
Georges Road Gateway Planning Project: Pedestrian Concepts Element

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Introduction

The Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy and the Department of Agricultural, Food and Resource Economics at Cook College have partnered with the Alan M. Voorhees Transportation Center to develop a conceptual pedestrian improvement plan for the Georges Road Gateway Project. This project was initiated after Investigators from the Georges Road Gateway Project, Radha Jagannathan, PhD and Michael J. Camasso, PhD met with VTC staff to propose the creation of a concept pedestrian plan element for the Georges Road Gateway Project Area, prepared by graduate students at the Voorhees Transportation Center. The purpose of the plan is to identify barriers to comfortable pedestrian circulation and to propose potential improvements that could be made. Improving pedestrian safety and accessibility in the neighborhood is an important element in enabling the creation of an environmental education program for New Brunswick schoolchildren at Pine Street Recreation Park. This conceptual plan has been produced as a first step towards a collaborative planning process and its purpose is to provide a basic framework that can be investigated with greater rigor.

Methodology

The methodology for the creation of this element began with a kickoff meeting. At this meeting, investigators from the Georges Road Gateway Project shared observations about the pedestrian environment in the project area. Additionally, areas of particular concern, or “focus areas,” were discussed for specific improvement.

Following the kickoff meeting, the project team conducted a series of site visits to gather observational data about the pedestrian environment in the project area. The project area was divided in to “neighborhood areas” that seemed to have common characteristics. Pedestrian conditions were noted and spot measurements taken for both the “neighborhood areas” and “focus areas” that had been identified.

A series of products were created to document neighborhood observations. Maps that were created included a base “context map”, a circulation map, a focus area location map, and a photo log key map. Following the documentation of existing conditions conceptual improvements for the neighborhood were generated. General recommendations were made for the neighborhood and focus areas. The focus areas also had sketch renderings and plan view improvements generated for alternative concepts that might be considered in each area. Finally, the project team recommended what further studies and research would be recommended to critically evaluate the feasibility of the proposed concepts and alternatives.

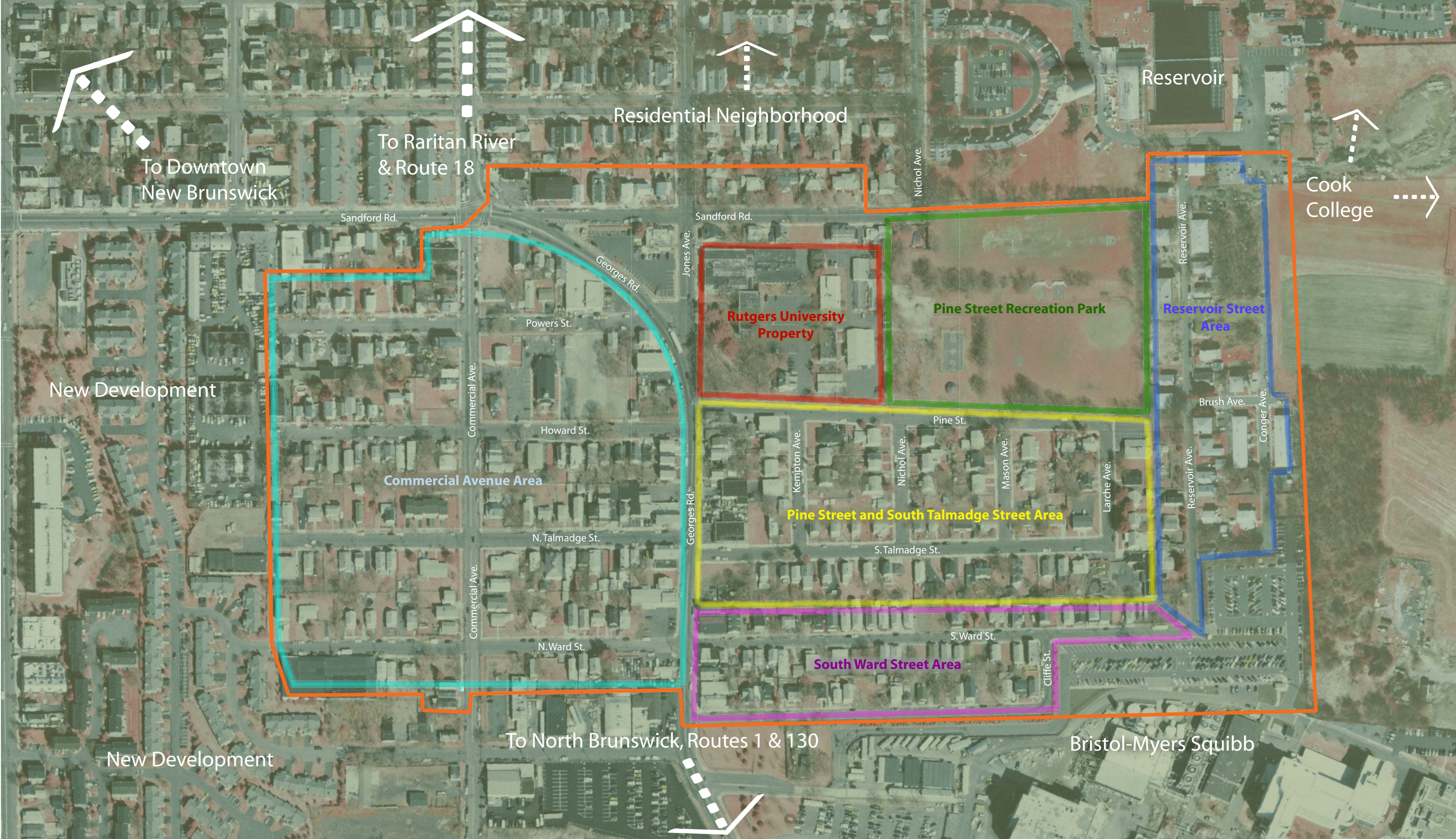
Project Area Description

The project area consists of the Georges Road Neighborhood in New Brunswick, NJ. The area is defined as Georges Road (NJ 171) between Commercial Avenue and Hazelhurst Street (near the border with North Brunswick Township), and the residential streets which intersect with Georges Road. As noted in the methodology, the project area was divided into “neighborhood areas” with common roadway characteristics. Descriptions of the neighborhood areas are provided in *Neighborhood Area Conditions and*

Recommendations below. The project area and neighborhood areas are depicted on Figure B-1 Context Map.

Existing land uses in the Georges Road Neighborhood are depicted on Figure B-2 Existing Uses. Land uses in the project area primarily consist of single-family homes and apartment homes (duplexes). Multi-family apartment buildings are located along Reservoir Avenue and Conger Avenue. Georges Road is lined by a mix of commercial uses, including restaurants and auto services. Churches are located on Howard Street and Larche Avenue. A prominent feature of the eastern part of the project area is Pine Street Recreation Park, which contains facilities for soccer, basketball, baseball/softball and a playground. The Rutgers University Property is located between Pine Street Recreation Park and Georges Road/Jones Avenue. Recent demolition of laboratory buildings on the property and potential transition of the site to new uses presents an opportunity to creatively integrate this property with the Park and create new programs for natural-science oriented learning for New Brunswick schoolchildren. Providing safe pedestrian access to the Park and the Rutgers Property is the key concern of this element.

Roadway circulation in the Georges Road Neighborhood is depicted on Figure B-3 Circulation Map. Georges Road itself is a two-lane, 25 MPH urban minor arterial on the state roadway system, under the jurisdiction of Middlesex County. It serves as a primary through route connecting the city of New Brunswick with Route 130 and Route 1. One signalized intersection is located within the project area at Commercial Avenue. Most of the remaining streets in the area are residential streets with relatively light traffic. Circulation within the project area is hampered by poor street connectivity. For three of the neighborhood areas, Pine Street and South Talmadge Street Area, South Ward Street Area, and Reservoir Street Area, the only access is provided by Georges Road. These three areas are bordered by Bristol-Myers Squibb to the south and Cook College to the west. Dead-ends also exist on three streets in the Commercial Avenue Area. The ability of pedestrians to move throughout the Georges Road Neighborhood is hampered by this poor connectivity as well as by the traffic volume, curves, and long crossing distances on Georges Road. Traffic conditions on Georges Road are the most significant obstacle to pedestrians wishing to walk to the Pine Street Recreation Park Area.



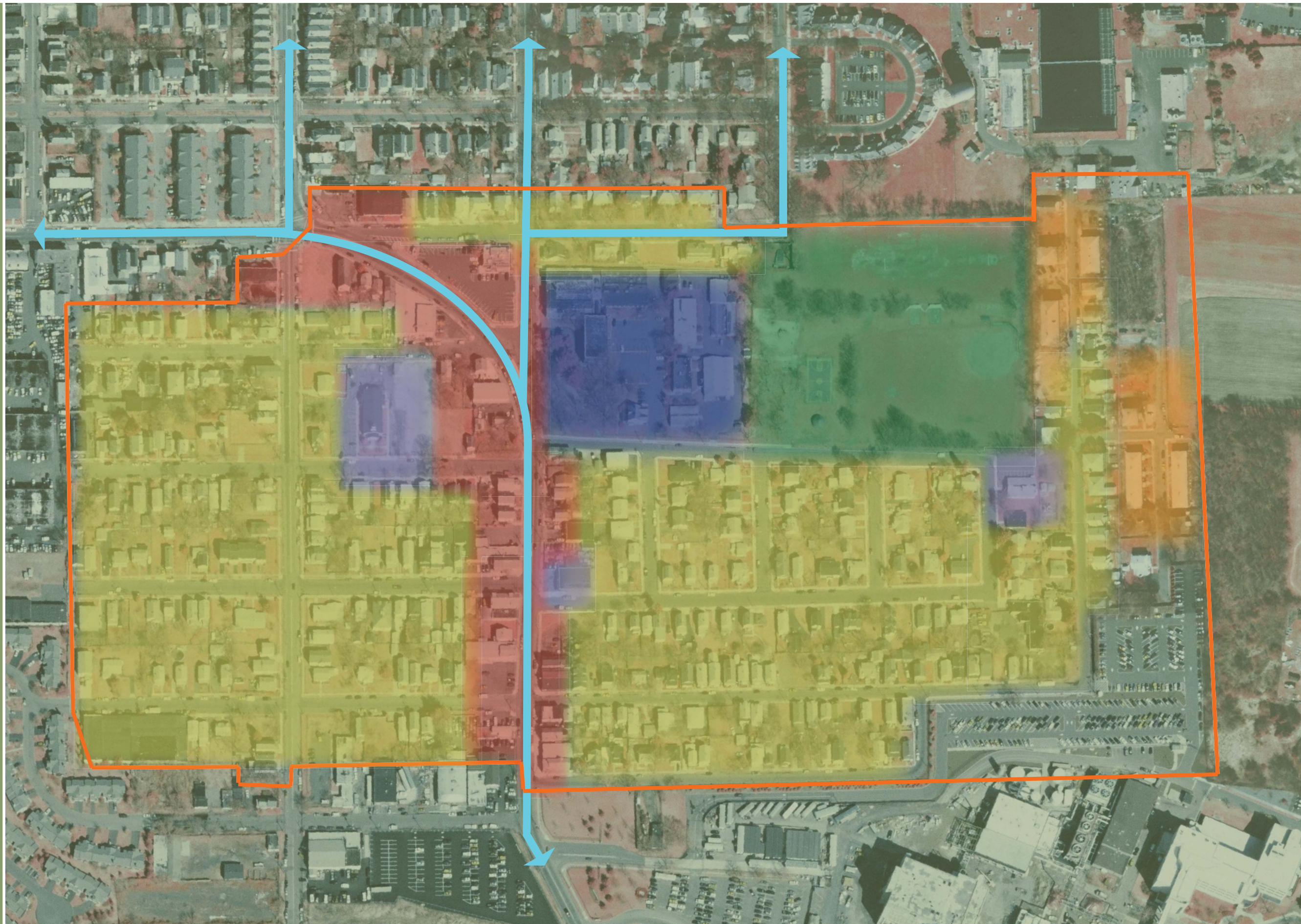
 Project Area
 Neighborhood Context

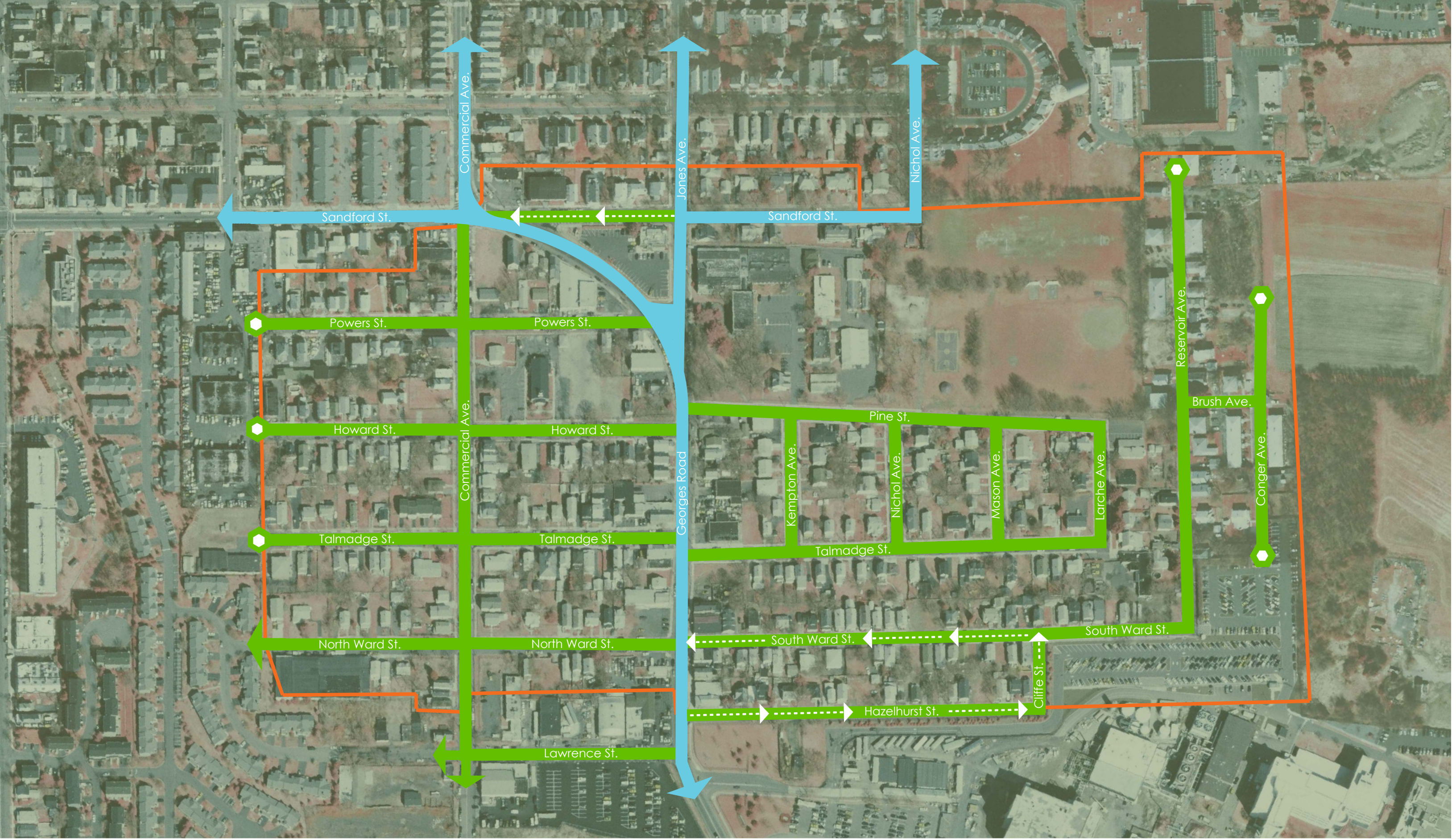
Georges Road Neighborhood
Context Map
 B-1



Legend

-  Project Area
-  Major Road
-  Commercial area with store fronts, restaurants, and automobile services
-  Moderate density neighborhood housing
-  High density neighborhood housing
-  Community Center
-  Park Area
-  Rutgers University Property





- Main Road - Moderate to Heavy Traffic
- Neighborhood Road - Light Traffic
- Dead End Road - No Through Traffic, Lacking Connectivity.
- Project Area
- One Way Street

Georges Road Neighborhood

Circulation Map

B-3



North

Neighborhood Area Conditions and Recommendations

The project area was divided into seven neighborhood areas according to common traffic, circulation, and roadway characteristics. These areas consist of both neighborhoods and public and private spaces.

The following general recommendations for pedestrian safety apply across the entire project area:

- Where sidewalks are not present, install 5-foot-wide concrete sidewalks with a “tree lawn” or buffer between the curb and sidewalk
- Install ADA accessible curb ramps at all intersections
- At signalized intersections, provide high-visibility crosswalks striping and pedestrian-actuated countdown pedestrian signal heads with ADA accessible push buttons
- At non-signalized striped crosswalks, provide high-visibility crosswalk striping and advance “Yield to Pedestrian” centerline signs
- Provide pedestrian-scaled lighting where possible

The following descriptions identify each neighborhood area, describe the current conditions, and recommend methods to improve roadways, sidewalks, traffic circulation, and pedestrian and vehicular safety. Further information on existing conditions and potential improvements can be found in the appendices:

- Appendix A: Photo Log provides a visual reference of the project area.
- Appendix B: Typical Opportunities and Typical Treatments and Appendix C: Typical Street Cross Sections provides additional illustration of existing conditions and recommended improvements.
- Appendix D: Survey Results – Georges Road Gateway Project contains survey results regarding the public perception of traffic conditions from the Georges Road Gateway Project.

- 1. Commercial Avenue Neighborhood Area:** This is a mainly residential area with a mix of commercial activities along Georges Road and at the intersection of Commercial Avenue and Sandford Road. The neighborhood is bordered by Georges Road to the southeast, east, and northeast, and Lawrence Road to the southwest.
 - This area contains five roadways:
 - Commercial Ave. (38')
 - Powers St. (34')
 - Howard St. (36')
 - North Talmadge St. (36')
 - North Ward St. (35')
 - This neighborhood lacks striped crosswalks at the intersections of Commercial Ave. and Powers St., Howard St., North Talmadge St., and North Ward St.
 - The roadways are in poor condition, most notably along Commercial Avenue
 - Standing water has been observed at North Ward Street and Howard Street after storms.
 - Sidewalks are in moderate condition with some isolated missing segments.
 - Parking is allowed on both sides of the street for all of the roads in this neighborhood area
 - Powers St., Howard St., and North Talmadge St, are local neighborhood streets that dead end at the western end of the neighborhood area. They intersect with

Georges Road to the east. North Ward St. is also a local neighborhood street that intersects with Georges Road to the east and provides access to newer residential development to the west. Commercial Avenue serves as a collector street with north-south through access.

Recommendations for the Commercial Avenue Neighborhood Area:

- Stripe high visibility crosswalks at all intersections in the neighborhood area
- Address drainage issues where standing water is observed
- Consider the potential of traffic calming measures along Commercial Avenue in the neighborhood area to address potential speed issues and to provide shorter and safer crossings.
- Conduct a sidewalk inventory and construct missing sidewalk segments and re-construct sidewalks that are in poor condition.
- Provide pedestrian lighting along Commercial Avenue. Consider lighting on other neighborhood streets.
- Provide ADA compatible curb ramps at all intersections

2. Rutgers University Property Area: This area consists of a vacant lot along Georges Road and a fenced area containing Rutgers Research Laboratories and other university buildings. This area is bordered by Pine Street to the southwest, Georges Road and Jones Avenue to the north and northwest, Sandford Road to the northeast and Pine Street Recreation Park to the southeast.

- This area is adjacent to homes along Sandford Road.
- Access to this area is provided on Pine Street.

Recommendations for the Rutgers University Property Area:

- Install new sidewalks along Georges Road.
- Install Pedestrian lighting along Jones Ave/Georges Rd and Pine St.
- Construct missing sidewalk segments along Jones Ave/Georges Rd and Pine St
- Consider coordinating the redevelopment of this area with improvements to the overall Georges Road neighborhood.
- Consider providing pedestrian access to the Pine Street Recreation Area

3. Pine Street Recreation Park Area: This area is a recreation park serving several nearby neighborhoods and contains a soccer field, softball field, basketball court, playground, two handball courts and a picnic gazebo. This area is bordered by Rutgers University Property neighborhood area to the northwest, the Reservoir Road neighborhood area to the southeast, the Pine Street neighborhood area to the southwest.

- The Recreation Park contains both an upper field with the entrance at the corner of Nichol Avenue and Sandford Road (the far north corner of the park) and a lower field which is bordered by Pine Street. The southeast side of the park is bordered by the back of apartment buildings located on Reservoir Road.
- Desire paths have been observed between Reservoir Road and the recreation park along the sides of the apartment buildings and between the church parking lot located at the corner of Pine Street and Talmadge Road.
- A desire path extends along the northwest side of the upper field which is used as a soccer field. This desire path extends into the Reservoir Road neighborhood at several points.

- Entrances to the park exist at the corner of Sanford and Nichol Avenue and on Pine Street.
- Current lighting is inadequate or non-existent in the majority of the park.

Recommendations for the Pine Street Recreation Park Area:

- Construct a multi-use path through the park to provide a pedestrian connection between the western end of Sanford Road and Reservoir Avenue
- Extend and improve the existing path at the north side of the park to provide a north-south pedestrian connection. This would provide connectivity between the north and south portions of Nichol Avenue which are currently cut off from each other by the park.
- Construct missing sidewalk segments along Pine St.
- Design and construct pedestrian lighting within the park and along Pine St.

4. Pine Street and South Talmadge Road Neighborhood Area: This area is mainly residential with a mix of commercial activities along Georges Road. There is a church and church parking lot at the corner of Pine Street and Larche Avenue in the far northeast corner of the neighborhood area. This area is bordered by Georges Road to the northwest, Rutgers University Property Area to the north/northeast, Pine Street Recreation Park to the northeast, and Reservoir Road neighborhood area to the southeast.

- Pine Street runs along the Rutgers University Property and the Pine Street recreation park and runs parallel to South Talmadge Street. Both Pine Street and South Talmadge Street are intersected by Kempton Avenue, Nichol Avenue, Mason Avenue, and Larche Avenue.
- Pine Street has a 27' pavement width, Kempton Avenue 30', Nichol Avenue 30', Larch Avenue 30', and S. Talmadge Street 30'
- Road conditions are poor in some areas of this neighborhood
- The main entrance to the Pine Street Recreation Park is provided at the intersection of Nichol Avenue and Pine Street in the northern corner of the park.
- Sidewalk conditions are generally good (completely redone three to four years ago),
- Intersections lack striped crosswalks
- A large number of children have been observed walking between the neighborhood and the park.
- Two speed humps exist on both South Talmadge Street and Pine Street.
- Poor storm water drainage occurs along Nichol Avenue and at the corners of Pine Street and Nichol Avenue and South Talmadge Street and Nichol Avenue
- Lighting in this neighborhood is poor.

Recommendations for the Pine Street and South Talmadge Road Area:

- Address drainage issues in neighborhood area
- Remove fencing along Pine Street to open up access to the park
- Install head in parking along northern section of Pine Street
- Install pedestrian lighting throughout neighborhood area
- Stripe high visibility crosswalks at all intersections

5. South Ward Street Neighborhood Area: This area is primarily residential and is bordered by Georges Road to the northwest and Bristol-Myers Squibb to the south/southwest.

- This area can only be accessed via Hazelhurst Street, which is a one-way street leading from Georges Road.
- This area can only be exited via South Ward Street, which is one-way between Cliffe Street and Georges Road.
- To access the Reservoir Road Neighborhood Area you must pass through the South Ward Street Neighborhood area.
- The roads in this area have 23 foot wide cartways (Hazelhurst Street, Cliffe Street, and South Ward Street).
- Portions of the sidewalk on South Ward Street are missing or in poor condition.
- The sidewalk bordering Bristol-Myers Squibb property is noticeably newer and much wider than the sidewalk on the rest of South Ward Street.
- Two speed humps exist on the one-way portion of South Ward Street.
- Street lighting in this area is poor.

Recommendations for the South Ward Street Area:

- Improve existing sidewalks, including the addition of ADA-compliant curb ramps
- Mirror sidewalk improvements from the Bristol-Myers Squibb side of South Ward Street along the entire length of the street
- Improve pedestrian lighting for all streets
- Improve one-way signage on Hazelhurst Street

6. Reservoir Road Neighborhood Area: This area is solely residential and consists of Reservoir Road, Brush Avenue and Conger Avenue. It area is bordered by the New Brunswick reservoir to the northeast, Cook College to the east and northeast, Pine Street Recreation Park to the northwest, the Pine Street and South Talmadge Street Area to the west, and the South Ward Street Area to the southwest.

- Reservoir Road and Conger Avenue are both dead-end streets.
- The neighborhood has poor connectivity to surrounding neighborhoods.
- Reservoir Road is 23 feet wide, Conger Avenue is 28 feet wide, and Brush Avenue is 18 feet wide.
- The sidewalks are in poor condition along Reservoir Road, Brush Avenue, and Conger Avenue.
- Sections of Reservoir Road lack sidewalks entirely.
- Drainage issues exist along Reservoir Road, with standing water observed in gravel parking lots adjacent to apartment buildings near the dead end.
- Several worn pedestrian paths exist between Reservoir Road and Pine Street and between Reservoir Road and Pine Street Recreation Park.
- Street lighting in this area is poor.

Recommendations for the Reservoir Road Area:

- Improve sidewalks to create a continuous sidewalk network
- Improve pedestrian lighting on all streets
- Plant street trees on all streets
- Create path connections to Pine Street Recreation Park
- Create path connections to Cook College
- Extend Pine Street through the existing church parking lot to connect with Reservoir Avenue

- 7. Georges Road:** Georges Road (NJ 171) between Commercial Avenue and Hazelhurst Street is lined by a mix of commercial uses.
- Georges Road is 35 feet wide near Talmadge Street and Ward Street, 95 feet wide at the intersection with Jones Avenue, and 37 feet wide at the intersection with Sandford Road near Commercial Avenue.
 - Sidewalk segments between Pine Street and Commercial Avenue and between South Talmadge Street and South Ward Street/North Ward Street were observed to be in poor condition.
 - Crosswalks are in poor condition or non-existent.
 - The ability of pedestrians to cross Georges Road at Jones Avenue is impeded by a long crossing distance and erratic vehicle turning movements that were observed in this wide, unsignalized intersection.
 - Parking is restricted on both sides of Georges Road, yet numerous parked vehicles were observed.

Recommendations for Georges Road:

- Improve sidewalks along Georges Road
- Install crosswalks along Georges Road
- Increase enforcement of parking along Georges Road

Introduction to: Focus Areas

In order fulfill the goal of creating a safe environment for the children of the GeorgesRoad neighborhood to walk to educational programs in Pine Street Recreation Park, the project team has identified five focus areas as the most significant barriers to pedestrian connectivity. The focus areas were selected from site visits, observation of pedestrian crossing patterns and worn paths in the area of Pine Street Recreation Park. Focus areas one and two address two key crossing locations on Georges Road. Focus areas three, four, and five all involve connectivity to and around the Park. Improvements within these focus areas, in combination with the neighborhood area recommendations above, have the potential to greatly enhance pedestrian mobility, especially children's access to the Park.

Georges Road Focus Areas 1 & 2



Commercial Ave. & Sanford Intersection

Focus Area #1



Area Photographs



Corner of Commerical & Sanford Toward Georges Road



View across intersection down Commercial Ave. towards Rt.18



High Speed Right Turn from Georges Rd. onto Commercial Ave.



Georges Road intersection with Sanford

Recommendations

The intersection of Georges Road and Commercial Avenue serves as the gateway to the Georges Road Neighborhood, yet this intersection has fallen into disrepair. The NJ Bicycle and Pedestrian Resource Center recommends the following improvements to this intersection:

- Restriping the intersection with high visibility crosswalks
- New pedestrian-activated signals with crossing time countdown
- Building out the NE corner to a minimum 75 degree angle to reduce crossing distance
- Installation of ADA compliant curb ramps
- Widen existing median on Georges Road to create a boulevard with pedestrian refuge island
- Build out the curb at location of current gore striping at the merge of Georges Road and Sanford Road.
- Prohibit right turns on red

These improvements will benefit not only the pedestrian by calming the traffic along Georges Road and improving the safety of the crossing at the intersection, but it would also create a safer roadway by clarifying merging and turning locations for drivers. In addition, the landscaped median would discourage mid-block crossings by pedestrians.

Georges Road & Jones Ave. Intersection

Focus Area #2

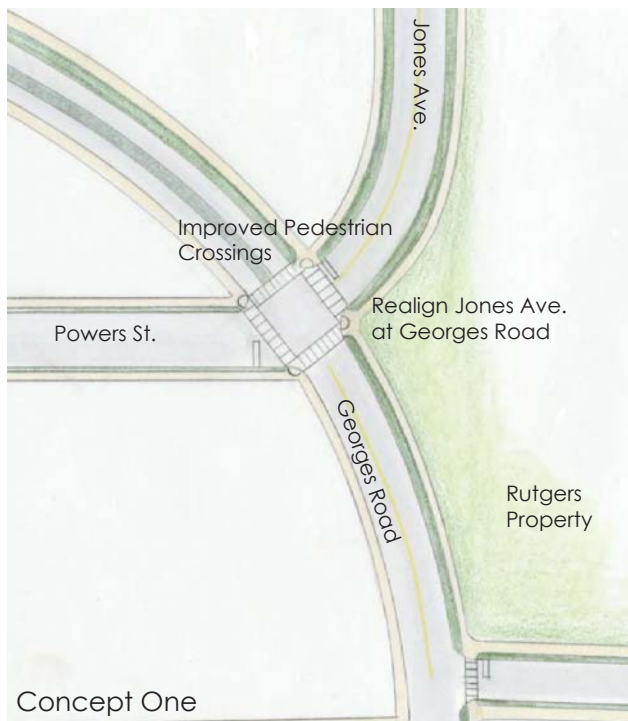


Aerial Photograph

This intersection poses the greatest barrier for children wishing to walk from the Commercial Avenue area to Pine Street Recreation Park. For that reason we have developed two alternatives, both of which depend heavily on a future traffic impact analysis to determine their feasibility. At this intersection the on-street parking that calms traffic further down Georges Road ends and the lanes of Georges Road widen accordingly. This results in an increased speed of traffic along the curve of the road and through the intersections with Jones Avenue, Powers Street and Pine Street.

Alternative One focuses on a realignment of Jones Avenue and a signalization of the new intersection. Alternative Two address the current street layout with improved pedestrian facilities and traffic island. These alternatives are illustrated below.

It is highly recommended that further study including a traffic impact analysis and a pedestrian crossing analysis be completed for this area as well as the collection of community input to determine the best solution for this intersection. This intersection is viewed as the main barrier for safe connectivity to and from the park for both pedestrians and vehicles.



Concept One



Concept Two

Area Photographs



Recommendations

Alternative One:

- Realign Jones Avenue to create a 90 degree intersection with Georges Road in line with Powers Street
- Install a signalized intersection with pedestrian activated signal heads and crossing time countdown
- Install high visibility crosswalks on all legs of the intersection of Georges Road and Jones Ave.
- Create a pedestrian refuge island on the northern leg of the intersection as part of a landscaped median
- Install ADA compliant curb ramps and pedestrian signal activation
- Install pedestrian crossing warning signs before intersection on Georges Road

Alternative Two:

- Add a channelization island as pedestrian refuge between Georges Road and Jones Avenue divide
- Install high visibility crosswalks and pedestrian crossing warning signs on Jones Avenue and Georges Road
-

Pine Street Recreation Park Area Connections



Additional pedestrian and bicycle paths should be developed within the Pine Street Recreation Park in an effort to improve accessibility between the upper entrance of the park and the Reservoir Road and Pine Street Neighborhood Areas. The construction of a new pedestrian walkway leading from the upper park entrance to Pine Street will improve pedestrian movement within the park and between neighborhoods surrounding the park. To create more convenient connections between the recreation park and the Reservoir Road Neighborhood, a shared use path should be created along the upper soccer field. This path will enhance walking and biking opportunities within the park and link several neighborhoods by way of the recreation park. Finally, the issue of poor vehicle circulation in the Reservoir Road Neighborhood must be addressed. In order to increase vehicle accessibility to the neighborhood, Pine Street should be extended through the church parking lot to connect with Reservoir Road. This will create an additional access point for vehicles traveling to the Reservoir Road neighborhood.

Pine Street Recreation Park Focus Areas 3, 4 & 5



Corner of Nichol & Sanford Road Park Entrance Focus Area #3



Aerial Photograph



High Visibility Crosswalks and Raised Corner Intersection

Area Sketches & Photographs



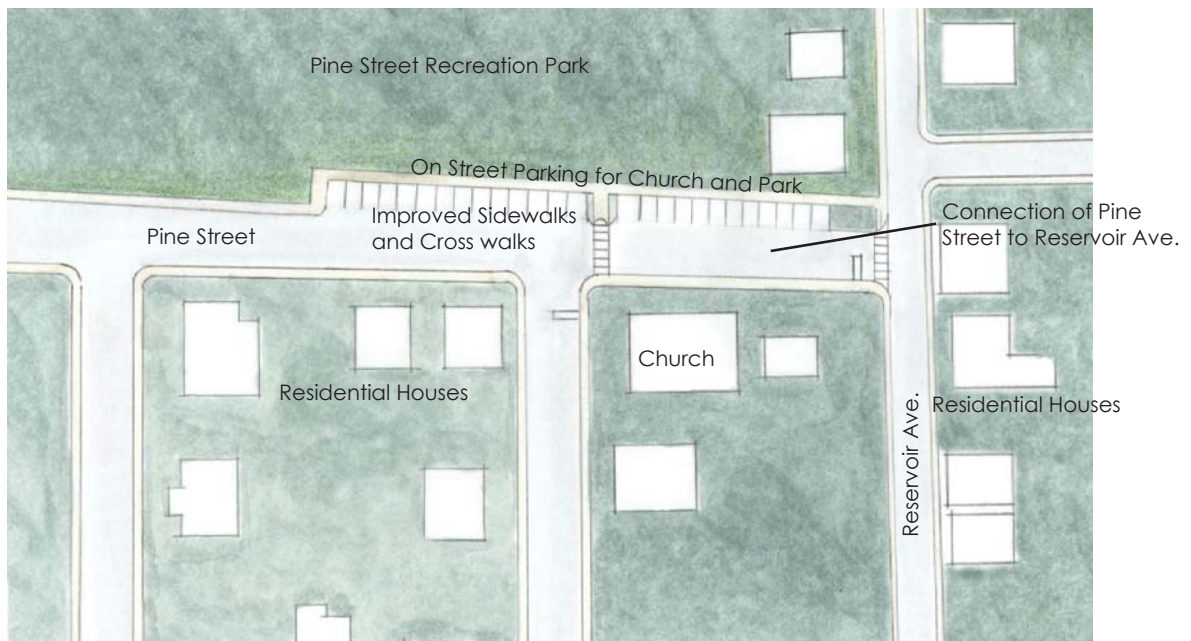
Recommendations

In its current condition this entrance to the park is neither welcoming or ADA accessible. The sidewalk along the outside of Sanford and Nichol is discontinuous, while access to the park is partially blocked by a gate. There is only a beaten path to the side of the Pine Street Park sign to serve as an entrance. The project team recommends greatly enhancing this entrance in an effort to connect the park to children in both the Nichol Avenue neighborhood as well as those in the Georges Road Neighborhood. The renderings and plans on these pages provide a possible vision of what this area could look like.

- Raised intersection with high visibility crosswalks at Sanford Road and Nichol Avenue
- Install pedestrian crossing warning signs on Sanford Road and Nichol Avenue
- Create park gateway entrance with pedestrian path leading to east side of park
- Install pedestrian lighting at park entrance and along path
- Complete sidewalk along outside of intersection

Pine Street Cut Through

Focus Area #4



Area Photographs



Recommendations

Pine Street currently terminates at Larche Ave at the eastern end of the park. It is recommended that Pine Street be extended to Reservoir Avenue through the current Church parking lot. Shared park and church parking will be provided along Pine Street. As illustrated this new parking can serve the churches needs on Sundays and special events and serve parking needs for the Pine Street Recreation Park during the week. This street extension would lead to increase safety in the Reservoir and Conger area due to better circulation for police and emergency service vehicles.

- Extend Pine Street as a two lane road to Reservoir Avenue
- Install sidewalks along the length of Pine Street
- Create head-in parking on the north side of Pine Street
- Install crosswalk at Pine Street and Larche Avenue
- Install stop sign at Larch Avenue and Pine Street intersection

Reservoir Ave. Connection

Focus Area #5



Area Photographs



Recommendations

The easterly edge of Pine Street Recreation Park is bounded by multifamily residential buildings. There are no pedestrian or vehicular connections to the park or the rest of the Georges Road neighborhood. Many beaten paths have been created between Reservoir Avenue and the park, suggesting residents of this area desire greater connection to the park. The sidewalks for this area are in poor condition and in many areas are discontinuous. In order to create greater connectivity between the park and the Reservoir Street neighborhood, a gateway park entrance and connection of a park path to new sidewalks along Reservoir Avenue are recommended.

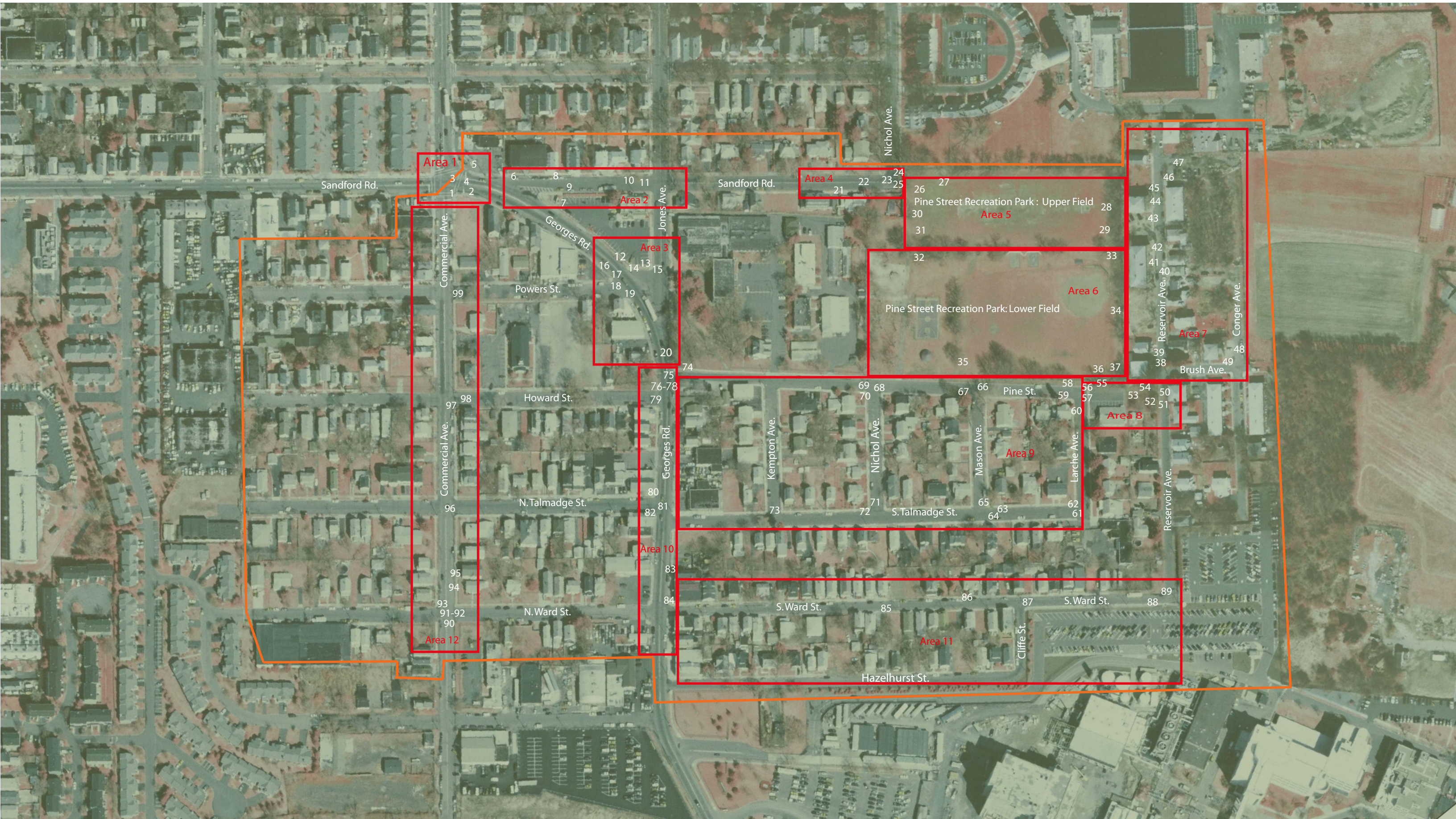
- Create gateway to Pine Street Park at Reservoir Avenue
- Install new sidewalks along both sides of Reservoir Avenue
- Install special pedestrian lighting at park gateway for added safety
- Evaluate stormwater management system

Next Steps


The intention of the Pedestrian Concepts Element is to lay the groundwork for future efforts to improve pedestrian safety and accessibility in the Georges Road neighborhood and Pine Street Recreation Park area by drawing attention to opportunities for improving the pedestrian environment. The findings and conceptual improvements presented in this report are based on direct observation of neighborhood conditions without the benefit of public outreach, technical data, or an engineering analysis. Future steps may involve:

- Review of relevant planning documents such as City Master Plan, County Master Plan, Cook College/Rutgers University development plans, etc.
- Coordination between Rutgers University, the City of New Brunswick, and Middlesex County
- A detailed concept development study that may involve:
 - Additional data collection in the form of pedestrian and vehicular traffic counts, a sidewalk inventory, crash history analysis, signal timing analysis, and a review of planned/approved development
 - Generation of additional improvement alternatives
 - Public outreach to local residents and community leaders
 - Identification of responsible agencies and funding sources

Appendix A: Photo Log



 Project Area

 Photo Area

Georges Road Neighborhood Photo Documentation Map



North

Area 1

Intersection of Stanford Road and Commercial Avenue



Intersection of Commercial Ave., Sandford Rd., and Georges Rd.

1



Intersection at Commercial Ave. and Sandford Rd. [from corner of Georges Rd.]

2



Looking across Georges Rd. towards Sandford Rd. from intersection at Commercial Ave.

3



Looking across Georges Rd. towards Sandford Rd. from intersection at Commercial Ave. [2]

4



Intersection of Sandford Rd. and Commercial Ave. from corner of Sandford

5

Area 2

Stanford Road between
Commercial Avenue and
Jones Avenue



Sandford Rd. merging with Georges Rd.

6



Looking towards intersection of Commercial and Sandford from Georges St. with Sandford Rd. merging with Georges St. on the right side of the photo.

7



Sandford Rd. merging with Georges Rd. [from Sandford Rd.]

8



Sandford Rd. merging with Georges Rd.

9



Sandford Rd. looking towards Commercial Ave.

10



Intersection of Sanford Rd. and Jones Ave.

11

Area 3

Problem Intersection: Jones Avenue, Georges Road, and Powers Street



Problem intersection [Jones, Georges, and Powers]

12



Problem intersection [Powers St. to the right, Jones Ave. to the left]

13



Problem intersection looking across to Powers St. [illustrating lack of crosswalks]

14



Problem intersection looking across merge of Georges Rd. and Jones Ave.

15



Problem intersection looking across Georges from left corner of Powers

16



Looking down Georges Rd. towards intersection with Commercial Ave.
[taken from corner of Powers St.]

17



Looking across Powers St. at intersection with Georges Rd.
[illustrating lack of a sidewalk]

18



Looking across Georges Rd. from right corner of Powers St.

19



Problem intersection from corner of Pine St. [Jones Ave. to the right and Powers St. to the left]

20

Area 4

Stanford Road leading to
recreation park entrance



View of Sandford Rd. looking towards the park entrance
21



Recreation Park entrance where Sandford Rd. and Nichol Ave. merge
22



Beaten path to Pine Street Recreation Park (entrance off Nichol Ave.)
23



Dangerous area where Sandford Rd. and Nichol Ave. merge [1]
24



Dangerous area where Sandford Rd. and Nichol Ave. merge [2]
25

Area 5

Upper portion of Pine Street
Recreation Park



Soccer field viewed from Sandford/Nichol side of the park
26



Possible area to extend a bike path around the soccer field towards
Reservoir Rd.



Water treatment plant next to soccer field viewed from Reservoir Ave.
side of the park
28



Soccer field viewed from Reservoir Rd. side of the park
29



Looking down the hill towards playground just past entrance on Sandford Rd./Nichol Ave.
30



Possible area to extend a pedestrian path from the park entrance on Sandford Rd./Nichol Ave. to the
existing steps that lead to the playground area
31

Area 6

Lower portion of Pine Street
Recreation Park



Existing path through lower portion of Pine Street Recreation Park

32



View of softball field from Reservoir Rd. side of the park

33



View of park looking towards Pine St. and Larch Ave.

34



Recreation park along Pine St. perpendicular to Mason Ave. [possible area for slanted on-street parking]

35



View of park from corner of Pine St. and Larch Ave.

36



Desire path between Pine St. and Reservoir Rd.
37

Area 7

Reservoir Avenue



Reservoir Ave. looking towards Pine Street Recreation Park
38



Looking across Reservoir Ave. from corner of Brush Ave.
39



Reservoir Ave. facing the dead end [taken at intersection with Brush Ave.]
40



Apartments on Reservoir Ave.
41



Reservoir Ave, facing the dead end [illustrating lack of curbs on both sides and the lack of a sidewalk on the right]

42



Parking lot of apartments [showing poor drainage]

43



Condition of sidewalk outside apartments on Reservoir Ave.

44



Sidewalk ending right after apartments

45



Reservoir Ave, near dead end [illustrating poor drainage system and a desire path]

46



Vacant lot on Reservoir Ave, near dead end

47



Conger Ave.
48



Intersection of Brush Ave. and Conger Ave.
49

Area 8

Church on Larche Avenue and Pine Street
[possible connection to
Reservoir Avenue]



Back of church parking lot looking onto Reservoir Ave.
50



Reservoir Ave. looking onto church parking lot
51



Church parking lot facing Pine St. [Pine Street Recreation Park on the right]
52



Church parking lot looking down Pine St. [Reservoir Ave. to the back]
53



Desire path between church lot and apartments leading to Pine Street
54



Desire path along church parking lot bordering recreation park
55



Church Parking lot from edge of desire path at Pine St. and Larche Ave.
56



Church parking lot viewed from intersection of Pine St. and Larche Ave.
57

Area 9
North Talmadge Street and
Pine Street Area



Pine Street Recreation Park bordering Pine St. (illustrating lack of sidewalk)
58



Pine St. looking towards Georges Rd. with the recreation park to the right
59



Larch Ave. looking towards So. Talmadge
60



Corner of So. Talmadge and Larch Ave. looking towards Georges Rd
61



Corner of So. Talmadge and Larch Ave.
62



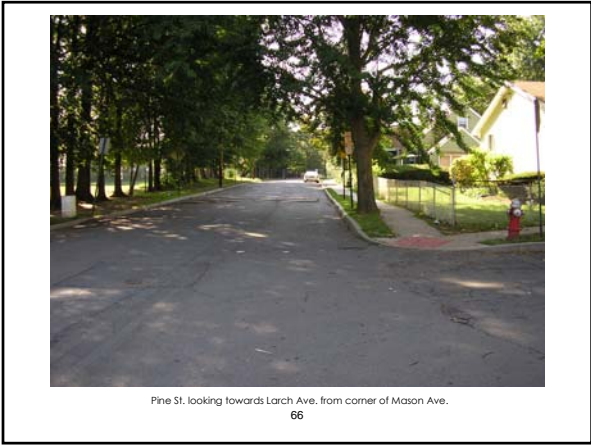
Speed hump on So. Talmadge near Mason Ave. (looking towards Larch Ave.)
63



Sidewalk and greenway on So. Talmadge looking towards Georges Rd.
64



Mason Ave. looking towards Pine Street Recreation Park
65



Pine St. looking towards Larch Ave. from corner of Mason Ave.
66



Pine St. looking toward Georges Rd. with park entrance to right
67



Pine St. adjacent to the park entrance [flooding problem in this area]
68



Pine St. adjacent to Pine Street Recreation Park
69



Pine St. intersection with Nichol Ave. looking towards Georges Rd.

70



Corner of So. Talmadge and Nichol Ave. [flooding problems and poor drainage]

71



Corner of So. Talmadge and Nichol Ave. looking towards Georges Rd.

72



Corner of So. Talmadge and Kempton Ave. looking towards Georges Rd.

73

Area 10

Georges Road area and crossing roads [Pine Street, Howard Street, Talmadge Street, Ward Street]



Corner of Pine St. and Georges Rd. [vacant lot to left]

74



Looking across Pine St. at intersection with Georges Rd.
75



Looking down Georges Rd. from corner of Pine St. [illustrating traffic congestion]
76



Van pulling out from Howard St. onto Georges Rd. [blind spot on Howard]
77



Looking down Georges Rd. from corner of Pine St.
78



Looking across Howard St. towards No. Talmadge
79



No. Talmadge looking down Georges Rd. towards Howard St. and Pine St.
80



Area 11
South Ward Street Area





Speed hump on South Ward St.
86



View of South Ward St. looking towards Georges Rd.
87



South Ward St. sidewalk bordering Bristol Myers property
88



View of S. Ward St. from corner of Reservoir Ave.
89

Area 12

Intersections along Commercial Avenue



Corner of N. Ward St. and Commercial Ave.
90



Poor road conditions and drainage at intersection of N. Ward and Commercial Ave.
91



Close up of road conditions
92



Lack of sidewalk on N. Ward St. just past Commercial Ave.
93



Road conditions along Commercial Ave. [looking towards N. Ward St.]
94



Road conditions along Commercial Ave. [looking towards N. Talmadge St.]
95



Intersection of N. Talmadge St. and Commercial Ave.
96



Road conditions at intersection of Howard St. and Commercial Ave.
97



Road conditions along Howard St. [facing Georges Rd.]
98



Intersection of Powers St. and Commercial Ave.
99

END

Appendix B: Typical Opportunities and Typical Treatments

Typical Bicycle/Pedestrian Treatments



SHARED-USE ROADWAY

Can be safe for bicyclists when:

- Width is sufficient
- Speeds are low
- Traffic volumes in area are low



BICYCLE LANE

- Provides a safe and comfortable environment for bicyclists
- An area that is delineated, but not separated from the roadway
- Typically 4" wide with a bicycle stencil



SHARED USE PATH (TRAIL)

- Offers connections and opportunities not provided in the roadway system
- Can provide valuable connections and recreational opportunities
- Typically 8'-10' wide



OTHER FACILITIES

- Bicycle Lockers
- Bicycle Racks on Transit
- Bicycle Racks
- Bicycle Safety Programs

Typical Bicycle/Pedestrian Treatments



SIDEWALKS

- A portion of the road ROW for the preferential or exclusive use of pedestrians
- Typically at least 5' wide
- Should be free of obstructions along its width and 80" high



CROSSWALKS

- Provides a designated crossing point
- Helps provide more predictable pedestrian movements
- Alerts drivers to pedestrian areas



SIGNAGE AND STRIPING

- Can help define pedestrian realm
- Provide visual cues for pedestrian and motorists
- Can augment other facilities



AMENITIES AND AESTHETICS

- Lets pedestrians know area was designed for their use
- Helps provide a safe and comfortable environment
- Helps provide a sense of "place"

Typical Bicycle/Pedestrian Treatments



CURB EXTENSION

- Reduces Vehicle Speeds
- Reduces Pedestrian Crossing Distance
- Increases Pedestrian Visibility
- Protects Parking Area & Prevents Parking Close to Intersection



FULL CLOSURE

- Can be used to eliminate neighborhood cut-throughs
- Eliminates vehicular access
- Allows pedestrian and bicycle access and egress



MID-BLOCK CROSSING

- Reduces Vehicle Speeds
- Increases Pedestrian Visibility
- Reduces Pedestrian Crossing Distance
- Connects Pedestrian Generators



RAISED MEDIAN GATEWAY

- Provides Defined Entry
- Provides Cue to a Transition Area
- Aesthetically Pleasing
- Provides Pedestrian Refuge
- Reduction in Vehicle Speeds

Typical Opportunities for Improvements



LONG CROSSING DISTANCES

Long crossing distances prolong the exposure time of pedestrians to motorists and make it difficult to see the pedestrian signal head on the other side of the road.



PEDESTRIAN OBSTRUCTIONS

Obstructions in the pedestrian right-of-way impede pedestrian movement and safety.



LACK OF CURB CUTS

Sidewalks without curb cuts are an obstacle to parents with baby carriages as well as people with disabilities.



POOR MAINTENANCE

Without maintenance pedestrians can trip causing in a liability issue, and people with disabilities can have trouble navigating the area.

Typical Opportunities for Improvements



ENHANCE AREAS IN PINE STREET RECREATION PARK

Several areas surrounding and within the park could use pedestrian improvements such as side walks and trails.



FACILITY GAPS

Lack of sidewalks in high traffic areas leads to the development of desire paths which can be unsafe and unsightly.



IMPROVED CROSSWALKS

Poor crosswalk conditions can make pedestrian right of ways hard to discern for motorists. Improving crosswalk striping will increase the safety of pedestrians.

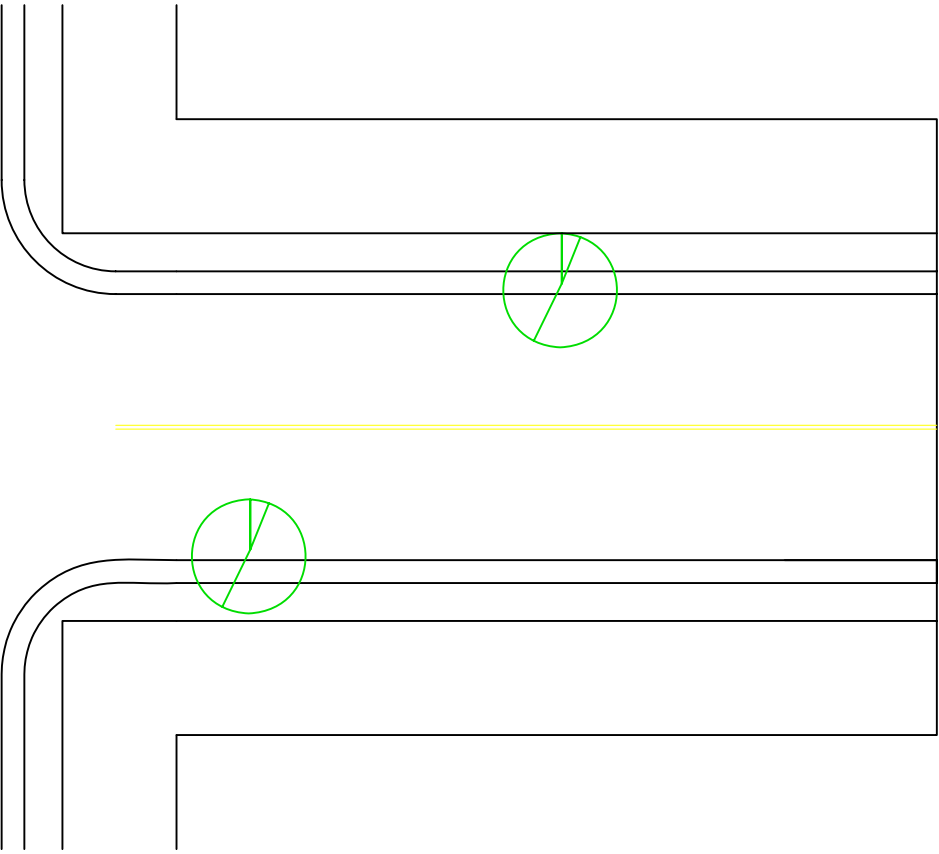
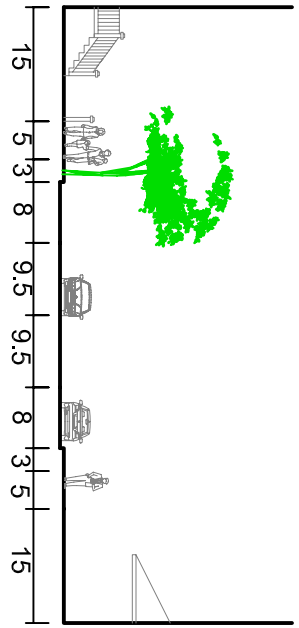


IMPROVE LIGHTING

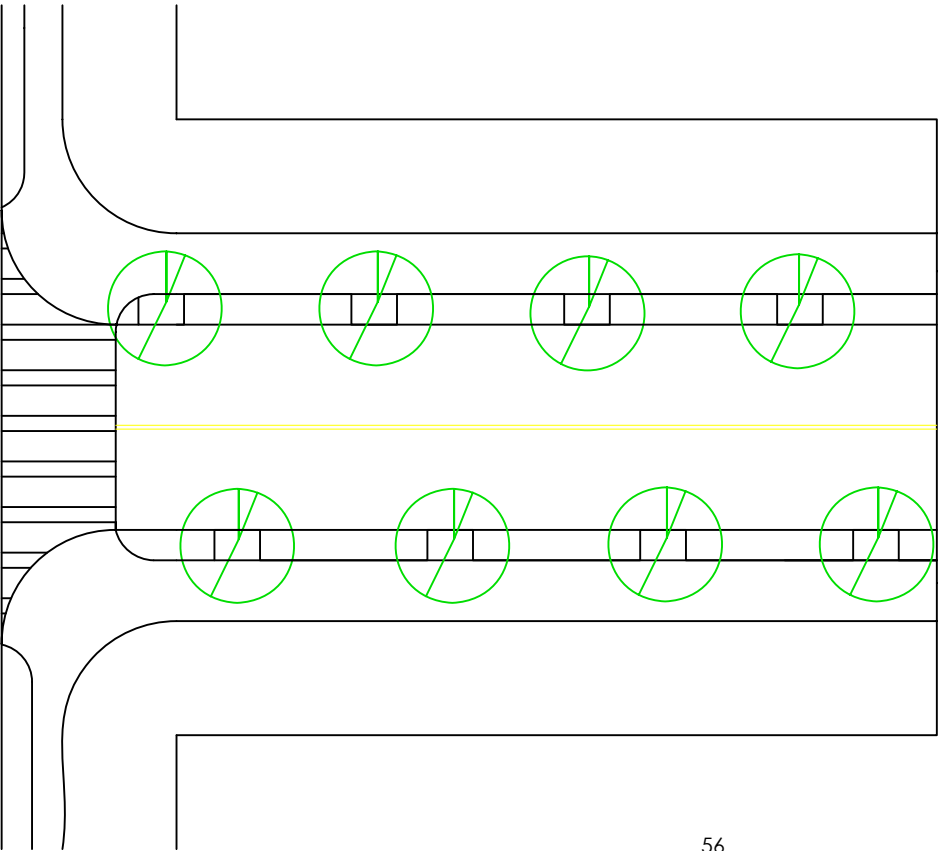
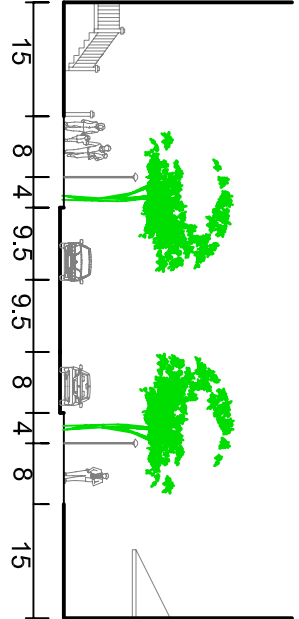
Unsuitable lighting conditions in residential areas can make crossing roads unsafe for pedestrians at night.

Appendix C: Typical Street Cross Sections

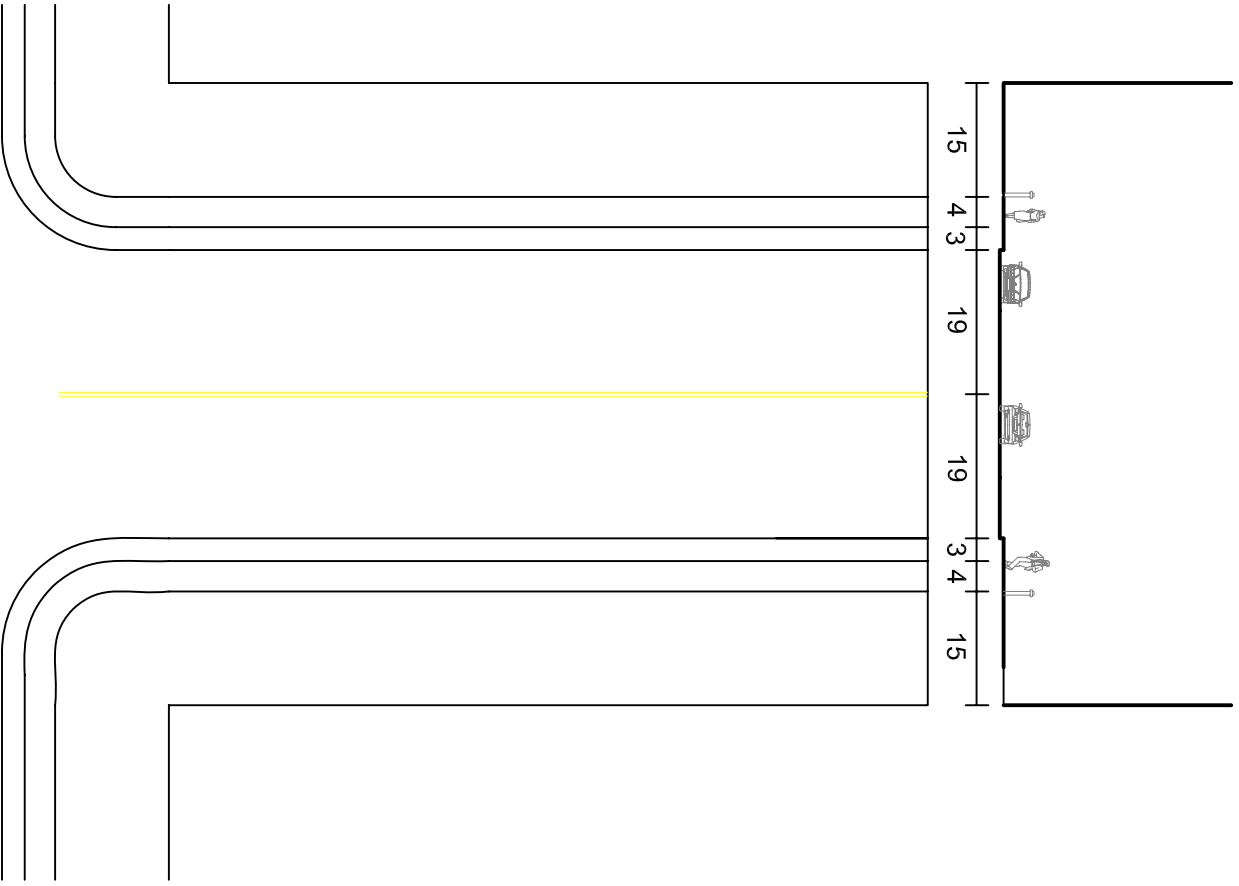
Georges Road
RD:51:38



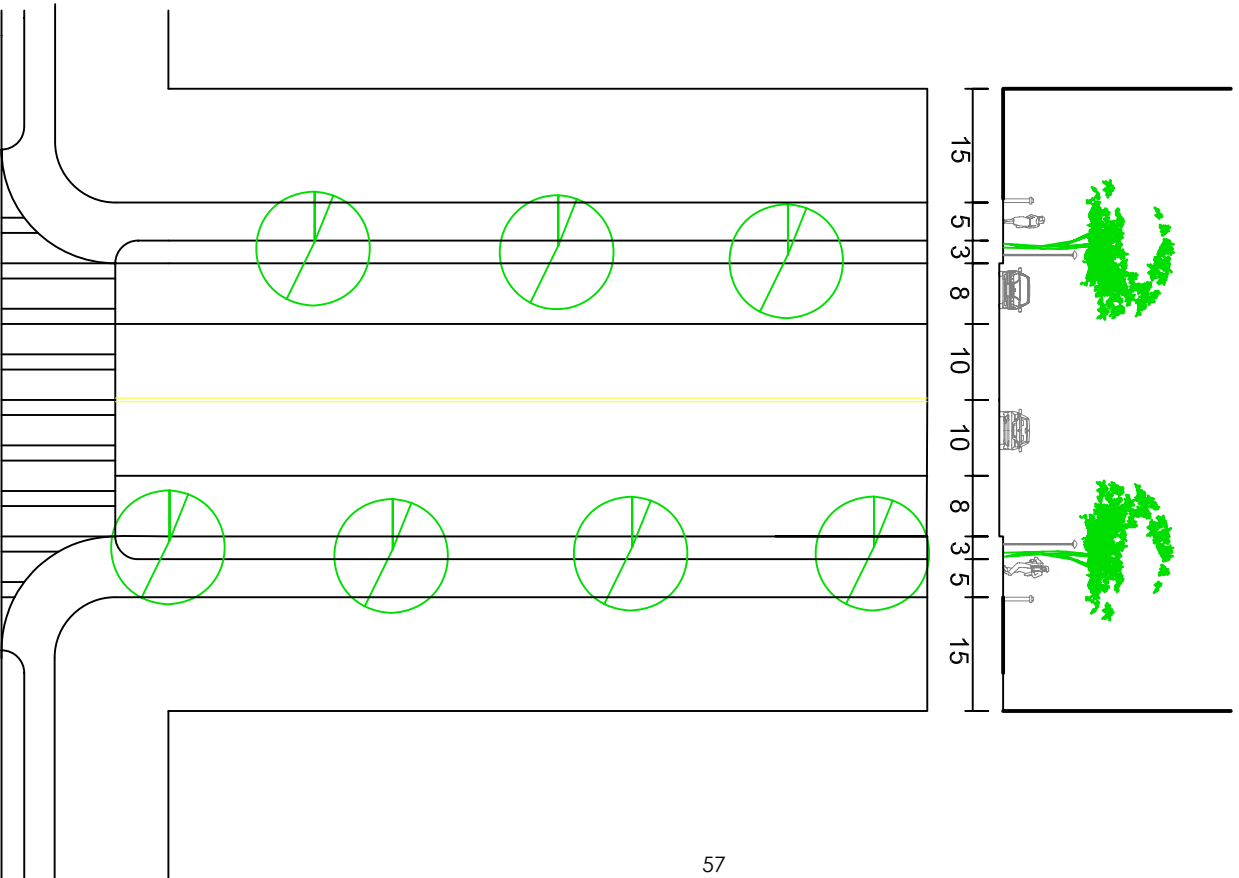
Georges Road
RD:51:27
Wider Sidewalks

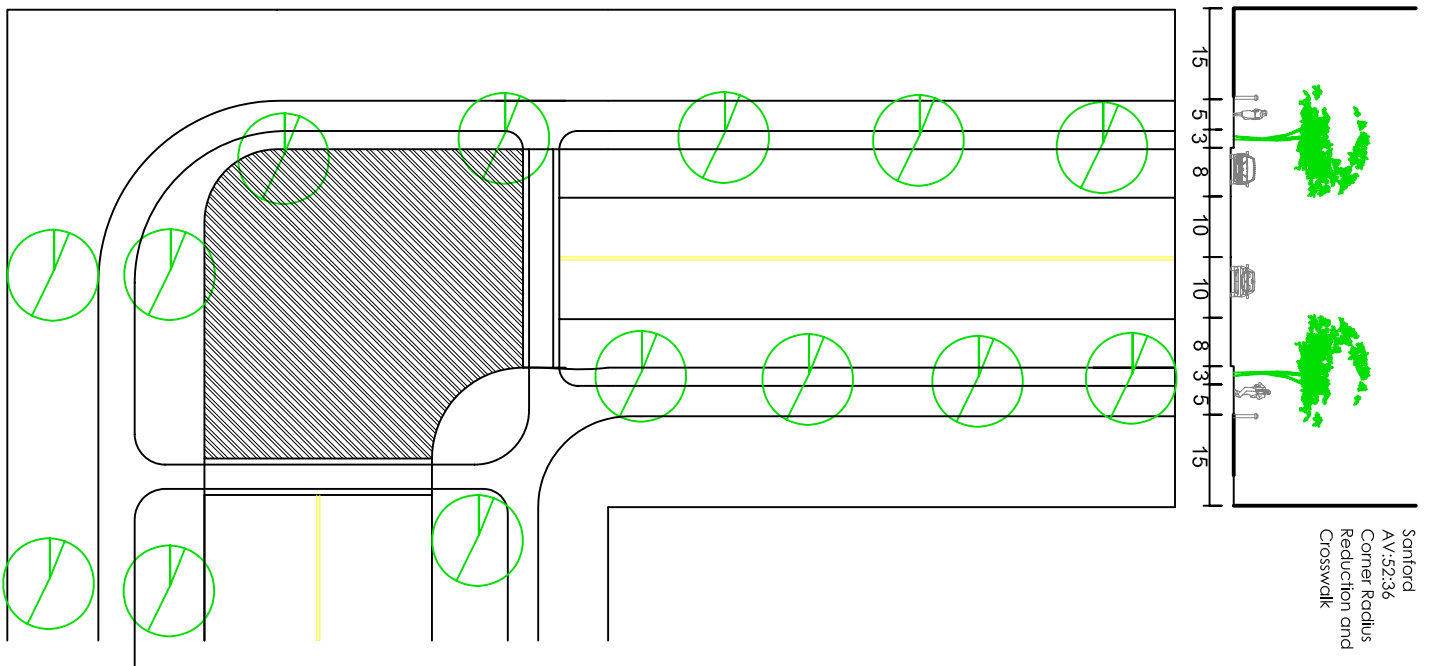
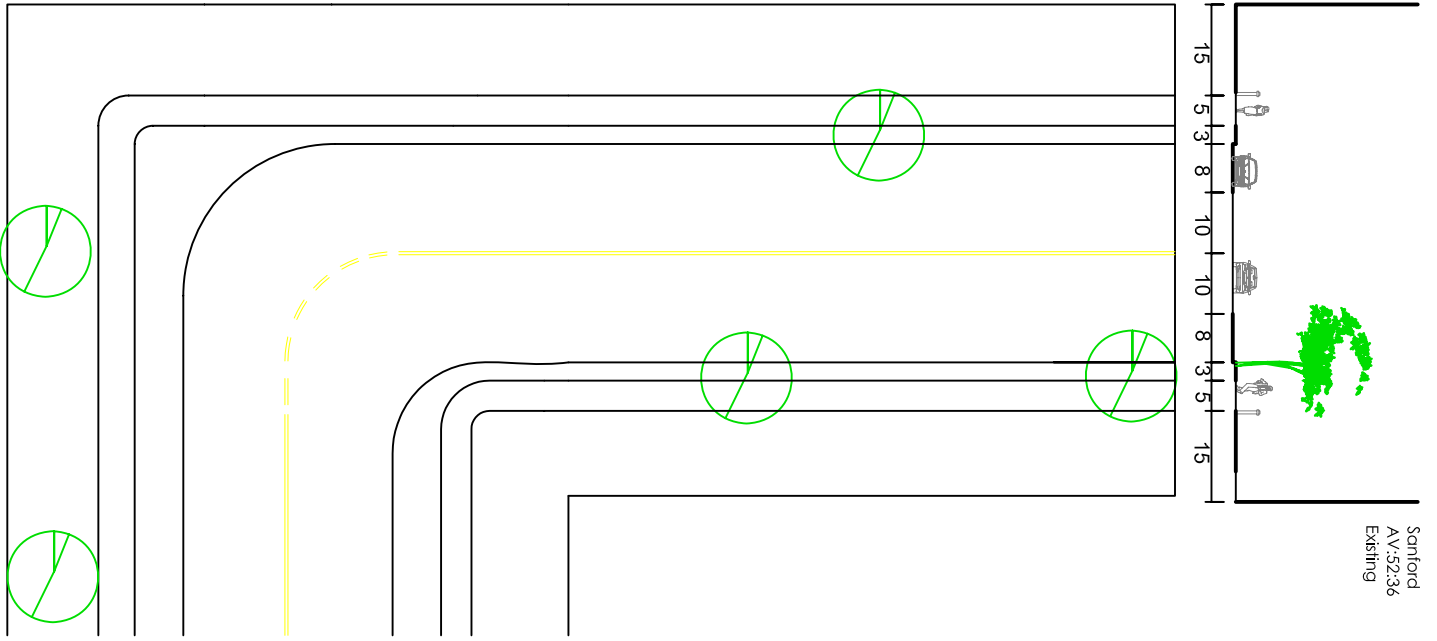


Commercial Ave
AV:52:38
Existing

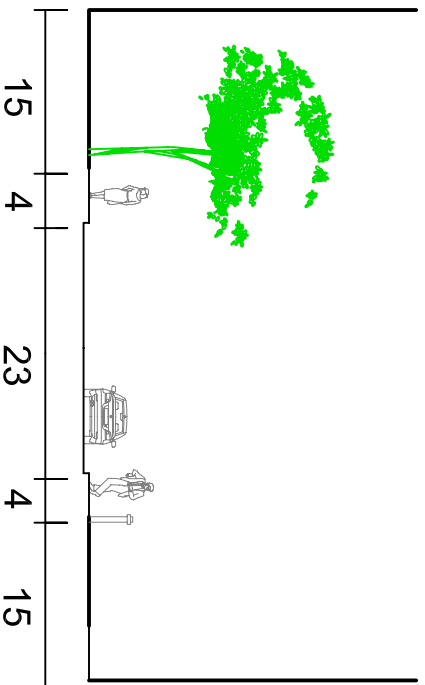


Commercial Ave
AV:52:36
Lane Narrowing

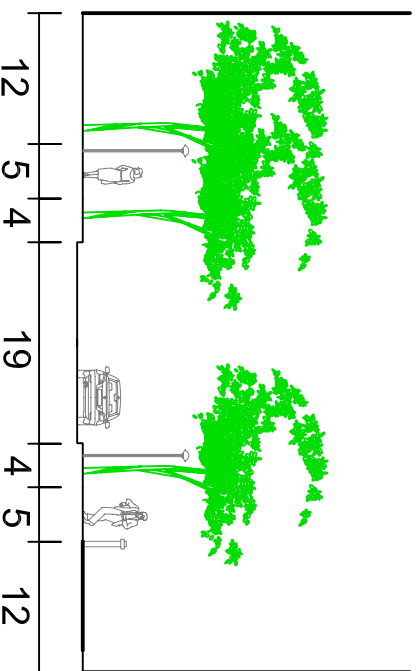




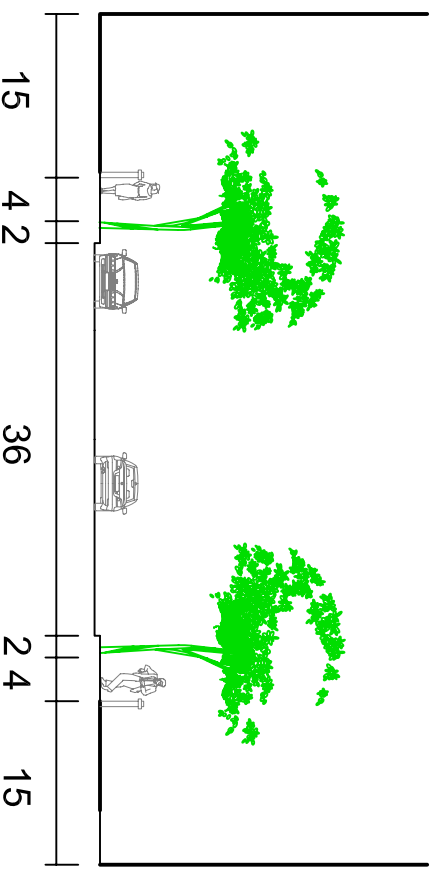
Reservoir Ave
AV:31:23
Existing



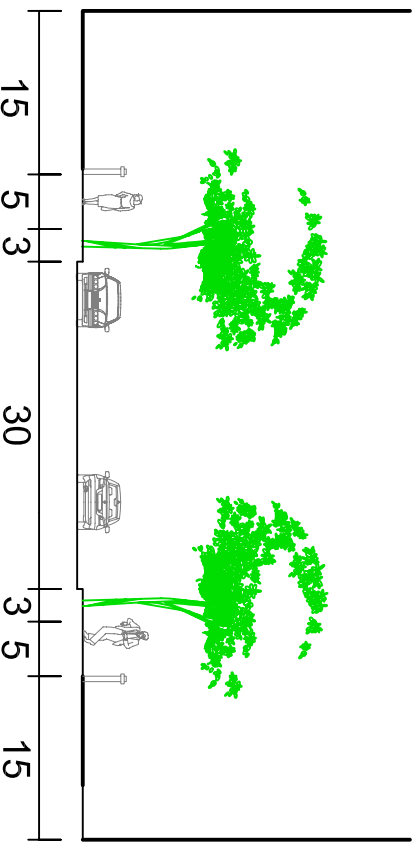
Reservoir Ave
AV:37:19
With Greenway



Howard
ST:50:36
Existing



Kempton Ave
AV:43:30
Existing



Appendix D: Survey Results- Georges Road Gateway Project

Traffic and Road Conditions

Nearly two-thirds of the respondents feel that streets, roads and sidewalks in their neighborhood are in disrepair. Traffic and parking problems also are at the top of the list of problems that neighbor's experience. Speeding, it appears, merits major concern among survey respondents in as much as nearly 75 percent of them rate it as a number one or one of the top five problems. Table 3.6 presents resident assessment of traffic and road conditions virtually all respondents (93 percent) feel that all streets should have concrete sidewalks and very high proportions believe that traffic controls are called for, including installation of speed bumps.

Table 3.6: Residents' Assessment of Traffic & Road Conditions

Q#	Question	% Responding "Strongly Agree" or "Agree"
7.a	All streets should have concrete sidewalks	92.6
7.b	More traffic controls are needed in the neighborhood	79.7
7.c	Speed bumps should be installed on some streets to control speed	87.4
7.d	Issuing parking permits to residents would make parking easier	61.6
7.e	The speed limit should be reduced on Georges Road	67.1
7.m	Streets need to be cleaned more often	74.9
7.n	There are many potholes in the neighborhood	61.3