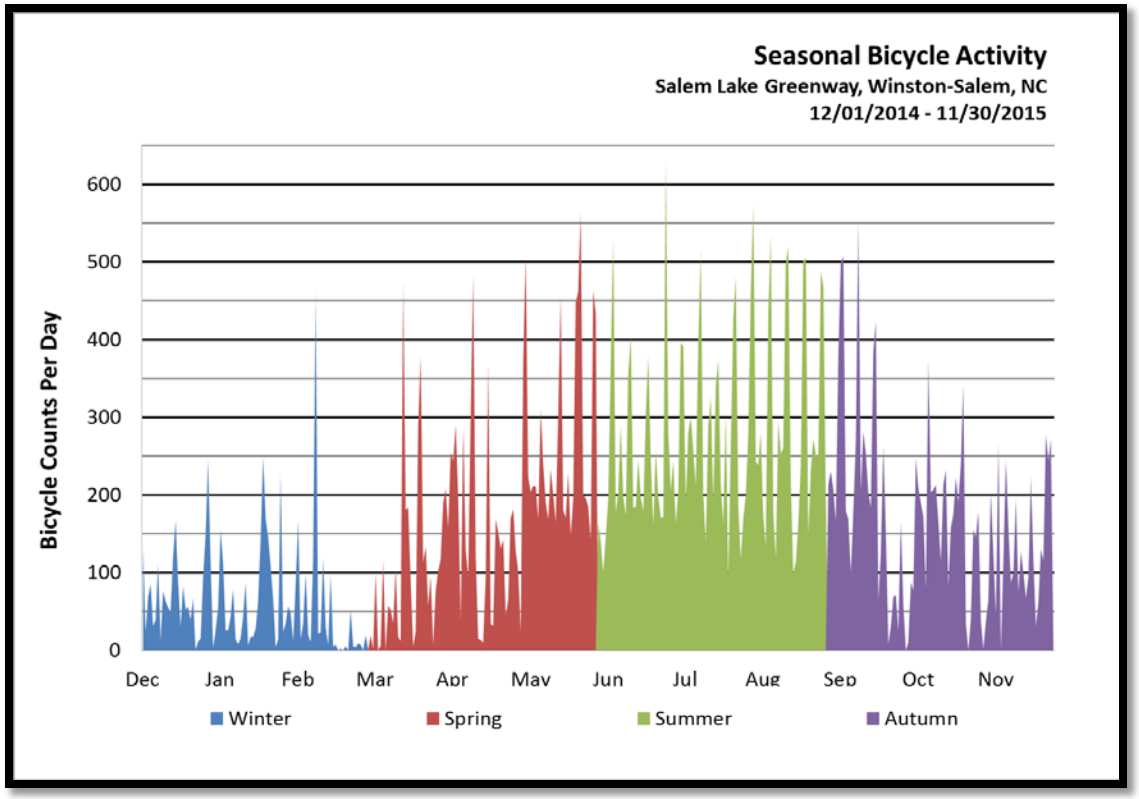


Figure 7. Seasonal Bicycle Activity

THE STROLLWAY – WINSTON-SALEM, NC

A continuous count station was installed on the Strollway Greenway in Winston-Salem, NC near Academy St. This historic rail-trail links Winston-Salem's downtown business district with historic Old Salem. **Table 1** contains information related to the site, and a photograph of the completed site installation is shown in **Figure 1.**

Figure 2 is a site diagram that shows equipment placement for the count station. Bicyclists on the greenway are detected by a set of two inductive loops positioned in the path (indicated as blue diamonds) and pedestrians are detected by an infrared sensor (indicated with a red triangle) mounted in a post.

ANALYSIS PERIOD

Data analyzed for this station includes the period from December 1, 2014 through November 30, 2015. This range was selected based on available data and reporting by season. Data is broken out into seasonal groupings: Dec-Feb as winter, Mar-May as spring, Jun-Aug as summer, and Sep-Nov as autumn. Specific graphs showing seasonal bicycle and pedestrian activity are covered under the detailed information outlined later in this report. Due to equipment errors or malfunctions or missing data, 1 day of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period.

Figure 1. Continuous Count Station Installation

Table 1 Station Description	
Active Since	September 16, 2014
Pedestrian Travel Pattern	Urban Mixed
Pedestrian Volume Group	Low
Bicyclist Travel Pattern	Urban Mixed
Bicyclist Volume Group	Low
Station Location Coordinates	N36.08705 W080.24386
Station Name / ID	W-S_STR / 3300002
Directional Distribution	
Northbound	*Southbound*
Pedestrians (50%)	Pedestrians (50%)
Bicyclists (51%)	Bicyclists (49%)

Figure 2. Site diagram showing bicycle and pedestrian count equipment placement

Summary Count Data

Over 86,000 pedestrian counts and greater than 5,000 bicycle counts were recorded during the 12-month analysis period. The overall volume of non-motorized users on this facility varies from nearly 4,000 to more than 10,000 counts per month. December is not figured into monthly or seasonal data statistics because data was not logged the first part of the month. **Table 2** gives a basic breakdown of summary statistics for both bicyclist and pedestrian count data. **Figure 3** displays the average high and low temperatures for this community during the months of the year. This site does not show a strong correlation between temperature and non-motorized volumes.

Table 2 Summary Volume Statistics (1) (2) (3)

Pedestrians		
	Highest Volume	**Lowest Volume**
Season	Spring	Winter
Month	May	February
Day of Week	Saturday	Friday
Date	March 17, 2015 (832)	NA
Peak Period		Tuesday/Thursday 5-6PM
12 Month Pedestrian Count		86,810
Annual Average Daily Pedestrian Traffic		238 AADPT
Bicyclists		
	Highest Volume	**Lowest Volume**
Season	Summer	Winter
Month	August	February
Day of Week	Sunday	Friday
Date	April 12, 2015 (49)	NA
Peak Period		Sundays 2-3PM
12 Month Bicycle Count		5,300
Annual Average Daily Bicycle Traffic		15 AADBT

(1) Note: 1 day of bicycle data and 1 day of pedestrian data are not present in the 12-month analysis period
(2) Data has been adjusted based on correction factors
(3) Annual Average Traffic calculated using AASHTO method

Pedestrian Data

For pedestrians, as shown in **Figure 3**, the lowest volumes for pedestrians are recorded in the winter months of December, January, and February. Since February is a very cold month, and there are fewer days in the month, this could account for the lower volumes in February 2015. The spring season has the highest overall volumes. With nearly 10,000 counts per month were recorded in May and October. Pedestrian volumes are highest on Saturdays and lowest on Fridays.

Bicycle Data

The lowest volumes for bicyclists are recorded during the winter months, also shown in **Figure 3**. The summer season has the highest overall average, with over 575 counts per month from May through September. The highest volumes are recorded in August, where monthly volumes exceed 600 counts. Bicyclist volumes are highest on Sundays, with the peak period starting in the late morning through the afternoon hours. Bicycle volumes are the lowest during the week on Friday.

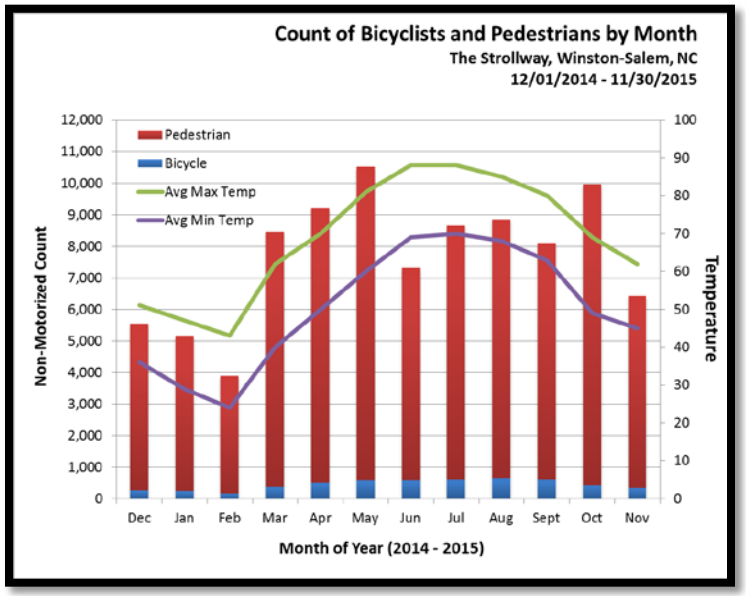


Figure 3. Non-Motorized Counts by Month and Temperature

Detailed Pedestrian Count Information

Table 3 shows average pedestrian activity by day of week. For the period, Saturdays are the highest counts recorded while Fridays are the lowest. On average, 238 pedestrian counts are recorded at the site each day.

Table 4 shows the pedestrian pattern observed at this site by hour of day and by day of week. The highest counts occur on Tuesday and Thursday evening between 6-7PM, where volumes exceed 35 pedestrians per hour. On the weekend, Saturdays have the highest hourly average at approximately 9-11AM with over 30 pedestrian counts per hour.

Hourly pedestrian volumes are depicted graphically in **Figure 4** showing the weekend peaking in the afternoon and early evening most weekdays. Some activity occurs into the evening hours on every night of the week, potentially due to the fact that the path has pedestrian-scale lighting.

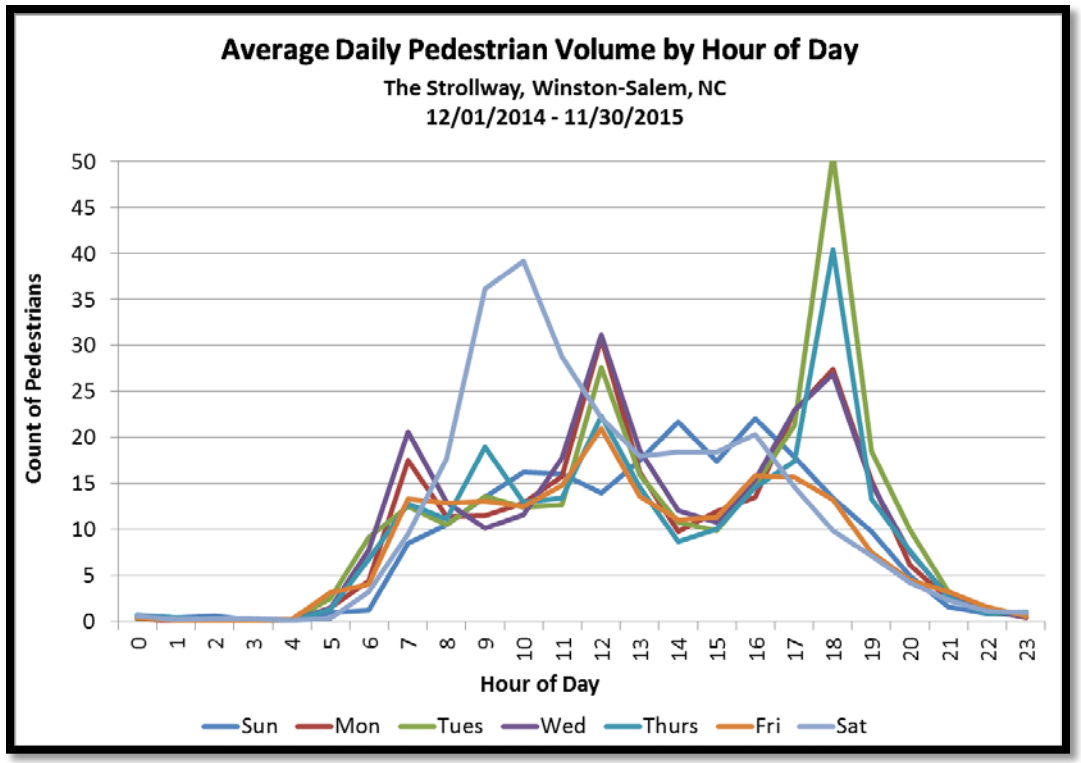


Figure 4. Average Daily Pedestrian Volumes by Hour of Day

Day of Week	Pedestrian Count
Sun	211
Mon	234
Tue	263
Wed	249
Thu	243
Fri	194
Sat	274
Average	**238**

Table 3. Average Pedestrian Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	1	0	0	0	1	0	1	0
1	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	1	1	2	1	1	3	0	1
6	1	4	8	7	6	4	3	4
7	7	15	11	18	11	12	8	12
8	9	10	9	11	10	11	15	11
9	12	10	12	9	16	11	31	15
10	14	11	11	10	11	11	34	15
11	14	14	11	15	12	13	25	15
12	12	27	24	27	19	18	19	21
13	15	14	14	16	13	12	15	14
14	19	9	9	10	8	10	16	12
15	15	10	9	9	9	10	16	11
16	19	12	13	13	13	14	18	15
17	15	20	18	20	15	14	13	16
18	12	24	44	23	35	11	9	21
19	9	13	16	13	12	7	6	11
20	4	5	9	7	7	4	4	6
21	1	2	3	3	2	3	2	2
22	1	1	1	1	1	1	1	1
23	1	0	1	1	1	1	1	1
Avg	**8**	**8**	**9**	**9**	**8**	**7**	**10**	**9**

Table 4. Pedestrian Patterns by Day of Week and Hour of Day

Seasonal variation is shown in **Figure 5**. The highest pedestrian volumes occur during the spring months (March-May), where it is not unusual to see daily pedestrian volumes exceed 300 counts.

Tuesday March 17th, 2015 had a record number of pedestrian counts, over 800, potentially due to special events related to St. Patrick's Day. October 24-25 volumes exceeded 650 counts, likely due to Halloween-related events in Old Salem.

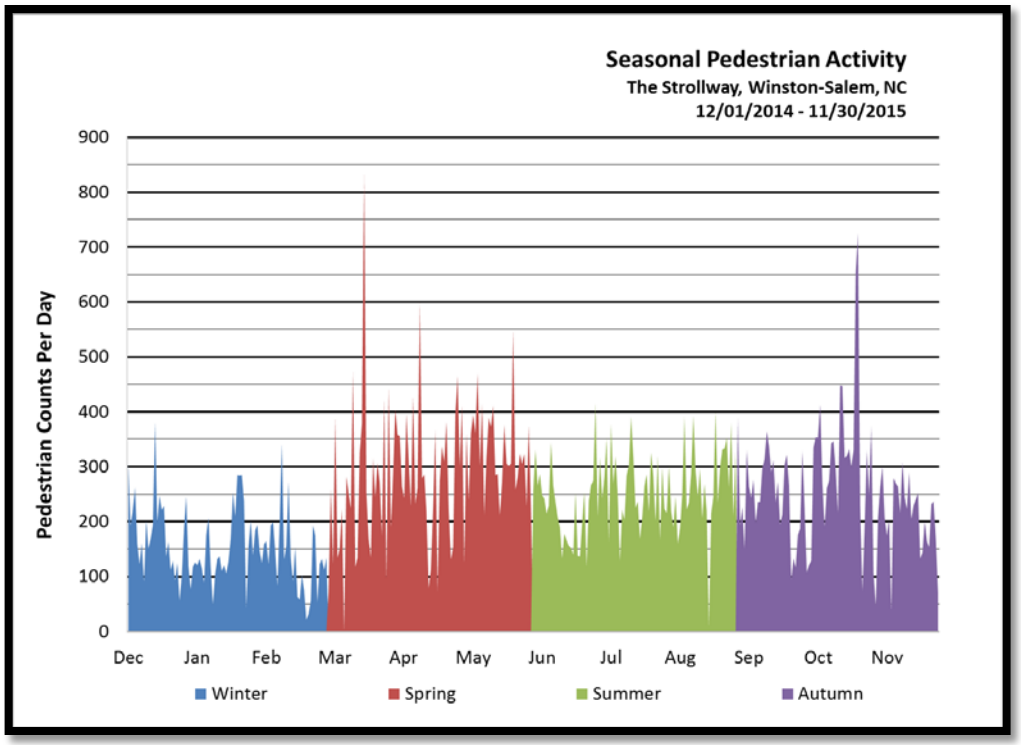


Figure 5. Seasonal Pedestrian Activity

Detailed Bicycle Count Information

Table 5 shows average bicycle activity by day of week. Sundays have the highest count, averaging 20 bicycle counts per day. Thursdays and Fridays are the lowest, averaging 11-12 bicycle counts per day.

Table 6 shows daily bicyclist patterns at the site over the course of each day. Peak bicyclist volumes occur on Sundays around 2-3PM where counts average 2-3 bicyclists per hour. During the week, Wednesdays typically have the highest average bicycle volumes.

Hourly bicyclist volumes at this site are depicted graphically in **Figure 6.** Days of the week do not vary significantly in terms of bicycling volumes. Bicycle activity primarily occurs between the hours of 10AM and 6PM on Sundays. Bicycle activity primarily occurs during daylight hours but does occur in the evening, possibly due to area lighting.

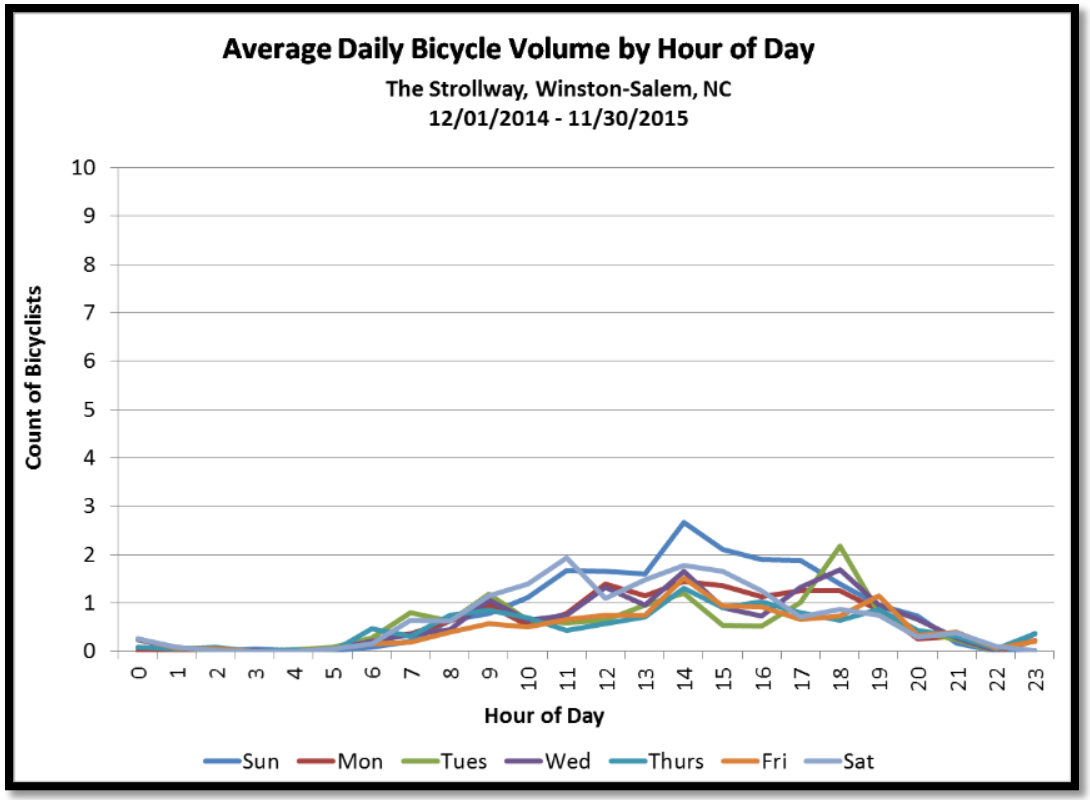


Figure 6. Average Daily Bicycle Volume by Hour of Day

Day of Week	Bicycle Count
Sun	20
Mon	14
Tue	14
Wed	15
Thu	12
Fri	11
Sat	14
Average	**14**

Table 5. Average Bicyclist Count by Day of Week

Hour	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Avg
0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	1	0	0	0	1	0
8	1	1	1	0	1	0	1	1
9	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1
11	2	1	1	1	0	1	2	1
12	2	1	1	1	1	1	1	1
13	2	1	1	1	1	1	1	1
14	3	1	1	2	1	2	2	2
15	2	1	1	1	1	1	2	1
16	2	1	1	1	1	1	1	1
17	2	1	1	1	1	1	1	1
18	1	1	2	2	1	1	1	1
19	1	1	1	1	1	1	1	1
20	1	0	0	1	0	0	0	0
21	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
Avg	**1**	**1**	**1**	**1**	**0**	**0**	**1**	**1**

Table 6. Bicyclist Patterns by Day of Week and Hour of Day

Seasonal variation at the site is shown in **Figure 7**. The highest bicyclist volumes occur during the summer months (June-August), where volumes regularly exceed 15-20 counts per day or approximately 600 counts or more per month. The spring and autumn months have similar volumes overall.

On Sunday April 12th, 2015 and Monday May 25, 2015 over 40 bicycle counts were recorded, with counts recorded at hourly intervals throughout the day, and no distinct pattern of peaking, indicating that this was likely not a special event. This activity could be attributed to good weather with highs in the 70's and Memorial Day, respectively.

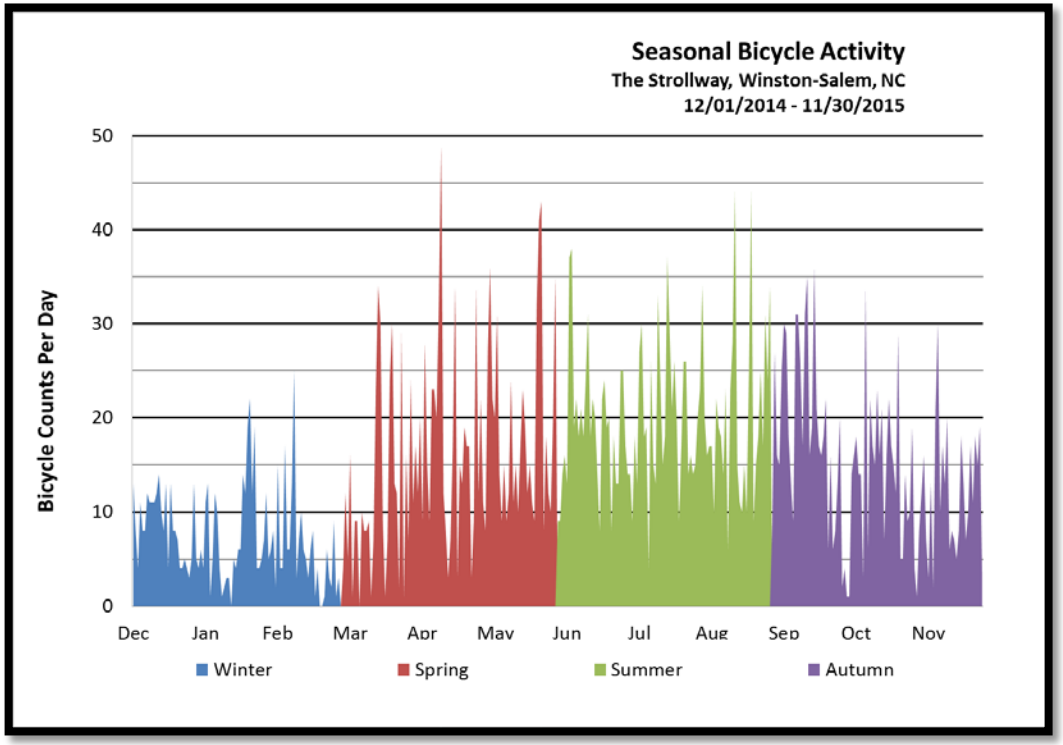


Figure 7. Seasonal Bicycle Activity