CAPITAL IMPROVEMENT PLAN
HIGHLAND PARK, NEW JERSEY

BOROUGH OF HIGHLAND PARK
NO. 9-14-284

RESOLUTION TO AMEND MEMBERSHIP OF CAPITAL IMPROVEMENTS PLANNING TASK FORCE

RESOLUTION: Finance Committee

BE IT RESOLVED by the Mayor and Borough Council that Resolution No. 8-14-236 shall be and is hereby amended to read as follows:

"WHEREAS, the Mayor and Council of the Borough of Highland Park desire to establish a Capital Improvements Planning Task Force;

NOW, THEREFORE, BE IT RESOLVED by the Borough Council of the Borough of Highland Park, that the Capital Improvements Planning Task Force is hereby established; and

BE IT FURTHER RESOLVED that the Capital Improvements Planning Task Force will consist of the following:

1. Thirteen (13) Regular Members who shall be residents of or employed within the Borough of Highland Park, to be appointed annually by the Mayor with the advice and consent of the Borough Council; and

BE IT FURTHER RESOLVED, that the purpose of the Capital Improvements Planning Task Force shall be to make recommendations on Capital Improvement projects for the Borough of Highland Park to pursue."

ADOPTED: September 16, 2014

ATTEST:

Joan Hullings
BOROUGH CLERK

I, Joan Hullings, Borough Clerk of the Borough of Highland Park, New Jersey, do hereby certify the above to be a true copy of a resolution adopted by the Borough Council of said Borough on the 16th day of September, 2014.

Joan Hullings
Joan Hullings, Borough Clerk

RECORD OF COUNCIL VOTES

Council Member	Ayes	Nays	Abstain	Absent
Erickson	✓			
Foster-Dublin	✓			
George	✓			
Millet	✓			
Potts	✓			
Welkovits	✓			

C - Task Force list

The Highland Park Capital Improvements Planning Task Force was established by Resolution 9-14-284 of the Borough Council on September 16, 2014. Its charge from the Mayor is to "assess our current infrastructure, and current and future development plans, in order to determine whether or not we are prepared for the next 2-5 years of growth from development here in HP, and to make recommendations for moving forward."

The task force received valuable assistance from a Rutgers University graduate urban planning studio class in Spring 2015 that performed field research and wrote the first draft of the attached report. The task force members appreciate the students' efforts and are grateful for their help in producing such a thorough and thoughtful capital improvements planning document. The student studio team in turn would like to acknowledge the generous individuals from the Borough of Highland Park, various municipal departments, and other affiliated organizations, without whom the report would not be possible.

Highland Park Capital Improvements Planning Task Force Members

Clinton Andrews	Chair, Urban Planner
Gayle Brill Mittler	Mayor
Jenni Chapman	Chair, Main Street Highland Park
Phil George	Councilman
Kim Hammond	Chair Planning Board
Linda Hoefele	School Business Administrator
Kathleen Kovach	Borough Administrator
Marc Mappan	President Library Board
James Polos	OEM Coordinator
Don Rish	Department Head Public Works
Stephen Rizco	Chief of Police
Jane Stanley	Director Library
Christine Thornton	Civil Engineer
Susan Welkovits	Council President
Nancy Wolf	Public Utilities Resident Member

Studio Team

Alex Belensz	Samuel Nourieli
Nan Chen	Barkha Patel
Jonathan deVries	Gabriel Sherman
Jordan Kocak	Zach Subar
Katie Magiera	Aman Trehan
Michael Martone	Katie Wettick
Sarah Moran	Steven Zimmerman

RUTGERS
Edward J. Bloustein School
of Planning and Public Policy

CONTENTS

EXECUTIVE SUMMARY

The Highland Park Capital Improvements Planning Task Force was established by Resolution 9-14-284 of the Borough Council on September 16, 2014, and charged to "assess our current infrastructure, and current and future development plans, in order to determine whether or not we are prepared for the next 2-5 years of growth from development here in HP, and to make recommendations for moving forward." The task force received valuable assistance from a Rutgers University graduate urban planning studio class in Spring 2015 that performed field research and wrote the first draft of this report.

The task force and student team performed demographic analysis of the projected need for infrastructure services using 6-year and 30-year time frames. They compiled an inventory of capital assets controlled by municipal departments, public utilities, and schools within the Borough, and assessed their condition and expected future needs. They developed a prioritization method to translate the list of expected needs into a recommended 6-year capital plan. Finally, the group developed policy recommendations to augment the capital plan.

Key findings include the following:
1. the privately owned network utility infrastructures (electricity, natural gas, telecommunications and cable television) will not have trouble keeping up with expected population growth, although government oversight and advocacy is necessary to monitor the services provided to the municipality and residents regarding the reliability of service delivery and report/document problems to the appropriate entities including state authorities;
2. the publically owned network infrastructures (water distribution, sewer collection, stormwater, and local roads) are also likely to be able to handle expected population growth, although all need regular maintenance with the possible exception of stormwater that may warrant attention;
3. Borough-owned buildings are generally adequate for expected population growth, but some will need significant investment to maintain their performance;
4. the School District is nearing capacity and is likely to need to invest to be able to handle expected future population growth, and it has its own capital planning process underway; and
5. the highest priority actions for capital planning include insulating the sewer main along the Raritan River, replacing aging vehicles (fire truck, medical van, garbage truck, and police vehicles), replacing fire and police equipment, and developing a sidewalk improvement financing program.

Policy recommendations include the following: Improve record keeping to inform future decisions; link the capital improvements plan to the Highland Park Master Plan; coordinate infrastructure improvements; improve the resiliency of infrastructure systems; incentivize private action to implement green infrastructure; insert an annual Capital Improvements Plan line-item into the Borough operating budget; encourage cooperation between the Borough, School District and County; encourage development in densely populated areas to improve infrastructure efficiency; and encourage sustainable transportation.

INTRODUCTION

INTRODUCTION

BACKGROUND

In recent years, the Borough of Highland Park, New Jersey has been confronted by issues of aging infrastructure and significant projected future population growth. Government officials have expressed concern about maintaining adequate levels of municipal services, protecting public health and maintaining a stable municipal budget. It is out of these concerns that the impetus for creating a six-year plan for capital improvement projects developed.

The Borough currently stands at a crossroads in its long history. It has seen significant change over the course of a century, but in some aspects it has retained its original character. In the 1950's, the Borough featured single-family homes on Raritan Avenue, with various mom and pop shops dotting the landscape. In the 1960's, Raritan Avenue developed into a strong commercial area, with delicatessens, bakeries, small grocery and clothing stores, a butcher, and even a fishmonger.

The character of Highland Park began changing in the late 1960's into the 1970's. Shopping malls began popping through New Jersey as part of a burgeoning national trend. Nearby Woodbridge Center and Menlo Park Mall were built during this boom in shopping mall construction. Many of the small businesses in the Borough were outcompeted and went out of business. The Main Street atmosphere that had existed in the Borough for many years lost a bit of its charm.

In recent years, Raritan Avenue has been revived as a commercial district, complete with restaurants, bakeries, wine stores, and clothing stores. There has been a push from the Borough for increased residential and commercial density in this corridor. Raritan Avenue is poised to be further transformed as a result. This revival has coincided with a boom in development activity throughout the Borough. Several major residential developments are underway or approved. These developments have the potential to add hundreds of housing units and thousands of residents to the Borough over the course of several decades.

A result of this projected growth will be an increased demand for municipal services. As the population increases, the Borough will have to evaluate if investments in infrastructure capacity are required. The age of municipal infrastructure in the Borough will add another layer of complexity to this decision-making process. The oldest pieces of water and sewer infrastructure in the Borough are estimated to be over 115 years old. The Borough will need to replace these and other pieces of critical infrastructure as they reach the end of their serviceable life in future decades.

To ensure that the Borough is able to provide adequate services to current and future residents, it is crucial that Highland Park develop a Capital Improvement Plan (CIP). Highland Park has enlisted the help of a team of Master's students in City and Regional Planning program at the Edward J. Bloustein School of Planning and Public Policy at Rutgers University. This report details the team's process, findings, and recommendations for the Highland Park CIP. It includes a long-range 30-year horizon, a more detailed, short-range 6-year plan with specific projects, and policy recommendations for future decision-making.

Sources: Interview with Diane Reh (Borough Hall). February 10, 2015.
Interview with Rebecca Hersh (Main Street Highland Park). February 17, 20

CAPITAL IMPROVEMENT PLANNING - FRAMEWORK

WHAT IS A CAPITAL IMPROVEMENT PLAN?

A capital improvements plan serves as a necessary nexus between the objectives stated in the goals and objectives outlined in a municipal comprehensive plan and the capital expenditures necessary to achieve them. The plan lays out the timing and projected expenditures for capital projects. Capital projects are non-recurring; there is a definitive start and end to the project. If a project or expense recurs on a regular or annual basis, the funds will come out of the operating budget. Typically, capital improvements plans are confined to a six-year window for specific projects. However, some plans will lay out a framework for decision-making which may extend out for several decades.

GOALS

The overall goal of the capital improvements plan is to allocate specific amounts of funding for capital projects that carry out the vision of comprehensive planning efforts in the municipality. This includes projects that improve, replace or install new municipal infrastructure. Through capital projects, a municipality will seek to mitigate public health threats, improve the resiliency of current infrastructure systems, improve services and quality of life for residents, replace infrastructure that has aged past its serviceable life and make improvements related to other municipal goals. By planning for these projects, a municipality can reduce the likelihood of emergency spending and spread out the costs of infrastructure investments.

CIP PROCESS

Numerous steps are involved in the development of a capital improvements plan. The plan must be based on a robust analysis of municipal infrastructure, budgets and goals. The steps include:

1. **Data Collection and Analysis**

    - Assembling data related to age and condition of municipal infrastructure.
    - Analyzing history of maintenance and improvement projects on municipal infrastructure.
    - Gathering Census data on municipal population.
    - Analyzing past municipal budgets to determine availability of funding and debt capacity.

2. **Communication with Municipal Officials and Other Experts**

    - Meeting with municipal officials to gather information on past practices and municipal goals, and garner recommendations on future projects.
    - Meeting with experts in the field, such as civil engineers and municipal finance experts, to gather information on industry standards and best practices.

3. **Population Projections**

    - Using historical Census populations, build-out analyses and economic indicators to develop scenario estimates of future population in the municipality.

4. **Development of Multi-Decade Vision**

    - Synthesizing current state of infrastructure, population projections and municipal goals into a long-term vision for capital expenditures.
    - Identifying types of projects to be undertaken, providing general cost estimates. and offering general recommendations for capital planning.

5. **Identification and Prioritization of Capital Projects**

    - Using guiding principles of multi-decade vision, identifying specific projects to be undertaken.
    - Applying a prioritization method to rank capital projects by importance and urgency. Criteria to be considered include impacts on public health and safety, project costs, availability of funding and condition of existing infrastructure.

6. **Development of Six-Year Capital Improvement Plan**

    - Using guiding principles of multi-decade vision, identifying specific projects to be undertaken.
    - Applying a prioritization method to rank capital projects by importance and urgency. Criteria to be considered include impacts on public health and safety, project costs, availability of funding and condition of existing infrastructure

Source: Interview with Stuart Meck (Director of Center for Planning Practice, Edward J. Bloustein School of Planning and Public Policy, Rutgers University). April 8, 2015.

INTRODUCTION

MUNICIPAL INFORMATION

GEOGRAPHY

Highland Park is within walking distance of New Brunswick, which is home to Rutgers University and houses Johnson & Johnson's world headquarters. As a result, it has the potential to attract a wide variety of residents from outside the area. It is also located adjacent to the Northeast Corridor train line, giving residents and visitors easy access to New York City and to other major cities along the East Coast. This is part of the reason why Highland Park is poised to grow in a way that other New Jersey cities are not, as the proximity to these and other amenities is a draw to new residents. Thus, infrastructure-related travel, such as roadways and sidewalks, is of critical importance to the Borough.

CLIMATE

The Borough's climate is not one of heavy extremes, but there are a variety of weather events that can damage its infrastructure. Temperatures typically swing above and below 32 degrees Fahrenheit throughout the winter. These temperature fluctuations often result in freeze-thaw events, which can be harmful to sidewalks, pipes and roads. Road plowing, which has happened frequently over the past few winters due to high snowfall totals, is also a major source of road damage.

Both winter and summer weather in the Borough could be affected by future climate change. The Borough is likely to experience more extreme winter weather events, leading to additional damage to infrastructure. There may be more severe heat events, which could lead to increased energy and water demand by residents. There also exists possibility of an increased number of severe rain events, which would tax current sanitary sewer and stormwater management capabilities.

Source: Highland Park Environmental Resource Inventory

Highland Park Nature Trail

DEMOGRAPHICS & PROJECTIONS

CURRENT TRENDS

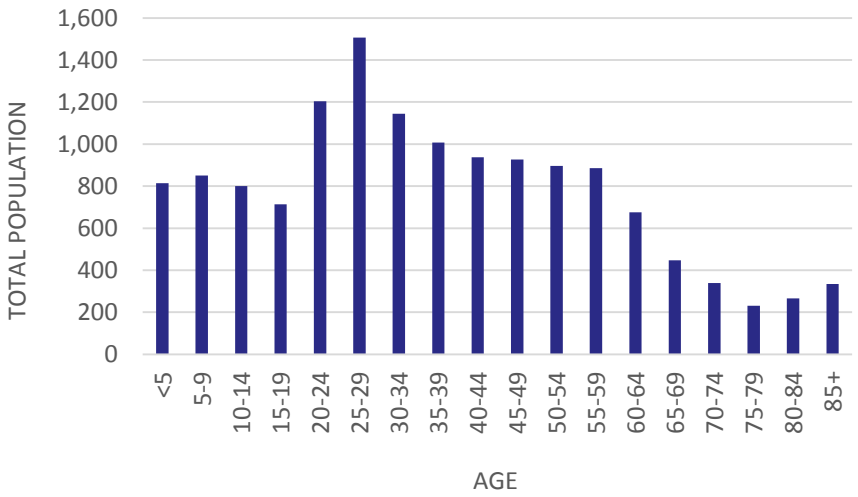
OVERVIEW

As of July 1, 2014 Highland Park had a population of 14,436. The population has remained relatively stable since the 1970's. However, this trend will likely change in future years as new developments bring additional residents into the Borough.

AGE DISTRIBUTION

The high share of rental housing in Highland Park (approximately 41 percent) has made it an attractive community for the millennial generation. Given the close proximity to Rutgers University and New Brunswick, the Borough is attractive to University students, faculty and staff. Based on the 2010 Census, millennials between the ages of 25 and 29 make up the greatest share of the municipal population (**Chart 1**). As of 2010, there were approximately 2,700 millennials living in Highland Park.

CHART 1: AGE DISTRIBUTION



Source: 2010 Census

POPULATION GROWTH

Population growth in the Borough since 1950 has been highlighted by periods of rapid growth, as well periods of stagnation and minor population decline. The Borough experienced steady growth in the 1950's, 1960's and 1970's. Since the 1970's, the population has remained relatively steady, hovering around 14,000 residents. The recent approval of several major housing developments in the Borough will lead to an increasing population in future decades.

POPULATION PROJECTIONS

OVERVIEW

The Borough is concerned that an increasing population will require increasing the capacity of municipal infrastructure and level of municipal services. This report provides several projections of future municipal population based on different development scenarios. These projections will help the Borough anticipate future capital expenditures related to an increasing population.

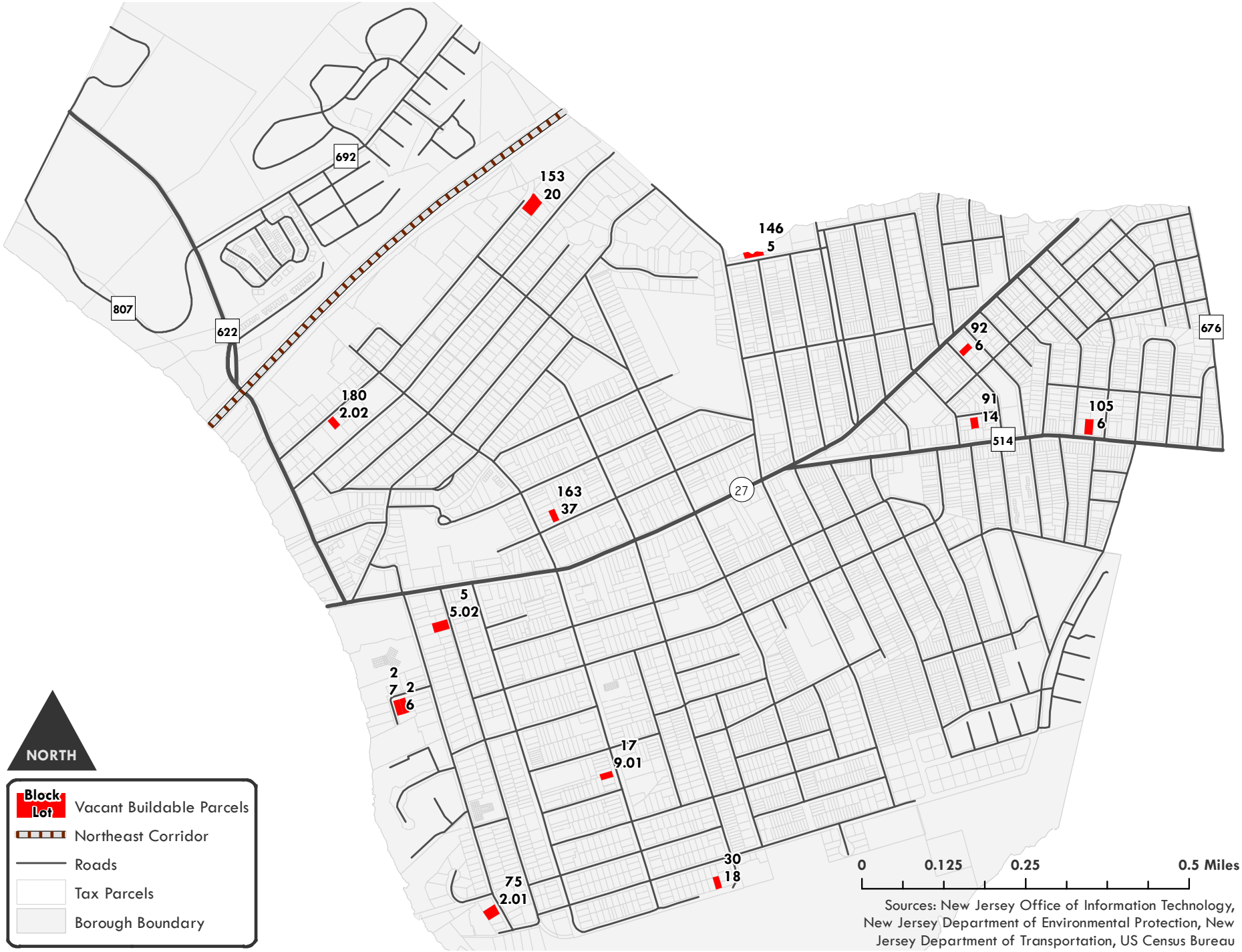
VACANT LAND ANALYSIS

A vacant land analysis was performed in order to help estimate the maximum future population in the Borough. The analysis included all vacant parcels, aside from current and planned developments, that could be subject to residential development under current zoning.

Vacant land was identified using the MOD IV Parcel Classification tax data from 2014. Using the Highland Park zoning map, 41 parcels were identified in the Single Family Residential (RA) zone, 6 parcels in the Two Family Residential (RB) zone, and 16 parcels in non-Residential zones. Of these parcels, only 16 met the minimum lot size requirements of their respective zones. When examining minimum lot width and depth requirements, only 13 of the 16 parcels complied with the zoning code. All 13 remaining parcels were within the RA zone. Since only one single family unit could be built on each parcel, 13 additional units could be built on vacant parcels.

To determine the additional number of residents that could occupy these units, a calculation for household size was applied. This average was multiplied by the 13 potential units to determine the maximum population increase expected from a build-out of vacant land. According to "Who Lives in New Jersey Housing," a 2006 Rutgers University Center for Urban Policy report, an average 2.548 persons would occupy each new unit

MAP 1: VACANT BUILDABLE PARCELS



Sources: New Jersey Office of Information Technology, New Jersey Department of Environmental Protection, New Jersey Department of Transportation, US Census Bureau

built on the vacant parcels. Thus, the maximum additional population these vacant parcels could accommodate is 33 people.

Sources:
Listokin, David, et al. Center for Urban Policy Research. Who Lives in New Jersey Housing? A Quick Guide to New Jersey Demographic Multipliers. 2006.
New Jersey MOD IV Parcel Classification tax data, 2014

IMPACT OF NEW PLANNED DEVELOPMENTS

Three scenarios were established to estimate population growth in Highland Park. The scenarios were developed using demographic data as well as data regarding current and planned housing developments. These scenarios account for historical and natural growth, as well as migration patterns, and were used to project population through the year 2050.

In the "No-Build" scenario, six population projection models were used to estimate how much the population of Highland Park would grow if current trends continued and no new housing units were added. The models accounted for historic growth as well as birth, death, and migration rates. The results varied significantly between models, as shown in **Chart 2**. The highest projected 2050 population was over 11,000 people more than the lowest projected 2050 population.

The results of the components of change model were selected from the six models to serve as the "No-Build" scenario population for further analysis. Assuming that birth rates, mortality rates, in-migration, and out-migration rates would remain constant in the future, this scenario suggests a modest linear growth from 2010 to 2050, with a maximum population of 15,958 in 2050.

SCENARIO A

Scenario A is the first of three build scenarios. It incorporates the expected population growth from residential developments that were built or approved at the time of this analysis. The developments are:

- Overlook (built in 2011)
- The Crossings (Pulte 2)
- Merriewold - Kaplan/The Castle
- Halpern (Former Y)

The developments were investigated to determine the number and type of units that were to be constructed. **Table 1** shows the number and types of units included in the Scenario A developments.

CHART 2: POPULATION ESTIMATION METHODS

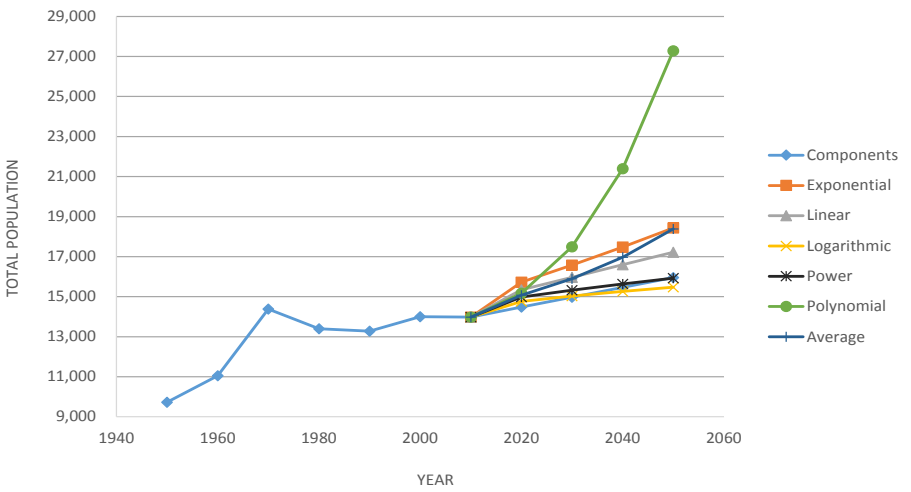
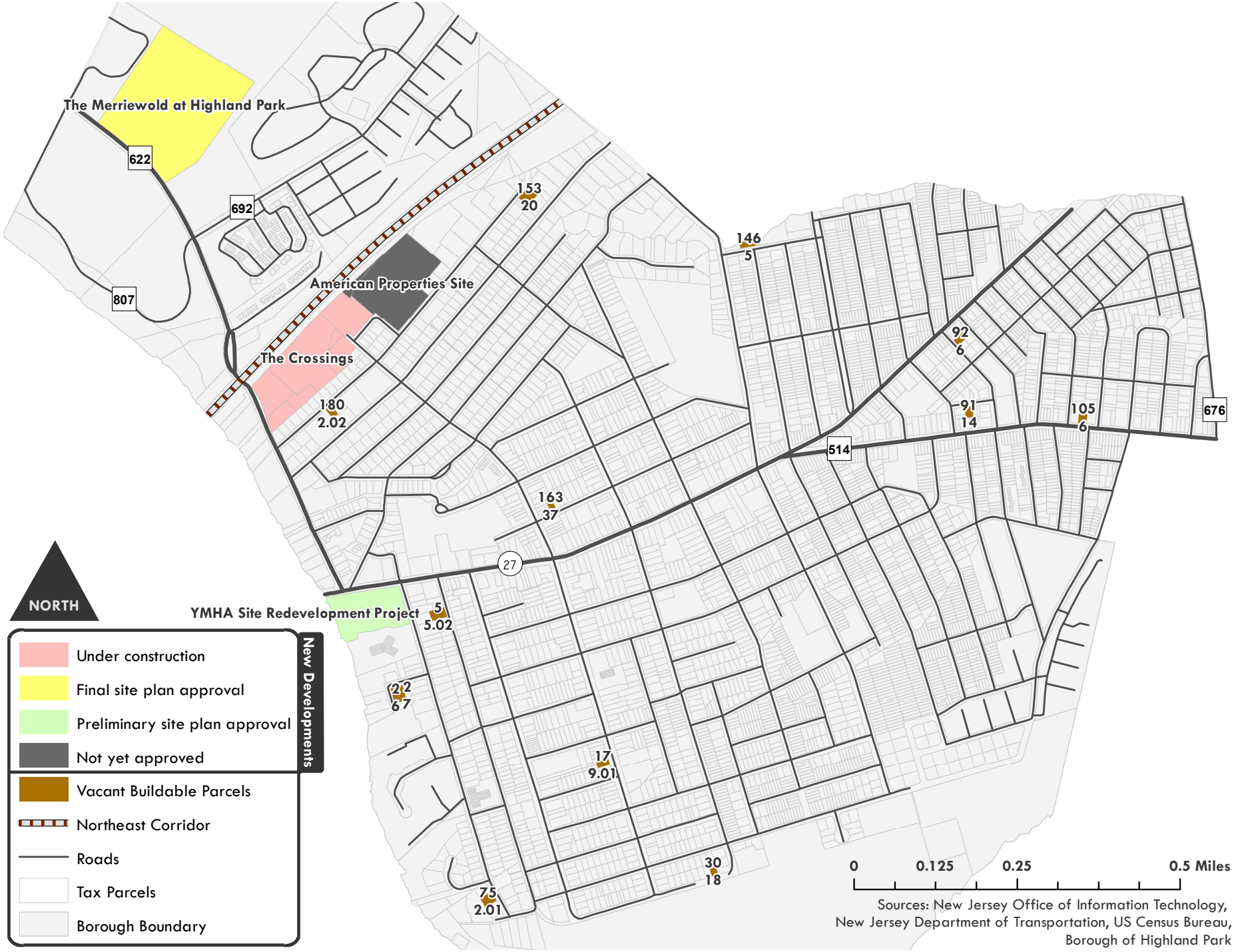


TABLE 1: DEVELOPMENT SCENARIOS: LOW

	SFD	SFA	2-4 units	5+ units	Total
The Crossings Pulte 2					
Units by Type	12	82			94
Merriewold Kaplan the Castle					
Units by Type				196	196
Overlook					
Units by Type	16	66			82
Halpern (former Y)					
Units by Type		23			23
TOTAL SCENARIO UNITS	395				

MAP 2: FUTURE DEVELOPMENTS

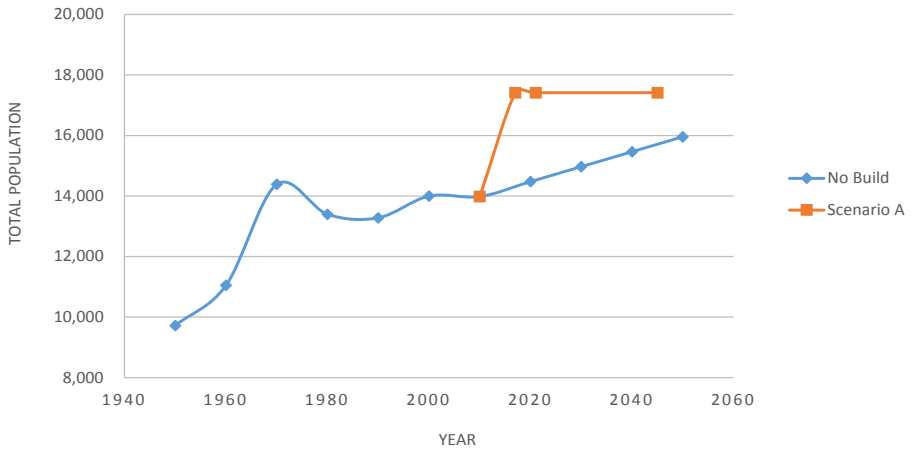


DEMOGRAPHICS & PROJECTIONS

The "Who Lives in New Jersey Housing" report provides estimates of how many persons would be expected to occupy new units. Given the proposed proportion of each type of housing unit considered in Scenario A, a weighted average household size was calculated. The resulting average household size was used in a housing-based projections formula, which also incorporated the current population, the number of new residential units, and the vacancy rate.

If the developments included in Scenario A are completed as expected, the model projects a sharp increase in population to 17,415 over the next decade. Should development cease after all developments in Scenario A are built, the population is projected to remain relatively consistent in future decades (**Chart 3**).

CHART 3: POPULATION PROJECTIONS



SCENARIO B

Scenario B is the second of three build scenarios. It incorporates the expected population growth from the residential developments included in Scenario A, as well as these additional proposed developments:

- American Properties
- Downtown Redevelopment - Strategic Infill Approach

The Highland Park Downtown Redevelopment Plan was analyzed to determine how many residential units could be expected in the downtown area. The plan presented two methods for development. One was a strategic infill approach which aimed to utilize many of the existing structures and add density by filling in vacant lots. This is expected to result in a moderate increase in residential units (60) in the downtown core. This approach was used to estimate the number of units in Scenario B.

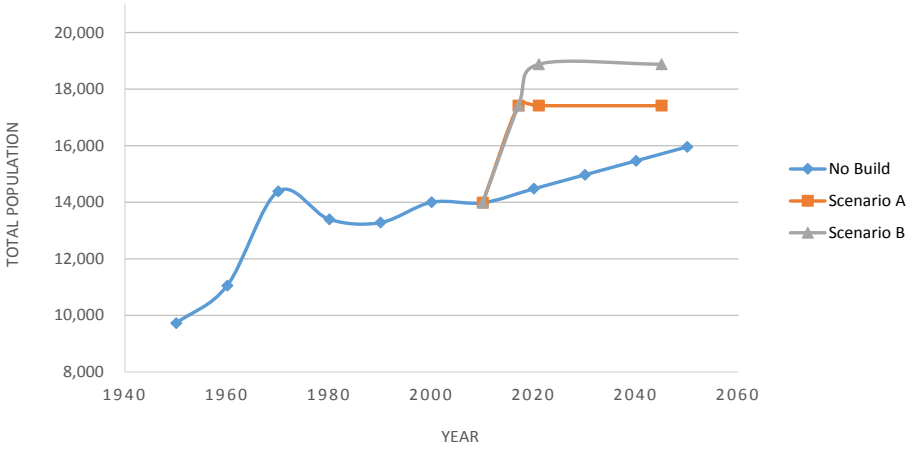
Table 2 shows the number and types of units included in Scenario B.

TABLE 2: DEVELOPMENT SCENARIOS: MIDDLE

	SFD	SFA	2-4 units	5+ units	Total
The Crossings Pulte 2					
Units by Type	12	82			94
Merriewold Kaplan the Castle					
Units by Type				196	196
Overlook					
Units by Type	16	66			82
Halpern (former Y)					
Units by Type		23			23
American Properties					
Units by Type	No Details				110
Downtown Development					
Units by Type			60		60
TOTAL SCENARIO UNITS	565				

If the developments included in Scenario B are completed as expected, the model projects the municipal population to grow to 18,882 residents by 2021. If development in the Borough does not continue past these projects, the population is projected to level out (**Chart 4**).

CHART 4: POPULATION PROJECTIONS



SCENARIO C

Scenario C is the third of three build scenarios. It incorporates the expected population growth from the residential developments included in Scenarios A and B, as well as these additional proposed developments:

- Upper/Lower Meadows/Buck Woods
- Downtown Redevelopment - Comprehensive Redevelopment Approach

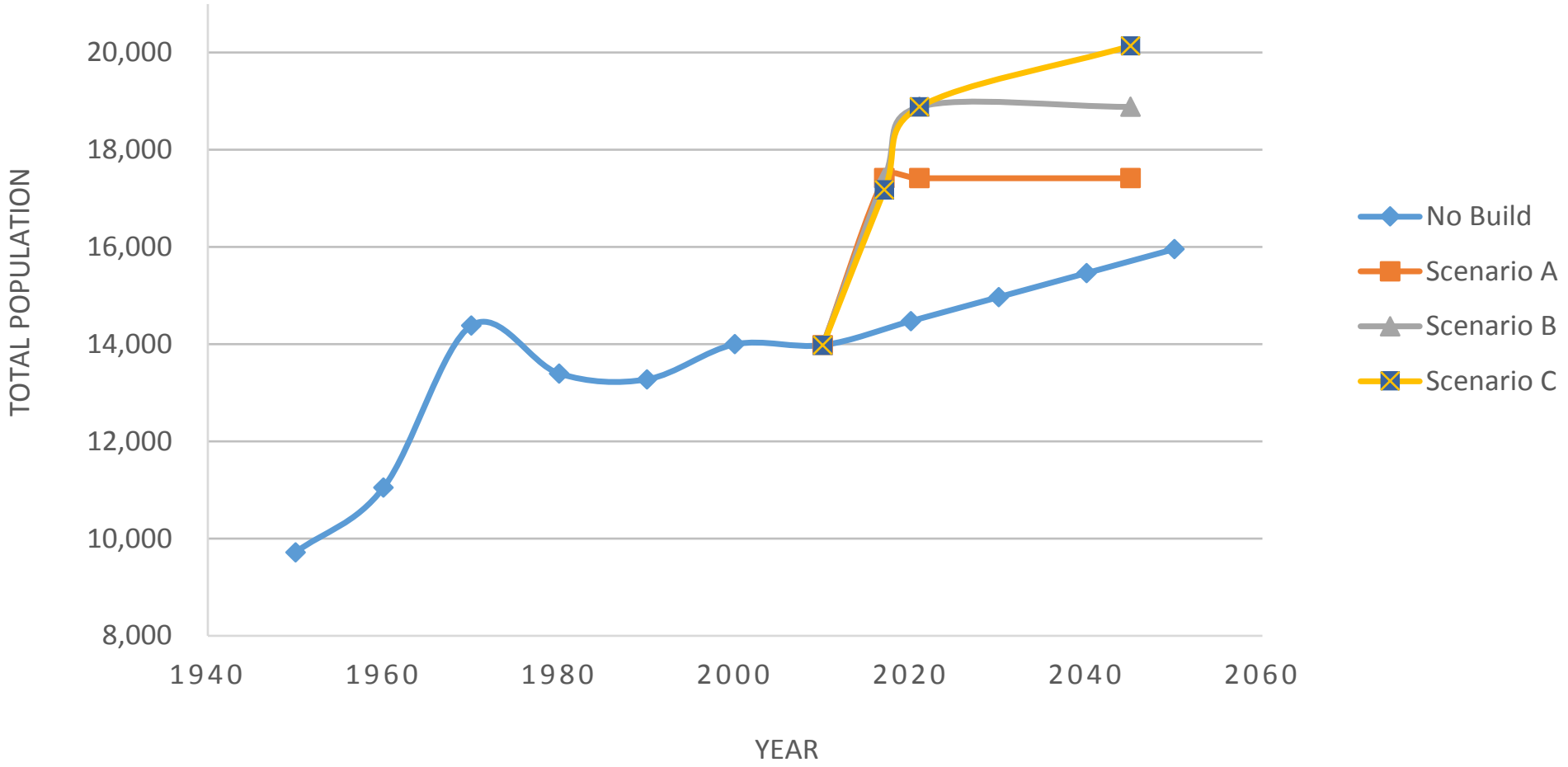
The Comprehensive Redevelopment Approach from the Downtown Redevelopment Plan aims to incorporate higher density than the infill approach. It is expected to result in a more significant increase in residential units (132) in the downtown core. **Table 3** shows the number and types of units included in Scenario C.

If the developments included in Scenario C are completed as expected, the model preditcs the municipal population to grow to 20,136 over the next 30 years. **Chart 5** shows a summary of the potential population increase given all of the scenarios presented thus far.

TABLE 3: DEVELOPMENT SCENARIOS: HIGH

	SFD	SFA	2-4 units	5+ units	Total
The Crossings Pulte 2					
Units by Type	12	82			94
Merriewold Kaplan the Castle					
Units by Type				196	196
Overlook					
Units by Type	16	66			82
Halpern (former Y)					
Units by Type		23			23
American Properties					
Units by Type	No Details				110
Downtown Development					
Units by Type			132		132
Upper/ Lower Meadows/ Buck Woods					
Units by Type				75	75
TOTAL SCENARIO UNITS	712				

CHART 5: POPULATION PROJECTIONS

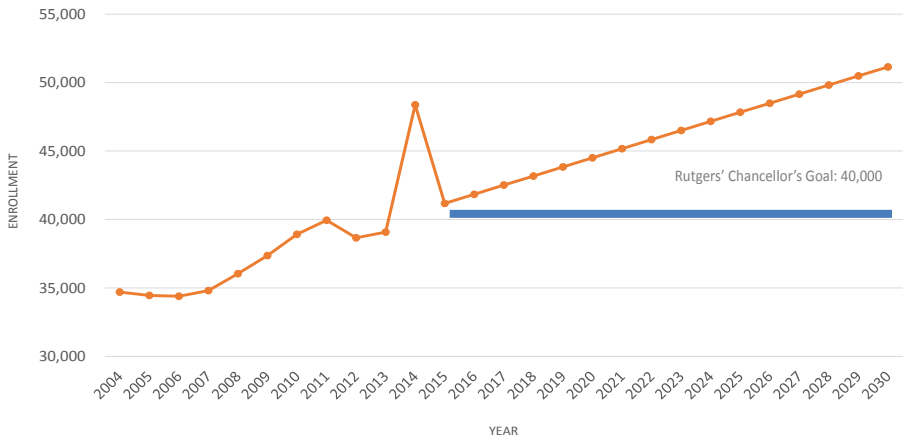


RUTGERS UNIVERSITY GROWTH

Many Rutgers University students, faculty and staff have historically resided in Highland Park. Enrollment data for the New Brunswick campus was used to project future University growth, which would likely impact the population in Highland Park. From 2004 to 2011, enrollment at Rutgers grew continuously at an average rate of 2.3 percent. In 2012 and 2013, enrollment decreased slightly. However, in 2014, enrollment increased to over 48,000 students, up from under 40,000 in 2013. This was primarily due to the merger between Rutgers and the University of Medicine and Dentistry of New Jersey.

In the project, the 2014 enrollment numbers were treated as an outlier and removed from the analysis. This resulted in more reasonable expected growth. The University has stated that its future enrollment goal is 40,000, 8,000 less than 2014 enrollment. As current students' progress in their studies and graduate, Rutgers University will enroll less students than graduate, to decrease the total enrollment to 40,000, where it will remain stable for the immediate future (**Chart 6**).

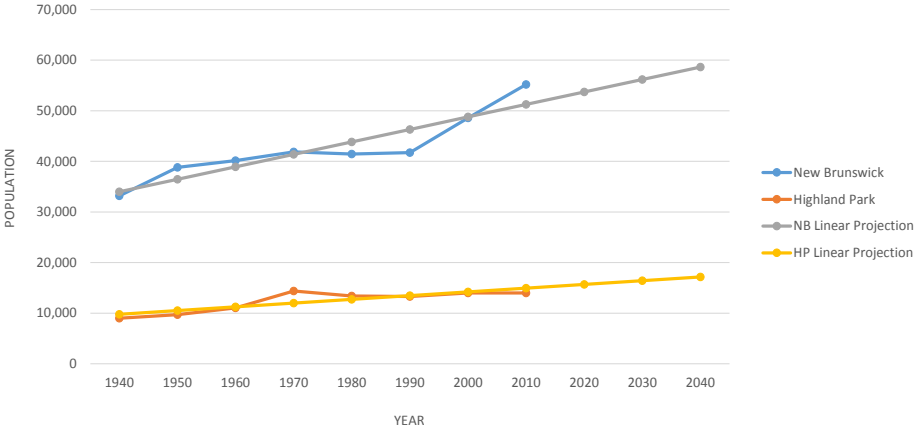
CHART 6: RUTGERS GROWTH



NEW BRUNSWICK POPULATION GROWTH

New Brunswick has seen population growth over the previous two decades, with a sharp increase in population in the past decade. The population is expected to grow considerably in the coming years and will likely surpass modest linear growth projections. New Brunswick is expected to receive, at a minimum, 327 new housing units according to a new planned development along College Avenue, which is expected to house at least 676 new residents. This is in addition to the planned high-rise HUB development across from the New Brunswick Train Station, for which expected unit and resident counts are not yet available. Comparatively, New Brunswick is expected to receive substantial high-density growth, whereas Highland Park is expected to undergo a more modest growth (**Chart 7**).

CHART 7: NEW BRUNSWICK & HIGHLAND PARK GROWTH



Source: Listokin, David, et al. Center for Urban Policy Research. Who Lives in New Jersey Housing? A Quick Guide to New Jersey Demographic Multipliers. 2006.

MUNICIPAL FINANCE

OPERATING BUDGET

The Highland Park municipal budget consists of both operating and capital expenses. The operating budget of the town determines the tax rates of the Borough, and related to capital expenses, it includes all debt service payments and occasionally a set amount of money that is transferred into a capital improvement fund.

The operating budget for Highland Park has remained stable, with a gradual increase over the past five years. In 2014, the portion of the municipal budget that was raised exclusively from local property taxes and was $10,359,470.33, while the municipal library budget was $952,154 and the Highland Park School District budget was $24,673,640.

Property taxes are based on the assessed value of properties in the Borough. Properties in the Borough are currently assessed at approximately 42 percent of market value. Because the assessed values are lower than average for New Jersey municipalities, the tax rate is relatively high, at 7.478 per $100 in 2014. When adjusted for the market value disparity, the effective property tax rate for the Borough is 3.139 percent. As shown in **Table 4**, the Borough's general tax rate is the sum of many smaller tax rates, with the majority of the money raised through property taxes supporting the school district.

CAPITAL SPENDING

In order to spend money on capital expenses, the Borough must either adopt a capital expenditure ordinance or spend user fees, which are fees generated from residents and business paying to use facility or utility. When an ordinance is proposed, it goes before the Borough Council to be approved. Borough residents have 20 days to object to the financing of the proposed project. If it passes, the town can issue a bond for the project.
The Borough is limited in its capital spending by of the amount of debt it can finance. Highland Park has a maximum debt capacity of 3.5 percent of the three year equalized assessment value. This results in a total debt capacity of $45,587,959.83. As of February 2015, $28,525,629 was still remaining, about 60 percent of the total capacity.

At present, the town includes a six-year capital spending plan as part of its yearly adopted budget. However, this plan is vague and occasionally functions as an estimate of costs and general wish-list, rather than a specific analysis of project costs.

Table 5 shows the capital expenditures of Highland Park from 2008 to 2013, as well as where the financing came from. Some of the numbers repeat from year to year, which represent repeating projects. For instance, in the grants column for the years 2011 and 2013 the $40,000 represents the acquisition of police vehicles. Similarly, under capital surplus, the $37,500 in years 2011 through 2013 was used for the acquisition of a fire truck, with costs spread out over time to make it more feasible within the Borough's budget.

FUNDING SOURCES

As discussed in **Table 5**, financing for capital investments can be acquired from a variety of sources, though most commonly through authorized debt. Assuming the municipality stays with the current debt capacity, there is no limit to how much the town can raise property taxes to pay back debts generated for capital projects.
Additionally, the Borough should continue to target grant funding to lift the financial burden of capital investments away from taxpayers. From 2008 to 2013, Highland Park successfully won grants to finance the acquisition of police cars, streetscape improvements on Raritan Avenue, and other road improvements throughout the Borough.

EXPRESSED PRIORITIES

Spending on capital projects in the Borough should remain consistent from year to year. Doing so will ensure that tax rates for residents remain stable. In an ideal scenario, the tax rate for residents will be increased slightly each year, with no major spikes or dips. The capital projects fund for the Borough should be large enough to ensure that money is available to finance large capital expenditures when they are necessitated, without it impacting resident taxpayers significantly in any single year.

Sources:
Borough of Highland Park, NJ Municipal Budgets, 2008 – 2013

TABLE 4: TAX RATES 2014							
County Tax	County Open Space Tax	District School Tax	Municipal Local Purpose Tax	Municipal Library Tax	Highland Park General Tax Rate	County Equalization Ratio	Effective Tax Rate
0.876	0.072	4.545	1.907	0.078	7.478	42.13	3.139

TABLE 5: CAPITAL EXPENDITURES 2008 - 2013						
Year	Total Cost in Current Year	Budget Appropriations	Capital Improvement Fund	Capital Surplus	Grants/Other	Authorized Debt
2013	$1,001,333	$33,333	$8,800	$37,500	$40,000	$881,700
2012	$2,968,000	-	$108,800	$37,500	$40,000	$2,781,700
2011	$968,000	-	$8,800	$37,500	$40,000	$861,700
2010	$1,792,683	-	$89,634	-	-	$1,703,049
2009	$2,882,960	-	$81,648	-	$1,250,000	$1,551,312
2008	$2,882,960	-	$81,648	-	$1,250,000	$1,551,312

INVENTORY

GENERAL & ADMINISTRATIVE

OVERVIEW

Borough Hall is tasked with the day-to-day operations and future planning for the Borough. All of the funds for the Borough are allocated to individual departments through Borough Hall. The Borough Administrator oversees Borough Hall and works on preparing capital and annual operating budgets to meet the needs of the Borough. The Administrator also works on coordination across departments, and is a primary liaison in responding to resident complaints and concerns.

The Borough allocates funds through three primary channels: the operating budget, the capital budget and by dedication by rider.

POLICE

OVERVIEW

The Highland Park Police Department is tasked with preserving peace, safety, and welfare for the citizens of Highland Park through its enforcement of Borough laws. The Department is currently served by 26 sworn officers. The Police Department currently has relatively few capital investment needs. The Department finished construction on a new building in 2014, and have been regularly replacing their vehicles for several years.

INVENTORY

The Department currently has 20 vehicles in its fleet. Half of these vehicles are older than the recommended useful life of five years. The Department purchases two new police vehicles per year, at a cost of $25,000 per vehicle. Since the Borough is small, and has short blocks with many stop signs, police vehicles must frequently brake and accelerate, reducing the lifespan of the vehicles.
The Police Department has the newest municipal building in the Borough. The new police headquarters opened in 2014. The building represents a vast improvement over the previous structure. Since the structure is new, the HVAC, electrical, plumbing, interior, and roof will not need to be replaced for at least 20 years. The building itself, under proper maintenance, can be used far into the future.
The Police Department also has various equipment that represent capital expenditures. Handguns, Alcotest machines, and Livescan fingerprint machines are an expensive component of everyday police work and require replacement over time.

WISH LIST

The Department has indicated the need for several capital investments over the next six years in order to keep the Department in efficient working order. Police vehicles will need to continue to be purchased yearly, which will result in 12 new vehicles over the next six years. The Department has also expressed a need to replace its handguns, Alcotest machines, and Livescan fingerprint machines within the next six years. One item that has not currently been requested, but may be required depending on New Jersey or Borough mandates, is the use of body cameras. It is possible that the Borough may be responsible for purchasing these items in the future in response to changes in State law.

EXPRESSED PRIORITIES

The Department has emphasized their desire to increase the size of the police force to improve its response times. This would not necessarily require the purchase of additional vehicles as of yet, due to existing flexibility in vehicle use by current officers. As the Borough continues to grow, and the need for more officers increases as the volume of calls increase, additional vehicles may be required to accommodate the demand.

Source:
Interview with Stephen Rizco (Police Chief of Highland Park). February 17, 2015.

FIRE

OVERVIEW

The Highland Park Volunteer Fire Department was established in 1899. At that time the Borough consisted of 50 to 100 residents. In the aftermath of several severe fires, the existing bucket brigade was dismantled and the more formal Highland Park Hose Company #1 was formed. The current Volunteer Fire Department (HPVFD) is made of three companies and even includes several part time staff. The Department covers the entirety of Highland Park and responds to mutual aid calls in nearby communities, such as East Franklin.

Major capital expenses for the Department include vehicles and the Fire Department building. Fire engines, though costly, have a long useful life. A fire engine usually lasts 25 years, and has significant resale value to other municipalities or overseas nations. The engines can also be repurposed as snow plows or other town utility vehicles.

INVENTORY

The Highland Park Volunteer Fire Department's fleet of vehicles consists of three fire engines, one ladder truck, three chief's vehicles, one utility vehicle, and one old police car.

WISH LIST

The Department has indicated several capital purchases as desired additions to the current inventory of gear. These items include upgrades to the air packs, gas meters, thermal imaging cameras, pass alerts, and a new chief vehicle. The Department has not purchased a new chief vehicle since 1987, instead receiving used hand-me-down vehicles from the Highland Park Police Department or Middlesex County.

EXPRESSED PRIORITIES

The Department has identified the following capital needs in order of priority: new fire engines, oxygen air bottles, and turnout gear. These items are essential firefighting equipment that the Department needs to have in order to be in compliance with national regulations, and to ensure that fire protection is delivered to the residents of Highland Park reliably and effectively.

Of the current fleet of three fire engines, one fire engine will need to be replaced within the next two years, the other two fire engines will need to be replaced in the next five years.

Air bottles are a critical piece of personal safety equipment for every firefighter. To ensure functionality and reliability air bottles must be replaced every 10 years as per OSHA & National Fire Protection Agency (NFPA) requirements. The department has a stock of 70 to 80 bottles and these are replaced on a rotating basis.

Similar to air bottles, turnout gear is essential to protecting firefighters who must enter a burning building. Currently the department receives three sets of turnout gear (the clothes used to fight a fire) per year, at a cost of $3,000 per set. The department will need more sets in the 2015 fiscal year.

Historic Photo 1922

Sources:
Highland Park Volunteer Fire Department. http://hpvfdnj.com/.
Interview with Jay Litmann (Fire Chief of Highland Park). February 13, 2015.

FIRST AID SQUAD

OVERVIEW

The Highland Park First Aid Squad is an independent C-Corporation which works in partnership with the Borough. Each municipality in New Jersey is required to have a 911 provider, and the First Aid Squad fulfills this role for the Borough. Since beginning operations in 1949, the First Aid Squad has been available to respond to emergencies 24 hours per day, 365 days a year. The Squad responds to approximately 1,200 calls per year. Many of these are joint calls with the Highland Park Fire Department. The First Aid Squad assists on fire calls by providing first aid services to both firefighters and to people affected by the fire. Usually, fire calls require all three of the First Aid Squads ambulances to respond.

Historic Photo 1952

The First Aid Squad has a yearly budget of around $100,000. The Borough contributes to the First Aid Squad budget by providing a $26,000 yearly donation and by using a budget line item for First Aid contributions. The Borough also supports the Squad through by providing workers compensation insurance, auto insurance, diesel fuel, paying the gas and electric bill for the First Aid Squad building, and dispatching services for the Squad. Maintenance and improvements to the building are the responsibility of the Squad. The land on which the building sits is owned by the Borough, and is leased to the Squad for $1.00 per year.
The First Aid Squad generates additional funds through various fundraising events and donations. The largest single source of fundraising income is from a yearly mailing campaign, where requests for donations are sent to every household in Highland Park. In recent years this mailing campaign has generated between $30,000 and $40,000. Other funding comes from memorial donations, donations for assisting with events such as the Highland Park 5K run, grant sources, and income from investments.

INVENTORY

The First Aid Squad owns one building located at 128 South 11th street in Highland Park. The building recently received a $600,000 renovation that added sleeping quarters, upgraded office space, improved social space, added showers, and improved the garage area.
The Squad owns three ambulances, purchased in 1995, 2001, and 2012, respectively. The standard replacement rate for ambulances is every five years. The Squad also owns one light duty truck from 1955, and one boat.

WISH LIST

The Squad has expressed the need for a larger, more modern building to serve as the base of operations, as well as the need to replace two of the older ambulances.

EXPRESSED PRIORITIES

The First Aid Squad has two critical capital needs. The first is a new building. The current building was built when ambulances were much smaller. As a result, storage and parking space within the garage area is very limited. The current building is also limited in its capacity to house staff. Office, sleeping, social and bathroom space is all limited. This impacts the squad's ability to attract volunteers and manage operations.
The second need is for new ambulances. The standard replacement rate is every five years, but the Squad currently use one ambulance that is 20 years old and one that is 14 years old. New ambulances would provide more reliable and effective service.

Currently there is a program encated by the federal government which created the First Responder Network Authority (FirstNet). The law gives FirstNet the mission to build, operate and maintain the first high-speed, nationwide wireless broadband network dedicated to public safety. FirstNet will provide a single interoperable platform for emergency and daily public safety communications. FirstNet will bring 21st century tools to millions of organizations and individuals that respond to emergencies at the local, state, tribal and federal levels. This program replaced an earlier program to provide a seamless broadband platform to aid first responders in a universal communications platform and the first 3 participants to sign on including New Jersey. This program should be monitored for cost implications because while the network will be built using federal dollars, it may require purchasing of new communications equipment for all of the first resopnders in the Borough.

Sources:
Highland Park First Aid Squad. http://www.highlandparkfas.com/.
Interview with Ari Leweitter (First Aid Squad President). March 27, 2015.

DEPARTMENT OF PUBLIC WORKS

OVERVIEW

The Highland Park Department of Public Works (DPW) is responsible for many tasks related to the upkeep and maintenance of the Borough. Duties include vehicle fleet maintenance, garbage collection, snow removal, and maintenance of streets, street trees, street signs, sanitary and storm sewers, water mains, and municipal buildings and grounds.

INVENTORY

1. Vehicles

The DPW uses a 32 vehicle fleet for its operations. Many of these vehicles are in good condition, however, several are nearing or have passed the end of their useful life.

CATEGORY	QUANTITY
Street Signs and Poles	105
Streets	107 (Streets Such as N. 2nd and S. 2nd are Counted Separately) / 389 Individual Road Segments
Vehicles	32
Buildings	6
Open Space	8 Usable properties/ 26 Scattered Small Parcels

2. Buildings & Grounds

There are six government-owned buildings in Highland Park. They include the Library, Borough Hall, the Senior Center, the police station, the fire station, and the Department of Public Works building. The police station, which opened in 2014, is the most recently built structure. This building also functions as the Office of Emergency Management.

FIRE HYDRANTS

Highland Park owns the majority of the fire hydrants in the Borough, with the exception of those near Donaldson Street Apartments, Treetops Apartments, and Cedar Lane Apartments. The useful life of these hydrants is not easily determined. Hydrant are typically replaced is if they are damaged, whether by a vehicle collision or other event. Thus, anticipating capital expenditures on fire hydrants is not easily anticipated.

3. Miscellaneous Items

This category includes the installation and maintenance of benches, street signs, street trees, street lighting and traffic signals.

Benches are categorized as a type of street furniture and are found along the main commercial corridor of Raritan Avenue as well as scattered throughout the Borough.

Street sign replacement costs the Borough approximately $4,000 per year, and is classified as an operating expense. Ownership varies depending on who owns the road on which the sign is located. No matter who owns the sign, however, Highland Park has the responsibility of maintaining them.

The Borough does not own any street lights, as they are all owned by the State of New Jersey or by PSE&G. If the Borough wishes to install additional lights in a particular area, it must petition either the State or PSE&G, and must provide either entity with a study showing why the lighting is necessary. The Borough would then then cover the cost of installation.

Highland Park owns a single traffic signal, located at Woodbridge Avenue and 11th Avenue, adjacent to the elementary school. All other traffic signals are owned by Middlesex County or the State and the Borough must petition either entity for new traffic signals.

WISH LIST

1. Vehicle Fleet

The Department of Public Works identifies vehicle replacement needs on an ongoing basis, with no defined criteria on when a vehicle should be replaced. Middlesex County replaces their trucks every five to seven years, while the Highland Park DPW has trucks in service that are up to 11 years old. Once a DPW vehicle has reached the end of its useful life, it is auctioned off. This allows the Borough to recuperate a portion of the vehicles cost, with the money returning into the general capital fund.

DPW Vehicle

Most DPW vehicles are currently in good condition. However some vehicles, such as the Ford Backhoe and the white tandem dump truck, are still in use but have exceeded their useful lives and should soon be replaced. An older garbage truck that is now being used as a spare will soon need to be replaced with a new truck featuring an automated arm on its body. An older pickup truck will also need to be replaced with a newer truck. These investment are part of the Department's effort to modernize its fleet.

Other vehicles, such as snow removal vehicles, are in good condition, but severe winters could take an additional toll on them in the future. The Borough is aware of this possibility, and may need to purchase additional vehicles and plows in future years.

As the winters have produced more snow and plowable events, the capital budget (and priorities) should also include ongoing line items for plows. Plows blades and all accompanying hardware impact DPW's budget with the price range of $1,500.00 for the smaller plows (pick-up trucks) up to $10,000.00 for the larger plows that are fitted to the Gargbage trucks.

2. Municipal Buildings and Grounds

The Fire Department, Senior Center and Borough Hall do not have any upcoming work scheduled at this time. However, the library is in need of a new roof. The Borough has also discussed installing solar panels on all of municipal buildings in order to reduce energy consumption.

EXPRESSED PRIORITIES

The Borough would like to continually upgrade the DPW vehicle fleet. This includes the purchase of a garbage truck with an automated arm. The DPW has also expressed an interest in the installation of underground cameras to monitor water and sewer pipes for damage and cracks.


Historic Photo 1959

A new butler building is needed to house DPW vehicles and equipment. The current building was built in 1986. At that time, individual trucks were smaller, and the population was considered to be stable. A new, larger building would be able to better accommodate larger, modern trucks and an expanded fleet. The building would be especially useful during the winter months to protect vehicles and increase their useful life.

The existing DPW building would benefit from backup generator. This would allow the DPW to continue to provide municipal services during power outages.

Sources:
Highland Park. http://hpboro.com/.
Interview with Don Rish (Superintendent of Highland Park Department Public Works). February 24, 2015.
Interview with Kathy Kovach (Borough Administrator). February 17, 2015.

PUBLIC AND SENIOR HOUSING

OVERVIEW

The Highland Park Housing Authority (HPHA) was established by a resolution with the Borough of Highland Park. The HPHA functions under the authority of the US Department of Housing and Urban Development (HUD) and the New Jersey Department of Community Affairs (DCA) - Division of Local Government Services. Due to the relatively small number of affordable units within the Borough, the HPHA has entered into a shared service agreement with the Woodbridge Housing Authority. This allows for greater provision of services that the HPHA would not be able to afford alone, including a finance dept., maintenance dept., procurement, and property management. The HPHA functions independently of any Highland Park budget or funding stream. The Borough currently contributes no local funding directly to support the mission of the HPHA. The only current support comes in the form of municipal services, such as snow removal and exterior grounds keeping done by the Department of Public Works. However, it is possible that the Borough could contribute towards capital improvements in the future. Woodbridge, for example, set aside developers' permit fees in a fund which the city then used to renovate much of its existing affordable housing stock. This is a model that Highland Park could look to as the population and affordable housing needs continue to grow.

INVENTORY

The HPHA owns two sites on South 6th Avenue, the Park Terrace Apartments and the Samuel Kronman Senior Apartments. The Park Terrace apartments contains 24 family units while the senior apartments offers 100 units for seniors and disabled individuals. The authority is permitted to maintain a maximum of 160 units. Additionally, HPHA provides over 145 housing choice vouchers for low-income residents of Highland Park (Highland Park Master Plan).

WISH LIST

The HPHA would like to see improved oversight of general external housekeeping needs, especially concerning garbage collection. Park Terrace Apartments recently changed from individual garbage collection at each unit to one centralized collection point at a dumpster. This has caused issues with the residents; they perceive the distance to walk to the dumpster to be too far and as a consequence have left bags of garbage sitting in front of their homes. The garbage collectors like the arrangement as it is less work for them. Finding a better balance could reduce feelings of resentment from residents and reduce the amount of misplaced garbage.

EXPRESSED PRIORITIES

Future needs for affordable housing in Highland Park may be limited. The most recently adopted 1999 New Jersey Council on Affordable Housing (COAH) metrics designated Highland Park as needing 31 additional units of affordable housing up to 2004. The Borough's Housing Element identified that the Borough would achieve this goal through rehabilitation of existing housing stock. Four new developments, the product of a builder's remedy lawsuit (legal action taken by developers against non-complying municipalities), should add a combined 42 to 44 new affordable units to the Borough, although not all developments have yet been approved. After the builder's remedy lawsuit was filed, it was determined that Highland Park had actually met its affordable housing obligation but had failed to file the proper documents on time. Despite these complications the Borough has approved the Pulte Crossings and American Properties developments (Highland Park Planet 2014).

The proposal goes on to estimate that Highland Park's maximum available capacity for new affordable housing units is 144 (New Jersey Council on Affordable Housing, Proposal 46 N.J.R. 924). As this is only a proposal and carries no legal authority it should be considered only as a reference point for thinking about future affordable housing needs. The Borough's achievement of the 1999 COAH obligation and the upcoming addition of affordable housing units via the builder's remedy lawsuits has largely fulfilled the Boroughs needs.

Sources:
Hersh, Pam. Highland Park Planet. 'Finally it's Final. Council Give American Properties the Go Ahead to Go Ahead.' 2014.
Hersh, Pam. Highland Park Planet. 'Highland Park Engaged in Development - for Better or for Worse.' 2014.
Highland Park Housing Authority. http://highlandparkhousing.org/.
Interview with Larry Stecker (Director of Modernization Woodbridge Housing Authority). March 26, 2015.
New Jersey Council on Affordable Housing (COAH). 'Proposal 46 N.J.R. 924.' 2014.
Orth-Rodgers & Associates, Inc. 'Borough of Highland Park 2003 Master Plan.' 2003.

LIBRARY

OVERVIEW

The Highland Park Library is an important community asset. The Library was founded in 1922, and 20,000 books were circulated within the first year. The Library moved to the current location in 1959. This building was then expanded in 1966, 1977, and 1994 as demand continued to grow.

Highland Park Library

In recent years, libraries across the country have experienced changing demands and trends, and the Highland Park Library is no exception. The Library has seen a recent dip in book circulation but an increase in rental of audio/video materials and digital books. The number of Library visits has also continued to increase along with the number of programs offered and people in attendance. To best respond to these changes, in 2012, the Library developed a strategic plan. The plan set forth priorities through 2015 which were to: invest in infrastructure, increase community involvement, increase the Library's reach, integrate technology, and ensure sustainability.

INVENTORY

The Library is located at 31 North 5th Avenue. More than 3,400 patrons visit the library each week and more than 178,000 items are circulated annually. The building consists of a large children's room, a young adult area with afterschool study space, an adult services area with work tables and internet stations, designated rooms for quiet study and computer use, and a meeting room with 70-person capacity. The most recent expansion and renovation of the building occurred in 1994 and some repairs are currently necessary. In 2015, a capital ordinance was passed to allow for bonding for a much-needed roof repair.

WISH LIST


Historic Photo 1959

To further the implementation of its strategic plan, the Library hired architects to assist in planning an interior retrofit. The retrofit would reposition the circulation desk, allowing for more space in the entrance of the building. The children and adult sections would also be reorganized to allow for better visibility and space for a new conference room and study. Additionally, the computer area would be expanded with a new laptop counter, the multipurpose room would be renovated and the bathrooms would be renovated and made more energy and water efficient. The Library believes these retrofits would best address their changing needs.

Additionally, the Library has been looking into the creation of a new computer network. The current computer system can only do open source work, with no word processing capabilities. A new network would consist of new software and hardware for all Library computers.

EXPRESSED PRIORITIES

The current priority for the Library is the interior retrofit. A budget for this project was created in 2013 and to ensure that the Library remains a positive community asset it is ideal that the retrofit be undertaken within the short-term.

Source:
Interview with Jane Stanley (Library Director) and Marc Mappen (President of the Board of Directors). February 13, 2015.

PARKS & RECREATION

OVERVIEW

The most notable parks in Highland Park, Johnson Park and Donaldson Park, are both owned by Middlesex County. Together these parks make up 563 acres of open space in the Borough and provide recreational fields, basketball courts, tennis courts, playground equipment, picnic groves, and other amenities for nearby residents. The Borough owns several additional small parks and areas of open space.

Nature Trail - Donaldson Park

INVENTORY

The open spaces owned by the Borough are much smaller and less well-known than the County parks. There are eight usable recreation spaces that the Borough owns and maintains:

- Valley Place Ravine and Ayres Beach, a 5 acre area adjacent to Donaldson Park;
- The Meadows, 16 acres of wooded area and trails also adjacent to Donaldson Park;
- The Environmental Education Center, 1.35 acres along River Road;
- Native Plant Reserve, 3.9 acres adjacent to the Environmental Center;
- Molimock Graff Park, a 1 acre park with playground Equipment on Karsey Street;
- Felton Park, a 0.1 acre tot-lot on Felton Avenue near Harper Street;
- Centennial Park, a 0.1 acre streetscape improvement at the corner of River Road and Raritan Avenue, containing stormwater infrastructure; and
- Veterans Park, a 0.7 acre section of open space on the triangle at South 6th Street and Woodbridge Avenue.

These open space areas are all in fair to good condition and should be sufficient even as the town continues to grow. The Borough is fortunate to be host to two large County parks for which they have no financial obligation. The combined acreage of these eight spaces, added to the county open space, results in a total of 591.9 acres of recreational open space in the Borough. Thus, even if the population grew to the Scenario B projected total of 18,882 (taken from the 2045 Scenario B projection), there would still be over 30 acres of open space per 1000 Borough residents.

WISH LIST

While the Borough parks and open spaces are in generally good condition, there are sections which could use new benches or surfacing. The Felton Park Tot-Lot has a poorly maintained asphalt surface, with patches of grass in some areas. The Tot-Lot would benefit from resurfacing, ideally with a more permeable surface. The benches in Felton Park should also be replaced along with the benches and picnic tables at the Native Plant Reserve. A final recommendation is to add signage to the Native Plant Reserve. This area is a potentially untapped resource along River Road as there is no signage that alerts potential users of its existence. The signs identifying the flowers within the open space are also primitively produced and would benefit from replacement or removal.

Source:
Highland Park Environmental Resource Inventory.

SENIOR CENTER

OVERVIEW

The Highland Park Senior Center provides a meeting place and services for elderly residents of the Borough. It offers social events, educational classes and other activities. It also provides transportation services within and beyond the Borough. An 18-passenger bus travels around the Borough to grocery stores and other locations, while a van takes residents to medical appointments outside of Highland Park. Trips to destinations like Atlantic City and Radio City Music Hall are also offered.

INVENTORY

The Senior Center building is located at 220 S. 6th Ave. The Center owns the building, as well as the aforementioned 18 passenger bus and a van for out-of-town transport.

WISH LIST

The Center would like a new medical van with a lift to transport seniors to out-of-town appointments. The vehicle currently in use does not have a lift, thus a lift-equipped van would better serve those in need of mobility assistance. Blinds in the Senior Center building may also need to be replaced, and can often incur a heavy expense. The Center does not anticipate any large expansion projects in the next six years.

Sources:
Interview with Kim Perkins (Senior Center Director), 4/27/15
Highland Park Senior Center website, http://www.hpboro.com/index.aspx?NID=70

Senior/Youth Center

WATER

OVERVIEW

Much of the water infrastructure for Highland Park was installed when the Borough was first developed in the early 20th century. The oldest pipes are estimated to have been installed in 1897. The Borough owns and maintains all water pipes within its boundaries. Municipal water is purchased from the Middlesex Water Company. The original water mains are made of cast iron, though some small sections have been replaced with ductile iron following breaks in the pipes.

The Borough has expressed concern that the current capacity of the water system may be insufficient should dramatic population growth occur over the next several decades. Insufficient capacity would require expensive upgrades, including the possibility of replacing long sections of water mains with pipes of a larger diameter. The closer the added units and service connections are to the large mains, the easier it would be to utilize the current system without increasing capacity. However, if population growth occurs in areas served by smaller pipes, it is possible that capacity would need to be increased. Fortunately, four of the major proposed developments in Highland Park are proximate to large mains along River Road and Raritan Avenue, as seen in **Map 3: Water Infrastructure and Development.**

Another issue regarding water infrastructure is the firm capacity of purchased water. Firm capacity refers to the amount of water Highland Park can receive from Middlesex Water and is based on regulations set forth by the New Jersey Department of Environmental Protection (NJDEP). NJDEP determines the amount of water municipalities can purchase and recommends maintaining a reserve, or buffer, in its firm capacity. Currently, Highland Park has an agreement with Middlesex Water to purchase between 1.2 and 2.4 million gallons per day (MGD) without penalty. If necessary, Highland Park can purchase up to 4.0 MGD with penalty. The largest peak daily demand to date has been 1.872 MGD, which was an average of approximately 130 gallons per person (see the attached graph.) Assuming that the 30 year population projected in Scenario B of 18,882 is realized, the Borough would need to purchase 2.45 MGD to meet peak demand. As the population grows over the next 30 years, a new contract should be negotiated to allow for the purchase of more water. Fortunately, the firm capacity for the Borough should be sufficient.

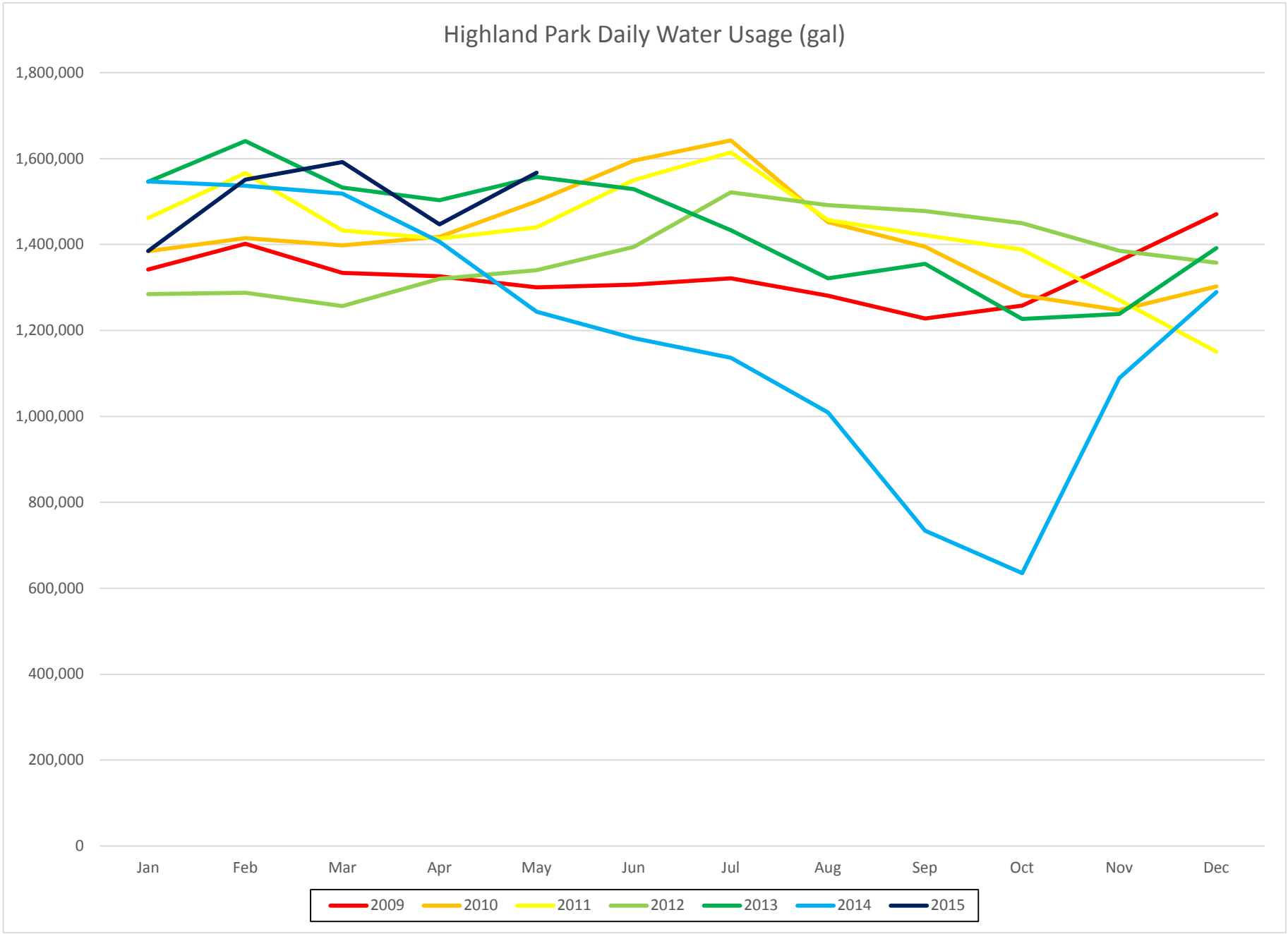
Highland Park currently faces two issues related to water infrastructure.

- Water Main Breaks - The Borough experienced eight water main breaks in 2014. Many of the older water pipes were installed in the early 20th century and are made of brittle cast iron. These aging pipes are susceptible to breaks caused by ground heaving due to freezing and thawing during cold weather, thermal expansion and contraction of the pipe during hot and cold weather events, and water hammers. A water hammer is a dramatic change in pressure that can occur when a hydrant or other major outflow is open or closed. These may occur during fire suppression activities and during illegal hydrant openings. Sudden changes in pressure from the Middlesex Water Company supply pipes can also cause water hammers. Brittle, old water mains are also stressed by heavy truck traffic on overlying roads, as well as by inadvertent impacts from road improvement projects. Water main breaks are problematic for numerous reasons, including the cost of repairing breaks, water service outages for nearby residences, and the chance for contaminants to enter the system.

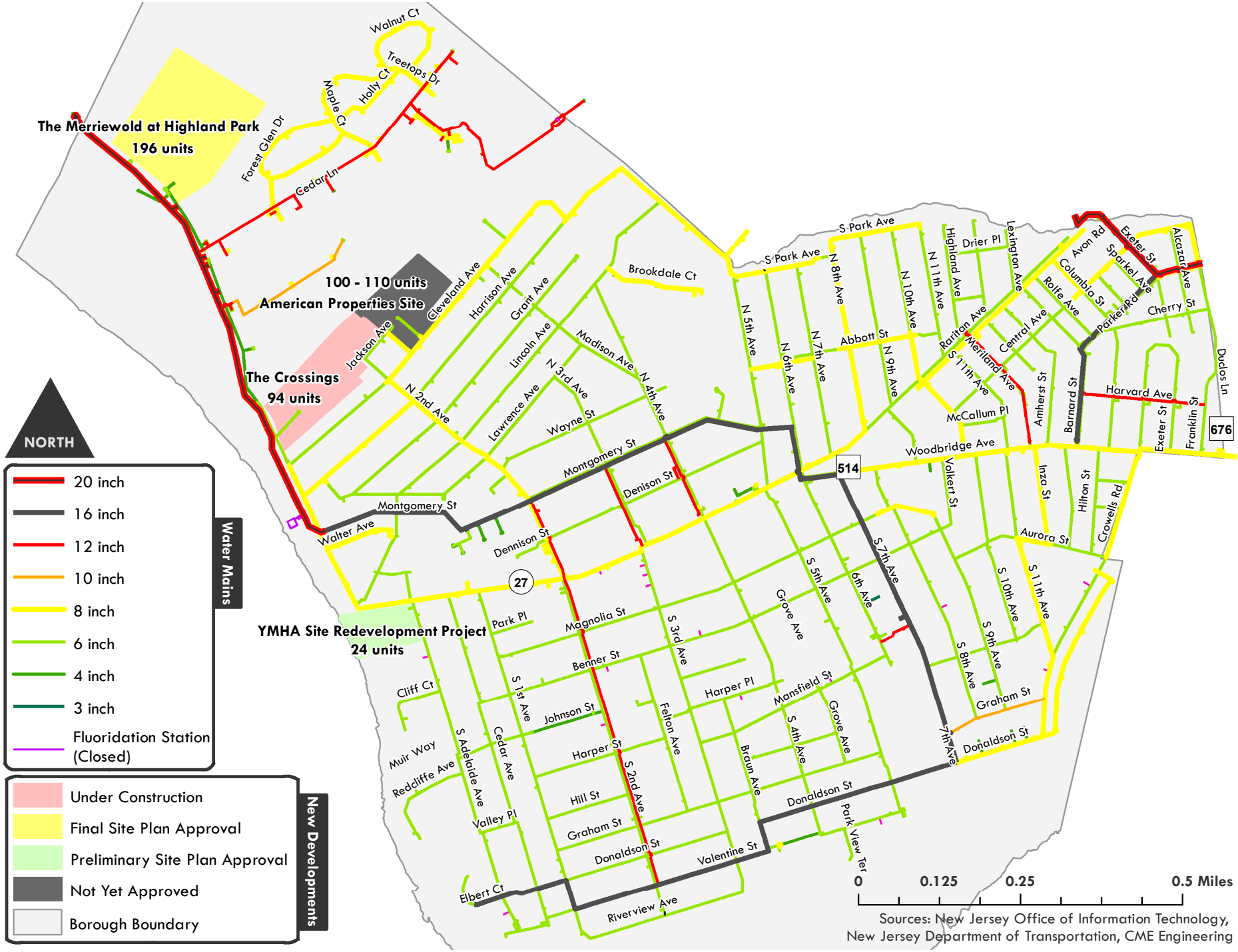
- Faulty Connections to Private Residences - While the Borough owns the water mains, it does not own the connections to private residences. Residents are only billed for the amount of water that reaches the meter connected to their home, so a leaky connection does not affect their bill. However, there is a current discrepancy in the amount of water purchased by the Borough and the amount of water billed to the residents. It is believed that water is leaking out of the system through faulty connections between the water mains and private residences. No regulatory framework exists for acquiring the connections to the home, and installing new meters at the connection is cost-prohibitive and would be unpopular with residents.

The Borough has made efforts in recent years to improve water infrastructure. Between 1996 and 2003, the Borough cleaned and relined all municipal water pipes with concrete. Over time, iron in the water supply had reacted with the cast iron pipes resulting in mineral deposit which reduced pipe capacity. The cleaning removed these deposits, and the cement lining serves as a barrier between the minerals in the water supply and the cast iron pipe, ensuring that future deposits will not occur. This project will extend the serviceable life of the pipes and ensures maximum flow.

The Borough has also installed valves at numerous water pipe intersections. This allows the Borough to close off smaller sections of pipe, reducing the number of homes that will lose water service should a break occur.


Highland Park Daily Water Usage (gal)
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2009
2010
2011
2012
2013
2014
2015

MAP 3: WATER INFRASTRUCTURE & DEVELOPMENT



WISH LIST

- **Water Tower** - The Borough has expressed interest in the construction of a water tower. A water tower can reduce the impacts of water hammers on the system by absorbing sudden changes in pressure. However, the process of siting, engineering and constructing a water tower may cost the Borough upwards of $1,000,000. The project would not alleviate other significant factors in water main breaks, most notably freezing and thawing. Siting a water tower in the Borough would be problematic as well. A water tower should be placed at or near the highest point in the Borough, with a buffer between the tower and the nearest residences. However, the highest point in the Borough is located in the Triangle area between Woodbridge Avenue and Raritan Avenue. This area is largely residential and has a limited number of small vacant parcels, as shown in Map 2: Future Developments.

- **Replacing Existing Water Pipes** – According to the American Water Works Association, a standard cast iron water main is has an expected serviceable life of 130 years. Based on this figure, the Borough would have approximately 22 miles of water pipe due to be replaced over the next 45 years **(Map 4: Age of Infrastructure)**. The oldest pipes, estimated to have been installed in 1897, would be due to be replaced by 2027. However, the concrete pipe lining project undertaken by the Borough should extend the serviceable life of the pipes. The degree to which the serviceable life will be extended is not known. Since all municipal pipes were lined, it is not necessary for the Borough to begin replacing cast iron water pipes at this time. However, the Borough should be cognizant of the future need to replace the pipes. Cast iron and older ductile iron pipes will need to be replaced with new ductile iron pipes. Given the quantity of older water pipes in Highland Park, the costs of large-scale replacement will be significant.

EXPRESSED PRIORITIES

The cost and siting issues associated with installing a water tower makes such a project currently infeasible. All water pipes in the Borough are currently within their serviceable life, however, the Borough should be prepare to make significant investments in future decades as the pipes continue to age.

Sources: Interview with Bob Fullagar (Middlesex Water). March 30, 2015.
Interview with Bruce Koch (Highland Park Municipal Engineer). March 6, 2015.
Interview with Don Rish (Superintendent, Highland Park Department of PublicWorks). February 24, 2015.
Public Water System Deficit/Surplus. http://www.state.nj.us/cgi-bin/dep/watersupply/pwsdetail.pl?id=1207001.

STORMWATER

OVERVIEW

Little information is available for storm water infrastructure in the Borough. Existing maps and inventories of stormwater pipes are outdated and incomplete.

According to the FEMA Flood Insurance Rate Maps, the majority of Highland Park is relatively safe from flooding. Donaldson and Johnson Parks lie within the 100-year flood zone. Fortunately, these areas have been preserved as open space and are maintained by Middlesex County, so there is no financial or structural risk to the Borough from flooding in the parks. Small 100-year flood zones are also present along streams in the northern and northwest portions of the Borough.

While the flood risk is low, the Borough is not immune to stormwater management issues. Storm sewers are subject to water intrusion from illegal hookups pipes and groundwater intrusion through faulty connections. This problem is not easily addressed by a capital project.

The Borough has green stormwater infrastructure installed along Raritan Avenue. These rain gardens and planters help slow the percolation of stormwater into storm sewers.

WISH LIST

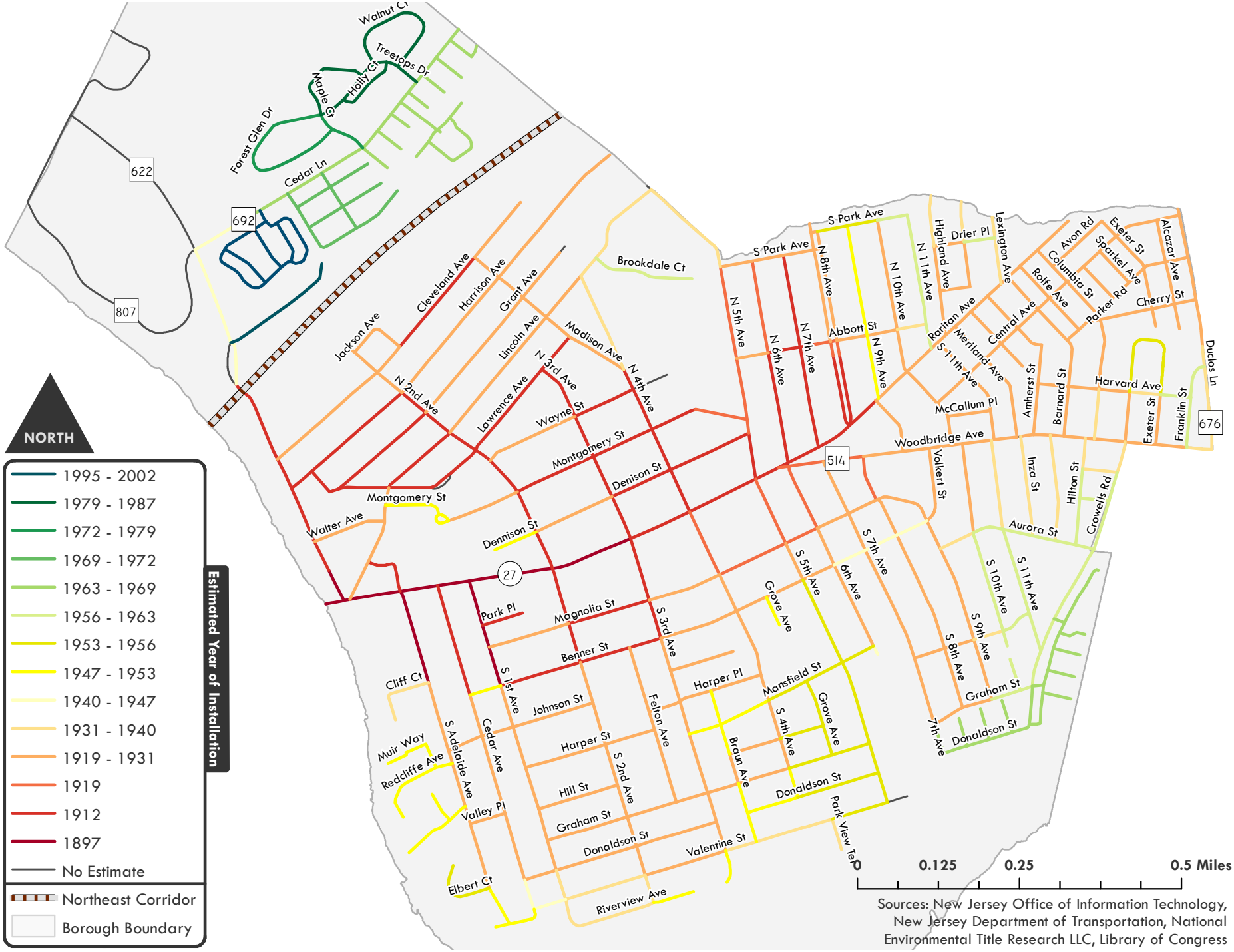
The Borough should devote resources to gathering information, including mapping, on the underground stormwater system. With this information, the Borough will be able to target areas of stormwater infrastructure in need of capital investments. The Borough should also be diligent in identifying opportunities for installing green stormwater management infrastructure. It should also purchase cameras and develop a systematic program for short term monitoring of the water and sewer systems. Based on the findings, it can develop a long range plan for addressing any issues/problems and residential needs and offer solutions for repairs that would fall on the property owner to fix and can be modeled after the sidewalk improvement program.

EXPRESSED PRIORITIES

The Borough has stated that it will explore opportunities for installing additional green stormwater infrastructure.

Source: FEMA NFIP Flood Insurance Rate Map
Interview with Bruce Koch (Highland Park Municipal Engineer). March 6, 2015.

MAP 4: AGE OF INFRASTRUCTURE



SANITARY SEWER

OVERVIEW

While the Middlesex County Utilities Authority (MCUA) treats wastewater from Highland Park, the Borough owns and maintains its own sanitary sewer lines beginning at the three MCUA metering chambers located at Cleveland Avenue, Donaldson Park, and River Road. The metering chambers measure the amount of wastewater produced by Highland Park for billing purposes.

Sanitary sewers pose unique maintenance challenges for municipalities. Fissures and holes form due to normal wear and tear on the pipes. Additionally, wastewater decomposes as it runs through the gravity-fed pipes and emits hydrogen sulfide gas, creating sulfuric acid which deteriorates the pipes.

Sanitary sewer lines in the Borough are in a decent state of repair. Between 2000 and 2005 Highland Park sent a remote camera through its sanitary sewer pipes to identify areas in need of repair. The Borough then regrouted all of the sewer lines. Regrouting fixed cracks and holes in the lines to prevent sewage outflow and to prevent groundwater from coming into the sanitary sewer system. The project will extend the serviceable life of the sewer lines.

The Borough has expressed concern that current sewer capacity may be insufficient in the face of future population growth. System capacity depends on where population growth occurs in Highland Park and where the sewage is discharged. There is a well-documented, regulated permitting process to ensure the sanitary sewer system can handle the wastewater expected from a new development. First, the developer must get Borough approval to build. The Borough must then get approval from MCUA to certify the treatment of wastewater from the new development. Then, MCUA must get approval from the New Jersey Department of Environmental Protection.

At present, Highland Park's sanitary sewer system has sufficient capacity to meet demand. However, the system is continuously challenged by inflow issues, when rainwater finds its way into the sanitary sewer instead of the stormwater sewer. Inflow puts an additional burden on the sanitary sewer and reduces its capacity during rain events. The sewer system is designed to handle a certain amount of water inflow and infiltration; approximately 2.5 times the dry weather flow. When the wet weather flow is significantly higher than the dry weather flow, it serves as an indication that the sanitary sewer is experiencing too much rainwater inflow which will eventually cause the sanitary sewer to overflow.

The main cause of inflow is illegal sump-pump and gutter hookups. The Borough is unable to document and regulate these connections when they occur inside homes, as is often the case with sump-pumps. In addition to decreased sewer capacity and potential overflow, excess inflow also costs Highland Park more money, as it is part of the effluent that MCUA treats.

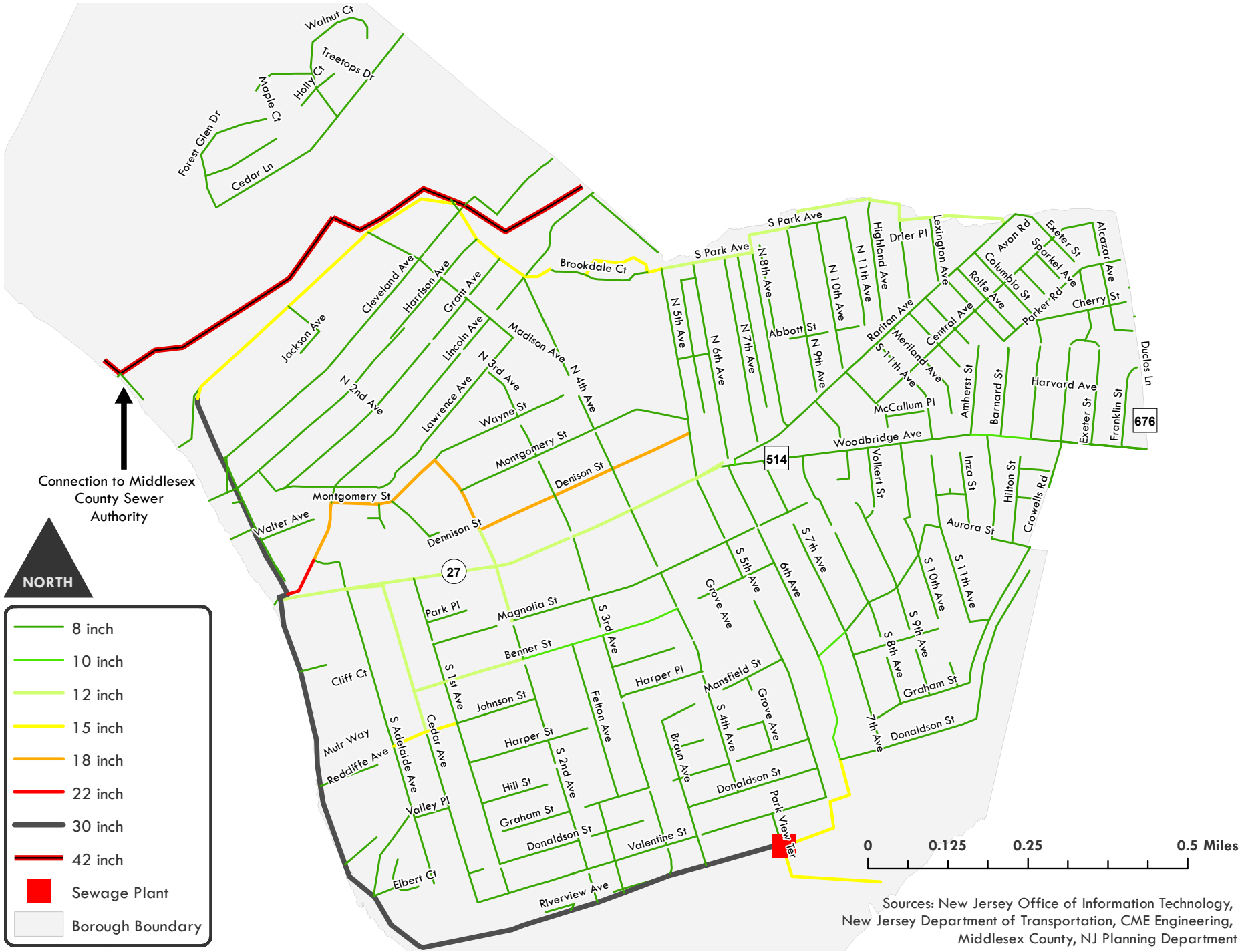
To give an example of Highland Park's sanitary sewer and inflow problem, in summer of 2014, the dry-weather flow of the sanitary sewer was about 766,000 gallons per day. In April of 2014, during a heavy rain event, the wet-weather flow reached over 6,000,000 gallons per day. This is approximately eight times the dry weather flow for this period, which means that Highland Park has a serious inflow problem. This rain event also resulted in raw sewage overflow and backups into homes which is a severe problem that Highland Park must remedy, either through increasing its sanitary sewer capacity or decreasing inflow and infiltration into its sanitary sewer system.

WISH LIST

A section of 30-inch sanitary sewer main running along the Raritan River is exposed next to the NJ Route 27 bridge. Without any insulation, this section of pipe is subject to temperature fluctuations which can cause thermal expansion and contraction and lead to cracking. The pipe should be insulated with the construction of a retaining wall the addition of fill to cover the pipe. The retaining wall will ensure the fill remains in place on the steep riverbank.

Sources: Interview with Bruce Koch (Highland Park Municipal Engineer). March 6, 2015.
Interview with Don Rish (Superintendent, Highland Park Department of Public Works). February 24, 2015.
Interview with Victor Santamarina (Plant Superintendent, Middlesex County Utility Authority). April 7, 2015.

MAP 5: MUNICIPAL SANITARY SEWER SYSTEM



Sources: New Jersey Office of Information Technology, New Jersey Department of Transportation, CME Engineering, Middlesex County, NJ Planning Department

STREETS

OVERVIEW

Highland Park owns all roads within the Borough except for one state road, NJ Route 27, and five county routes, Woodbridge Avenue, River Road, Duclos Lane, Cedar Lane, and Johnson Park Road. Maintenance on Borough-owned roads are performed in one of three ways: contracting with a nearby municipality to do the repair, the cheapest of the three options, sending repairs out to bid to private contractors, or receiving State funding and/or assistance on the road. The current methodology for determining which roads are in need of repair is a visual inventory conducted by experts within the Department of Public Works.

PASER METHODOLOGY

To help assess the overall quality of the roads in Highland Park, a quality survey was conducted for each local road segment throughout the Borough, excluding county and state roads. The PASER methodology was selected to help evaluate the pavement surface condition using qualitative, visual data collection (**Map 6**). A guide from the Wisconsin Transportation Information Center features a comprehensive description of the method, photos to use during evaluation, and a detailed explanation of each type of surface damage. Roads are given a score from 1-10, with the following description:

- Rating 9 & 10 - Excellent - No maintenance required
- Rating 8 - Very good - Little or no maintenance required
- Rating 7 - Good - Routine sealing recommended
- Rating 5 & 6 - Fair/Good - Preservative treatments required
- Rating 3 & 4 - Poor/Fair - Structural improvement required
- Rating 1 & 2 - Failed/Very Poor - Reconstruction required

Damage to Borough roads is caused by two main factors: poor weather conditions and resulting road maintenance, including plowing and salting, and heavy vehicle loads. The timing of road deterioration depends on weather conditions, quality of materials, as well as other factors. However, once deterioration begins, pavement often declines rapidly. **Figure 1** depicts the typical pattern of deterioration if a road is not repaired throughout its life.

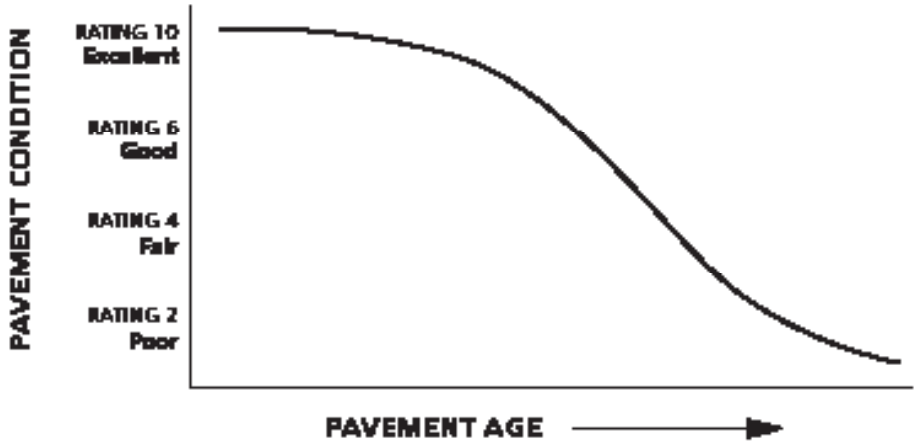


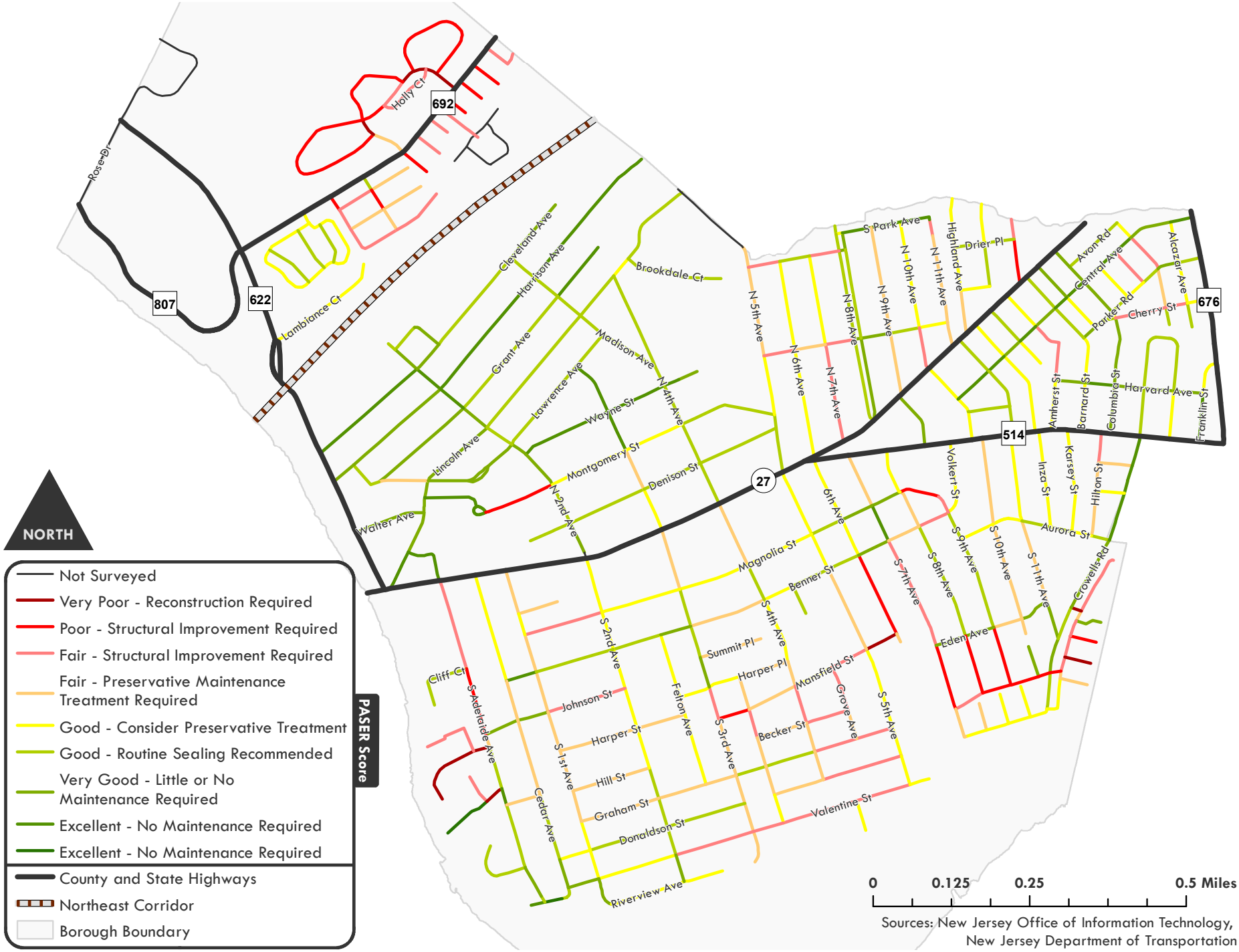
Figure 1: Taken from PASER Guide Page 14

The PASER methodology specifies 4 types of asphalt damage:

- **Surface Defects**: Impacts on the texture and character of the asphalt, including raveling, flushing, and polishing.
- **Surface Deformation**: Displacement or warping of material, including rutting and distortion.
- **Cracks**: Breaks or splits in the asphalt. There are many types of cracks ranging in severity, including transverse cracks, reflection cracks, slippage cracks, longitudinal cracks, block cracks, and alligator cracks.
- **Potholes/Patches**: Includes holes, loss of pavement, and asphalt replacement on existing road segments. Some patches can appear smooth and well-covered, but indicate that underlying damage still remains.

The following information was recorded in the PASER survey of Borough road segments: PASER score, material (asphalt or concrete), and whether each of the aforementioned four types of road damage was present. The results provided insight into the overall condition of the roads which can serve as guidelines for future investment.

MAP 6: PASER SCORING



While the survey did not identify any failed road segments, eight percent were determined to be in poor or very poor condition. Roads in poor condition were concentrated in the most northern and southern portions of the Borough. The majority of the segments were in the middle range of the PASER scale rankings. 27 percent of the segments were found to be in fair condition and 41 percent in good condition. The best road segments were found to be in very good or excellent condition, which comprised 23 percent of the road segments. **Table 6** below summarizes the findings.

TABLE 6: ROAD SURVEY SCORES

PASER Score	Number of Road Segments	Percentage
1 - Failed	0	0
2 - Very Poor	11	2.5
3 - Poor	24	5.4
4 - Fair	51	11.5
5 - Fair	71	16.0
6 - Good	87	19.6
7 - Good	94	21.1
8 - Very Good	61	13.7
9 - Excellent	39	8.8
10 - Excellent	2	0.4

In addition to assigning a PASER score for each road segment, the survey also identified the presence of key damage factors. **Table 7** below provides a summary of the assessed damage.

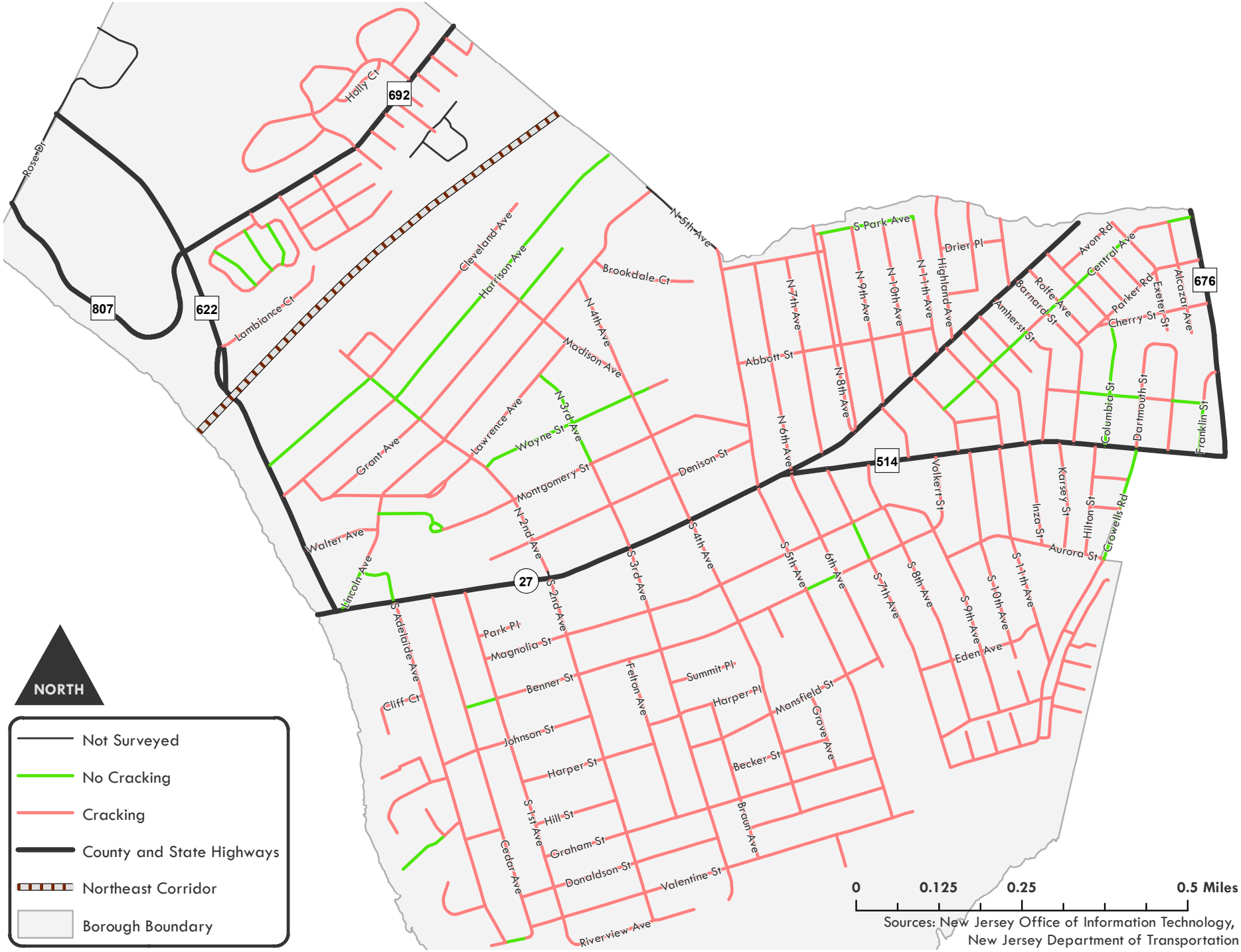
TABLE 7: DAMAGED ROADS

Damage Type	Percentage of Road Segments Affected	Number of Affected Segments
Cracks	89.1	392
Surface Defects	54.5	240
Surface Deformation	20.2	89
Potholes/Patching	58.6	258

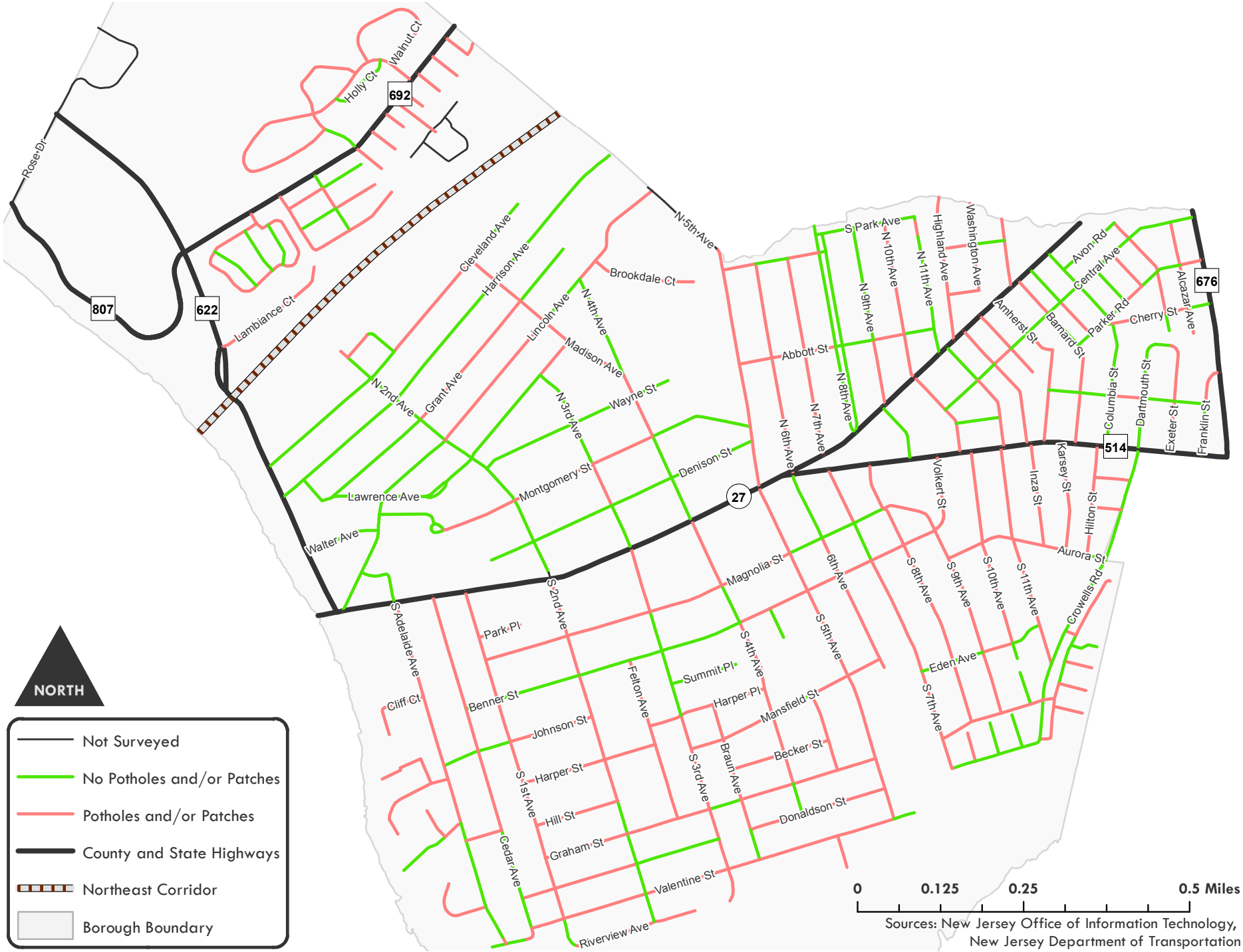
Map 7: Cracking, identifies where cracks were found in road segments throughout the Borough. Cracks form for a number of reasons, most commonly age, weather (freezing and thawing patterns), heavy vehicles, and excessive stopping and starting (often at intersections). 89 percent of the segments were found to have cracks. Although this metric does not measure the extent of the cracking, types of cracks, or the severity of the cracking, road quality tends to deteriorate quickly after damage begins to show. Therefore, it would be cost-effective for the Borough to fix cracks early to extend the life of the asphalt.

Next, **Map 8: Potholes & Patching**, identifies where either potholes or evidence of patching is found throughout the Borough. Potholes typically form from heavy loads (i.e. trucks), poor drainage, fatigue, or inadequate material strength. At least 59 percent of all Borough roads had some type of potholes or patching with a notably high presence of this type of road damage in the southern portion of Highland Park. The map does not indicate the number of potholes, the quality of the patching, or any other indicator of damage extent; it merely specifies whether the damage exists. In addition to being evidence of structural damage, potholes can create obstacles for drivers and safety hazards for pedestrians and bicyclists. An abundance of potholes can also be a nuisances for residents and may negatively impact land values.

MAP 7: CRACKING



MAP 8: PATCHES & POTHOLES



The third map, **Map 9**, shows where road surface deformation was found in Highland Park. This type of damage usually forms from displacement of unstable material or traffic compaction in certain portions of the road segment. Only 20 percent of road segments had evidence of this type of damage, which can create particularly hazardous walking, bicycling, and driving conditions. Although minor surface deformation can be fixed with patching, more severe forms may require complete reconstruction. There is a notably high concentration of surface deformation in the northern most portion of the Borough, west of the Northeast Corridor rail tracks. Older sections in the south also show some signs of deformation.

The last type of damage assessed was surface defects, which are identified in **Map 10**. Surface defects are usually the result of asphalt hardening due to aging, insufficient asphalt content, or conditions during cold weather construction. Approximately 55 percent of all Borough road segments displayed evidence this type of deterioration. Some types of surface defects require a simple seal coat or skid-resistant aggregate, which is much less expensive to complete compared to replacing the segment. Minimizing surface defects helps to preserve the structural integrity of the material. Surface defects tend to become clearly visible in PASER ranking 6 and below, and addressing this type of damage may delay more severe forms of future damage.

This assessment of road quality is useful for capital improvements planning, but is not entirely comprehensive. Multiple surveyors conducted the assessment, so there is the potential for inconsistencies in the PASER ratings across the Borough. In addition, no road segment is entirely consistent in its damage. Therefore, averaging is necessary when categorizing damage in a localized area. It is also important to note that roadway engineers were not present in this review, so the PASER ratings may not be entirely accurate or up to professional standards. Regardless, the information collected during the road quality survey helps quantify user perception and will help the Borough make informed decisions on which road segments to improve or replace in conjunction with other capital improvements requiring construction along roadways.

WISH LIST

The Borough should review and repair roads on a regular basis to prevent rapid deterioration and reduce the need for replacement, which is ultimately more costly than routine maintenance. Structural damage such as potholes, damaged patches, and large cracks can be hazardous for bicyclists and pedestrians, and may damage vehicles. Perceived poor road quality may also have a negative effect on home values in addition to being a source of frustration for residents. Lastly, the road damage is not evenly distributed throughout the Borough, and is particularly concentrated in the development off of Cedar Lane in the north and throughout the southern neighborhoods. Maintenance should be done equitably in an effort to serve as many residents as possible.


Concrete Road Segment


Alligator Cracking


Potholes & Deteriorating Patching

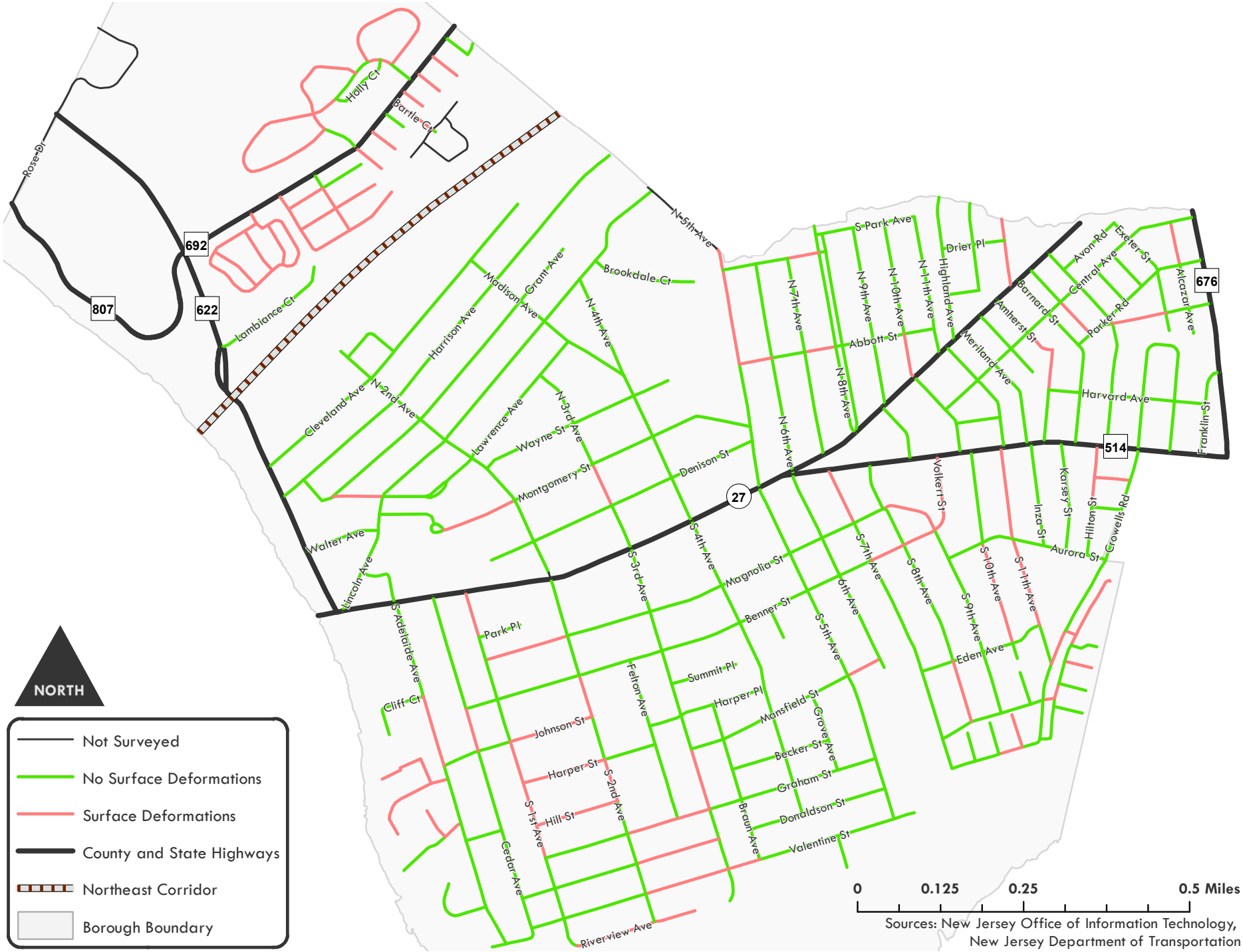

Cracking


Extensive Potholes

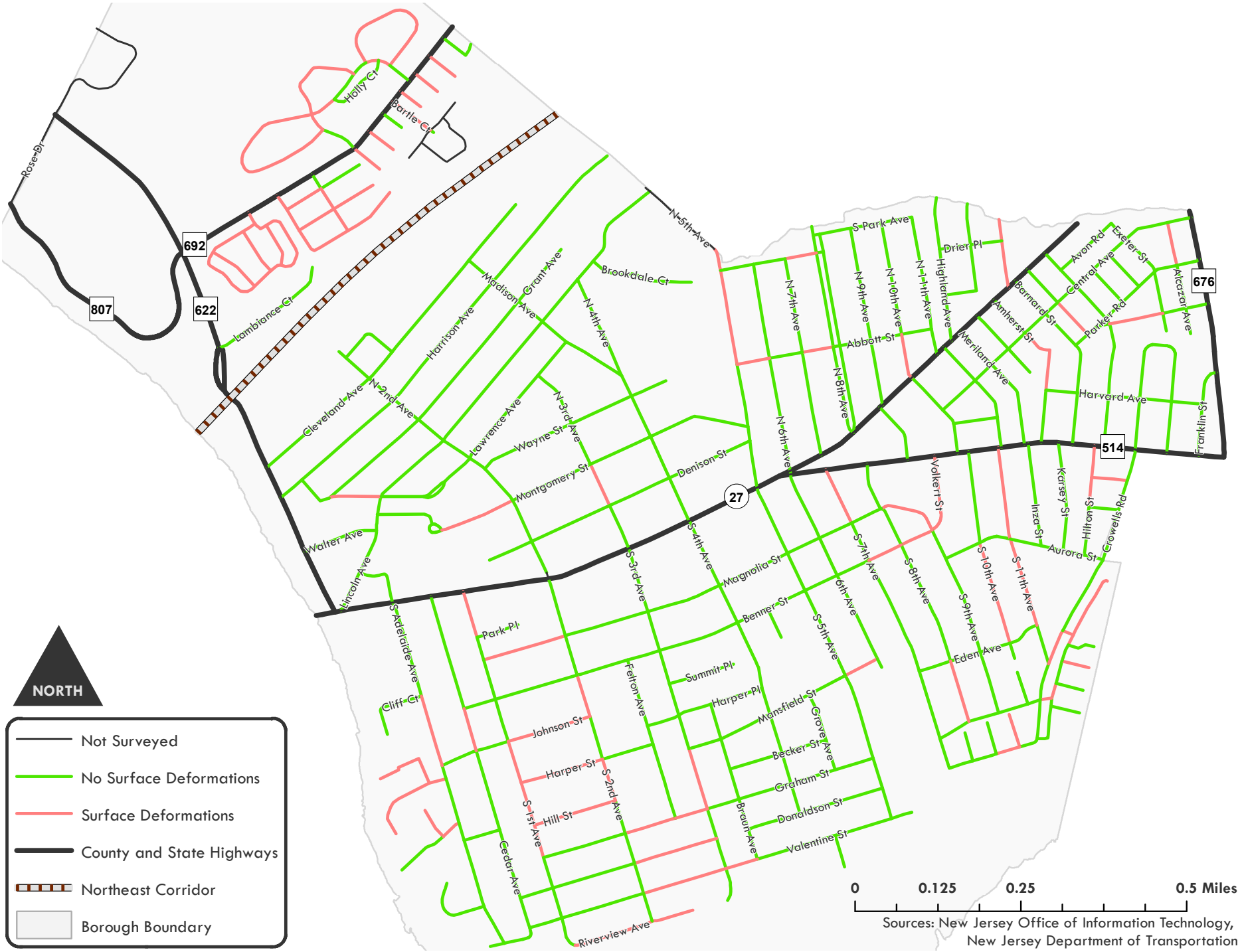

Surface Defects and Cracking

Source:
"PASER Manual: Asphalt Roads." Transportation Information Center, University of Wisconsin-Madison. Madison, WI: 2012. Accessed March 2015. http://www.apa-mi.org/docs/Asphalt-PASERManual.pdf

MAP 9: SURFACE DEFORMATION



MAP 10: SURFACE DEFECTS



BIKEWAYS

OVERVIEW

The compact size of Highland Park, its proximity to the major employment center of New Brunswick, and the generally light through-traffic along side streets makes the Borough a bicycle-friendly community. It is not uncommon to see cyclists traversing the Borough's side streets or traveling through the parks. The Borough owns a few bicycle paths near Buck Woods and the Meadows, but the majority of the bicycle infrastructure used by Highland Park residents is not owned by the Borough.

The most recent improvement to Borough bike access has been the installation of "sharrows" along Raritan Avenue. Sharrows are a low-cost and easy-to-implement alternative to bike lanes. They are demarcations on the roadway that alert drivers and cyclists that the roadway is meant to be shared between the two modes. In this shared environment, cyclists are encouraged to take full use of the travel lane, increasing visibility and safety. Sharrows are an alternative for when bicycle lanes are unfeasible due to road width limitations and other factors. The sharrows on Raritan Avenue were installed by the New Jersey Department of Transportation in accordance with Highland Park's Complete Streets Ordinance.

Highland Park has the distinction of being home to a portion of the East Coast Greenway, a 2,900 mile long trail stretching from Maine to Florida. The Greenway starts in Highland Park as one crosses the Raritan River Bridge, and heads northwest along the south side of River Road, until exiting the Borough into Piscataway in Johnson Park. There is also a small diversion of the Greenway that follows Cedar Lane to Rutgers University's Livingston campus. While originally conceived of and intended for a long-distance trail for hikers and cyclists traversing the eastern seaboard, it has the added benefit of being an important bicycle asset to the residents of Highland Park, providing them with a safe and easily-accessible bike trail to Johnson Park.

Source:
Borough of Highland Park. "Sharing the Roadway." http://www.hpboro.com/DocumentCenter/View/1874

SIDEWALKS

OVERVIEW

Sidewalks are a valuable piece of infrastructure for the Borough. Walking is an important part of the resident or visitor experience and most residences are within easy walking distance of the Raritan Avenue commercial district. Additionally, many Highland Park residents walk to New Brunswick for work, school or recreation. Thus, it is critical that sidewalks are properly maintained.

While the Borough oversees maintenance of the sidewalks, the actual maintenance costs are borne by property owners. Per New Jersey State Law, sidewalks on residential properties are defined as a public access easements on private property. In accordance with this statute, residents are required to keep their sidewalks maintained to the standards of the Highland Park municipal code and the Americans with Disabilities Act. Recent court cases have challenged the authority of the Borough to require sidewalk maintenance. However, the courts have upheld the Borough's ability to administer these requirements.

Sidewalks in Highland Park suffer routine damage as a result of freeze-thaw events. Winter temperatures in the Borough routinely fluctuate above and below freezing. The Borough's venerable street trees also contribute to sidewalk maintenance costs when their roots grow and expand under the concrete slabs.

Types of sidewalk damage include the following:

- **Rigid Body Uplift/Settlement** - This occurs when an entire concrete slab of sidewalks settles or is lifted. This can create a lip in the sidewalk which may result in a municipal code violation. In cold-weather climates, this is often caused by the freezing and thawing of the underlying grounds, and in some instances, the growth of tree roots.

- **Tensile Shrinkage** - A section of sidewalk can settle and become deformed if the underlying ground is deprived of moisture. This can create a lip of sidewalk, which may result in a municipal code violation.

- **Sagging** - The uneven settlement of the underlying ground can cause long sections of the sidewalk to tilt or form longitudinal cracks. This is caused by freezing and thawing.

- **Hogging** - Similar underlying causes as rigid body uplift, but in this case, the sidewalk becomes cracked in the middle of the slab. This is caused by freezing and thawing, and in some instances, the growth of tree roots.

Regular sidewalk maintenance occurs when Borough officials find, or are made aware of, code violations. Due to a change in New Jersey State Law, as of July 1st, 2014, the Borough can be held liable for accidents occurring on sidewalks in violation of the code if the Borough was aware of the violation prior to the accident and had not taken proactive steps towards fixing the sidewalk. Thus, the Borough strives to quickly notify property owners of violations.

From 2012 to 2014, the Borough administered a sidewalk improvement program. The initial phase of the program was a Borough-wide assessment of sidewalk conditions. Several municipal employees as well as a newly hired part-time employee were tasked with completing the survey of all residential sidewalks. Owners of sidewalks who were found to be in violation of the municipal code were notified of their violation. The survey identified over 1800 violations.

Over 500 property owners participated in the Borough's zero-interest loan program to assist with construction costs. The total estimated construction costs for bringing these sidewalks up to code was $386,858.40. Based on this estimate, the Borough bonded money to generate the funds and approximately 600 property owners paid for the improvements with no assistance from the Borough. Property owners who did not comply with the violation notices were given two warning notices before being issued a court summons. The Borough issued over 250 summonses to property owners for sidewalk violations. If issued a summons, property owners were ordered to pay a fine in addition to fixing the code violation.

Overall, the sidewalks in Highland Park are in good condition after the completion of the sidewalk improvement program in 2014. However, the frequency of freeze-thaw events and the presence of street trees along most municipal streets ensures that sidewalk maintenance will continue to be an ongoing project for the Borough. It is estimated that the overall condition of Borough sidewalks will deteriorate to the point where a similar sidewalk improvement program will be needed by 2021 or 2022.

WISH LIST

The Borough should perform another sidewalk improvement program beginning in 2021, with $400,000 bonded for zero-interest loans for property owners.

Sources:
Institute for Research in Construction. "Behaviour and Performance of Concrete Sidewalks" http://www.nrc-cnrc.gc.ca/ctu-sc/files/doc/ctu-sc/ctu-n53_eng.pdf
Interview with Scott Luthman (Code Assessor). April 1, 2015.

FOOTPATHS

OVERVIEW

Beyond the street network exists another layer of pedestrian access, comprised of the various pedestrian-only footpaths throughout the Borough. These footpaths are located in the middle of long blocks, allowing pedestrians to easily cut through the Highland Park street grid. This is a major asset for the Borough's Orthodox Jewish population, which has weekly religious observance of the Shabbat which limits driving. It also benefits the school children, who can access the local schools more safely and easily. Continued maintenance of these crucial pedestrian assets is beneficial to the community.

Source:
Interview with Scott Luthman (Code Assessor). April 1, 2015.

POWER

OVERVIEW

Electrical power is supplied to Highland Park by Public Service Electric and Gas Company (PSE&G). Currently, there are three substations powering eight circuits throughout the Borough. The Edison substation is 4 kilovolts (kV), the Kilmer substation is 13kV, and then Meadow road substation is also 13kV.
Highland Park is unique in its power network in that the north side has a different distribution design than the south side. The north side, which features some of the oldest structures, primarily has backyard wiring. At the time of construction, the town was sparsely populated and had not been fully developed, so wires were routed to connect individual houses through backyards. The south side, which features newer homes, is wired along the street, with connections leading directly to individual homes. Backyard construction has been completely phased out since trucks do not easily fit into most residential yards, making it logistically difficult to repair and maintain.

PSE&G does not have any concerns about electrical capacity with new housing developments in Highland Park. Two options exist for managing increasing demand: building a new circuit or converting power between existing circuits. Since power is distributed throughout the network, and not confined within particular municipalities, PSE&G is able to be flexible with its resources to provide power throughout the region. Company representatives note that it would be more economical to use the 13kV Kilmer circuit in new developments since it is the most modern system, but load transfers between circuits would require virtually no additional infrastructure. Developers are required to submit a load profile data sheet to PSE&G for all new developments to ensure that all necessary electrical infrastructure is built. The default system is overhead, but developers can pay the differential to have buried underground (BUD) wiring.

Although capacity does not appear to be a concern for PSE&G, there are some issues with the service that affect residents of Highland Park. The Borough is vulnerable to breaks in the main lines throughout the grid, which service many radial lines (i.e. through local, side streets). During emergencies, radial lines may serve as main lines, requiring wire replacement to bring them up to adequate capacity. This can be costly for PSE&G in an aging system. Outages during storms has been an ongoing issue and a possible solution would be to look to the tree maintenance and tree trimming in the Borough. Since Highland Park is known for its trees, they are also an issue which can be addressed for mitigating outages caused by storms. Ensuring that there is an ongoing coordinated effort for tree trimming with PSE&G, which is coordinated with the Borough, this could be a way to address the issue to ensure the least amount of outages caused by storms.

Next, the 13kV substations (Kilmer and Meadow Road) are prone to service issues. Since they produce more power, the distribution lines are longer and serve more customers. Some lines are several miles long, which makes them more vulnerable to breaks or deterioration. Typical issues include accidents, construction failures, damage caused by animals, and storms. The 4kV substation has significantly shorter lines and experiences fewer disruptions overall.

Reliability statistics are used regularly to assess the system, but they can be misleading. Customer Average Interruption Duration Index (CAIDI), an indicator that measures the average time to restore service for a customer, is high for some substations. However, this metric can show high figures even if only one customer experiences a service outage, which is typical in Highland Park. System Average Interruption Frequency Index (SAIFI), an indicator that measures overall system performance, is low for most substations. However, major storms such as Superstorm Sandy, were not included in these calculations, which seems to suggest that major storms are not considered to be preventable. Fortunately, PSE&G has received $1.2 billion over the past three years as part of New Jersey's Energy Strong program to harden its infrastructure for future generations.
Since Highland Park does not manage the power distribution system, an option to ensure maintenance is to schedule regular meetings with PSE&G. Additionally, since PSE&G is regulated by the Board of Public Utilities, that agency may be used as an advocate. The Borough should look to track the number and severity of the outages and work with PSE&G and the Board of Public Utilities to fix ongoing issues. The Borough should use oversight and advocacy to ensure that appropriate maintenance is being accomplished. If there is a documented pattern, the Borough may take additional actions by contacting legislators to address concerns which are not being handled in a timely and appropriate manner.

CABLE, TELECOMMUNICATIONS & NATURAL GAS

OVERVIEW

Cable & internet are provided by a variety of providers in Highland Park. The service providers have an agreement with PSE&G to share power poles throughout its distribution network. Generally, the wires are layered with telecommunications on the bottom of the pole and PSE&G wires towards the top of the pole. Additionally, fiber optic cables run under Raritan Avenue, often complicating road and pipe projects. Natural Gas is provided by PSE&G and also runs under the street.

The Borough receives telephone, cable and internet services predominately from Cablevision and Verizon, which are companies regulated by the Board of Public Utilities because they operate in the Borough's municipal right of way. Both Cablevision and Verizon FIOS are governed by cable franchise agreements, which the Borough officials should be familiar with because the services being directed are provided to Borough Hall as well as other municipal service properties, in addition to the services being provided to residents. For cable, the BPU Office of Cable Television is the designated complaint officer. Regularly scheduled meetings with the companies government relations department can be useful as well as copying the BPU/OCTV.

A key element to enforcing the cable franchise agreements is that the Borough is required to provide notice to the company and allow an opportunity to the company to cure any noted deficiencies or problems. Any issues regarding problems with Cable or Telecommunications should use oversight and advocacy to ensure that appropriate maintenance is being accomplished, and this includes contacting the BPU. If there is a documented pattern, the Borough may take additional actions by contacting legislators to address concerns which are not being handled in a timely and appropriate manner.

Since Highland Park does not manage natural gas and telecommunications distribution systems, there is no Wish-List or Expressed priorities for these assets. It is expected these private companies will independently respond to any increases in demand for their services, but again in instances where the above entities do not, the BPU should be one of the contact utilized for assistance.

Source:
Interview with Frank Lucchesi (PSE&G Regional Public Affairs Manager) and Joe DePinto (PSE&G Engineering and Resource Manager). March 4, 2015.

SCHOOLS

OVERVIEW

In 2014, the Highland Park School District served over 1,600 students in its four schools and had a budget of over $31 million, nearly three times that of the Borough's municipal budget. In addition to providing classroom and extracurricular space for Highland Park's school children, the District's facilities are used for many other civic and private activities. Due to the large budget and unique needs of the School District, this report will discuss capital investments for the District separately.

The School District has played a major role in Highland Park for over 100 years. A major impetus for Highland Park's separation from Raritan Township in 1905 was its desire for an autonomous public school system. Since the Borough formed, the School District has seen major enrollment fluctuations. By 1914, enrollment had reached 458 and plans for two new neighborhood schools came to fruition with the construction of Hamilton School in 1915 and Irving School in 1916. Franklin Junior High School was completed in 1926 and the Senior High School was opened in 1937. Despite these new facilities, by the 1950s and 1960s an influx of residents into new apartment complexes and other residential development had led to severe overcrowding of the schools.

In an effort to accommodate these new students, Bartle School was opened in 1967 and bonds were taken out to pay for additions to Irving School and the High School. By the 1990s, this growth trend had reversed and enrollment at the High School had dropped to 550, down from 900 in the late sixties.

Overcrowding at Irving School, 1965 - boys change for gym class in a basement hallway. Joseph Koye captured this photograph as part of a series to document school overcrowding in Highland Park" Source: Kolva, Jeane and Joanne Pisciotta. Highland Park - Images of America. 1999

CURRENT CONTEXT

New Jersey school districts operate locally and are governed by local Boards of Education, but are subject to many State laws. School district capital planning is governed at the state level by N.J.A.C. 6A:26, EDUCATIONAL FACILITIES, which lays out requirements for long-range facilities plans (LRFPs), capital project review, planning and construction standards for school facilities, land acquisition and disposal, safety requirements for school facilities, comprehensive maintenance plans, and more. Highland Park School District must therefore meet changing local needs, while complying with formula-based state requirements and funding.

Today, the School District faces the twin pressures of increasing enrollment and students leaving the District to attend charter schools. These trends, along with the uncertainties tied to funding sources and the political environment, make long range capital planning difficult but necessary. Representatives from the Board of Education and the District acknowledge the difficulty in preparing accurate strategic plans for the next year, and admit that these uncertainties make longer range plans for the next five or twenty-five years even more problematic.

The district engages in State-mandated long-range strategic planning, which must be updated or redone every five years (N.J.A.C. 6A:26-2.1.a). The LRFP must detail the school district's facilities (schools, temporary, and others) and its plan for meeting school facilities needs during the ensuing five years.

Specifically, the plan includes: (1) enrollment projections by grade. The projections must be certified by a qualified demographer and use cohort survival method, unless the district believes this method will not yield accurate results and can justify an alternative method based on additional data; (2) functional capacity of every school facility, by facility and grade level, including an inventory of all spaces; (3) an inventory of every school facility and temporary facility; (4) an inventory of all school district-owned land; (5) a listing of the approximate size and nature of any new sites that may be needed for school facilities projects set forth in the LRFP; (6) an inventory of all building systems within each facility, including structure, enclosure, mechanical, plumbing, interior walls and finishes and electrical systems; (7) a determination of the life expectancy of all building systems; (8) a determination of any building system deficiencies in each school facility and the required remediation; (9) the school district's proposed school facilities projects and other capital projects and preliminary scopes of work; and (10) the school district's proposed programmatic models for school facility types and capacities.

The State must approve school facilities projects, which include: (1) new construction; (2) rehabilitation; (3) acquisition of existing buildings; (4) furnishings, fixtures, and equipment; and (5) rehabilitation of multi-purpose physical education fields. Furthermore, the state requires local support for all school facilities projects.

FUNDING AND ENROLLMENT

The bulk of revenue for the District comes from the property tax, with the balance coming from state aid, state grants, international student tuition, federal aid, and other sources. With the District largely reliant on property taxes, it is crucial to understand the nature of future residential development in the Borough to determine if new tax receipts will offset new expenditures on students. Property tax receipts are used for operational expenses, so capital projects must be funded through specific grants and bonds. A school district may annually transfer by district Board of Education resolution an un-budgeted fund balance up to one percent of the school district's annual budget certified for taxes, or $50,000, whichever is higher, to capital outlay to fund other capital projects, except land acquisition projects.

The State, which allocates a portion of its school aid on a per-pupil basis, prefers conservative enrollment projections. If Highland Park is projecting more growth than other New Jersey municipalities, it must convincingly demonstrate that its estimates are justified.

New Jersey's charter school policy also has a major impact on the District's enrollment and funding. Under State law, the school district where the pupil resides must pay the charter school where the student is enrolled an amount equal to the lower of either 90 percent of the program budget per pupil for the specific grade level in the district or 90 percent of the maximum "thorough and efficient amount." In recent years, Highland Park School District has seen an increasing number of its residents sending their children to charter schools. The District currently sends students to four charter schools, and its payments have increased from $326,707 for the 2012-2013 school year to an anticipated $562,473 for the 2014-2015 school year.

One of the main receivers of Highland Park school-age children is Hatikvah International Academy Charter School, a K-5 Hebrew-language immersion charter school in East Brunswick. Despite the fact that East Brunswick is the school's only approved sending district, Highland Park sends the second highest number of students. This amounted to $309,824 in payments for the 2014-15 school year. Additional money that the state required the District to set aside based on projected charter school enrollments was also not available to cover expenses in the 2014-2015 school year. On February 3, 2015, the Highland Park Board of Education passed a resolution requesting the New Jersey Commissioner of Education to deny Hatikvah's proposed charter expansion.

Using the District's per-pupil space requirements, the current facilities can house 1,686 Full-time Equivalent (FTE) students. Using the State's Functional Capacity measure, these facilities can house 2,344. Based on the District's current space practices, the facilities are currently at around 95 percent of capacity. However, this capacity is spread across four different school buildings and 13 grades. Since per-pupil square footage requirements change based on grade level, filled capacity can change as students age through the system, even without a net change in number of students.

Understanding the specific characteristics of the school age population moving into the District could help administrators plan for classroom space needs. However, there has not been clear communication between the District, developers, and the Borough regarding the impact of new developments on the District.

INVENTORY

The Highland Park School District consists of four schools, with five instructional buildings and one administrative building. These facilities total 319,392 gross square feet (GSF) and 315,335 adjusted GSF.

Irving Primary School

The Irving School serves over 320 students from Pre-Kindergarten through first grade. The school first opened on January 8, 1916 after the Borough recognized a need for two separate neighborhood schools. By 1921, the schools had received four-room additions, but were overcrowded by the late 1950s and early 60s. Renovations were made to the schools in 1968 and, most recently, in 2004.

The site includes two multi-story instructional school buildings for Irving Elementary and Irving Primary, an athletic field/playground with grass and hard play-surface, and a parking lot with corresponding walking area. The site totals 1.94 acres, all of which are district-owned. The facilities total 76,552 GSF and 74,544 Adjusted GSF.

Irving Primary School

Bartle Elementary School

The Bartle School, named after Highland Park's first public school teacher, opened in 1967. It originally served as a middle school for grades six, seven and eight. Since then, many changes have been made to the school's internal and external structure. It is now an elementary school for grades two through five. Improvements were made in 1994 and more recent structural improvements to the school building include a complete window replacement totaling 15,000 sq. ft. in 2008 and a roof replacement totaling 64,000 sq. ft. in 2009.

The site includes the multi-story instructional school building, an athletic field/playground with grass, playground areas, an interior courtyard, and a parking lot with corresponding walking area. The site totals 4.20 acres, all of which are district-owned. The facilities total 87,101 GSF and 86,027 adjusted GSF.

Bartle Elementary School

Highland Park Middle School and High School

The Middle School and High School are discussed together due their shared facilities. The combined site is 15.6 acres, and includes the High School multistory instructional building (113,421 GSF, 112,834 adjusted GSF), the Middle School multistory instructional building (42,318 GSF, 41,929 adjusted GSF), walkways, and High School and Middle School parking areas.

The High School, serving grades 9-12, was constructed between 1925 and 1926 as a junior high school. It was renamed "Highland Park High School" in 1937, after it expanded education through 12th grade. In the 1950s and 1960s, the High School underwent an expansion with the addition of the "English wing" (1958) and the "Science wing" (1968). An all-weather track was constructed in the mid-1980s.

Renovation and expansion in the 1990s included the addition of the "gazebo-like" cafeteria building improvements in 1994. In 2006, the "Science wing" roof was replaced, totaling 10,400 SF.

Highland Park Middle School

Maintenance Building

The District owns a maintenance and utility building on 15.6 acre site.

OTHER ASSETS

Maintenance Vehicles

The District owns three maintenance trucks, two of which are three years old. The third is much older and will need to be replaced within the next several years. The District does not own any school buses.

WISH LIST

Representatives of the School District are eager to sustain, improve and expand the services they provide in order to accommodate population changes in the coming years. The District has identified the following capital projects to be completed over the next five years in order to achieve these goals.

- **Boiler Replacement**
  Expected to begin: Summer, 2015
  Cost: $450,000
- **Roof Replacements**
  Expected to begin: 1-2 years
  Cost: Not currently known
- **Maintenance Truck Replacement**
  Expected to change: 1-2 years
  Cost: $60,000
- **Expansion of School Buildings**
  Expected to begin: 3-5 years
  Cost: $5.5 - 6 million
- **Solar Panels**
  Expected to begin: 10 years
  Cost: Not easily estimated due to potential volatility of solar pricing in future years, and uncertainties regarding project size

EXPRESSED PRIORITIES

The District's main priority for the next three to five years is an overall expansion. The School District is using professional demographers and engineers in the drafting of its updated LRFP. The goal is to gain a more accurate understanding of Highland Park's school-age population. The demography study in particular will conduct a use-of-space analysis, which will be important in the phasing and planning of the expansion. Some of the space standards and definitions which are expected to remain relatively constant over the next thirty years are included below:

- 100 sq. ft. of outdoor play space is required for each preschool child using the space at one time.
- Area allowance per full-time equivalent (FTE) student": Preschool through grade 5 requirement is 125 sq. ft., grades 6 through 8 require 134 sq. ft., and grades 9 through 12 require 151 sq. ft.
- *Functional capacity* is the number of students that can be housed in a building to provide sufficient space for the building to be educationally adequate for the delivery of programs and services necessary for student achievement of the Core Curriculum Content Standards. Functional capacity is determined by dividing the adjusted gross square footage of a school facility by the minimum area allowance per FTE student for the grade level students contained therein.
- *Excluded space* is an existing space that is not contained in the facilities efficiency standards but may be included in a school district's approved room inventory that would be structurally or fiscally impractical to convert to other uses in the facilities efficiency standards as demonstrated by the school district and that: (1) Delivers programs and services aligned to the Core Curriculum Content Standards; or (2) Provides support services directly to students.

Appendix A provides a range of school enrollment scenarios, based on population change, school capacity measures, and the percent of the school age population that attends public school. The results of the analysis for the year 2045 range from a low of 1,654 students to a high of 2,943. This would correspond to a low-end space requirement of 226,545 sq. ft. (below the District's current capacity) to a high-end requirement of 541,550 sq. ft. (more than 200,000 sq. ft. over current capacity). Most likely, the true value will somewhere in between, which would necessitate the already planned expansion of the District's facilities.

INVENTORY - SCHOOLS

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30-YEAR HORIZON

30-YEAR HORIZON

OVERVIEW

As the municipal population increases and current infrastructure ages, the Borough will need to be prepared to invest capital funds into providing a safe, appealing community, all while maintaining a stable budget. Particular attention will need to be paid to existing infrastructure that will age past the recommended serviceable life, as well as the capacity and condition of infrastructure near areas of the Borough that will be developed. By anticipating increases in demand and estimating dates for when infrastructure will be improved or replaced, the Borough can plan for future capital improvements and spread capital costs out instead of engaging in reactive, emergency-like spending.

The Borough must also consider the potential impacts of climate change, including possible severe weather events in any season and high-heat days in the summer. Events such as these may introduce additional stresses to the Borough's road and pipe infrastructure. Cold-weather events could introduce more disruptive freeze-thaw conditions which contribute to pipe breaks, as well as damage to sidewalks and roads. Continued snowy winters would demand frequent plowing, a major source of road damage. High heat events could lead to high peak water demand, stressing water delivery and waste removal systems. Since these events are unpredictable by nature, it would behoove the Borough to proactively improve the overall resiliency of the municipal infrastructure systems.

The 30-year horizon for each class of infrastructure are as follows:

WATER

According the American Water Works Association, a cast iron water main can expect to have a serviceable life of approximately 130 years. A pipe that has aged past its serviceable life may be prone to catastrophic failure. The cleaning and concrete lining project which the Borough undertook between 1996 and 2003 will extend the serviceable life of municipal water pipes, but the degree to which it will do so is not known. Had the mains not been relined, it is estimated that approximately 22 miles of municipal water mains would reach the end of their serviceable life by 2061, with the oldest pipes needing to be decommissioned by 2027 (see Map of Estimated Age of Infrastructure). The Borough should still prepare for the possibility of significant capital expenditures on the water system in the mid-to-late 21st century. The Borough will need a plan to phase out these projects in order to disperse the costs of installing new pipes ahead of the end of their serviceable life and limit impacts and service delays for adjacent homes and businesses.

Fortunately for the Borough, most of the large developable tracts of land within the Borough are serviced by large water mains (see Map of Water Infrastructure & Map of Future Development). However, it is possible that future infill or high-density development could generate excess demand for water in the immediate vicinity of lower-volume pipes. For example, Raritan Avenue, which the focus of plans for future infill development, is served by an eight-inch main, small by comparison to the 20-inch main running along River Road. The Borough should be proactive in its assessment of water demand for new developments, and be prepared to undertake projects to increase capacity if necessary.

SANITARY SEWER

Much of the sanitary sewer cast iron pipes in the Borough are estimated to have been installed at the same time as water infrastructure. Thus the Borough faces many of the same challenges regarding the aging of the sanitary sewer system. Between 2000 and 2005, the sanitary sewer pipes were cleaned and re-grouted. This project should extend the serviceable life of the pipes, though to degree to which is unknown. The Borough should prepare for the possibility of significant capital expenditures on the sanitary sewer system in the mid-to-late 21st century. Replacing sanitary sewer mains ahead of the end of their serviceable life will limit the risk of catastrophic pipe failure, as well as address the ongoing issue of groundwater intrusion. Similar to investing in water infrastructure, the Borough will need a plan to phase out these projects in order to disperse the costs of installing new pipes ahead of the end of their serviceable life and limit impacts and service delays for adjacent homes and businesses.

STORMWATER

Limited information is currently available on storm sewer infrastructure in the Borough. A comprehensive map of storm sewer pipes in the Borough does not presently exist. Without this information, it is difficult to assess where and when capital investments are needed. The Borough should seek to develop a complete map and inventory of storm sewer infrastructure before identifying capital projects. Fortunately, the Borough does not have combined sewer overflows, which are one of the primary issues with older sewer systems.
Nevertheless, the Borough will need to take steps to limit impacts of future development on sewer capacity. Incoming developments have the potential to increase the volume of runoff entering the storm sewer system. Measures to limit the impact of runoff include installing green stormwater management infrastructure where possible and assessing the capacity of storm sewer infrastructure near new developments.

SIDEWALKS

Sidewalks in the Borough are constantly being challenged by freeze-thaw events, tree roots, and general wear and tear. The Borough should be prepared to implement a sidewalk improvement program once or twice per decade, depending on the rate of deterioration of the sidewalks. Should the trend of severe winters continue, the program may need to be repeated more frequently. When a sidewalk improvement program is initiated, the Borough should bond money in order to generate a fund out of which homeowners can borrow money to help finance sidewalk improvements.

POLICE DEPARTMENT

The need to expand police services is directly correlated to the number of additional calls the department receives. As population increases, the expected number of calls should also increase, but not by a predictable amount. Should the Police Department need to hire more officers and maintain a larger force within the next 30 years, they will likely need to purchase additional vehicles keep up with regular replacement and allow for expansion.

The Police Department building is brand new, and will not need major investments for at least 20 years, when assets such as HVAC or plumbing may need some replacement or updating. The structure itself should be serviceable for many decades to come. The Department will need to be flexible as police technology and citizen expectations evolve over time, which could lead to unexpected capital needs over the next 30 years.

FIRE & FIRST AID

Similar to the Police Department, both the Fire Department and the First Aid Squad will likely see an increase in call over the next 30 years due to the expanding population. The departments will need to evaluate and anticipate the need to purchase new vehicles in future capital plans when current capacity to respond to calls is reduced. While the six-year capital plan recommends the construction of a new First Aid building, the Fire Department building will likely need to be replaced within 30 years as well.

In addition, the Fire Department has not purchased a brand new fire chief vehicle since 1987. The Department currently relies on used vehicles from other Departments. With an expanding population and potential for increase service calls, the Department may benefit from a brand new, reliable vehicle.

DPW

In keeping with the theme of increasing municipal services, the Borough must be prepared to allocate additional resources to the DPW as the population expands. Services tied to population size, such as garbage pickup, will increase. Increasing the level of services the DPW provides will require investment in additional vehicles and other infrastructure. The Borough should also track the age of DPW vehicles and equipment and be prepared to invest in replacements as these pieces of infrastructure near the end of their serviceable life.

With an ever increasing population, demand for services is expected to increase in the coming years. There may be more need for additional garbage collection, and roads could deteriorate more quickly. The DPW must be prepared to address these concerns. We recommend regular maintenance of existing vehicles in order to ensure that lightly used equipment does not age too quickly. The DPW, then, must think about hiring additional manpower to serve additional residents. It will also need to establish a program similar to one that the police department already has for its vehicles, in which garbage trucks and other vehicles are replaced on a regular basis to ensure their continued viability.

We also think it would be useful for the DPW to have a dedicated methodology for road improvements. Such a methodology could rely on the PASER model we used in this report. This would enable roads to be improved on a regular schedule. Improvements could also be coordinated with other needed replacements along roads, such as those related to water and sewer issues. A list of specific roads that need improvement could be produced as part of this report.

PRIORITIZATION METHODS

CRITERIA & WEIGHTS

Various government departments within the Borough have individual wish lists of capital projects. Most of these projects will compete for the same funding from the Borough, thus an objective way to prioritize them must be used. The prioritization system presented here is meant to act as a tool for objective and consistent decision making.

Ten criteria, detailed in the table below, have been developed for prioritization. These criteria are broken down into four categories: project characteristics, technical considerations, time considerations, and public health and safety. For each criteria, projects are given a score of between zero and ten, with ten representing projects of highest importance. The scores for each criteria are individually weighted to reflect their relative importance. The criteria scores are then summed within each category. A weight is the applied to each category as a whole. The sum of the four category weights results in the final score for the project. This process can be visualized in Figure 1.

Once each project has been scored, all scores are rounded to the nearest whole number to determine the final rank. Budgetary considerations will determine how equally-scored projects are prioritized. This system is designed to act as a basis for future decision making in the Borough. It is important that this system be reevaluated over time as additional needs arise and the priorities of Borough change. Furthermore, unexpected events may cause an immediate need for previously un-prioritized projects, this flexibility should be allowed for sudden changes. It should also be noted that capital investments in the School District should be prioritized separately from those involving the Borough as a whole. The recommended capital investments for the School District are discussed within the School District section of this report.

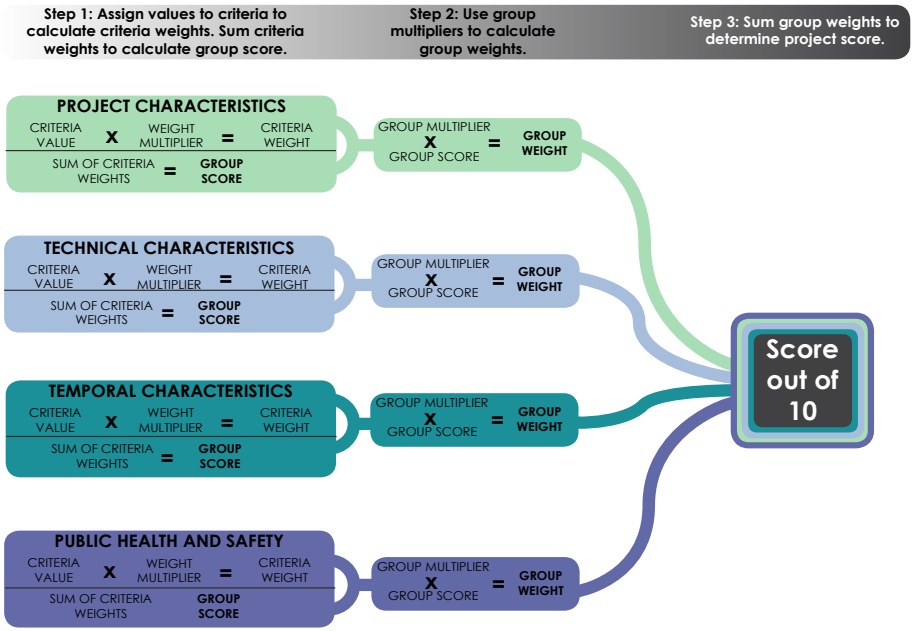


Figure 1

PRIORITIZATION METHODS

PROJECT CHARACTERISTICS			**Group Weight =**	**0.2**
Criteria	**10**	**5**	**0**	**Weight**
Community Support	Broad Community Support	Partial Community Support	No Community Support	0.1
Resiliency	Project significantly enhances resiliency of town	Project moderately enhances resiliency of town	Project does not address resiliency	0.3
Quality of Life	Project dramatically improves quality of life	Project moderately improves quality of life	Project does not improve quality of life	0.2
Level of Service Impacts	Significantly increases level of municipal services in response to a known or anticipated need	Moderately increases level of municipal services	Project does not increase level of municipal services	0.3
Economic Development	Project spurs significant private investment in municipality	Project spurs moderate private investment in municipality	Project does not spur private investment in municipality	0.1
TECHNICAL CHARACTERISTICS			**Group Weight =**	**0.25**
Criteria	**10**	**5**	**0**	**Weight**
Location and Distribution of Benefits	Project benefits large area AND is located in area which has not received recent improvements	Project benefits large area OR is located in area which has not received recent improvements	Project only benefits small area and is in area which has received recent improvements	0.4
Impact on Operational finance/Revenues	Project will increase net municipal revenues	Project has no impact on net municipal revenues	Project will decrease net municipal revenues	0.6
TIME CONSIDERATIONS			**Group Weight =**	**0.25**
Criteria	**10**	**5**	**0**	**Weight**
Age of Infrastructure	Project addresses infrastructure that has aged past its serviceable life	Project addresses infrastructure that has aged past its useful life	Project not necessitated by age of infrastructure	0.6
Coordination with Other Capital Projects	Project must be undertaken and/or completed for additional high-priority project to occur	Project would ideally occur in conjunction with a second project	Project has no relation to other capital projects	0.4
PUBLIC HEALTH AND SAFETY			**Group Weight =**	**0.3**
Criteria	**10**	**5**	**0**	**Weight**
Public Health and Safety	Project fully remedies or prevents public health and safety threat	Project partially remedies or prevents public health and safety threat	Project does not address public health and safety threat	1

6-YEAR CAPITAL PLAN

OVERVIEW

Stemming from the compiled wish lists of the various departments, changing capacity numbers spurred by the growing population, and the prioritization method discussed above, the following capital projects were found to have the highest priority over the next six years.

Each project is rated a (1), (2) or (3) based on feasibility, cost and urgency; (1) a high priority to be started within the next year and (3) to be started within the next six years.

1. Insulation of Sewer Main along the Raritan River (1)

Sections of 30-inch sewer main along the Raritan River are open and exposed to the air. One exposed section is directly adjacent to the NJ Route 27 bridge over the river, on the southern side, and another is in the ravine below South Adelaide St. The Borough is concerned that thermal expansion and contraction of the pipe due to hot and cold temperatures could case the pipe could rupture and drain directly into the river. It is recommended that a retaining wall be built and the pipe be covered with fill. Each recommended retaining wall would be approximately 15 feet tall by 50 feet wide. The project is complicated by the difficult location adjacent to the Raritan River.

Estimated Cost: $120,000 at minimum

2. New ADA Compliant (Handicapped Accessible) Van for the Senior Center (1)

The medical vehicle which is currently in used by the Senior Center does not have a handicapped lift. A new, lift-equipped van would better serve elderly residents of the Borough which rely on the Senior Center to provide transportation to medical appointments.

Estimated Cost: $43,000

3. Police Equipment (1)

The Police Department has not replaced its handguns in 10 years. Even if a firearm is not fired in the field, it must be replaced periodically due to aging. The Department also requires new Alcotest alcohol testing machines and Livescan fingerprint machines. It is a mandated state requirement. The current system is too old.

Estimated Cost: $14,175 to replace all handguns; $18,000 for Alcotest machine; $39,000 for Livescan fingerprint machine

4. Energy Resiliency Investment (1)

Recent experiences with prolonged power outages due to hurricanes and accidents have highlighted the need for the Borough to establish “islands of resilience” where electricity, heat and other basics of survival are available for residents whose homes have lost power. This could take the form of a natural gas-fired backup generator or islandable solar+battery system serving a portion of the single building, or a microgrid that serves several buildings using a combination of generating technologies. Grant-funded projects at the senior center and DPW building are in the works.

Estimated Cost: $300,000

5. Teen Center (1)

The demand for space in the Senior/Youth Center has outstripped the supply, and the needs of these two target populations appear to be different. A new Teen Center could relieve the pressure on the current building. It should be located near the center of town where teens will naturally congregate.

Estimated Cost: $TBD

6. Library Site Improvements & Streetscape (2)

The Highland Park Library developed a strategic plan in 2012. During the planning process, the Library projected increasing demands for library space, including larger areas for computer usage and group studying. Following the completion of the strategic plan, architects were hired to complete an interior retrofit, taking into account the goals expressed in the plan. The budget for the proposed improvement is $425,000. Some of this money will need to be generated in the form of bonds, but additional capital can be raised from individual donations. The library is a Borough landmark, and there is broad support from Borough residents for the project.

Estimated Cost: $425,000, minus the amount raised from individual donations

7. Sewer Monitoring (2)

A sewer infrastructure monitoring system could allow more effective preventative maintenance and timely repairs of the Borough's aging system. The system would include sensors and cameras located at strategic points throughout the server system, connected to a command station at the Department of Public Works.

Estimated Cost: $TBD

8. Water Metering System (2)

A frequent site of leaks in the water supply distribution system is the lateral connection from the water main in the street to meter located within each individual building/property. Based on the findings from the Water Monitoring program, the Borough may identify areas of repair that fall to the property owner. Identifying and repairing these leaks is challenging and expensive because the laterals are on private property.
A new metering system that will identify leaks between the building and curb should be installed throughout the Borough, funded through the water and server capital account.

Estimated Cost: $1,000,000

9. Spray Park (2)

Children residing in the Borough lack access to a swimming pool or similar water feature for use during hot summer days. A safe, cost-effective solution is to build a spray park that allows children to get wet, cool off, and enjoy playing in the water. It requires a site at the scale of a pocket park, as well as a substantial investment in equipment and piping. It can be designed as a sculptural art object or fountain. County support may be available.

Estimated Cost: $TBD

10. Main Street Improvements (2)

The Farmers' Market has been a key driver of the commercial revival of Raritan Avenue, providing residents and out-of-town visitors with fresh healthy food options during the summer and fall seasons. Yet the physical site, located on the South Side of Raritan Avenue between Second and Third Avenues, at a prominent bend in Raritan Avenue, is currently a blighted eyesore, with a decaying asphalt surface, poor drainage, and totally lacking streetscape amenities and landscaping. An investment in developing this site as a Borough Square will enhance the Market's positive impact, allowing for an expanded Market season and providing a Center for other events and performances on non-market days and year-round, such as Movie Night, Menorah and Tree Lighting, which are only a beginning.
Funding for an initial phase, including grading and curbs, seating, hardscape and landscaping, would be a wise investment in the Borough's future as a walkable downtown. Grant funding or county support may be available.

Estimated cost: $300,000

11. Capital Asset Management Data System (2)

While assembling this report, task members observed that Borough record-keeping policy is to discard documents after holding them for the legally required time period, usually seven years. This unfortunately makes it difficult to determine the histories of long-lived assets such as buildings and infrastructure. Needed is an electronic capital asset management data system to systematize and preserve these records. A variety of vendors offer such products. Functionalities may span planning and budgeting, disposal, analytics, and even procurement. The start-up costs of such systems are usually higher than their ongoing costs.

Estimated Cost: $TBD

12. Fire Truck Replacement (3)

The Borough will need to replace the aging fire trucks used by the Fire Department. The oldest Borough-owned fire truck dates back to 1992, while two others were manufactured in 1995 and 2003. It is recommended that Borough replace the oldest truck next year, and the next-oldest truck in the next five years.

Estimated Cost: $600,000 per vehicle

13. Ambulance Replacement (3)

The Squad currently uses two ambulances that are 14 and 20 years old, respectively. The average replacement period for an ambulance is five years; therefore these ambulances should be replaced. The First Aid Squad generates revenue from donations and mailing campaigns, thus is likely the Borough would not bear the full cost of these projects.

Estimated Cost: $200,000 for two ambulances, minus any capital generated from donations

14. New Garbage Truck (3)

Existing DPW trucks are not equipped for automated for garbage collection. The Department could use additional trucks to improve efficiency and replace an aging truck. The truck should feature an automated arm, as well as a McNeilus rear loader.

Estimated Cost: $269,000

15. Sidewalk Improvement Program (3)

While the sidewalks in Highland Park are currently in good condition, the effect of freeze-thaw events, tree root growth and general wear and tear means that the Borough will need to repeat the sidewalk improvement program that was undertaken from 2012 to 2014. The program should be undertaken no later than 2021. The Borough will need to bond money in order to generate a fund out of which residents can take out zero-interest loans to help with construction costs.

Estimated Cost: $400,000

16. New Butler Building and Generator for DPW and other various equipment (3)

The DPW will need a new butler building to house equipment. The existing butler building is cramped, and would be insufficient should the DPW increase the size of its fleet and other equipment. In addition, the main DPW building should be outfitted with a generator so that the department can continue to provide important services to the Borough during power outages.

Estimated Cost: $35,000 - $40,000 for butler building, $20,000 - $25,000 for backup generator

POLICY RECOMMENDATIONS

POLICY RECOMMENDATIONS

The following policy recommendations will help guide decision-making for future capital improvements planning in the Borough of Highland Park.

Improve record keeping to inform future decisions. A challenge encountered in preparing this plan was lack of information about the history of the Borough's infrastructure systems. The Borough should strive to keep detailed records regarding capital projects and maintenance of infrastructure. Scanned, searchable records going back in history beyond the statutory minimum number of years would have great value to future infrastructure planners. Consider acquiring an asset management data system.

Link the capital improvements plan to the Highland Park Master Plan. The Master Plan acts as a guide for future management, development and preservation within the Borough. The Borough should ensure that capital investments are in accordance with the goals of the Master Plan. Economic, land use, circulation, municipal services, conservation, and historic preservation objectives are all part of the Master Plan.

Improve the resiliency of infrastructure systems. The Borough should seek to identify and remedy weak points in energy, telecommunications, roads, water supply, sewer, and stormwater and transportation systems. This includes working with utility companies and the county to implement solar islanding or microgrid capabilities, for example, as well as being proactive with capital investments and maintenance of publically-owned infrastructure. By encouraging the installation of green infrastructure, the Borough can reduce the rate of runoff into its stormwater system, improve air quality and aesthetics, and combat the effects of high heat days.

Incentivize private action to implement green infrastructure and repair leaking water laterals. The Borough should encourage property owners to install green infrastructure features such as tree planters, rain gardens and bioswales. It should work with developers of vacant parcels to ensure that green infrastructure and other resiliency improvements are included in new development in order to reduce the extra burden on existing infrastructure and ensure quality of life for new residents.

Provide a regular annual Capital Improvements Plan addendum to the Borough operating budget. This would establish remind budgeters to dedicate a portion of annual expenditures for capital improvements in the Borough. This would ensure capital improvements are paid for and made every year of the six-year plan. The Borough could also insert additional items to generate capital for specific types of projects. For example, the Borough could establish a fund for green stormwater management infrastructure, so that funds are available when opportunities present themselves for these types of projects. Additionally, the Borough could create a line item for future projects which are expected to be very expensive, such as the replacement of water and sanitary sewer mains.

Encourage cooperation between the Borough, School District, and County. The Borough and School District should collaborate on capital improvements planning to further mutual goals. A relationship that benefits both entities would cut down on inefficiencies and repetition in capital planning and investments. Both should coordinate with Middlesex County to smooth out the combined effects on property tax rates.

Encourage development in densely populated areas. The Highland Park Master Plan calls for the downtown and commercial core to be redeveloped. Building in already developed areas would minimize the built environment's impact on sensitive areas for native plants and wildlife, which is another Master Plan objective. The Borough should consider this area a priority when implementing recommendations presented here in the coming years in order to improve the capacity and resiliency of infrastructure in the area.

Encourage sustainable transportation. Highland Park is a small municipality with short street segments, and municipal vehicles experience wear and tear as a result. Replacing vehicle patrols with bicycle patrols would lengthen the useful life of police vehicles and allow officers to use a mode of transportation that requires comparatively little maintenance. Other departments could follow suit. This practice would make Borough departments a model for sustainability in New Jersey.

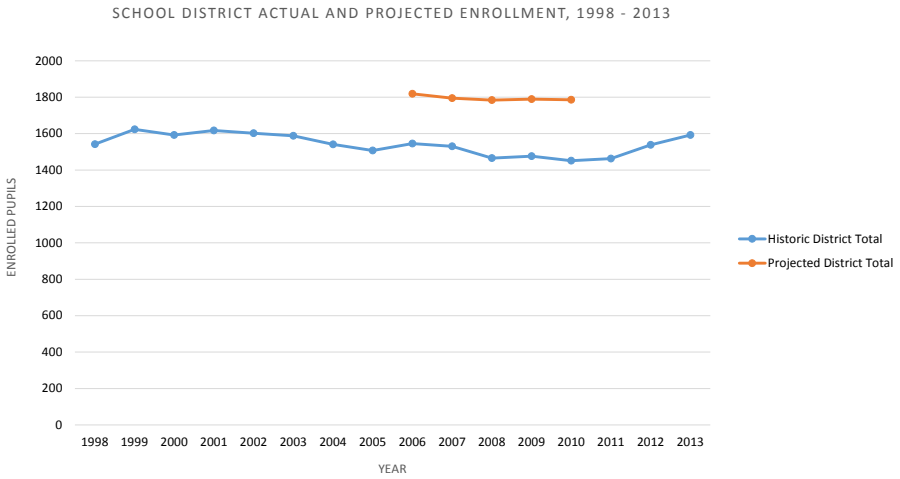
Improve cooperation & information flow among Borough bards and agencies. Miscommunication and compartmentalized information flows sometimes reduce the effectiveness of municipal governance. For example, the redevelopment of a property in the central business district may involve a handoff from the Redevelopment Agency to the Planning Board, and from the Planning Board to Borough Council, and from there to Code Enforcement office and Tax Assessor, and at each stage the developer could experience conflicting signals. Needed are concerted liason efforts and a unified information management system.

Reference: Highland Park Master Plan. http://www.hpboro.com/DocumentCenter/Home/View/166

APPENDIX A:
SCHOOL ENROLLMENT PROJECTIONS

APPENDIX A - SCHOOL ENROLLMENT PROJECTIONS

Future district and individual school enrollment is difficult to predict with precision, but is critical for maintaining adequate facilities to meet state and district standards.



The chart "Highland Park School District Actual and Projected Enrollment, 1998-2013" shows historic enrollment data from 1998-2013 from the New Jersey Department of Education, as well as the District's projected enrollments for 2006-2010 from the Long-Range Facilities Plan. Although the LRFP accurately predicted the overall enrollment trend, it overestimated district-wide enrollment by over 200 pupils each year for which there is overlapping data available. It should be noted that the District's reported actual enrollments for 2000 - 2005 do not match exactly the NJDOE's actual district enrollments for the same time period. The difference varies between 5 and 81 per year, so even accounting for these discrepancies, the LRFP projections were still high.

The following tables show a series of future enrollment scenarios, plus corresponding square footage requirements. All of these numbers were derived based on a series of assumptions, and therefore should be interpreted as estimates only. The enrollment scenarios are based on the same population scenarios used throughout the report, with some modifications (see III. Demographics/Projections). Because the decennial census age cohorts do not align with the age cohorts attending PK-12 schools, American Community Survey data was used to supplement Census data. A 15-17 year-old cohort was added to each population scenario, based on the 2010 percentage of the larger 15-19 year-old cohort comprised of 15-17 year olds (55 percent).

For any school district, but for Highland Park especially, school age population does not translate directly into public school enrollment. In 2010, approximately 65 percent of 5-17 year-olds living in Highland Park were enrolled in the Borough's public school system (Table 1).

TABLE 1: 2010 ENROLLMENT VERSUS SCHOOL AGE POPULATION

Age*	Enrollment	School Age Population
5 - 9	510	850
10 - 14	514	801
15 - 17	303	392
Total	1,327	2,043

*Enrollment numbers do not include "ungraded" pupils

As demographics shift, it is possible more of the school age population may attend public schools. This possibility should be considered when projecting space needs for the District.

Another factor that plays an important role in projecting space needs for the District is the specific measure of capacity used. The functional capacity of the District in 2010 was 2,344 students. Using the more restrictive "District Practices" capacity measure, District-wide capacity was only 1,709. Therefore, while the District is at around 95 percent of its District Practices capacity, it is at only around 69 percent of its Functional capacity. Space requirements were calculated using both measures (Tables 2-7).

Sources:
New Jersey Department of Education.
U.S. Census Bureau. American Community Survey, 2009-2013.
U.S. Census Bureau. American Community Survey, 2006-2010.

APPENDIX A - SCHOOL ENROLLMENT PROJECTIONS

TABLE 2: 2010 PROJECTED DISTRICT ENROLLMENT BASED ON 65% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	1,654	1,654	1,654
Scenario B	1,654	1,793	1,793
Scenario C	1,654	1,739	1,912

TABLE 3: 2010 PROJECTED DISTRICT ENROLLMENT BASED ON 100% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	2,545	2,545	2,545
Scenario B	2,545	2,760	2,760
Scenario C	2,545	2,760	2,943

TABLE 4: REQUIRED SQUARE FEET BASED ON FUNCTIONAL CAPACITY* AND 65% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	226,545	226,545	226,545
Scenario B	226,545	245,628	245,628
Scenario C	226,545	245,628	261,941

*Functional capacity is calculated by taking the mean of the three age-specific per-pupil space requirements (137 sq. ft. per pupil)

TABLE 5: REQUIRED SQUARE FEET BASED ON FUNCTIONAL CAPACITY* AND 100% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	348,732	348,732	348,732
Scenario B	348,732	378,108	378,108
Scenario C	348,732	378,108	403,220

*Functional capacity is calculated by taking the mean of the three age-specific per-pupil space requirements (137 sq. ft. per pupil)

TABLE 6: REQUIRED SQUARE FEET BASED ON DISTRICT PRACTICES CAPACITY* AND 65% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	304,264	304,264	304,264
Scenario B	304,264	329,895	329,895
Scenario C	304,264	329,895	351,804

*District capacity is calculated by taking the quotient of 2010 Adjusted Existing Gross Square Feet to District Capacity (number of students) (184 sq. ft. per pupil)

TABLE 7: REQUIRED SQUARE FEET BASED ON DISTRICT PRACTICES CAPACITY* AND 100% ENROLLMENT OF SCHOOL AGE POPULATION

	2017	2021	2045
Scenario A	468,370	468,370	468,370
Scenario B	468,370	507,825	507,825
Scenario C	468,370	507,825	541,550

*District capacity is calculated by taking the quotient of 2010 Adjusted Existing Gross Square Feet to District Capacity (number of students) (184 sq. ft. per pupil)

APPENDIX B:
INVESTMENTS IN RESILIENCE

APPENDIX B - INVESTMENTS IN RESILIENCE

Investments in Resilience

The core objective of the CIP is to assess infrastructure needs. One of the emerging concerns is the resilience of the capital assets. In Highland Park, "resilience" should be thought of as the capacity of the Borough to deliver key functions and critical services in the event of a natural disaster or other emergency. Recent events in the Borough reinforce this concept. The entire Borough was badly hit by Hurricane Sandy and most of the town was without power for up to two weeks.

In order to better prepare for such situations, the Borough must outline the scope of services it is able to provide to support the community during emergencies. Some of the key responsibilities for the Borough include:

- Providing safe and clean shelter
- Independent power backup systems
- Community cooking facilities
- Ambient temperature control systems

Resiliency was a key objective of the Borough's 2003 sustainability plan, Highland Park 2020: A Sustainable Community. The highlights of the plan included the green certification of the new construction projects and a solar photo-voltaic roof for the Borough Hall. These efforts were also recognized by NJ Bureau of Public Utilities under the Clean Energy Program.

The Borough has been certified a Silver community by Sustainable Jersey. Highland Park is one of just 22 municipalities in New Jersey at the Silver level of certification. The Borough has received points towards this certification for numerous programs, including the following efforts:

- Renewable Energy - On-site Solar systems
- Energy audits and education on NJ Clean Energy Programs to businesses and residents
- Community Outreach programs

The Borough should continue to pursue objectives in resiliency through sustainability reforms and investments. Strategic solutions like solar energy with storage capacity, combined heat and power systems for distributed energy and micro grids that can separate from the grid and operate independently can help the town achieve both goals simultaneously.

Emergency Management

On February 1, 2005, Meryl Frank, the mayor at that time, signed off on an Emergency Operations Plan (EOP) which set forth the general policies and procedures to be carried out by municipal and volunteer entities in order to provide the residents an effective response plan in times of emergency. The Plan covered all aspects of emergency management response activities of different agencies in the Borough, county to ensure their optimum use. The hazards that the plan addressed included severe weather, flooding, hazardous materials transportation, railroad incidents, aircraft incidents and an enemy attack. The new EOP was updated in 2014 and was submitted to the NJ State Office of Emergency Management for approval. The Borough also has verbal agreements with several nearby municipalities and governments to share emergence management resources.

Solar Islanding Project

The Solar Islanding Project is a feasibility study to assess the critical power requirements in situations of electric outage. The project performs estimates on the size of solar panels and battery backup systems required to service municipalities. This study is being conducted by RGCB and is funded through a grant from Sustainable Jersey. The long term vision is to develop a micro grid that harnesses the extensive array of solar panels installed in a couple of buildings around the Borough Hall and provide a robust independent backup capability for emergency situations.

Should a solar island prove to be a feasible investment, the Borough should explore ideas for creating an independent grid. Solar power purchase agreements (SPPA) are becoming a popular model for state and local governments around the country. An SPPA offers the host organization the opportunity to install solar power without paying upfront costs or maintenance and operation costs. There are many federal and state tax credits available to defray the huge installation costs of the on-site solar systems. Since local governments are non-tax paying entities, the third-party model introduces a taxable entity into the structure that can benefit from these incentives, lowering the overall costs. With preset electricity prices, the structure provides a price hedge against the potential volatility of conventional sources. It is possible to include a buyout option in the agreement. This typically occurs after year six, by which time the provider have been able to capture all of the tax incentives. Some noteworthy examples of SSPA's in the State of New Jersey include Vineland Solar

One and the Atlantic City Convention & Visitor Authority.

The Borough should be aware of the following caveats within SPPA's:

- While the host entity does eventually benefit with permanently lower electricity bills, it must pay for the power generated on-site until the SPPA expires or when the buyout option has been exercised.
- The government staff or facility managers must also allow access to the facilities by the third party. This factor should be considered at the time of the agreement.
- As these agreements can be complex, strong legal expertise is needed. Resources must be allocated to ensure the host's interested are well represented in the final contract.
- Insurance is another big issue for third party PPA providers and can sometimes stop a project from moving forward.

Capital investments in solar infrastructure would include the costs of purchasing solar panels, inverters and batteries. Once this infrastructure is installed, the Borough could then enter into an SPPA.

Sources:
NJ Clean Energy Program, "ACCVA Solar Project"
NJ Clean Energy Program, "Borough of Highland Park Clean Energy Municipality"
NJ Clean Energy Program, "Vineland Solar One"
The Rahus Institute, "The Customer's guide to Solar Power Purchase Agreements"
National Renewable Energy Laboratory, "Power Purchase Agreement Checklist for State and Local Governments"

APPENDIX C:
LOCAL BOND LAW

APPENDIX C - LOCAL BOND LAW

40A:2-17. Adoption of bond ordinance, procedures

a. Introduction.

A bond ordinance shall be introduced in writing at a meeting of the governing body and shall be passed upon first reading, which may be by title.

b. Publication, hearing and adoption.

The bond ordinance, or a summary thereof, in a form prescribed by the Local Finance Board, shall be published after first reading, together with notice of the introduction thereof and of the date, which shall be at least 10 days after introduction and first reading, and the time and place of further consideration for final passage, which may be at an adjournment of such meeting or another meeting. If a summary is published, the summary shall contain a clear and concise statement prepared by the clerk of the governing body setting forth the purpose of the ordinance, the amount of indebtedness being authorized and the time and place when and where a copy of the ordinance can be obtained, without cost, by any member of the general public residing in the local unit. Such publication shall be at least one week prior to the date for further consideration. At the time and place so advertised, or at any time and place to which such meeting or further consideration shall from time to time be adjourned, such bond ordinance may be read by its title, if,
(1) at least one week prior to such date or further consideration, there shall have been posted, on the bulletin board or other place upon which public notices are customarily
posted in the principal municipal building of the municipality,
(a) a copy of such bond ordinance or summary, and
(b) a notice that copies of such bond ordinance will be made available during such week and up to and including the date of such meeting or further consideration to the members of the general public of the municipality who shall request such copies, naming the place at which such copies will be so made available, and
(2) such copies of said bond ordinance shall have been made available accordingly, but otherwise such bond ordinance shall be read in full. All persons interested shall then be given an opportunity to be heard.

After the duplicate of the supplemental debt statement has been filed in the office of the director, and after such hearing, the governing body may proceed to amend the bond ordinance and thereupon finally adopt or reject it, with or without amendments.

If any amendment is adopted substantially altering matters required by this chapter to be contained in the bond ordinance, such amended bond ordinance shall not be finally adopted until at least one week thereafter and until the bond ordinance or a summary of it shall have been published once at least two days prior to the date for further consideration, together with notice of the date, time and place at which it will be further considered for final adoption. At the time and place so advertised, or at any time and place to which such meeting or further consideration shall from time to time be adjourned, such amended bond ordinance may be read by its title, if,
(1) at least one week prior to such date or further consideration, there shall have been posted, on the bulletin board or other place upon which public notices are customarily posted in the principal municipal building of the municipality,
(a) a copy of such bond ordinance or summary, and
(b) a notice that copies of such bond ordinance will be made available during such week and up to and including the date of such meeting or further consideration to the members of the general public of the municipality who shall request such copies, naming the place at which such copies will be so made available, and
(2) such copies of said bond ordinance shall have been made available accordingly, but otherwise such bond ordinance shall be read in full. All persons interested shall again be given an opportunity to be heard. After such hearing, the governing body may proceed to reject, finally adopt or further amend such bond ordinance.

A bond ordinance shall be finally adopted by the recorded affirmative votes of at least 2/3 of the full membership of the governing body. In a local unit in which the approval of any officer is required to make an ordinance or resolution effective, such bond ordinance shall be so approved, or passed over veto before it shall be published after final adoption.

c. *Final publication with statement.*

Every bond ordinance shall be published either in full or in summary form after final adoption, together with a statement in substantially the following form:

STATEMENT

The bond ordinance published herewith has been finally adopted and the 20-day period of limitation within which a suit, action or proceeding questioning the validity of such ordinance can be commenced, as provided in the Local Bond Law has begun to run from the date of the first publication of this statement.

Clerk

L.1960, c. 169, s. 1; amended 1963, c. 153; 2000, c. 126, s. 14.

40A:2-18. Bond ordinance, effective date

A bond ordinance shall take effect 20 days after the first publication of the ordinance or of a summary thereof after final adoption. A bond ordinance which authorizes obligations to fund, refund, renew, extend or retire obligations issued or authorized pursuant to this chapter, or notes or bonds issued or authorized pursuant to any act of which this chapter is a revision shall not be subject to referendum.

L.1960, c. 169, s. 1; amended 2000, c. 126, s. 15.

40A:2-19. Publications

Publications required by this chapter shall, in the case of a municipality, be in a newspaper published and circulating in the municipality, if there be one, and if not, in a newspaper published in the county and circulating in the municipality. In the case of a county, publications shall be in a newspaper published at the county seat, if there be one, and if not, in a newspaper published and circulating in the county. For the purposes of this section, a newspaper shall not be deemed to be published during any period of time in which the publication of such newspaper shall be interrupted by any involuntary suspension of publication resulting from loss, destruction, mechanical or electric failure of typesetting equipment or printing presses or the unavailability due to conditions beyond the control of the publisher, of paper or other materials and supplies necessary for operation, or resulting from a labor dispute with a recognized labor union.

L.1960, c. 169, s. 1; amended 1970, c. 318.

40A:2-20. Expenses included in cost

The cost of an improvement or property may include interest on obligations until the end of the fiscal year in which the obligations are issued or until 6 months after the completion of construction or acquisition, and architect's fees, accounting, engineering and inspection costs, legal expenses, costs of authorizing, selling and issuing obligations, preliminary planning, test and survey expenses, and a reasonable proportion of the compensation and expenses of employees of a local unit in connection with the construction or acquisition of such improvement or property.

L.1960, c. 169, s. 1, eff. Jan. 1, 1962.

40A:2-21. Minimum period of usefulness

No local unit shall authorize obligations for any improvement or purpose having a period of usefulness of less than 5 years.

L.1960, c. 169, s. 1, eff. Jan. 1, 1962.

40A:2-22. Maximum bond terms

The governing body of the local unit shall determine the period of usefulness of any purpose according to its reasonable life computed from the date of the bonds, which period shall not be greater than the following:

a. Buildings and structures.

1. Bridges, including retaining walls and approaches, or permanent structures of brick, stone, concrete or metal, or similar durable construction, 30 years.
2. Buildings, including the original furnishings and equipment therefor:
Class A: A building, of which all walls, floors, partitions, stairs and roof are wholly of incombustible material, except the window frames, doors, top flooring and wooden handrails on the stairs, 40 years;
Class B: A building, the outer walls of which are wholly of incombustible material, except the window frames and doors, 30 years;
Class C: A building which does not meet the requirements of Class A or Class B, 20 years.
3. Buildings or structures acquired substantially reconstructed or additions thereto, one-half the period fixed in this subsection for such buildings or structures.
4. Additional furnishings, five years.

b. Marine improvements.

1. Harbor improvements, docks or marine terminals, 40 years.
2. Dikes, bulkheads, jetties or similar devices of stone, concrete or metal, 15 years; of wood or partly of wood, 10 years.

c. Additional equipment and machinery.

1. Additional or replacement equipment and machinery, 15 years.
2. Voting machines, 15 years.
3. Information technology and telecommunications equipment, 7 years, except that for items with a unit cost of less than $5,000, 5 years.

d. Real property.

1. Acquisition for any public purpose of lands or riparian rights, or both,

and the original dredging, grading, draining or planting thereof, 40 years.
2. Impr ovement of airport, cemetery, golf course, park, playground, 15 years.
3. Stadia of concrete or other incombustible materials, 20 years.

e. *Streets or thoroughfares.*

1. Elimination of grade crossings, 35 years.
2. Streets or roads:
Class A: Rigid pavement. A pavement of not less than eight inches of cement concrete or a six-inch cement concrete base with not less than three-inch bituminous concrete surface course, or equivalent wearing surface, 20 years.
Flexible pavement. A pavement not less than 10 inches in depth consisting of five-inch macadam base, three-inch modified penetration macadam and threeinch bituminous concrete surface course or other pavements of equivalent strength, in accordance with the findings of the American Association of State Highway Officials (AASHO) Road Test, 20 years.
Class B: Mixed surface-treated road. An eight-inch surface of gravel, stone or other selected material under partial control mixed with cement or lime and flyash, six inches in compacted thickness with bituminous surface treatment and cover, 10 years.
Bituminous penetration road. A five-inch gravel or stone base course and a three-inch course bound with a bituminous or equivalent binder, 10 years.
Class C: Mixed bituminous road. An eight-inch surface of gravel, stone, or other selected material under partial control mixed with bituminous material one inch or more in compacted thickness, five years.
Penetration macadam road. A road of sand, gravel or water-bound macadam, or surfacing with penetration macadam, five years.
3. Sidewalks, curbs and gutters of stone, concrete or brick, 10 years.
The period of usefulness in this subsection shall apply to construction and reconstruction of streets and thoroughfares.

f. Utilities and municipal systems.

1. Sewerage system, whether sanitary or storm water, water supply or distribution system, 40 years.
2. Electric light, power or gas systems, garbage, refuse or ashes incinerator or disposal plant, 25 years.
3. Communication and signal systems, 10 years.
4. House connections to publicly-owned gas, water or sewerage systems from the service main in the street to the curb or property lines where not part of original installation, five years.

g. Vehicles and apparatus.

1. Fire engines, apparatus and equipment, when purchased new, but not fire equipment purchased separately, 10 years.
2. Automotive vehicles, including original apparatus and equipment (other than passenger cars and station wagons), when purchased new, five years.
3. Major repairs, reconditioning or overhaul of fire engines and apparatus, ambulances, rescue vehicles, and similar public safety vehicles (other than passenger cars and station wagons) which may reasonably be expected to extend for at least five years the period of usefulness thereof, five years.
h. The closure of a sanitary landfill facility utilized, owned or operated by a county or municipality, 15 years; provided that the closure has been approved by the Board of Public Utilities and the Department of Environmental Protection. For the purposes of this subsection "closure" means all activities associated with the design, purchase or construction of all measures required by the Department of Environmental Protection, pursuant to law, in order to prevent, minimize or monitor pollution or health hazards resulting from sanitary landfill facilities subsequent to the termination of operations at any portion thereof, including, but not necessarily limited to, the costs of the placement of earthen or vegetative cover, and the installation of methane gas vents or monitors and leachate monitoring wells or collection systems at the site of any sanitary landfill facility.
i. (Deleted by amendment, P.L.2007, c.62.)
j. The prefunding of a claims account for environmental liability claims by an environmental impairment liability insurance pool pursuant to P.L.1993, c.269 (C.40A:10-38.1 et al.), 20 years.

L.1960, c. 169, s. 1; amended 1964, c. 133; 1981, c. 273, s. 1; 1985, c. 153, s. 2; 1993, c.269, s. 18; 2005, c. 174; 2007, c. 62, s. 17.

40A:2-22.1. Request for director determination of period of usefulness

A local unit may request, in a form and manner determined by rule and regulation of the Local Finance Board, that the Director of the Division of Local Government Services in the Department of Community Affairs determine a period of usefulness for any capital improvement or property not included in N.J.S.40A:2-22, provided that the maximum period of usefulness so determined shall not exceed 15 years.

L.2007, c. 62, s. 18.

40A:2-24. Form of obligations

Notes may be issued payable to bearer, with interest payable to bearer or on presentation for endorsement or may be in registered form. Notes payable to bearer may be made subject to registration and the principal of and interest on notes so registered shall be payable to the registered owner.
Bonds may be issued either in coupon or registered form. Bonds in coupon form may contain provision for registration as to principal only and as to both principal and interest. Bonds issued in fully registered form or in coupon form with provision for registration as to both principal and interest may contain provision for conversion into bonds in coupon form at the request and expense of the registered owner or his duly authorized attorney or legal representative.
Any obligations may be issued subject to redemption prior to maturity with or without premium, or at such redemption price or prices and under such terms and conditions as may be fixed by resolution of the governing body.

L.1960, c. 169, s. 1, eff. Jan. 1, 1962.

40A:2-25. Execution and delivery of obligations

Obligations shall be executed in the name of the local unit by the manual or facsimile signatures of such officials, including a financial officer, as may be designated by resolution, or if none be designated, of the director of the board of chosen freeholders of a county or the mayor, or other executive officer of the municipality and of a financial officer of the local unit, and shall be under the seal of the local unit affixed, imprinted or reproduced thereon and attested by the manual signature of the clerk or deputy clerk. Coupons attached to any obligation shall be authenticated by the facsimile or manual signature of the financial officer whose manual or facsimile signature appears upon the obligation. Delivery of obligations fully executed by the officers holding office at the time of such execution shall be valid, notwithstanding any change in such officers or in the seal occurring after such execution.
L.1960, c. 169, s. 1, eff. Jan. 1, 1962. Amended by L.1983, c. 370, s. 1, eff. Oct. 27, 1983.

40A:2-26. Maturities of bonds

Maturities of all bonds shall be as determined by bond ordinance or by subsequent resolution and within the following limitations:
a. All bonds shall mature within the period or average period of usefulness determined in the bond ordinance.
b. All bonds shall mature in annual installments, the first of which shall be payable not more than one year from the date of the bonds. No annual installment shall exceed by more than 100% the amount of the smallest prior installment.
c. The first installment of bonds to finance a municipal public utility may be made payable not later than the end of the second year's operation, computed from the estimated date of completion, as fixed in the project report submitted pursuant to this chapter.
d. Bonds to finance that part of the cost of a local improvement which is to be assessed on property shall mature in annual installments not exceeding in number the number of annual installments or average thereof fixed in the bond ordinance for the payment of special assessments. The first annual installment of such bonds shall be payable not more than two years from the date of the bonds, and no annual installment shall exceed the amount of the smallest prior installment.