Depot Park, Phases 1 and 2
Methods

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Overview

Depot Park is a 32-acre urban park adjacent to downtown Gainesville, Florida. In this study, the performance of Depot Park is evaluated through a mixture of longitudinal and cross-sectional comparative analysis. The longitudinal analysis compares pre- and post- performance of Depot Park, and the cross-sectional analysis compares the performance of the Depot Park area with downtown Gainesville, Florida. The methods and tools used in this case study include i-Tree, eBird, Space Syntax, ArcGIS, archival research, and a park user survey conducted on-site and online.

The primary data collected in this research consists of: a) a tree inventory, b) data describing the pedestrian network around the park, and c) park users' feedback. The tree inventory focuses on a number of parameters: species, current condition, trunk circumference at breast height, sun exposure, and distance to buildings. The pedestrian network data collected identifies sidewalks and trail segments within ½ mile of the park. The feedback from park users was collected through a survey composed of four sections: the utilization of the park, the quality of life, social interaction, and the diversity of park users. All data were collected from May to October in 2019.

The secondary data cited by the research team and/or shared by the project liaison includes: a) stormwater runoff volume and quality, b) bird species counts, c) adjacent business data, and e) adjacent properties' assessed value.
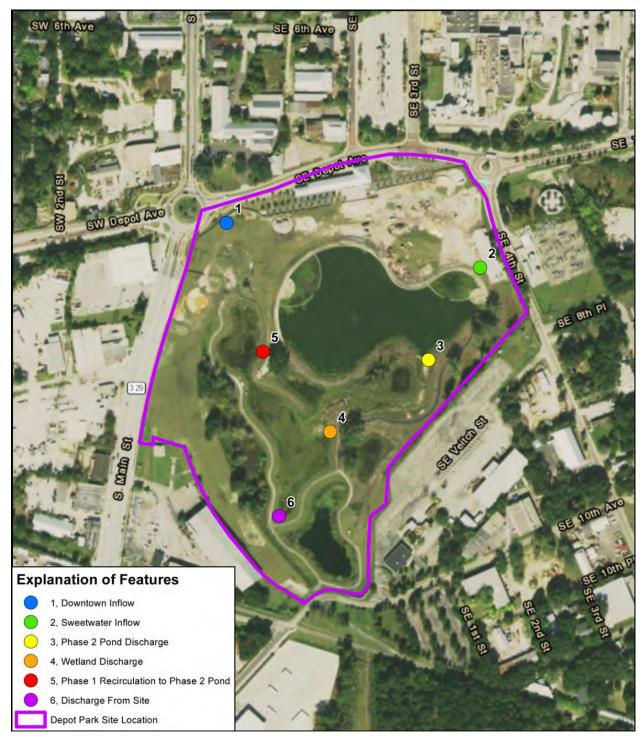
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Figure 1: Stormwater features in Depot Park

1. Environmental Benefits

Manages and treats an estimated 600 million gallons of stormwater from downtown Gainesville annually. The purchase of stormwater credits under the City's trading program has generated over $657,000 to date.

Methods: The stormwater treatment facility in Depot Park consists of pre-treatment baffle boxes, wet detention ponds, sediment forebays, and upstream and downstream ponds. Currently, the system treats runoff from downtown Gainesville.

In 2016, Amec Foster Wheeler Environment & Infrastructure, Inc. was hired to monitor and evaluate the effectiveness of the Depot Park Stormwater Treatment Facilities. Devices were installed at 6 main transfer points in the treatment system by October 2016 for the monitoring program started in January 2017. The results reported here were based on eight rain events that received more than 0.2 inches but did not exceed 1.5 inches of rainfall.

The estimation of stormwater credits was based on data obtained from the Public Works Department in the City of Gainesville. According to the Stormwater Treatment Performance Standards by Alachua County (https://alachuacofl.civicclerk.com/Web/GenFile.aspx?ad=17025), projects that discharge directly or indirectly to surface waters need to reduce post-development annual pollutants by 80%. Since 2011, Depot Park has been providing stormwater credits for new developments to purchase. Qualified projects need to be located in the Sweetwater Branch Watershed or have hydraulic connection with the Depot Park Stormwater Treatment Facilities. The land-use types can be residential, commercial, industry, and open space. Total suspended solids (TSS) are a key pollutants in runoff, and are carriers of other pollutants such as nutrients, organics, and metals. The fee calculation for stormwater credits was based on TSS loads.

Calculations: According to the Final Monitoring Report, the eight qualifying rain events generated a total of 109.73 acre-ft, which is 6% of the estimated annual average influent flow (according to Amec Foster Wheeler). The average influent flow for the 8 qualifying events was 13.72 acre-ft (ranging from 8.12 to 23.39 acre-ft).

1 acre-ft = 325,851 gallons

Total influent flow of the 8 qualifying rain events: 109.73 x 325,851 = 35,755,624 gallons

Estimate of annual average influent flow: 35,775,624/ 6% = 595,927,067 gallons

Although not every storm was monitored and captured in this analysis, monitoring of the 8 storms does indicate that Depot Park is performing to its stormwater design targets.

Stormwater Credit Calculations: Until now, 15 projects have applied for and obtained Deport Park Stormwater credits as displayed in the table below. The total size of the parcels is 51.17 acres, and the total fee for these stormwater credits is estimated to be more than $657,000.

Approved Projects	Parcel Size	TSS Load	Costs
	Acre	lbs./year	$
1. FDOT Main Street Reconstruction	5.18	3648.13	209,220.26
2. Alachua County Courthouse	4.175	2630.82	150,877.53
3. Alachua County Courthouse-south lots	0.89	560.82	32,163.03
4. Depot Segment 4 Temp	0.293	1309.42	26,634.00
5. Main Street roundabout	1.016	612.78	12,464.00
6. Depot Park Phase 1	11.03	3679.63	74,844.00
7. Jacks Bar	0.091	70.68	4,053.50
8. PP/SB SRP Resubmittal	23.84	64.36	3,691.05
9. Everyman Sound	1.06	707.24	40,560.21
10. George Wang	0.142	110.3	6,325.71
11. Fire Staton # 1	0.372	192.76	3,920.76
12. St Frances Pets	0.37	260.58	14,944.26
13. NW 12th Ave	0.92	446.76	25,621.44
14. Terrell Brown	0.69	291.57	16,721.45
15. Burger King	1.1	611.6	35,075.50
Total	**51.169**		**657,116.68**

Figure 2: Calculation of stormwater credit fees

Sources: Amec Foster Wheeler Environment & Infrastructure, Inc. (2018) City of Gainesville Depot Park Stormwater Treatment Facility Final Monitory Report.

City of Gainesville Public Works Department.

Limitations:

- The annual average influent flow is an estimate, not a real measurement.

- Most rain events did not qualify for sampling, which affects the accuracy of the result.

- The documents obtained from the City do not show the fees for all 15 projects. The fees for the following projects are based on an estimation assuming the fee assessed for each pound of TSS is the same as other projects ($57.35/lb). Projects where fee information was available include the FDOT Main Street Reconstruction, Alachua County Courthouse, Alachua County Courthouse-south lots, Jacks Bar, PP/SB Resubmittal, Everyman Sound, George Wang, and St. Frances Pets.

Improves water quality by reducing the concentration of cadmium by 60%, chromium by 55%, copper by 71%, zinc by 76%, ammonia by 69%, total phosphorus by 65%, and total suspended solids by 56% on average for 6 monitored rain events.

Methods: As mentioned above, the calculation of stormwater treatment benefits was based on the data collected by Amec Foster Wheeler Environment & Infrastructure, Inc. in 2017. The water samples of eight rain events were collected at six site locations and sent to the lab for analysis. The analysis included the following pollutants/ nutrients:
  ➢ Total Cadmium
  ➢ Total Copper
  ➢ Total Hardness
  ➢ Total Kjeldahl Nitrogen (TN)
  ➢ Total Phosphorus (TP)
  ➢ Total Suspended Solids (TSS)
  ➢ Fecal Coliform
  ➢ Total Chromium
  ➢ Total Zinc
  ➢ Nitrate+Nitrite (NOx-N)
  ➢ Total Ammonia
  ➢ Orthophosphate
  ➢ Oil & Grease

Calculations:

The removal efficiencies were calculated by comparing pollutant/nutrient concentrations at the influent and effluent points of the treatment system. For the entire system, the influent points are location 1 and 2, and the effluent point is location 6. So the removal efficiency was calculated by the formula below:

$$Removal\ efficiency = \frac{[(location\ 1 + location\ 2) - location\ 6]}{(locatioin\ 1 + location\ 2)}$$

Some data of two rain events were missing, so these rain events were excluded from the removal efficiency calculation. The events are Q2-B (the second rain event in quarter 2 in 2017), Q2-C (the 3rd rain event in quarter 2 in 2017). The data collected are as following:

	Metal							Microbiolog			Wet Chemistry				
	Cadmium	Calcium	Chromium	Copper	Magnesium	Zinc	T Hardness	Coliform Fecal	Oil & Grease	Ammonia	TN	TP	TTS	Nitrate +Nitrite	Orthophos phate
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Q1-6A	0.00032	46	0.0026	0.011	4.9	0.029	140	800	2.2	0.06	0.8	0.157	7.4	0.039	1
Q1-(1A+2A)	0.00064	52.4	0.0043	0.0162	5.43	0.064	156				1.59	0.522	48	0.31	0.293
Removal Efficiency	50.00%	12.21%	39.53%	32.10%	9.76%	54.69%	10.26%				49.69%	69.92%	84.58%	87.42%	-241.30%
Q1-6B	0.00032	49	0.0008	0.06	5.4	0.012	140	2	1.6	0.01	0.85	0.118	8.4	0.007	0.006
Q1-(1B+2B)											2.2	0.519	25	0.213	0.212
Removal Efficiency											61.36%	77.26%	66.40%	96.71%	97.17%
Q2-6A	0.00034	88	0.0011	0.0025	7.1	0.016	250	4	2.2	1.1	1.8	0.239	9	0.023	0.122
Q2-(1A+2A)	0.00078	69	0.0062	0.036	35.3	0.208	215				6	1.364	41	0.535	0.646
Removal Efficiency	56.41%	-27.54%	82.26%	93.06%	79.89%	92.31%	-16.28%				70.00%	82.48%	78.05%	95.70%	81.11%
Q3-6A	0.00032		0.0015	0.0027		0.0066	77	86	2.2	0.01	0.81	0.1	11	0.015	0.036
Q3-(1A+2A)	0.00064		0.0103	0.0141		0.047	98	4	5	0.2	1.05	0.226	15	0.35	0.171
Removal Efficiency	50.00%		85.44%	80.85%		85.96%	21.43%	-2050.00%	56.00%	95.00%	22.86%	55.75%	26.67%	95.71%	78.95%
Q4-6A	0.00042	28	0.00097	0.0025	2.4	0.012	80	1260	2.2	0.03	1.8	0.221	4.6	0.04	0.04
Q4-(1A+2A)	0.00388	26	0.0042	0.0088	2	0.078	73	400	4.4	0.17	1.17	0.339	7	0.26	0.222
Removal Efficiency	89.18%	-7.69%	76.90%	71.59%	-20.00%	84.62%	-9.59%	-215.00%	50.00%	82.35%	-53.85%	34.81%	34.29%	84.62%	81.98%
Q4-6B	0.00045	38	0.011	0.0062	4.1	0.033	110	760	6.8	0.12	1.3	0.143	10	0.064	0.036
Q4-(1B+2B)	0.00104	49	0.0101	0.0254	3.97	0.085	140	8290	5	0.17	1.72	0.431	18.2	0.158	0.276
Removal Efficiency	56.73%	22.45%	-8.91%	75.59%	-3.27%	61.18%	21.43%	90.83%	-36.00%	29.41%	24.42%	66.82%	45.05%	59.49%	86.96%
Average Removal Efficiency	60.46%	-0.11%	55.04%	70.64%	13.27%	75.75%	5.45%	-724.72%	23.33%	68.92%	29.08%	64.51%	55.84%	86.61%	30.81%

Figure 3: Removal Efficiency of the DP Stormwater Treatment Facility

Sources: Amec Foster Wheeler Environment & Infrastructure, Inc. (2018) City of Gainesville Depot Park Stormwater Treatment Facility Final Monitory Report.

Limitations:
- There were 55 rain events in 2017, however, samples for only eight events were collected due to various reasons, such as rain events not fulfilling the requirements of 0.2-1.5 inches, if events were not outside of a 72-hour dry period, errors in backup program, dead battery, etc. Therefore, the results shown might not fully reflect the efficiency of the system.
- Gainesville received record amount of rainfall in June and July 2017 followed by a 100-year storm event on Sept. 11, 2017 resulting from Hurricane Irma. These unusual rain events may have caused diluted loading from the point source locations (location 1 and 2), leading to negative removal efficiencies.

Sequesters 13 tons of atmospheric carbon annually in 315 newly-planted trees. The trees will sequester a projected 31 tons of atmospheric carbon annually after 10 years.

Methods: The calculation of current atmospheric benefit was based on an onsite tree inventory, and the future benefit calculation relied on a 10-year projection of tree growth. 25 trees in different conditions were selected as representative samples according to Depot Park's construction documents and onsite investigation by the CSI research team. The construction documents include 244 newly planted trees, not including those around CADE museum. Upon

onsite observation, the research team added 71 trees that were counted in the museum area. 315 newly-planted trees (13 species in total) were included when calculating this benefit.

Two i-Tree tools including i-Tree MyTree v1.5 and i-Tree Design v6.0 were used for calculating atmospheric benefit of the newly planted trees. i-Tree MyTree can assess values of diverse indicators for one to several trees while i-Tree Design analyzes tree benefits at the parcel level. We used i-Tree MyTree to calculate current sequestered carbon dioxide and i-Tree Design to estimate projected sequestered carbon dioxide in 10 years.

Seven indicators of tree species, condition, trunk circumference or diameter, sun exposure, distance from a building, adjacent building's construction date, and orientation of the tree relative to adjacent buildings were entered into i-Tree MyTree. The last 3 indicators are only needed when the tree is within 60 ft of a building. Possible tree conditions consist of excellent, good, fair, poor, critical, dying, and dead. Trunk circumference is measured at 4.5 feet above the ground. The diameter at this height is called "diameter at breast height" (dbh), which is the standard measurement of tree trunk width. Either the circumference or diameter can be entered into the software. We summed the trunk circumferences at breast height for small trees with three or more primary leaders, including *Largerstroememia indica "Nachez"* (White Crape Myrtle) and *Cornus Florida "Weaver"* (Weaver Dogwood). Sun exposure includes full sun, partial sun, and full shade. Distance from a building includes 0-20 ft, 20-39 ft, 39-59 ft, and >59 ft. Building's built date includes after 1980, between 1950 to 1980, and before 1950. Compass directions cover north, northeast, east, southeast, south, southwest, west, and northwest.

Tree species	# of Trees	Tree's condition	Truck circumference (inch)	Sun exposure	Is the tree within 60 feet of a building?	When was the building built?	How far is the tree from the building?	Compass direction from the tree to the building
Acer Rubrum "Autumn Flame"	21	Excellent	10	Full sun	No			
Acer Rubrum "Autumn Flame"	2	Excellent	10	Full sun	Yes	After 1980	20ft	Southeast
Carpinus Caroliniana	6	Excellent	14	Full sun	No			
Cercis Canadensis	9	Good	3.5	Full sun	No			
Cornus Florida "Weaver"	5	Excellent	17.6 (5.4+5.6+6.6)	Full sun	No			
Cornus Florida "Weaver"	1	Excellent	17.6	Full sun	yes	After 1980	25ft	Northeast
Fraxinus Pennsylvanica	3	Good	10.75	Full sun	No			
Lagerstroememia indica "natchez"	51	Excellent	25.5 (9+8.5+8)	Full sun	No			
Liriodendron Tulipifera	32	Excellent	9.75	Full sun	No			
Liriodendron Tulipifera	1	Excellent	9.75	Full sun	Yes	After 1980	15ft	Northeast
Liriodendron Tulipifera	1	Excellent	9.75	Full sun	Yes	After 1980	48ft	Northeast
Liriodendron Tulipifera	10	Excellent	9.75	Full sun	Yes	After 1980	20ft	South
Liriodendron Tulipifera	2	Poor	8	Partial sun	No			
Liriodendron Tulipifera	7	Fair	9	Full sun	No			
Magnolia Grandiflora	18	Excellent	12	Full sun	No			
Quercus Virginiana	21	Excellent	12.5	Full sun	No			
Quercus Virginiana	1	Excellent	12.5	Full sun	Yes	After 1980	35ft	Northeast
Quercus Virginiana	2	Excellent	12.5	Full sun	Yes	After 1980	20ft	North
Quercus Virginiana	1	Excellent	12.5	Full sun	Yes	After 1980	20ft	Northwest
Quercus Virginiana	8	Fair	12.5	Full sun	No			
Quercus Virginiana	1	Poor	12.5	Full sun	No			
Taxodium Distichum	48	Excellent	9.5	Full sun	No			
Ulmus Alata	17	Excellent	9.6	Full sun	No			
Phoenix Sylvestrix	16	Excellent	35.25	Full sun	No			
Sabal Palmetto	31	Excellent	40	Full sun	No			

Figure 4: Tree Species and Features in Depot Park

Calculations:

Below is an example of using i-Tree MyTree to calculate current atmospheric carbon reduction for one tree-an *Acer Rubrum "Autumn Flame"* (Red Maple) with the restroom building in Depot Park nearby.

Figure 5: (left) Screenshot Example of Data Imported into i-Tree MyTree

Figure 6: (right) Report of Benefit Estimation by i-Tree MyTree

Below is an example of using i-Tree Design to calculate the same tree's atmospheric carbon reduction in 2029.
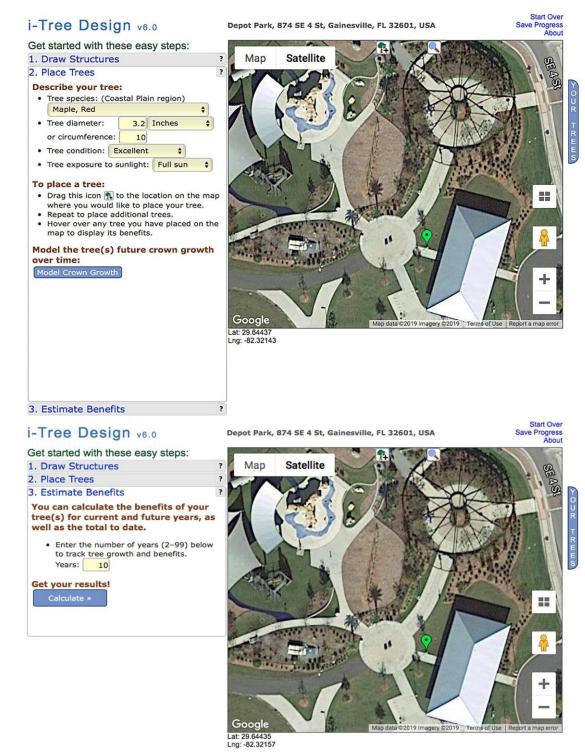

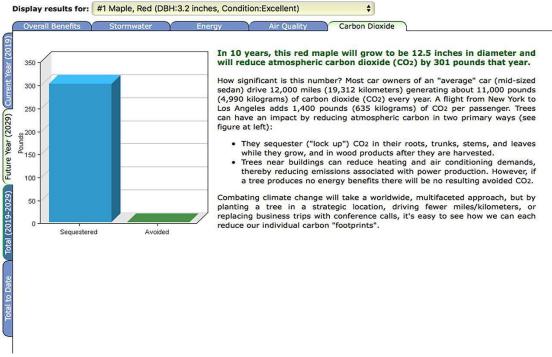Figure 7: Screenshot Example of Data Imported into i-Tree Design

Figure 8: Report of Benefit Estimation by i-Tree Design

Carbon sequestration benefits for all trees in Depot Park were calculated using the methods described above. In the calculation process, the number of trees near a building or not were combined since buildings have no impact on the amount of sequestered carbon dioxide.

Tree species	Atmospheric Carbon Reduction in 2019 (lbs)	Atmospheric Carbon Reduction in 2029 (lbs)	Calculation	Total Atmospheric Carbon Reduction in 2019 (lbs)	Total Atmospheric Carbon Reduction in 2029 (lbs)
Acer Rubrum "Autumn Flame"	60	301	x 23	1389	6923
Carpinus Caroliniana	30	36	x 6	178	216
Cercis Canadensis	9	2	x 9	80	18
Cornus Florida "Weaver"	70	105	x 6	421	630
Fraxinus Pennsylvanica	52	194	x 3	156	582
Lagerstroememia indica "natchez"	203	278	x 51	10328	14178
Liriodendron Tulipifera	43	264	x 44	1876	11616
Liriodendron Tulipifera (Poor)	12	39	x 2	24	78
Liriodendron Tulipifera (Fair)	30	173	x 7	209	1211
Magnolia Grandiflora	39	148	x 18	700	2664
Quercus Virginiana	88	402	x 25	2198	10050
Quercus Virginiana (Fair)	70	271	x 8	560	2168
Quercus Virginiana (Poor)	51	156	x 1	51	156
Taxodium Distichum	29	171	x 48	1403	8208
Ulmus Alata	30	137	x 17	504	2329
Phoenix Sylvestrix	104	138	x 16	1663	2208
Sabal Palmetto	125	157	x 31	3874	4867
Total				**25614**	**68102**

Figure 9: Total Atmospheric Carbon Reduction

Sources:
Site Permit Construction Documents of Depot Park - Phase 2 for City of Gainesville Community Redevelopment Agency, Jbrown Inc., provided by the Gainesville Community Redevelopment Agency
i-Tree Tools: https://www.itreetools.org
i-Tree MyTree v1.5: https://mytree.itreetools.org
i-Tree Design v6.0: https://design.itreetools.org

Limitations:
- Only newly planted trees were inventoried. The atmospheric carbon reduction by older trees retained on site was not counted.
- The calculations assumed all proposed trees included in construction documents were all planted. One *Magnolia grandiflora* near the Depot Building and trees around CADE museum were added based on the onsite observation. Because not all proposed trees were verified in the field, other discrepancies were not found but may exist.
- i-Tree Mytree and i-Tree Design tools only counted trees taller than 4.5 feet. Atmospheric carbon reduction by short shrubs and grasses was not estimated.
- An average trunk circumference was used for each tree species in the same condition. The newly planted trees in Depot Park were planted at the same time, so that the size for the same species doesn't vary significantly. However, deviation still exists.
- *"Phoenix sylvestris"* is not an option in i-Tree tools. "*Phoenix canarensis"* was used for the calculation, which is the only option for this genus.

Provides habitat for over 130 bird species observed by citizen scientists.

Methods: Bird species counts were based on data from eBird. eBird is an online database that integrates birders' knowledge and experience and documents bird distribution, abundance, habitat use, and trend. 137 bird species with more than 4000 individuals have been documented in eBird at Depot Park since data collection began. Before Depot Park opened, the site was a brownfield and people were not allowed access. We didn't include the bird observation data prior to 2016 due to the access issues and the inconsistent data records for these years.

Year	Observed Bird Species
2019 (until Nov.)	100 species (+4 other taxa)
2018	104 species (+9 other taxa)
2017	105 species (+10 other taxa)
2016	103 species (+3 other taxa)
1900-2019	137 species (+16 other taxa)

Figure 10: Observed Bird Species in Depot Park

No conclusive trend was identified based on the annual observed bird species in total as far as the results show, since the data collection period (2016-2019) is short and the 2019 calendar year was only partly over when data was recorded. In an attempt to understand whether Depot Park was supporting an increase or decrease in the total number of individuals recorded (versus increases/decreases in species diversity), we tracked high counts for 43 bird species on eBird from 2016 to 2019. High count refers to the highest number counted of one species submitted on a "single checklist" within a specified date range and region (eBird, 2019). It can be counted on any day within that year by an individual observer and it's not an aggregated count for the year. In this way, we can avoid double counting for the bird counts. By separating the date range into each year, we can see the birds' high counts annually.

We collected 43 bird species' high counts whose high counts are over 5 in 2019. Those with less than 5 were not selected because the fluctuation of small numbers is insignificant. We defined "increasing" by two criteria: a) the number of individuals increased continuously from 2016 to 2018; b) if there was a fluctuation during 2016-2018, an apparent increase was shown in 2019 (through November). As a result, 42% of bird species show an increasing trend as indicated in red, 39% species show a fluctuation in counts as indicated in black, and 19% species experience a decrease as indicated in blue from 2016 to 2019.
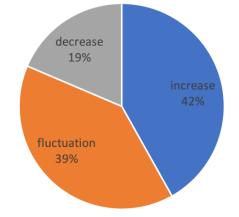

Figure 11: Bird count fluctuation in Depot Park from January 2016 to 2019 (Nov.)

Calculations:

No.	Bird Species	2016	2017	2018	2019
1	Red-winged Blackbird	200	50	700	200
2	American Robin	100	30	66	200
3	Black-bellied Whistling-Duck	510	60	18	90
4	Tree Swallow	1	29	25	65
5	Boat-tailed Grackle	50	250	50	50
6	Double-crested Cormorant	1	26	22	42
7	White Ibis	9	34	90	33
8	Chimney Swift	45	28	70	30
9	Cedar Waxwing	/	57	75	30
10	Bonaparte's Gull	16	47	21	29
11	Turkey Vulture	22	60	20	26
12	Yellow-rumped Warbler	15	14	15	25
13	Fish Crow	82	100	36	25
14	Tufted Titmouse	3	3	3	20
15	Barn Swallow	6	6	30	20
16	House Finch	2	15	4	16
17	Eurasian Collared-Dove	17	19	8	16
18	Snowy Egret	17	23	21	12
19	Northern Rough-winged Swallow	6	25	9	12
20	Common Gallinule	12	15	13	12
21	Bufflehead	5	6	11	12
22	Mourning Dove	15	7	7	10
23	Glossy Ibis	/	/	1	10
24	Common Grackle	25	90	30	10
25	Northern Mockingbird	10	10	7	9
26	Pied-billed Grebe	28	19	7	8
27	Hooded Merganser	1	2	10	8
28	Great Crested Flycatcher	1	2	3	8
29	Black Vulture	12	40	11	8
30	American Crow	10	80	7	8
31	Northern Cardinal	6	6	10	7
32	Loggerhead Shrike	2	6	6	6
33	European Starling	30	20	4	6
34	Carolina Wren	3	3	3	6
35	Ring-billed Gull	14	28	23	5
36	Red-bellied Woodpecker	3	3	3	5
37	Palm Warbler	45	27	16	5
38	Osprey	4	3	5	5
39	Mottled Duck	/	/	2	5
40	Little Blue Heron	4	7	6	5
41	Eastern Bluebird	7	3	5	5
42	Brown-headed Cowbird	12	1	3	5
43	Blue Jay	3	6	4	5

Red: increase

Black: fluctuation

Blue: decrease

Figure 12: Bird counts in Depot Park from January 2016 to November 2019

Sources:
eBird for Depot Park: https://ebird.org/hotspot/L4832841?yr=all&m=&rank=hc
Yearly bird species count on eBird: https://ebird.org/barchart?r=L4832841&yr=cur&m
Specific species count on eBird:
https://ebird.org/barchart?byr=2019&eyr=2019&bmo=1&emo=12&r=L4832841&spp=bbwduc
"High counts" illustration on eBird:
https://support.ebird.org/en/support/solutions/articles/48000948655-ebird-glossary#anchorH

Limitations:
- eBird data is not comprehensive, nor does it include all birds potentially on-site. The outcome is based on the birders' park visit frequency, ability to recognize birds, knowledge of eBird, availability to report birds, etc.
- High count was used to represent the real counts of bird species as recorded in eBird, but may not be representative of all species on the site at a given time.

2. Social Benefits

Overall methods for survey:
304 onsite responses and 21 online responses were retrieved. The onsite survey was conducted during a two-week period on Sept. 14 (Saturday), Sept 17 (Tuesday), Sept 22 (Sunday), and Sept 27 (Friday) in 2019, by two observers from the research team. 95, 55, 101, and 53 responses were obtained respectively for the 4 days. The observers conducted a one-hour survey at 3-hour intervals within one day (9am, 12am, 3pm, 6pm). One observer from the research team was stationed near the Northeast gateway into the park which is located at the intersection of SE Depot Avenue and SE 4th Street, and close to the playground area with relatively large flow of visitors; the other observer walked along the trail, pathway, and promenade throughout the park. The online survey was posted on Sept. 13 by the official Facebook account of College of Design, Construction and Planning at the University of Florida. The survey consisted of 20 questions covering four main topics: utilization of Depot Park, quality of life, social interaction, and diversity of park users. Each topic contained 5 questions. Question types include multiple-choice and open-ended questions.

Overall limitations for survey methods:
- The survey was only conducted in September, which cannot capture seasonal variation in users.
- The online survey was limited to one social media platform (Facebook) and could only be posted through an official University of Florida Facebook account due to Institutional Review Board (IRB) requirements.

Improves recreation and leisure opportunities according to 75% of 325 surveyed visitors. 63% of surveyed visitors report they visit the park for at least 3 types of activities. Respondents are most attracted to the park for exercise, contact with nature, spending time with friends and family, children's recreational opportunities, and eating and drinking.

Methods: Park users were asked about how Depot Park affected their recreational and leisure opportunities, and their reasons for visiting Depot Park. We also studied how many kinds of recreational activities each user has engaged in the park.

Calculations:
We obtained 325 responses for the following questions (#4, #6).

Figure 13: (left) Park's impact on recreational opportunities

Figure 14: (right) Number of activity combinations in park
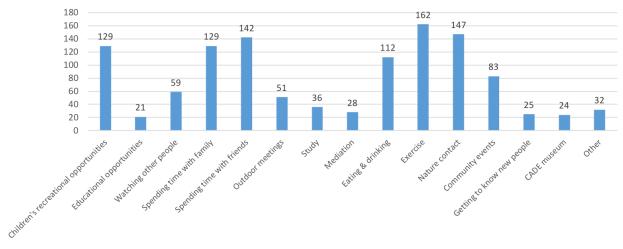

Figure 15: Recreational activities in park

Sources:
Survey Questions #4 and #6:
- Why do you visit Depot Park?
- How has Depot Park affected your life in the following aspects? (see Appendix A)

Enhances social interactions with 53% of 324 surveyed visitors reporting they get to know new people in the park. 87% of respondents meet with family and/or friends in the park, with 32% of them meeting at least once a month.

Methods: Park users were asked about the numbers of new people they met, their meeting frequency with family and/or friends, and the public events they have attended last year in the park through the survey.

Calculations:

We obtained 324 responses for the questions of new acquaintances (#13) and family/friends meeting frequency (#12), and 323 responses for the question of public event participation (#11).

Figure 16: Number of new people that park users met in park

Figure 17: (left) Frequency of meetings with family/friends, Figure 18: (right) Number of public events participated in

Sources:

Survey Questions #11, #12 and #13:
- How many public events did you attend in Depot Park during the past year?
- How often do you meet with family and/or friends in Depot Park?

● How many new people have you gotten to know in the Park? (see Appendix A)

Encourages repeat visits and longer stay times. Of 325 surveyed visitors, 56% reported spending more than 1 hour in the park during each visit. In terms of frequency, 64% reported visiting the park at least once a month, 31% at least once a week, and 3% about once a day.

Methods: Park users were asked how long they stayed in the park during each visit through the survey. Park users were asked about how often they visited Depot Park.

Calculations:
We obtained 325 responses for the questions (#5 and #1).

Figure 19: (left) Park users' time spent in park, Figure 20: (right) Park visit frequency

Sources:
Survey Questions #5:
● On average, how long do you spend in the park during each visit? (see Appendix A)
Survey Question #1:
● How often do you come to Depot Park? (see Appendix A)

Serves local users and draws users from around the city as demonstrated by more than 97% of 325 surveyed visitors reporting that they live in Gainesville, and 64% reporting that they live within 5 miles of the park.

Methods: There were three questions related to Depot Park's service radius in the survey. A map of Gainesville was presented to help the surveyed respondents locate their address (Figure 21). The questions were described below:
● How do you normally travel to Depot Park?
● How long does it normally take to travel to Depot Park?
● Please indicate which zone you live in to help us understand where park users come from.

20. Please indicate which zone you live in to help us understand where park users come from.

☐ **A:** < 0.5 mile from Depot Park   ☐ **B:** 0.5-1 mile from Depot Park   ☐ **C:** 1-2 miles from Depot Park
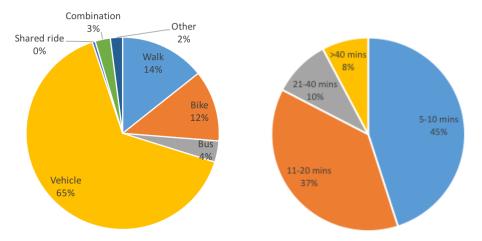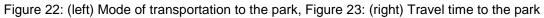☐ **D:** 2-5 miles from Depot Park   ☐ **E:** > 5 miles from Depot Park

Figure 21: The living zone question in the Depot Park User Survey

The results showed that the questions of transportation and travel time to park are correlated with the question of living zone. That is, more than half of the respondents travel by vehicle to the park with a travel time between 5-20 minutes, indicating they live beyond 5 miles away from the park, which demonstrates the park's attraction.

Calculations:
We obtained 325 responses for the questions of transportation (#2) and travel time (#3), and 316 responses for the question of living zone (#20).

Figure 22: (left) Mode of transportation to the park, Figure 23: (right) Travel time to the park

Figure 24: Park users' living distance from park

Sources:
Survey Questions #2, #3, #20:
- How do you normally travel to Depot Park?
- How long does it normally take to travel to Depot Park?
- Please indicate which zone you live in to help us understand where park users come from. (see Appendix A)

Improves the perceived health of park visitors with 60% of 325 surveyed visitors reporting the park has improved their physical health and 65% reporting the park has improved their mental health.

Methods: Park users were asked about how Depot Park affected their physical and mental health through the survey.

Calculations:
Question #6 in the survey includes 6 subqueries (physical health, mental health, family relationship, educational opportunities, recreational and leisure opportunities, and sense of community) and 3 answers (degraded, neutral, and improved). For question 6, it was common that people selected "neutral" for some subqueries but intentionally did not answer other ones.

We classified this group of respondents into a new category of "don't want to specify" for a certain subquery. The total number is 325 for all the 6 subqueries.
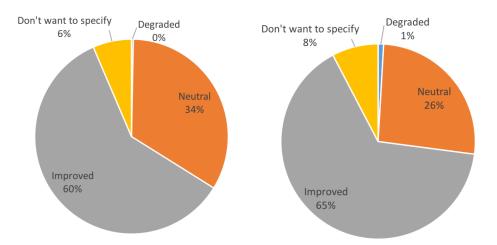

Figure 25: (left) Park impact on physical health, Figure 26: (right) Park impact on mental health

Sources:
Survey Questions #6:

● How has Depot Park affected your life in the following aspects? (see Appendix A)

Improves family relationships with 51% of 325 surveyed visitors reporting that the park has improved their family relationships. 185 of these visitors reported visiting the park for the playground and/or for a family reunion, and of these, 73% felt that the park has improved their family relationships.

Methods: Park users were asked about how Depot Park affected their family relationships through the survey. This result was further analyzed among the group of users who have conducted family activities in the park.
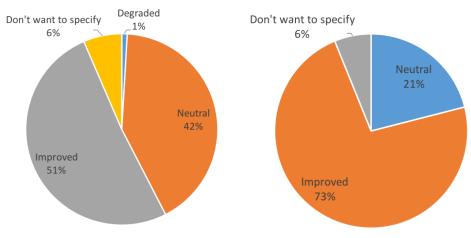

Figure 27: (left) Park impact on family relationship

Figure 28: (right) Park's family relationship impact on people who go for children's recreational opportunities and/or family reunion
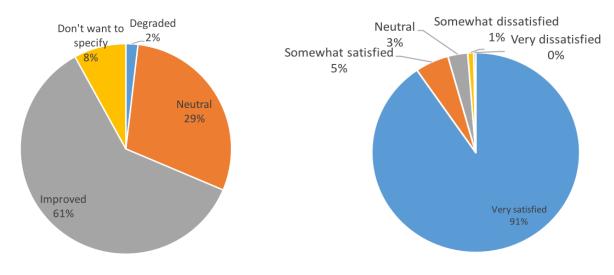
Survey Questions #6:

- How has Depot Park affected your life in the following aspects? (see Appendix A)

Improves park users' sense of community according to 61% of 325 surveyed visitors. 91% reported being very satisfied about Depot Park overall as a City Park.

Methods: Park users were asked about how Depot Park affected their sense of community and how satisfied they felt about Depot Park overall as a city park through the survey.

Calculations:

We obtained 324 responses for the questions (#6 and #9) .

Figure 29: Park impact on sense of community

Figure 30: Park users' satisfaction for the park

Sources:
Survey Questions #6:

- How has Depot Park affected your life in the following aspects? (see Appendix A)

Survey Questions #9:

- How satisfied do you feel about Depot Park overall as a city park? (see Appendix A)

Creates a feeling of safety as reported by 95% of 325 surveyed visitors. 73% of respondents reported feeling safe because of three or more of these factors: the park's visibility, maintenance, increased use by people, wide trail and sidewalks, and lighting.

Methods: Park users were asked about whether they feel safe and secure about the park, and which factors contribute to the safe feelings through the survey.

Calculations:

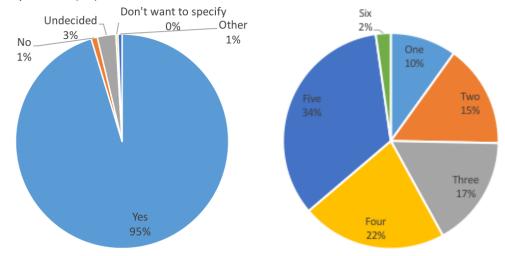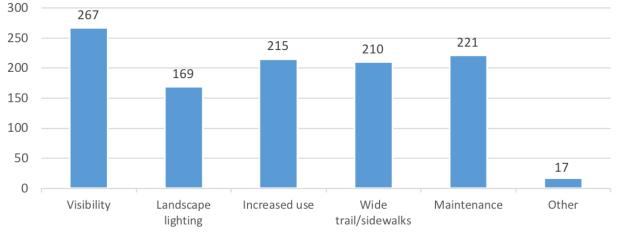We obtained 325 responses for the safety feeling question (#7), and 312 responses for the safety factor question (#8).

Figure 31: (left) Park users' feeling of safety, Figure 32 (right): Number of factors contributing feelings of safety

Figure 33: Factors contributing to safe feeling

Sources:

Survey Questions #7 and #8:
- Does the park feel safe and secure?
- If yes, what aspects of it makes you feel safe and secure? (see Appendix A)

Improves or maintains connectivity of the pedestrian network within a half-mile of the park for 37 out of 41 sidewalks/trails. The average integration of the pedestrian network increased from 2.5 to 2.6 as calculated by spatial configuration analysis.

Methods: The role of the park in improving pedestrian connectivity was assessed by comparing the integration of pedestrian networks within ½ mile (10-min walking distance) of the park.

Integration measures the number of turns one has to make from one street segment to reach all other street segments in the network, using the shortest path. The streets that require the fewest turns to reach all other streets are most integrated and highlighted in warm colors, such as red and orange, while streets that require more turns are less integrated and highlighted in cool colors such as blue and green (Figure 34). Integration was calculated by Space Syntax - a set of tools that analyze spatial configuration http://www.spacesyntax.net/. By comparing the integration of pedestrian connections before and after the construction of Depot Park, we studied how the Park along with the park trails enhanced the overall connection and walkability of the area within a 10-minute walking distance of the Park.

The research team used "depthmapX v0.7.0" released by the Space Syntax Lab in the Bartlett School of Architecture at University College London to calculate the integration. The sidewalks and trails around the park were identified using Google Earth/StreetView, and the trails in the Park were identified using the construction documents/site plan. The pedestrian networks were traced in AutoCAD and imported to depthmapX for Axial Analysis. Since Space Syntax calculates shortest path, the curvilinear trails in the Park were changed to straight segments, however the number of intersections (turns) were kept the same to ensure the accuracy of the calculation.
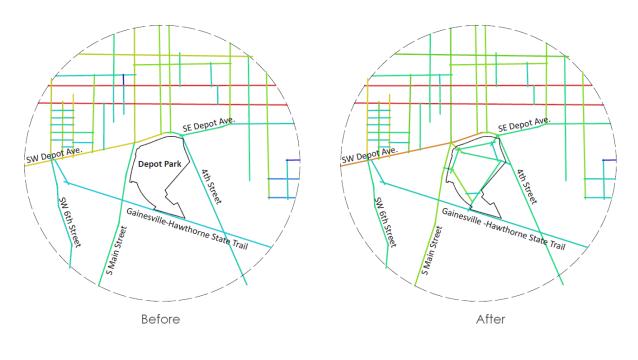

Figure 34: Pedestrian network integration

The results show that there are 41 sidewalks and trail segments within a ½-mile radius of Depot Park (the trails in the park are excluded). Their average integration increased from 2.538 to 2.648, among which the increase within 1/4 miles of the park was most significant. Higher integration (red) suggests stronger connection, thus the pedestrian connection around Depot

Park has been strengthened. Among the 41 sidewalks/trails, the integration of 17 increased, 20 remained the same, and four decreased. For the sidewalks immediately adjacent to the park, the integration of SW Depot Avenue increased from 3.883 to 4.233, SE Depot Avenue increased from 2.312 to 2.689, Gainesville Hawthorne State Trail increased from 1.723 to 2.354, and 4th Street increased from 1.833 to 2.661.

Calculations:

Street	Before Integration	After Integration	Integration Increase	Integration No Change	Integration Decrease
1	2.209	2.269	x		
2	2.305	2.970	x		
3	1.818	2.028	x		
4	1.723	2.354	x		
5	1.833	2.661	x		
6	3.883	4.233	x		
7	2.939	2.970	x		
8	2.312	2.689	x		
9	2.273	2.312	x		
10	4.678	4.463			x
11	4.938	4.887			x
12	2.929	3.927	x		
13	3.252	3.227			x
14	2.908	2.908		x	
15	2.686	2.686		x	
16	3.094	3.119	x		
17	2.264	2.264		x	
18	2.091	2.091		x	
19	2.305	2.305		x	
20	2.939	2.970	x		
21	2.970	3.001	x		
22	3.319	3.556	x		
23	2.091	2.091		x	
24	2.264	2.264		x	
25	2.305	2.305		x	
26	2.264	2.264		x	
27	2.264	2.317		x	
28	3.144	3.169	x		
29	3.669	3.667			x
30	3.465	3.678	x		
31	3.458	3.465	x		
32	2.081	2.081		x	
33	2.081	2.081		x	
34	2.081	2.081		x	
35	2.396	2.396		x	
36	2.081	2.081		x	
37	1.659	1.659		x	
38	1.819	1.819		x	
39	0.500	0.500		x	
40	1.379	1.379		x	
41	1.379	1.379		x	
Average	2.5377561	2.6479512			

Figure 35: Calculation of pedestrian network integration

Limitations:

- We defined the study area as a ½-mile radius around Depot Park based on the broadly accepted measure of walkability. We calculated the integration only based on the networks in this boundary, and did not consider the potential influence from the outside or other influencing factors within the study area. The pre- and post- comparison use the same boundary, criteria, and parameters, helping to negate the influence of outside corridors on the results.

3. Economic Benefits

Contributes to a 14.8% increase in the mean assessed value of parcels within ¼ mile of Depot Park from 2017-2018, compared to a 4.0% increase in downtown. From 2012-2014, before the park's opening, mean assessed value was a 3.5% decrease in the Depot Park area compared to a 6.2% increase in downtown.

Methods: The calculation of property value change was based on the assessed value obtained from Florida Geographic Data Library (FGDL) (File: FLORIDA PARCEL DATA STATEWIDE). The data covers the property value of Alachua County in 2012, 2014, 2017, and 2018. We imported the data into ArcGIS and compared the mean value of approximately 430 parcels in the ¼-mile radius of Depot Park and 920 parcels in downtown Gainesville (except the overlapping area between these two scopes).

Figure 36: Parcels in Depot Park area (within a ¼-mile radius) and Downtown Gainesville

Results show that mean property values within the ¼-mile radius of Depot Park experienced a significant increase after the park opened. From 2012 to 2014, Depot Park's adjacent parcels suffered a 3.5% decrease while property values in the downtown area (except the overlapping area) increased by 6.2%. After the park opened in August 2016 and in 2017-18, the parcel values within the Depot Park area increased more than those within the downtown area.

Figure 37:
Depot Park Area and Downtown Gainesville: Property Assessed Value Change (2012-2014, 2017-2018)

Calculations:

Year	Mean Value of Depot Park's Adjacent parcels	Parcel # of DP Area	Mean Value of Parcels in Downtown	Parcel # of Downtown
2012	$185,866	430	$389,782	920
2014	$179,380	435	$413,776	927
Value Change (2012-2014)	**-3.5%**		**6.2%**	
2017	$214,039	427	$442,352	916
2018	$245,682	427	$460,250	921
Value Change (2017-2018)	**14.8%**		**4.0%**	

Figure 38: Calculation of property market value changes (2012-2014, 2017-2018)

Sources:
Florida Geographic Data Library. (2012, 2014, 2017, 2018). *Florida Parcel Data Statewide*.
Retrieved from https://www.fgdl.org/metadataexplorer/explorer.jsp
2018 User's Guide of Florida Department of Revenue: Property Tax Data Files:
ftp://sdrftp03.dor.state.fl.us/Tax%20Roll%20Data%20Files/2018_NAL_SDF_NAP_Users_Guide
/2018_NAL_SDF_NAP_Users_Guide.docx

Limitations:
- The results were based on the 3-year period after Depot Park opened. The period is not long enough to show the park's long-term benefits to nearby properties' value.
- It is hard to determine how much of the property value growth can be attributed to the park. Other factors such as government policies and expenditures could also have influenced the property value change.

Contributes an increased rate of new businesses opening. The percent increase in the number of new businesses was below downtown Gainesville's before the park's opening, and became higher than downtown Gainesville's percent after the park's opening.

Methods: The business development analysis was based on data retrieved from dataGNV. We compared the percentage increase of newly started businesses in the Depot Park area with that in downtown Gainesville from Aug 2016 to Jul 2019. Percentage increase was defined as the newly started business number divided by the total business number from the previous year. The Depot Park area was defined as the area within ½ mile of the park, and the area to define downtown Gainesville was chosen to correspond with the Gainesville Community Redevelopment Agency Downtown CRA boundary (Figure 39). Shapefile: Active Businesses was used to locate the new businesses retrieved from dataGNV. The business data was divided into 1-year increments: Aug 2016-Jul 2017, Aug 2017-Jul 2018, Aug 2018-Jul 2019.
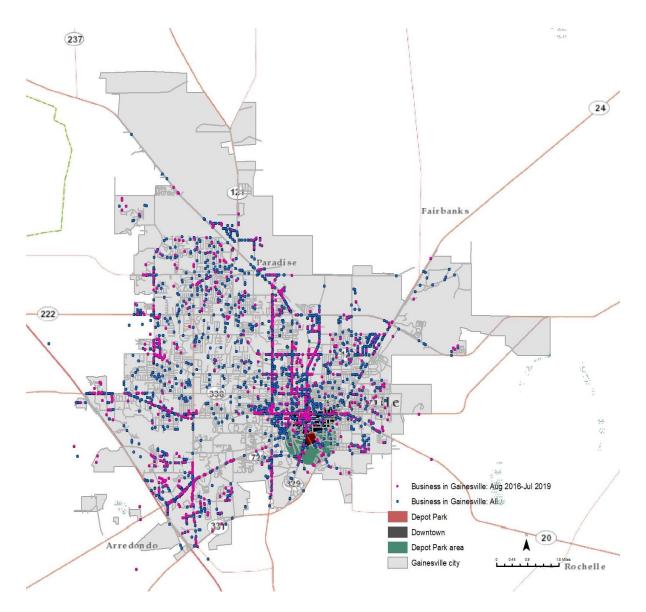
Figure 39: All businesses and new businesses after Depot Park opened in Gainesville
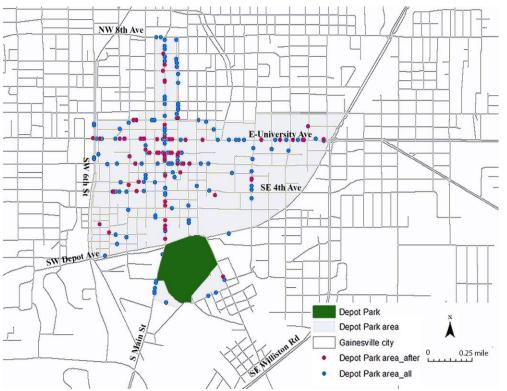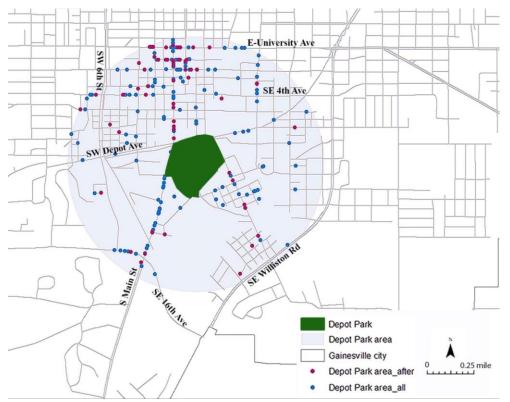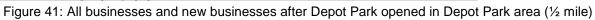
Figure 40: All businesses and new businesses after Depot Park opened in downtown

Figure 41: All businesses and new businesses after Depot Park opened in Depot Park area (½ mile)

The results show that the percentage annual increase of new businesses in the Depot Park area was lower than that in downtown Gainesville from Aug 2016 to Jul 2017, but was higher from Aug 2017 to Jul 2019.
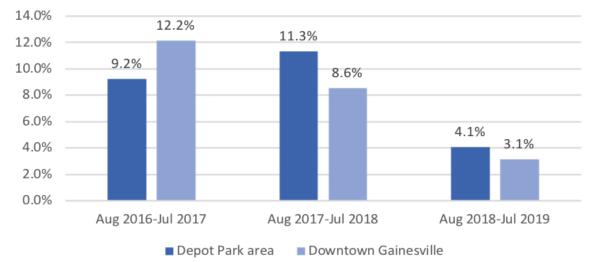

Figure 42: Depot Park Area and Downtown Gainesville: Rate of Increase of New Businesses (Aug 2016-Jul 2019)

Calculations:

	# of New Businesses in DP Area	# of All Businesses in DP Area	Percentage Increase in DP Area	# of New Businesses in Downtown	# of All Businesses in Downtown	Percentage Increase in Downtown
in Aug 2016		3956			4115	
Aug 2016-Jul 2017	365	4151	**9.2%**	500	4615	**12.2%**
Aug 2017-Jul 2018	470	4516	**11.3%**	395	5010	**8.6%**
Aug 2018-Jul 2019	183	4699	**4.1%**	157	5167	**3.1%**

Figure 43: Calculation of percentage increase in Depot Park area and downtown

Sources:
DataGNV | Open Data Portal:
https://data.cityofgainesville.org/Strong-Economy/Active-Businesses/hk2b-em59
Downtown Gainesville: https://gainesvillecra.com/downtown/

Limitations:
- The results were based on the 3-year period after Depot Park opened. However this period is not long enough to conclusively show the park's long-term benefits to nearby businesses.
- It is hard to determine how much of the business growth can be attributed to the Park versus other potential factors such as government policies and expenditures.

Inconclusive Benefit

Enhances racial integration in a moderately segregated city. The entropy index calculated for 311 park visitors was 1.186, while the three historically black residential neighborhoods near the park have an entropy index of 0.990. This may indicate the park encourages higher integration of black and white residents.

Methods: Entropy measures how evenly different racial groups are distributed across a given area. Entropy was calculated for Depot Park, the three closest residential neighborhoods to the park, and the city of Gainesville to explore the park users' racial diversity, and racial integration within the park and its surrounding neighborhoods. The three neighborhoods include Sugar Hill, Springhill, and Porters community, which are approximately ½ mile from the park. Entropy measures the weighted average deviation of racial and ethnic diversity of a single areal unit from the metropolitan average. The result provides an indication of the area's 'entropy' or racial and ethnic diversity (Census, 2010).
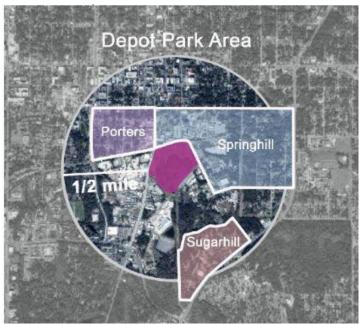

Figure 44: Neighborhoods near Depot Park

The 2010 US Census data for Gainesville shows a clear pattern of racial segregation. Gainesville city obtained a Black-White Dissimilarity score of 41.1 (Diversity and Disparities, 2018), which means that the city is moderately segregated and 41.1% of black/white residents would need to move to a different census tract for the two groups to be equally distributed. Gainesville is composed of 57.8% white residents and 23.6% black residents based on 2010 Census data. By comparison, the three neighborhoods closest to Depot Park are historically black neighborhoods (Miller, 1938), and still maintain a higher proportion of black residents than that of the city. The percentage of black residents inhabiting each of the three neighborhoods are 85.9% (Sugar Hill), 46.2% (Springhill), and 28.9% (Porters), respectively.
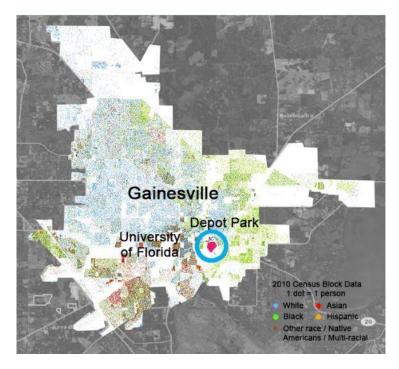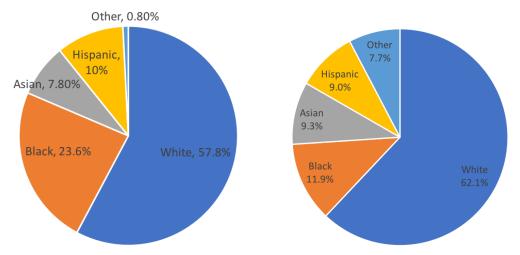
Figure 45: Racial density map of Gainesville

Figure 46: (left) Racial Composition of Gainesville , Figure 47: (right) Racial composition of Depot Park users

The racial composition of Depot Park users was collected through the survey. According to the entropy formula, we first calculated the weighted average entropy of the 3 neighborhoods according to their population proportions. Then, we compared the entropy index of Depot Park, Gainesville city, and the 3 closest surrounding neighborhoods. Based on the definition of the formula, the maximum value for the entropy index h is ln(k). We categorized 5 ethnic groups, thus the maximum value is ln(5)=1.61 for our study. Areas with higher values of h are more diverse.

- An area with h =1.61 would have equal proportions of all groups (20% each).

● An area with h =0 contains only a single group

The entropy index is 1.186 for Depot Park, 1.126 for the city, and an average of 0.990 for the surrounding neighborhoods, which shows the park's racial composition is closer to that of the overall city, and the neighborhoods' racial composition is less diverse. Depot Park potentially increases the diversity of southeast Gainesville andcross-racial social interactions by encouraging different groups of people come to visit the park.

The conclusion that Depot Park may promote integration can be additionally supported by Question #20 in the survey. Though most park users are local residents in Gainesville, 62% visitors report living 2-5 miles away from Depot Park while 36% visitors report living over 5 miles away from the park. As a popular open space, the park attracts residents all over the city, which contributes to the interactions between different groups of people.

Calculations:

We obtained 311 respondents to question #16, and we take 311 as the Depot Park population in the following calculations.

$$h_i = -\sum_{j=1}^{k} p_{ij} \ln(p_{ij})$$

k　　=number of ethnic groups ("ethnicities")

p_{ij}　　=proportion of population of jth ethnicity in tract i (=n_{ij}/n_i)

n_{ij}　　=number of population of jth ethnicity in tract i

n_i　　=total number of population in tract i

Figure 48: Formula for Entropy

Neighborhood	White pop. (1)	Black pop.(2)	Asian pop. (3)	Hispanic pop.(4)	Other pop.(5)	Total pop.
Sugar Hill	16	95	0	0	0	111
Springhill	323	333	2	40	20	720
Porters	225	122	5	59	1	423
Neighborhood	Prop. White (p1)	Prop. Black (p2)	Prop. Asian (p3)	Prop. Hispanic (p4)	Prop. Other (p5)	h=- p1*ln(p1) +p2*ln(p2)...
Sugar Hill	14.1%	85.9%	0.0%	0.0%	0.0%	0.4068
Springhill	44.9%	46.2%	0.6%	5.5%	2.8%	1.0066
Porters	53.1%	28.9%	4.0%	13.8%	0.3%	1.1144

Figure 49: The entropy indexes of 3 neighborhoods

Neighborhood i=1,2,3	h=- p1*ln(p1) +p2*ln(p2)...	Pop. proportion among 3 neighborhoods	Weighted Average
Sugar Hill	0.4068	8.9%	0.0362
Springhill	1.0066	57.4%	0.5778
Porters	1.1144	33.7%	0.3755
Sum			**0.9895**

Figure 50: Weighted average entropy index of 3 neighborhoods as a whole

Area	White pop. (1)	Black pop.(2)	Asian pop. (3)	Hispanic pop.(4)	Other pop.(5)	Total pop.
Depot Park	193	37	28	29	24	311
Gainesville city	71,903	29,358	9,646	12,387	1,060	124,354
3 neighborhoods						
Area	Prop. White (p1)	Prop. Black (p2)	Prop. Asian (p3)	Prop. Hispanic (p4)	Prop. Other (p5)	h=- p1*ln(p1) +p2*ln(p2)...
Depot Park	62.1%	11.9%	9.0%	9.3%	7.7%	**1.1863**
Gainesville city	57.8%	23.6%	7.8%	10.0%	0.9%	**1.1255**
3 neighborhoods						**0.9895**

Figure 51: Entropy indexes of Depot Park, neighborhoods, and Gainesville

Sources:
Survey Questions #16, # 20:
- You identify yourself as: White, Black, American Indian/Alaskan Native, Asian, Pacific Islander, Hispanic, Other.
- Please indicate which zone you live in to help us understand where park users come from. (see Appendix A)

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Statistical Atlas of Gainesville:
https://statisticalatlas.com/county-subdivision/Florida/Alachua-County/Gainesville/Race-and-Ethnicity#data-map/neighborhood
University of Virginia. (2010). The racial dot map. Retrieved from:
https://demographics.virginia.edu/DotMap/

Limitations:

- The most recent U.S. Census data for Gainesville was released in 2010.
- 311 surveyed respondents are taken as the park's population for the calculation. This number can only serve as a reference.
- There are a variety of limitations associated with convenience sampling, which may impact these results.

Other references (all benefits)

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4. Appendix A: Depot Park User Survey

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INFORMED CONSENT

Dear Participant:

We invite you to participate in a research study entitled "***Depot Park Landscape Performance Evaluation***". This research is conducted through a collaboration between the Department of Landscape Architecture at the University of Florida and the Gainesville Community Redevelopment Agency. *Please read this consent document before you decide to participate in this study.*

Study Purpose: The purpose of the project is to assess whether Depot Park fulfills its goals and provides high quality recreational amenities to the local community.

What you will be asked to do in this study: You will be asked to fill out the enclosed questionnaire. The short survey contains 21 multiple choice questions about your experiences using the Park. Your answers will help us understand how to enhance Depot Park management and more broadly, inform improvements to future park design.

Time required: Approximately 5-10 minutes

Risk and confidentiality: There is a minimal risk that the harm or discomfort is no greater than those we regularly encountered in daily life. However, since 1) no identifying information will be collected and 2) your answers are completely confidential and will be released only as part of group summaries, it is highly unlikely that participating in the survey will result in any adverse consequence for you.

Voluntary participating and right to withdraw: Your participation in the survey is completely voluntary. You may decline to participate, leave any questions you don't wish to answer blank, or stop at any time you want.

Who to contact if you have questions about the study
Yi Luo, Assistant professor, Department of Landscape Architecture, yi.luo@ufl.edu
Michael Volk, Research assistant professor, Department of Landscape Architecture, mikevolk@ufl.edu
Kanglin Chen, Research assistant, Department of Landscape Architecture, kanglinchen@ufl.edu

Who to contact about your rights as a research participant in this study
IRB02 Office
Address:
Box 112250
University of Florida
Gainesville, FL 32611
Tel: 352-392-0433

Electronic Consent
Clicking on the "agree" button below indicates that:
▪ You have read the above information
▪ You voluntarily agree to participate
▪ You are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Agree   Disagree

Depot Park User Survey

Utilization of Depot Park

1. How often do you come to Depot Park?

☐ Not at all
☐ A few times a year
☐ Once a month
☐ 2 - 3 times a month
☐ About once a week
☐ More than once a week
☐ About once a day

2. How do you normally travel to Depot Park? (Please select all that apply)

☐ Walk
☐ Bike
☐ Bus
☐ Vehicle (motorcycle, car, truck, etc.)
☐ Shared ride such as Uber and Lyft
☐ Combination of more than one method
☐ Other (please describe) _____

3. How long does it normally take to travel to Depot Park?

☐ 5 - 10 minutes
☐ 11 - 20 minutes
☐ 21 - 40 minutes
☐ > 40 minutes

4. Why do you visit Depot Park? (Please select all that apply)

☐ Children's recreational opportunities
☐ Educational opportunities
☐ Watching other people
☐ Spending time with family
☐ Spending time with friends
☐ Outdoor meetings
☐ Study
☐ Meditation
☐ Eating & drinking
☐ Exercise
☐ Nature contact
☐ Community events
☐ Getting to know new people
☐ CADE Museum
☐ Other (please describe) _____
_____

5. On average, how long do you spend in the Park during each visit?

☐ 5 - 10 minutes
☐ 11 - 30 minutes
☐ 31 minutes - 1 hour
☐ 1 - 2 hours
☐ > 2 hours

Quality of Life

6. How has Depot Park affected your life in the following aspects?

	Degraded	Neutral	Improved
Physical health	☐	☐	☐
Mental health	☐	☐	☐
Family relationship	☐	☐	☐
Educational opportunities	☐	☐	☐
Recreation and leisure opportunities	☐	☐	☐
Sense of community	☐	☐	☐

Others (please describe) _____
_____

7. Does the park feel safe and secure?

☐ Yes
☐ No
☐ Undecided
☐ Don't want to specify
☐ Other (please describe) _____
_____

8. If yes, what aspects of it makes you feel safe and secure? (Please select all that apply)

☐ Visibility; *it is easy to see around*
☐ Landscape lighting; *it is well lit at night*
☐ Increased use; *there are many people around*
☐ Wide trail/sidewalks; *I can walk, run, bike easily*
☐ Maintenance; the landscapes are well maintained
☐ Other (please describe) _____
_____

9. How satisfied do you feel about Depot Park overall as a city park?

☐ Very satisfied
☐ Somewhat satisfied
☐ Neutral
☐ Somewhat dissatisfied
☐ Very dissatisfied

10. What can be improved about the park?

_____
_____
_____
_____
_____
_____

Social Interaction

11. How many public events did you attend in Depot Park during the past year?

☐ None
☐ 1 - 3
☐ 4 - 8
☐ 9 - 12
☐ 2 - 4 per month
☐ > 4 per month

12. How often do you meet with family and/or friends in Depot Park?

☐ Not at all
☐ A few times
☐ Once a month
☐ 2 - 4 times per month
☐ > 4 times per month

13. How many new people have you gotten to know in the park?

☐ None
☐ 1 - 2
☐ 3 - 5
☐ 6 - 10
☐ > 10

14. Do you follow Depot Park in any of the social media below?

☐ Facebook
☐ Twitter
☐ Instagram
☐ Other (please specify) _____
☐ None

15. How often do you post about Depot Park in social media?

☐ Never
☐ A few times a year
☐ Once a month
☐ 2 - 4 times per month
☐ > 4 times per month

Diversity of Park Users

The following questions are designed to help us understand the diversity of the park users. Your participation is highly appreciated. However it is completely fine if you do not wish to answer.

16. **You identify yourself as:**

☐ White   ☐ Black   ☐ American Indian/Alaskan Native   ☐ Asian   ☐ Pacific Islander   ☐ Hispanic
☐ Other (please identify) _____

17. **Your age:**

☐ 18 - 24   ☐ 25 - 44   ☐ 45 - 64   ☐ 65 and older

18. **The highest level of formal education you have received:**

☐ Less than a high school degree   ☐ High school degree   ☐ Bachelor's degree   ☐ Graduate degree or higher

19. **Your combined household income:**

☐ ≤ $24,999   ☐ $25,000 - 49,999   ☐ $50,000 - 74,999   ☐ $75,000 - 99,999   ☐ ≥ $100,000

20. **Please indicate which zone you live in to help us understand where park users come from.**

☐ **A:** < 0.5 mile from Depot Park   ☐ **B:** 0.5-1 mile from Depot Park   ☐ **C:** 1-2 miles from Depot Park
☐ **D:** 2-5 miles from Depot Park   ☐ **E:** > 5 miles from Depot Park