1CAPITAL IMPROVEMENT PLAN

INTRODUCTION & OVERVIEW

The introduction to the Capital Improvement Plan (CIP) is divided into three sections:

- What is a Capital Improvement Plan?
- Why Prepare a CIP?
- How Does the CIP Relate to the Master Plan?

WHAT IS A CAPITAL IMPROVEMENT PLAN?

A Capital Improvement Plan (CIP) is a multi-year program for expenditures by the City of Flint for rehabilitation, replacement, and balancing of the City's municipal infrastructure systems. Projects considered through the CIP process involve proposed investments in the City's infrastructure and facilities, such as police and fire stations, parks and recreation facilities, community centers, offices, roads and sidewalks, and utilities.

Definition of Capital Improvements

Capital improvements are permanent physical improvements, generally expected to have a normal life of ten years or longer. Equipment and objects needed for day-to-day use are generally not considered capital improvements. Smaller projects and projects that are intended to last for fewer than ten years are funded through the City's operating budget.

CIP and Budgeting

A CIP is typically prepared and adopted annually by the Planning Commission and is presented as a recommendation to the Mayor and the City Council.

Each year, the plan identifies the physical needs of the City's departments, estimates the costs of proposed projects, and recommends expenditures and sources of funding for priority capital improvements.

As such, the CIP plays an integral role in the process of formulating the City's annual capital budget.

20 Year Horizon

The Flint CIP is a 6-20 year plan of programmed projects for the City's municipal infrastructure systems. The first two years of this plan should form the basis for the City's two-year Capital Approval of annual budgets allocates funds to undertake projects in this period, thus beginning the implementation of the CIP. In addition, capital projects that will need to be implemented between years 7 and 20 are also included to provide a basis for future updates to this CIP.

Given the uncertainty around the availability of funds primarily tied to the budgets associated with water and sewer revenue, many of the necessary improvements that are planned in the 6-year CIP period are ultimately considered unfunded in this CIP.

BENEFITS OF THE CIP

- Assist in implementation of the Master Plan.
- Identify both short- and long-term capital expenditures to allow budgeting.
- Determine regular maintenance needs for City facilities so they remain viable.
- Provide for a more effective evaluation of alternatives and solutions than the crisis-decision process.
- Enhance opportunities for grants by allowing for long-term planning.
- Provide the ability to stabilize debt and consolidate projects to reduce borrowing costs.
- Serve as a public relations and economic development tool.
- Allow for a focus on preserving infrastructure while ensuring efficient use of public funds.
- Identify actual infrastructure needs of the City, including cases where additional funding is required beyond what is available locally.
- Provide opportunities for cooperation between departments and other units of government, such as Genesee County and Flint Community Schools, by pooling resources to reduce costs in some instances.

CAPITAL IMPROVEMENT PLANNING IN FLINT

The City of Flint has been significantly impacted by factory closures and population loss, with an 18% decline in population between the 2000 and 2010 census. The loss of jobs and population and decline in local tax revenue and state-shared revenues has had a significant impact on the City's finances. The City returned to state receivership in December 2011, as a result of consistent deficits in the General Fund, a decline in pooled cash, poor budgeting practices, and unfunded liabilities for retiree benefits.

Significant progress has been made in addressing the financial issues leading to the assignment of an emergency manager, as the $19.1 million deficit at the end of FY12 had been eliminated by the end of FY15, largely as the result of a $7 million emergency loan.

On April 29th, 2015 the Emergency Manager notified the Governor of Michigan that the financial emergency in Flint had been resolved. At that time, the Governor relieved the Emergency Manager of his responsibilities and a Receivership Transition Advisory Board was created to oversee the transition of city affairs, to its charter-designated officials.

For the first time in nearly a decade, the City began FY16 with positive balances in all of its funds. Cash position had drastically improved, and the FY16 and FY17 Budgets are realistically balanced.

Looking forward to FY18 and beyond however, the City will continue to face significant challenges as City expenditures (expenses) are projected to outpace any increases in revenues. This will lead to operating deficits in many of the City funds. Water rate increases and the potential renewal of two City millages (Public Safety and Parks and Recreation), have the ability to assist the City's budgets through long-term, ongoing revenue. This stable income could fund many much needed capital improvement projects. That being said however, even with this funding additional sources of revenue will be required or decreases in operating costs must occur for the City to recognize any progress towards improving its capital.

While the City continues to await the ruling of litigation over retiree healthcare, a result that could devastate the City's financial position, a number of issues emerging in Q1 of FY16 have adversely impacted the ability to complete even planned FY16 capital improvements.

On August 17, 2015 a preliminary injunction order was issued against the City requiring that the City immediately reduce its water and sewer rates. In addition, the order barred the City from shutting off a service for non-payment of water and subsequently banned them from collecting delinquent balances prior to August 17. This ruling led to a projected amount of approximately $11 million in uncollectible accounts, or money the City was entitled to but not able to collect on. It has also resulted in significant drops in the number of payments being received from customers.

As a direct result of the Court ruling and in order for the City to respond to this loss in projected revenue, a spending and hiring freeze across the City was implemented. At this time, the freeze remains in effect.

For water and sewer funds, it was necessary to identify projects which could be eliminated or postponed to lessen the financial burden of the order while maintaining ongoing daily operations so the City could function. To that end, many of the water and sewer capital improvements were eliminated or postponed multiple years with the exception of any projects necessary to ready the City for receipt of water from the Karegnondi Water Authority (KWA).

As a result of the spending freeze and postponement of capital improvement projects in many of the City's funds, the 2016-2021 CIP update largely repeats the City's prior capital improvement plan with projects postponed by one fiscal year. Emerging capital improvement projects have been added and all existing projects have been update to reflect any changes in priority or estimated cost.

A Common Issue

The City of Flint, like many municipalities in the United States, has been severely impacted by the recession. In the wake of the Great Recession, many local governments in Michigan have witnessed a decrease in property tax and income tax revenues while seeing the level of state- shared revenue reduced.

With less money coming in, younger communities with relatively new infrastructure have been able to cope with severe budget reductions by postponing planned infrastructure installation or expansion. In established communities like Flint, however, budget cuts have led to deferred maintenance on existing infrastructure. This has often resulted in deterioration that now requires significant expenditures to catch up.

Many of the improvements listed in the CIP are a direct response to both the years of neglect due to severe budgetary issues and the fact that there has not been a Master Plan or comprehensive CIP developed for the City in decades.

Flint Water Crisis

In April 2014, the City of Flint formally transitioned its primary source of drinking water by connecting to the Flint River. As a result of this switch, the corrosive nature of the treated river water has led to an accelerated aging process of the City's water infrastructure. Additionally, an unexpected result of the switch has directly led to shortened usefulness of this infrastructure.

Perhaps the most damning result of this switch has been the exposure of lead to residents of Flint and in particular children of Flint. The treated Flint River water subsequently resulted in the degradation of the micro/bio-film that protects the water service lines from leeching. These lines run from the street into a resident's home and supply the residence with water to live. Thus, the damaged service lines resulted in lead leeching, with Federal, State and local testing all dismissing the initial results of elevated lead levels in Flint homes.

The total cost for replacement of all City-owned water mains and property service lines is estimated at approximately $1 billion, but much further analysis and data collection is needed to solidify this figure.

Rising Cost of Deferred Maintenance

Providing ongoing maintenance, such as resurfacing streets and repairing or replacing leaky roofs, is vital for maintaining the condition of assets. When maintenance is not fully funded, it contributes to deferred maintenance and capital costs. The City has not funded required maintenance on most facilities due to tight budgetary constraints and competing priorities. As a result the City has a large backlog in deferred capital projects which is likely to significantly increase as more information is collected on the actual condition of City facilities. Compounding the problem, as assets continue to deteriorate, the cost of repair will exponentially increase and can result in peripheral damage. For example, deferring roof replacement could later result in needing to replace the roof structural members, walls, and floor of a building.

Getting the Most out of Existing Infrastructure

The challenge to maintain services in the midst of shrinking resources and increasing costs has put pressure on City government to make its limited capital resources work more efficiently. City administration, elected and appointed officials, and staff, working under the oversight of an Emergency Manager appointed by the Governor, have taken several steps to make capital expenditures more closely reflect long-range objectives. However, the population and job losses, years of neglect, and lack of regular maintenance on much of the City's infrastructure, facilities, and properties have taken their toll.

City Budget

Making progress on the budget deficit has required difficult decisions and sacrifices, including dedicating minimal resources to capital improvements beyond emergency repairs. The FY16 and FY17 budgets were balanced through a mixture of significant revenue increases, significant expenditure de- creases, and steps taken to reduce legacy costs. Past revenue increases included increases in water and sewer rates, passage of a 6 mill property tax for police and fire, establishment of a special assessment district for street lighting, and implementation of a fee sufficient to cover the cost of waste collection.

Expenditure reductions included elimination of 20 percent of the City's workforce, compensation decreases equivalent to a 20 percent wage reduction for remaining employees, and the restructuring of health and retirement benefits for current employees and retirees necessary to develop a credibly balanced spending plan. The City continues to work towards a process of realistic budgeting that will enable capital needs to be planned for, rather than reacted to.

Other Influencing Factors

In addition to adopted City policy, including the recommendations of the Master Plan, several factors and recent or on-going initiatives have shaped the development of the CIP. These influencing factors include:

-Most City facilities are in urgent need of upgrades, repair, and/or replacement of critical components, such as HVAC systems, roofs, parking lots, sidewalks, plumbing and electrical systems, security upgrades, lighting, windows, etc., and there are several buildings that are closed and not being used. Completion of some energy efficiency and other projects may result in long-term net savings but require initial capital outlays. The CIP calls for several facility assessments to determine the future viability of facilities and prioritize where investments should occur.

-Improvements to the City's water system are needed, not necessarily to mitigate the factors from the primary source transfer, but to maintain and replace water system components that are in dire need of improvement or replacement regardless of the water source. Previous studies have shown the

current system to have very low efficiency, with losses up to $2.0 million annually.

-The street system in Flint has severely deteriorated. A Pavement Surface Evaluation and Rating System (PASER) study in 2012 found only 8% of Federal-Aid eligible City streets to be in good condition. Estimates for repair of local streets exceed $50 million.

-Sidewalks throughout the City are in unsatisfactory condition and have an estimated unmet need of $40-85 million for repairs. These sidewalks are old, cracked, have separations and heaving that are potential safety hazards, creating accessibility issues for persons with certain disabilities. Grants have been used to repair sidewalks in eligible areas but do not result in significant progress to handle needs. Though no detailed inventory is known to exist, it is also extremely likely that a significant number of curb ramps in the City are in poor condition, create access issues for persons with disabilities, and do not meet current standards under the Americans with Disabilities Act. Current city ordinance requires property owners to maintain their adjacent sidewalks. A 50/50 cost share program has the potential to expedite the repairs and improve accessibility throughout the city.

-The City owns and operates several dams that are critical to the water supply for the City, as well as for recreational uses. All of them require varying amounts of rehabilitation and repair, with some being mandated to be removed as they are not viable and provide no purpose given the current drinking water system design.

-Inflow and infiltration (I/I) into the sanitary sewer results in significant amounts of water being treated that is clean. Much of the I/I is at manholes and perforated manhole covers in floodplain areas that are regularly under water.

-Housing diversity is limited, particularly for multi-family housing. Much of the housing stock (82%) was built prior to 1970 and 14.1% of parcels contain houses in poor or substandard condition.

-Many residential parcels are vacant lots (22%) and there are thousands of blighted parcels in the City.

-Flint Community Schools (FCS) suffers from budget problems, outdated facilities, and loss of students. Enrollment for the ’14-’15 academic year was roughly 5,700 students, 86% lower than the peak numbers in the late 1960’s. A number of FCS schools have been closed and many of them currently sit vacant awaiting demolition or reuse in some manner.

-The City park system, including over 67 facilities and 1,800 acres, suffers from severe neglect. Lack of regular maintenance and upkeep and elimination of most staff and programs has resulted in many facilities being closed. Equipment at most parks is severely outdated and does not meet current design and safety standards, with many parks plagued by trash and graffiti. 34 parks are currently cared for through volunteer-led efforts including park tenders and park adopter programs. This helps reduce the overall cost of trash abatement, but not mowing costs as these groups do not mow many of the city’s parks.

-Budget issues have led to reductions in staffing and service levels for many city departments. For instance, since 2002 the Parks and Recreation Division has eliminated 89 staff positions, leaving less than 1 full-time employee focused on parks.

WHY PREPARE A CIP?

THE BENEFITS OF CAPITAL IMPROVEMENT PLANNING

Over time, public facilities need major repair, replacement, or expansion and maintaining and upgrading a community's capital assets requires significant financial investment. This investment must be weighed against other community needs and analyzed in light of community goals. The City of Flint, like many cities, is under pressure to make efficient use of capital resources and must make difficult choices. There are more needs than can be satisfied at once, and the selection of one investment over another may shape the development of the City for years to come.

Capital improvement planning is a valuable tool to ensure that choices are made wisely. The City's development goals are implem3nt, in park, by the careful provision of capital facilities. The benefits of this systematic approach to planning capital projects include:

Focused attention and co-ordination with community goals, needs, and capabilities – By developing a CIP, capital projects can be brought into line with the City's long-range plans by balancing identified needs with financial capacities. Considered individually, a building renovation, park system improvement, and street widening may all be viable projects, but each project may look quite different when, in the course of the CIP process, it is forced to compete directly with a number of other projects for limited funds.

Optimizes use of the taxpayer's dollar – The CIP helps the Mayor and City Council make sound annual budget decisions. Careful planning of capital improvements helps prevent costly mistakes. In addition, capital planning allows the City to save money in several other ways. For example, investors in municipal bonds tend to look more favorably on communities that have a CIP; if bond financing is selected for a capital improvement project, the City may realize significant savings on interest.

Guides redevelopment and growth – The location and capacity of capital improvements shape the growth and redevelopment of the City.
City decision-makers can use the CIP to develop well thought out policies to guide future land use and economic development that are consistent with the implementation of the Master Plan.

Encourages coordination between departments – Participatory efforts of multiple City service units in the planning and coordination of capital improvement planning reduces scheduling conflicts and ensures that high priority needs are addressed before those of a lower priority. In addition, the CIP can be used to promote innovative management techniques and improve governmental efficiency and effectiveness by combining projects within the same area to provide a lower overall cost than if the projects were constructed separately.

Improves the basis for intergovernmental and regional cooperation – Capital improvement planning offers public officials of all governmental units (City of Flint, MDOT, Genesee County, Flint Community Schools, Genesee County Metropolitan Planning Commission, Mass Transportation Authority, etc.) an opportunity to plan the location, timing, and financing of improvements in the interest of the community and region as a whole. Advance planning also allows these entities to seek funding opportunities that may have limited availability otherwise and provide the potential for coordination/ cost-sharing for projects that span community borders and jurisdictions of the various governmental entities.

Maintains a sound and stable financial program- Unplanned emergency expenditures can endanger the financial well-being of the City, as the lack of ability to plan generally leads to higher costs. Sharp changes in the tax structure or bonded indebtedness may be avoided when construction projects are planned in advance and scheduled at intervals over a number of years. When there is ample time for planning, the most economical means of financing each project can be selected in advance. The CIP can help the City avoid commitments and debts that would prevent the initiation of other important projects at a later date.

Enhances opportunities for participation in Federal or state grant programs- Preparing and regularly updating a CIP improves the City's chance of obtaining aid through Federal and state programs that provide funds for planning, construction, and financing of capital improvements. By knowing which projects are planned, eligibility can be determined and specific grants sought for eligible projects. The CIP should include projects that can be started quickly by having construction documents ready should grant funds become available.

Provides the City with an accurate account of its capital challenges. Creation of a CIP allows the City of Flint to face a "reality check", as it begins to assess the significant amount of challenges associated with fixing its capital. The CIP takes stock of the actual needs, even if the funds to fix them do not yet exist.

LEGAL BASIS FOR THE CAPITAL IMPROVEMENT PLAN

State of Michigan

The State of Michigan provides for the development and use of a capital improvement plan in the Municipal Planning Act (Section 125.3865, Act 33 of the Public Acts of 2008).

> "To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of a master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise."

If the planning commission is exempted, the legislative body either shall prepare and adopt a capital improvements program, separate from or as a part of the annual budget, or shall delegate the preparation of the capital improvements program to the chief elected official or a nonelected administrative official, subject to final approval by the legislative body.

The capital improvements pro- gram shall show those public structures and improvements, in the general order of their priority, that in the commission's judgment will be needed or desirable and can be under- taken within the ensuing 6-year period. The capital improvements program shall be based upon the requirements of the local unit of government for all types of public structures and improvements. Consequently, each agency or department of the local unit of government with authority for public structures or improvements shall upon request furnish the planning commission with lists, plans, and estimates of time and cost of those public structures and improvements."

City of Flint

In addition, the City of Flint Charter (Section 4-504) reinforces the City's planning responsibility, with Section 4-505 calling for periodic review of the plan:

> ***4-504 Comprehensive Plan*** – "The Mayor shall propose and the City Council, after review by the Planning Commission, shall approve, with the modifications the Council deems necessary, a comprehensive plan of policies for the social, economic and physical development and conservation of the City."
>
> ***4-505 Periodic Review of Plan*** – "After approval of the plan, the Mayor shall annually propose any amendments necessary to keep the plan current; and the City Council, after review by the Planning Commission, shall consider the Mayor's proposed amendments and make the modifications in the plan that it deems necessary."

CIP & ANNUAL BUDGET PROCESS

The City's Annual Budget itemized and appropriates the funds needed for all municipal purposes. It is generally recommended that budgets separate out capital improvements from operating expenses to ensure a clear demarcation between the two.

The ***Operating Budget*** includes the day-to-day operational expenses of the City, such as salaries, supplies, and expenses for programmed activities.

A ***Capital Projects Budget*** would include the anticipated capital project costs. The first two years of projects contained in the Capital Improvement Plan should be the basis for formulating the Capital Projects Budget.

The City needs to strive to maximize resources by maintaining a balance between operating and capital budgets. A continuous relationship exists between the CIP and the annual budget and a direct link can be seen between the two documents, as there should be in a strategic planning environment. Budget appropriations lapse at the end of the fiscal year as the operating budget is funded with recurring annual revenues such as taxes, licenses, fines, user fees, and interest income.

Linking Planning to the Budget

The CIP plays a significant role in the implementation of a Master Plan by providing a link between planning and budgeting for capital projects. The CIP process precedes the budget process and is used to develop the capital project portion of the annual budget.

Approval of the CIP by the Planning Commission does not mean that they grant final approval of all projects contained within the plan. Rather, by approving the CIP the Planning Commission acknowledges that these projects represent a reasonable interpretation of the upcoming needs for the City and that projects contained in the first year of the plan are suitable for inclusion in the up- coming budget to be considered and ultimately approved by the City Council

Priorities vs. Funding Availability

Priority rankings do not necessarily always correspond to funding sequence. For example, a road-widening project which is ranked lower than a park project may be funded before the park project because the road project has access to a restricted revenue source, whereas a park project may have to compete for funding from other revenue sources. A project's funding depends upon a number of factors – not only its merit, but also its location, cost, funding source, and logistics.

City Funds with Capital Spending Capacity

101- General Fund for limited capital improvements

402 – Public Improvement Fund (Millage) for capital building improvements

202 – Transportation (major Roads) fund

203 - Transportation (local roads) fund

590 – Utilities (sewer) capital funds

591 - Utilities (water) capital funds

RELATIONSHIP BETWEEN THE CIP & CITY MASTER PLAN

The completion of the City's Imagine Flint Plan in late 2013 has formed the basis for Flint's continued recovery. The Master Plan is the first in over 50 years and was the result of collaboration between City leaders, residents, and business owners to develop a vision for Flint's recovery efforts.

The CIP is intended to complement the Master Plan to ensure infrastructure can be provided to meet the goals of the Master Plan, with a clear definition of needs and priorities to assist in budget development annually. However, it must be noted that the City's capital needs far exceed available resources, even with additional funding from non-traditional sources (grants, donations, etc.). The condition of the facilities will require difficult decisions to be made regarding prioritization of CIP projects.

Comprehensive planning influences the programming of capital improvements. As noted above, state law reinforces that link by requiring that the Planning Commission annually prepare a CIP to support and implement Master Plan recommendations.

The City also provides a strong connection between the comprehensive plan and capital improvements in the form of short-range implementation strategies. In addition to the Master Plan, several other planning documents provide implementation recommendations that link the future vision of the community to relatively short-term actions.

These documents include, but are not limited to:

- Parks & Recreation Master Plan
- Flint Parks Assessment & Amenity Inventory
- Reimagining Chevy in the Hole
- Flint River Assessment
- City of Flint Water Reliability Study
- Flint River District Strategy
- City of Flint Water Supply Assessment
- Flint River Restoration Plan
- Flint Downtown Traffic and Parking Study
- Flint Street Lights Project
- City of Flint Water and Waste- water Rate Study
- Portfolio Energy Use Analysis
- State Revolving Fund Report
- Transportation Improvement Plan (TIP)
- City Strategic Plan

CIP as a Planning Document

The CIP is a planning document that serves to consolidate necessary projects associated with the City's various infrastructure asset areas. These needs are gathered primarily from findings of the City's master planning efforts and staff identification through the operations and maintenance of the City's facilities and systems. The CIP provides a methodology for addressing the infrastructure needs to allow staff to determine anticipated funding sources and schedules for the projects necessary to meet the needs, based on priority, and the availability of the financial and staffing resources to perform these projects.

Annual Update Process

The CIP is a dynamic and needs to be reevaluated at least annually. Each year all projects included within the CIP should be reviewed, a call for new projects made, and adjustments made to existing project lists arising from changes in the amount of funding required, conditions or timeline. A new year of programming is also added each year to replace the year funded in the annual operating budget.

The CIP will continue to

develop over time. Greater attention shall be devoted to provide more detailed information about individual project requests, program planning, fiscal analysis, fiscal policies and developing debt strategy.

Need for Further Study

A vast majority of Flint's infrastructure projects are not new infrastructure – it is the need to replace or rehabilitate and adjust the current aged facilities. The infrastructure in place supported a significantly higher residential population and industrial user base, so the infrastructure is generally prepared to support the "rebirth" of the City as described in the Master Plan.

Due to the water crisis as previously noted, it's important that the City continue to research, investigate and ultimately conclude the severity and depth of the lead-piping problem. A series of technical measures must be taken to properly address the scale of the problem and those include collecting, analyzing and reporting on the findings. The extent of damage that ultimately will be found to have occurred to Flint's infrastructure because of the Flint River switch must be recognized and publically discussed. These findings and dialogue will ultimately position the City to accurately understand the challenges and the amount of funding necessary to fix them.

PUBLIC INVOLVEMENT

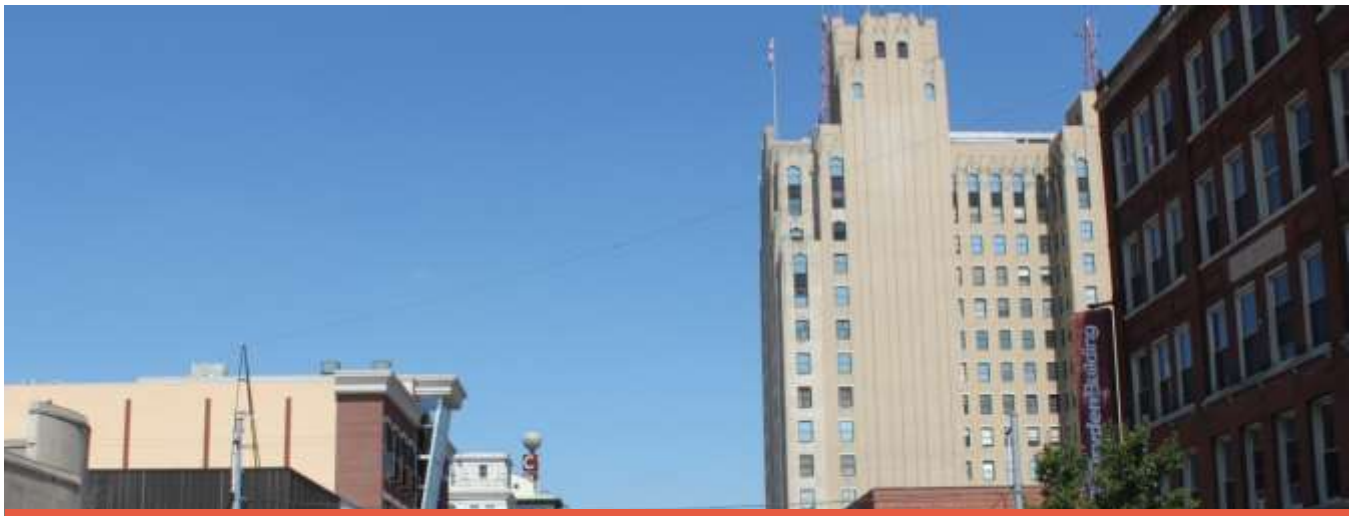
The City is committed to including the public in its recovery efforts and a significant public involvement campaign was included during the Master Plan.

Given both the unusual and unique circumstances during the update of this document, extensive community engagement and outreach was unable to occur. As noted earlier, the current landscapes involving the water and subsequent budget stability leaves many of the projects in this document unattainable at this given time.

Local, State, and Federal court decisions as well as the as-yet unknown extent of damage to water infrastructure present multiple uncertainties when estimating the level of infrastructure needs and funds available to address them. Given so many unknowns, this CIP will be treated as an evolving document, with changes made as more information becomes available. The water crisis has put a spotlight on capital needs in Flint. What is unescapable is the conclusion that the resources required to make our damaged water infrastructure safe far exceed local capacity. On-going State and/or federal help is urgently needed to address these problems.

PUBLIC INVOLVEMENT AFTER THE CIP PROCESS

Some of the projects included in the CIP are studies and planning efforts that should incorporate public involvement as an integral part of the project. The majority of the projects that are identified for implementation in the CIP are "traditional" municipal public works projects, such as water main replacements, road reconstructions, park development, government buildings, and structures.



2 CAPITAL IMPROVEMENT PLAN

READING & USING THE CIP

2016-2021 CIP POLICY

This CIP outlines a schedule of public expenditures over the ensuing six-year period. The CIP provides for large, physical improvements that are permanent in nature, including the basic facilities, services, and installations needed for the functioning of the community. These include transportation systems, parks, utilities, municipal facilities, and other miscellaneous projects. The CIP provides a list of high value capital budget items or projects for inclusion in the proposed Capital Budget of the City's Annual Budget Document.

Standards for Inclusion

The City's CIP is a document that initiates and tracks high expenditure capital projects, purchases and programs. To qualify for inclusion in the CIP, a single project or a program of projects comprised of components of a common infrastructure or capital system (e.g., neighborhood parks system, annual street program, etc.) must meet certain standards, which are to be set by the Planning Commission with assistance from City staff and input of residents.

General guidance on the standards for an item's inclusion in the CIP includes that the project:

- Is consistent with an adopted or anticipated component of the Master Plan, a state or Federal requirement, or a City Council approved policy;
- Constitutes a permanent, physical, or system improvement in excess of an established cost or significant equipment purchases in excess of an established cost; or,
- Adds to the value or capacity of the infrastructure of the City.

Unfunded Needs

The CIP cannot address all of the capital expenditure needs for the City. As with other communities throughout the region, state, and nation, the City's infrastructure systems have needs that are mounting at such a rate that they cannot be addressed within the span of a six- year CIP. Some identified needs cannot be addressed because of limits on the annual amount of available funding or staffing resources. Others cannot be addressed because of a lack of any applicable funding source, or perhaps policy or legal restrictions. Furthermore, given the current financial situation created due to legal rulings, the City of Flint finds itself with very little-to-no room for infrastructure upgrades outside of the immediate water systems.

As a result, there are needs whose solutions cannot be implemented within the CIP. Rather than discard or ignore these items, they are included in the CIP as unfunded needs and are shown as being unfunded, with many of them shown out- side of the 6-year window. This information will provide guidance to City staff in examining the limitations and restrictions currently in place and to seek alternative methods to achieve solutions.

Operational & Maintenance Needs

Many cities include within their annual budget an Operations and Maintenance (O&M) Budget and a Capital Projects budget. Projects that are considered operational, maintenance, or recurring are typically excluded from the CIP, but are captured in the O&M Budget portion of the Annual City Budget Document.

In this CIP, some O&M projects are included in the CIP. A separate O&M budget should be developed in future years to include the items that have a regular schedule for maintenance or replacement, such as:

- Minor bridge rehabilitation;
- Minor street repairs and filling of potholes;
- Replacement of roofs, doors, windows, etc.;
- Parking lot reconstruction;
- Computer system upgrades;
- Hydrant and water valve replacement;
- Security system upgrades; and,
- Water meter replacement.

Capital Projects Budget

Approval of the CIP by the City Council does not mean that the Council grants final approval or authorization for all the projects contained in the plan. Rather, by approving the CIP Council acknowledges that they agree that these projects represent a reasonable interpretation of the upcoming needs for the City, with the projects contained in the first two years of the plan being the basis for the City's next Capital Projects Budget. Until a project is contained within an approved annual budget and funding is identified, projects and schedules for each included in the CIP are only guides that are likely to be changed as conditions change.

ASSIGNING PRIORITY

The following classification system has been used to prioritize capital improvement needs and is used in the list of CIP projects in this document:

PRIORITY 1 – URGENT
Urgent, high-priority projects that should be done if at all possible.

These include projects that are required to comply with a Federal or state requirement; projects that would address an emergency or remedy a condition dangerous to public health, welfare, and safety; projects that would provide facilities for a critically needed community program; projects needed to correct an inequitable distribution of public improvements in the past; and projects vital to the economic stability of the City. A special effort is made to find sufficient funding for all of the projects in this group, realizing that this is not feasible given the significant needs.

PRIORITY 2 - IMPORTANT
High-priority projects that should be done as funding becomes available.

These include projects that would benefit the community and projects whose validity of planning and validity of timing have been established.

PRIORITY 3 – DESIRABLE
Worthwhile projects to be considered if funding is available.

These are projects that are adequately planned, but not absolutely required, and should be deferred to a subsequent year if budget reductions are necessary. These projects may end up being included within a funded portion of the CIP if alternative sources of funding are identified.

CIP Project Narratives

The CIP includes an extensive inventory of capital improvement projects proposed for inclusion in the proposed Capital Budget of the City's Annual Budget Document. As a planning document with a direct impact on the physical make-up of the city, the projects included in the CIP should support long-term City policy established in the Master Plan.

2015 CIP Progress

It is important to note the significant amount of effort and progress that has been either initiated or completed over the course of the previous CIP year. Given that 2015 represented the first, official combined CIP in the City's history, the 2016 CIP update will highlight a handful of the significant projects that were addressed from the previous year, and also update on a broad basis, the total progress that has been achieved by the City, within each chapter. To make the document easier to read and follow, a color-coded system has been devised to help the reader track the progress and understand the document:

Project Completed in 2015 -

Project On-Going from 2015 -

Project Added from 2015 -

Project Removed:
As previously noted, a handful of projects were removed due to the unforeseen water crisis. These projects are identified in their respected charts.

Imagine Flint Master Plan for a Sustainable Flint

The Master Plan utilizes an innovative "placemaking" approach, which defines desired places within the City. While traditional approaches to city planning are often concerned with the specific "uses", the Land Use Plan builds on the idea of establishing unique and desirable places. The Place-Based Land Use Plan is the central component of the Master Plan, the implementation of which individual capital projects should work toward.

Master Plan Place Types

The Land Use Plan establishes 12 distinct place types within the city that provide for various land uses and types of places, essential for creating a harmonious and inviting community in which to live, work, and visit. The following summary highlights the intent of each place type. Chapter 4: Land Use Plan of the Master Plan provides detailed descriptions accompanied by a series of implementation strategies for each place type.

Community Open Space

Community Open Space areas are designated where parks, open spaces, and environmental features predominate. These areas are defined by: large natural features, such as large greenways along the Flint River, Swartz Creek, Gilkey Creek, and Kearsley Creek; areas around Thread Lake, Kearsley Reservoir, and Flint Park Lake; large wooded areas and urban forests; and, other City parks and open spaces.

Green Neighborhoods

Flint's Green Neighborhoods are areas where previously vacant or underutilized properties have been repurposed. They have become low-density, residential neighborhoods with a significant amount of land dedicated to green uses, community gardens, small-scale urban agriculture, and small open space areas.

Traditional Neighborhoods

The Traditional Neighborhood is the building block of the Flint community. It is where most people live and families are raised, in primarily detached single family homes. Flint's Traditional Neighbor hoods are supported by various other uses including schools, com- munity centers, religious institutions and parks.

Mixed Residential

Mixed Residential areas are generally concentrated around Down- town, providing a local population to help patronize Downtown businesses. Mixed Residential areas are also situated along busy corridors, providing an opportunity for transit-oriented development and more robust commercial services.

Neighborhood Centers

Neighborhood Centers are a focal point of Flint's neighborhoods and are distributed throughout the City. Neighborhood Centers are primarily located at the intersection of busy streets that provide ease of access for nearby residents and contribute to the overall activity of the area.

City Corridor

City Corridors are situated along Flint's busiest roads, providing areas for a range of activities on parcels easily accessible by automobiles and serviced by transit. City Corridors leverage the economic potential of traffic and help minimize land use incompatibilities by containing a variety of uses in manageable areas throughout the City.

Downtown

Downtown is a dense and vibrant mixed use area near the geographic center of the City along Saginaw Street, between the Flint River and Interstate 69. Downtown is, and should continue to be, a compact area consisting of a variety of uses that together provide and foster an active pedestrian-oriented area.

Civic/Cultural Campus

As home to Mott Community College, the Flint Cultural Center, and the Flint Central High School campus, the Civic/Cultural Campus is a unique area of the City. The Civic/Cultural Campus is a unique place type consisting entirely of institutional and public uses and any redevelopment within this place type should consist of uses that complement or strengthen the existing campus.

University Avenue Core

Flint's University Avenue Core is a unique area of the City, home to Hurley Medical Center, Kettering University, Atwood Stadium, and General Motors Tool and Die. These anchor institutions form the central component of a high-intensity district outside of Downtown Flint.

Commerce and Employment Centers

Commerce and Employment Centers are areas where the development pattern is focused around a community anchor such as a large employer, regional commercial center, or a cluster of smaller employment-related uses. Commerce and Employment Centers can attract a significant number of workers and visitors from outside of the community.

Production Centers

Production Centers are designated where the City's major industrial centers and economic generators exist such as GM's Flint Truck Assembly and portions of the Buick City site. These intense industrial uses are capable of generating considerable noise, traffic, and other nuisances and should be separated from residential and commercial areas.

Green Innovation

The deindustrialization of the City has resulted in a significant population decline and areas of Flint that once consisted of fully built out neighborhoods are now vacant. Areas of Green Innovation represent significant redevelopment opportunities that hold the potential for a variety of eco-friendly and sustainable solutions to repurpose large vacant areas and help reinvent the City.

CIP ORGANIZATION

Several areas of the Master Plan identified infrastructure/capital projects and the CIP maintains the same chapter structure to enable a one-to-one comparison between CIP projects and Master Plan policy. The CIP is organized into the following chapters:

- Chapter 1 – Introduction & Overview
- Chapter 2 – Reading & Using This CIP
- Chapter 3 – Housing & Neighborhoods;
- Chapter 4 – Transportation & Mobility;
- Chapter 5 – Environmental Features, Open Space, & Parks;
- Chapter 6 – Infrastructure & Community Facilities;
- Chapter 7 – Economic Development & Education; and,
- Chapter 8 – Public Safety, Health, & Welfare.
- Chapter 9 – Moving Forward

To assist with implementation of the Master Plan and align CIP projects with long-term City policy, the CIP has been organized around the core chapters of the Master Plan. The CIP includes several sections with corresponding Master Plan chapters, including those in the above table.

CIP ORGANIZATION

CIP CHAPTER	MASTER PLAN CHAPTER
3	Chapter 5 – Housing & Neighborhoods
4	Chapter 6 – Transportation & Mobility
5	Chapter 7 – Environmental Features, Open Space, &
6	Chapter 8 – Infrastructure & Community Facilities
7	Chapter 9 – Economic Development & Education
8	Chapter 10 – Public Safety, Health & Welfare

Grouped CIP Projects

Within each section, CIP items have been grouped based on the various sections and sub-headings contained within the Master Plan. This will enable a one-to-one comparison between City policy identified in the Master Plan and the projects identified in the CIP. So, for example, improvements to traffic signals along Pierson Road directly relate to the "Technology & Wayfinding" section of the Transportation & Mobility chapter.

In some sections the categories are further subdivided to ensure there is clear delineation of needs for departments. This is most significant for the Infra- structure & Community Facilities section, which is subdivided for City Hall, miscellaneous City facilities, Water Department, and Sewer Department subsections in the CIP.

Information Sources

Capital projects and costs listed were obtained from a variety of sources, including:

- Lists of capital projects provided by various departments;
- Applications prepared by the City for various grants; and,
- Previous studies prepared by the City, other governmental entities, or consultants on behalf of either.

In some cases, projects listed have had very little detail prepared and cost estimates have been approximated based on the anticipated scope of the project. It is very likely that many of the costs noted for various projects will vary, sometimes considerably, when additional information or analysis is obtained.

READING CIP PROJECTS

All projects have the following information provided:

- ***Project Name*** – a short description of the project.
- ***Project Narrative*** – provides additional detail about each project that is known at the time of the CIP completion. The exact extent of the scope of all projects may not be known at this time but the narrative does give additional detail that is not always obvious in the Project Name.
- ***Priority*** – as discussed previously, all projects were given a priority based on their need. Priority is provided for projects on a case-by-case basis and there is no ranking between projects either within a department or between departments. In considering the priority, a number of factors were considered. Of primary importance was how the project might assist in implementation of the Master Plan, as well as other plans (e.g., Strategic Plan), provide a long-term cost savings or other similar benefit (e.g., roof replacement/repair prevents interior water damage to a building), or is required as a regulatory requirement (e.g., dam repair required by the state).

Priorities are stated as:

1. *URGENT*: projects that should be done if at all possible
2. *IMPORTANT*: projects that should be done as soon as funding is available
3. *DESIRABLE*: worthwhile projects that can be deferred if needed

Projects have also been ordered within each priority group such that the most important projects are at the top of the list and least important at the bottom. For example, various roadway improvements are listed as '2 – IMPORTANT', but some projects should be implemented ahead of others within that priority group based on their location and the place type they serve.

- ***Total Cost*** – the total cost of the project, which may be a one-time cost, multi-year, or continuous. For continuous cost projects (i.e., projects such as water-main replacements done every year on a 20-year cycle), the total cost shown is for the 20-year CIP duration.
- ***City Cost Share*** – the portion of the total cost assumed to be the responsibility of the City.
- ***Non-City Funds*** – funding provided by grants, donations, or other sources not part of the City's budget.

With regard to City cost share, unless a non-City fund source such as a grant has been identified and secures, it is assumed that the City will be responsible for funding 100% of the cost of the project.

CIP PROJECT SPREADSHEET

The information in the following CIP tables is a summary of the CIP Project Spreadsheet included at the end of the CIP. The project spreadsheet includes similar information in a slightly different format. The most relevant difference is that the spreadsheet includes an "Unfunded Needs FY 2015-2035" column. This column reflects the amount of the total cost of each project that is currently unfunded – essentially not included in an approved budget, has no identified funding source except for the City budget, an assumed match for a grant that is or may be sought for the improvement, etc.

Many "unfunded" projects are likely to be included in a future CIP update and may have funding from alternate sources. All projects contained on the CIP spreadsheet are included in the tables below, with some multi-phase projects on the spreadsheet lumped together into one project (e.g., design engineering, construction, and construction engineering for road projects are split into three phases on the spreadsheet but combined below).

3 CAPITAL IMPROVEMENT PLAN

HOUSING & NEIGHBORHOODS

The City of Flint has lost approximately half its population over the past fifty years. This population loss has resulted in a tremendous physical impact across Flint's neighborhoods, with some experiencing significant vacancies and degrading housing conditions, while other neighborhoods have fared more favorably, but are still fighting to remain stable.

The Housing and Neighborhoods Chapter in the Master Plan outlines a wide variety of strategies needed to address the drastic changes that have occurred in Flint's neighborhood structure. In more populated neighborhoods, the City must devote resources toward vacant lot maintenance, targeted demolition, building rehabilitation, and code enforcement to prevent these neighborhoods from destabilizing.

In other traditional single-family neighborhoods experiencing significant population loss, the City should focus on helping these areas evolve into well- maintained, less dense, "green neighborhoods." A few neighborhoods with extreme population loss are being repurposed to make way for non-residential development that can make productive use of largely vacant areas.

The CIP plays an important role in tying infrastructure improvements to the needs of each neighborhood place type identified in the Master Plan.

CIP Vision for Housing & Neighborhoods

Imagine thriving neighborhoods, free of blight, where a targeted demolition stabilizes traditional neighborhoods and transforms high-vacancy neighborhoods into stable green neighborhoods with larger lots, community gardens, and well-maintained open space. Imagine inclusive neighborhoods teeming with mixed-income and mixed use developments integrated into the fabric of the community and connected to transit and walkable retail options. Imagine neighborhoods with re-tooled, modern infrastructure that is well-matched to the service needs of the population.

Capital Improvement Overview

Housing maintenance or neighborhood stabilization projects are typically not included in a Capital Improvement Plan. Unfortunately, the burden of managing vacant properties falls on local government and cities like Flint are struggling to find the resources necessary to demolish or rehabilitate vacant buildings and take care of vacant property. Moving forward, it is important to note that the City continue to commit its Community Development Block Grant Funds and pursue additional grants to fund neighborhood stabilization efforts such as owner occupied rehabilitation and new housing construction. The City should also use grant funds to help stimulate multi- family supply in a fairly weak housing market.

Imagine Flint Neighborhood Planning Initiative

The City has committed to completing 10 - 15 neighborhood plans within the City by 2020. Investments in improving the quality of housing, along with strategic investments in neighborhood infrastructure should be guided by this neighborhood-level planning effort. In November 2015, the City was awarded a multi-year grant from the Ruth Mott Foundation to begin this process. The grant will enable to the City to develop and implement two (2) neighborhood plans annually, over the next two years. The City should continue to work with its community partners and identify the necessary funding to carry-out this program indefinitely.

HUD Choice Neighborhoods Planning Project (CN)

The City, in partnership with the Flint Housing Commission (FHC) was awarded a $500,000 CN planning grant for the South Flint community. The grant specifically focuses on the Atherton East housing complex, one of the most isolated and crime-ridden developments within the City. Identified in the master plan as an inequitable development, the site currently lies within a floodplain. The grant will allow the City, FHC, and residents of the South Flint community the ability to craft a transformation plan for housing rehabilitation and relocation. The plan and any new potential development would focus on creating vibrant mixed-income neighborhoods that include quality, affordable housing and a multitude of options for the residents of South Flint.

Housing & Neighborhoods – 2015 CIP Progress

It's important to document and detail the tremendous amount of work being done by the City over the past year. The following details the significant progress and investment made towards improving Flint's housing and neighborhoods. In all, there are 8 on-going projects that total roughly $12.8 million dollars in capital improvements to Flint neighborhoods.

A full list of the projects can be found on the project spreadsheet listed within this chapter.

Hardest-Hit Funding.

The City and GCLBA partnered again in 2015, resulting in $12 million of Federal demolition dollars being awarded to the GCLBA, to address abandoned properties in Flint. The funding will result in 800-1,000 additional problem properties being removed from neighborhoods.

Blight Removal Activities.

The City continues to take a community-driven approach to eliminating blight. 2015 produced some astounding numbers of blight removal:

- Over 1,000 tons of trash removed.
- 31 participants of Operation Fresh Start.
- 4,208 enforcement complaints received; 3,551 responded to and 1,826 resolved.

Neighborhood Inventory Program.

The City continued to partner with the Community Foundation and their NSG program to offer $21,000 in mini-grants for neighborhood data collection work. In all, 70,000 pieces of data was collected.

Housing & Neighborhoods Policy

The following housing and neighborhood policies are derived from the Master Plan and should shape all projects moving forward. These policies provide a framework for evaluating the merits of any capital improvement project. For detailed discussion of each policy, please refer to the Master Plan section and the page referenced.

Housing options diversification.

The City partnered with MSHDA to commission a Target Market analysis report. The TMA should be used to encourage new, quality multi-family housing options to meet the new place based land use patterns.

Master Plan reference: Diversifying Housing Options, pp. 93-95.

Data-driven investment.

The City developed a blight-matrix that uses data to guide future block-level intervention. This has produced a data-driven foundation to make investment decisions that align with the Land Use Plan.

Master Plan reference: Developing An Investment Framework, pp. 97-100.

Neighborhood stabilization.

The City continues to equitably commit funds for neighborhood stabilization, with at least half allocated to Green Neighborhood.

Master Plan reference: Neighborhood Revitalization Priorities, p. 101; Eliminating Blight and Urban Decay, p. 110.

Code enforcement.

The City continues to develop a pro-active code enforcement program designed to first address absentee property owners in the city who are failing to adequately provide care to their property. Currently a Magistrate position is being created to help expedite citations created through Code Enforcement.

Master Plan reference: Code Enforcement, p. 101.

Low-Maintenance Restoration & Greening.

With funding from HHF, the City and GCLBA have begun to restore recently demolished lots with low-growth clover. The planting of clover offers a significant reduction to annual maintenance of vacant lots, resulting in two (2) mowing's a season.

Master Plan reference: Greening & Repurposing, pp. 102-103.

HOUSING & NEIGHBORHOODS CAPITAL IMPROVEMENT PLAN

Blight Elimination

The Master Plan calls for the development of a multi-phase blight elimination framework that serves to stabilize neighborhoods through a collaborative approach between residents, local government, institutions, community groups, and business leaders and developers. In its important campaign to end blight in Flint, the City produced a Five-Year Blight Elimination Framework with assistance from the Genesee County Land Bank. The blight elimination framework uses the Master Plan place types to provide direction for blight removal, which can be used by institutions, residents, business owners, public officials, and the entire Flint community. Grant funding is aiding in the implementation of this document.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Code Enforcement Provide effective code enforcement to support blight removal and work to ensure that properties remain blight free. 5-year cost.	1 – URGENT	$2,500,000	TDB	TDB
Boarding Boarding of 5,000 structures. 5-year cost.	1 – URGENT	$1,100,000	TDB	TDB
Mowing Mow 20,000 properties annually with next-door support and using mow strips for properties not adjacent to occupied properties, if not reused. 5-year cost.	1 – URGENT	$17,988,300	TDB	TDB
Waste Removal Removal of 71,000 tons of trash, debris, and hazardous trees. 5-year cost.	1 – URGENT	$3,800,000	TDB	TDB
Demolition Demolish 5,000 vacant and blighted residential structures. 5-year cost.	1 – URGENT Grant Funds Secured	$63,950,000	TDB	TDB
Vacant Lot Reuse Facilitate reuse of 5,000 vacant lots. 5-year cost.	1 – URGENT Grant Funds Secured	$1,400,000	TDB	TDB

HOUSING & NEIGHBORHOODS
CAPITAL IMPROVEMENT PLAN

Improving Neighborhoods

Investing in Flint's existing neighborhoods is a key component in improving quality of life, a guiding principle of the Master Plan. The City should continue to identify projects and initiatives that improve neighborhoods in accordance to the Master Plan.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Smith Village Landscaping and Green Infrastructure Plan The Renaissance of Smith Village Development is nearly complete. This plan will address remaining issues such as inconsistent grading and drainage, and make the neighborhood more attractive through better streetscape and landscape design. These issues give us the opportunity to make Smith Village a demonstration project for the implementation of green infrastructure, helping the City cut long term maintenance and utility costs while becoming more sustainable in the process.	2 – IMPORTANT	$75,000	$75,000	$0
Smith Village Landscaping and Infrastructure Improvements Implementation and construction of the above plan. Will include: streetscape and gateway improvements, landscaping and grading, sidewalk and utility repairs, and green infrastructure elements such as rain gardens.	2 – IMPORTANT	$195,000	$195,000	$0
LED streetlight program Converting existing streetlights to LED fixtures would require an initial capital outlay but the savings in energy costs was anticipated to have a payback of as soon as 3 years (based on EPICS-Purdue University study).	3 – DESIRABLE	$5,00,000	$5,000,000	$0
Residential Parcel Assessment Biennial inventory of residential parcels for structural quality and housing vacancy. Cost of undertaking one such inventory is $20,000.	2 – IMPORTANT Grant Funds Secured	$20,000	$0	$20,000
Choice Neighborhood Planning Project Development of a comprehensive Transformation Plan for the south Flint community, which specifically targets the Atherton East housing complex. The plan includes funding for "short-term" action projects to improve the quality of neighborhoods in South Flint.	1 – URGENT Grant Funds Secured	$500,000	$500,000	$0
Imagine Flint Neighborhood Planning Initiative Two-year planning project that will create at least 4 neighborhood plans across Flint.	1 – URGENT Grant Funds Secured	$487,580	$177,580	$320,000
Interactive Parcel Mapping Platform Development and implementation of a parcel based mapping platform accessible to residents to assist with City code enforcement efforts and neighborhood stabilization.	2 – IMPORTANT	$50,000	$0	$50,000

4 CAPITAL IMPROVEMENT PLAN

TRANSPORTATION & MOBILITY

The City must approach transportation and mobility with a strategy that is driven by the Master Plan. The City is primed to leverage its strategic regional location, access to the interstate highway system, and connection to Bishop International Airport for new economic development efforts. The City is also faced with the challenge of restructuring its transportation and mobility systems that were designed and built for a population twice that of which they currently serve.

The Transportation & Mobility Plan of the Master Plan stresses the need to work with agencies, to better coordinate efforts, manage and maintain their roadways, and improve the transportation system in Flint. Furthermore the city must undertake and support initiatives that reduce dependence on the automobile while improving walkability and bikeability.

Land use and transportation are inherently linked. Together, they create the places people go and the ways they get there. Land use and transportation must be closely coordinated to ensure that Flint grows in a sustainable and efficient way.

All policies and projects should consider the impacts on both the City's land use pattern and transportation network based on the following questions:

- Does the existing transportation system support anticipated development?
- How can future development complement the transportation network?
- What modes of transportation are most appropriate for a given area?
- How can investment in transportation accomplish other community goals, including neighborhood stabilization; infrastructure improvement; economic development; and the promotion of public safety, health and welfare?
- How does the local environment influence transportation improvements?

CIP Vision for Transportation & Mobility

Imagine an efficient, coordinated, and reliable transportation system within Flint, where an interactive network of trails, sidewalks, bike lanes, buses, and roads afford all citizens multiple modes of safe transit. Imagine a Flint that is one of the most walkable and bike-able communities in all of Michigan. Imagine a Flint that capitalizes on its strategic regional location, access to the interstate highway system, existing railroad infrastructure, and connection to Bishop Inter- national Airport to spark new industries and grow companies.

CIP Overview

The City of Flint has the opportunity to redesign its image and develop a more efficient mode of transit throughout the city. An aging street network that is severely in excess given the cur- rent population counts should be addressed though prioritized projects that align accordingly with the future functional classification map, identifying current and future traffic counts. These roadways offer support to the areas of envisioned higher density and regional opportunities found in the land use plan. Focusing on major road way improvements that offer increased bicycle and pedestrian mobility options will aid the City towards shifting the perception of an auto-oriented town, while providing the vibrant spaces for increased recreation and reduced long-term maintenance for the city to manage.

A strong prioritization on road diet projects and streetscape improvements present lower cost options that offer higher reward returns. Furthermore, the transportation and mobility CIP has the opportunity to connect with the larger regional transit network, of which air, rail and public transit have tremendous long-term opportunities. Linking increased passenger rail options with a growing state network of public transit options provides opportunities for Flint to significantly tap into its strategic location.

Transportation & Mobility – 2015 CIP Progress

It's important to document and detail the tremendous amount of work initiated by the City over the past year and document the progress being made from the previous years CIP.

In all, 4 major projects were fully completed and an additional 13 have begun and still remain in progress. This substantial progress results in roughly $2.9 million fully executed on CIP projects last year (2015) and another $19.9 million worth of capital improvements that remain "in progress".

The following details the significant projects and investment made towards improving Flint's roads and increasing mobility for all residents and visitors. A full list of the projects can be found on the project spreadsheet listed within this chapter.

Pierson Rd. CMAQ Project
$420,000 project designed to upgrade traffic signals and remove unnecessary ones.

N. Saginaw St. Rehab.
$2.5 million dollar project that rehabilitated 1.8 miles of N. Saginaw St.

Stewart St. Bridge
A $400,000 project that provided preventative maintenance that runs over Buick City.

Genesee Valley Trail
A 10-foot wide non-motorized trail was completed that connects the City with the larger, regional trail network.

Transportation & Mobility Policy

The following transportation and mobility policies are derived from the Master Plan and should shape all projects moving forward. These policies should provide a framework for evaluating the merits of any given capital improvement project. For detailed discussion of each policy, please refer to the Master Plan section and page referenced.

Infrastructure Design
An increased emphasis on road diets and traffic calming is taking shape as multiple City-streets are awaiting the results of engineered road diet studies.

Master Plan reference: Infrastructure Design, p. 123-126

Trail Development
The City completed and remains in negotiations to build additional non-motorized trails.

Master Plan reference: Trail Improvements, p. 128

Street Tree Management
A tree inventory has been conducted and a draft street tree management plan is currently under review. Once finalized, adequate dollar amounts will be appropriated in upcoming CIP updates.

Winter Plowing & Storage
There is a need to acquire a second location to store salt during the winter months to reduce reload and travel time when plowing city streets. Additionally, due to the age of the fleet, there are mechanical challenges faced by the Department. DPW will need access to an indoor storage facility to help decrease startup/down times.

Aging Fleet
Due to the aging of the fleet used to perform winter maintenance activities, the City desperately needs to start replacing the tandem trucks to reduce the repair costs and downtown currently being experienced. DPW is proposing to purchase at least two trucks/year, during the next three years.

Pedestrian Safety (Walking Audit)
The City will be partnering with community groups to begin to audit the city's sidewalk network while also assessing the ADA compatibility.

Master Plan reference: Signage & Safety, p. 130-132

Sidewalk Repair (50/50 Program)
The City launched a 50/50 program works to repair faulty sidewalks with partial payment coming from homeowners. The City should also continue to secure federal, state, and grant funding for the repair or installation of sidewalks.

Master Plan reference: Signage & Safety, p. 131

Mass Transit Authority
The MTA should be consulted to determine needs related to local infrastructure (bus turn-outs, stop locations, intersection phasing, ITS applications, etc.) and identify desirable modifications to established routes.

Master Plan reference: Transit, p. 133-136

Data Collection efforts
The City launched an aggressive program to better understand exactly "where" mobility problems are occurring. The problem spotter technology allows residents and DPW staff to identify problems in real time, through the use and collection of data.

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Maintenance of Existing Streets

The street network within the City includes more than 550 miles of roadways. The current network of local streets has long been neglected, with estimates of repairs needed at $50 million, and this estimate may be well below actual costs when considering the full scope of projects. Even with the undeniable need, the FY 2012-13 maintenance programs accounted for only 4.5 miles of resurfacing. At that pace, City roadway resurfacing would be completed on a 122-year cycle even though the life expectancy of an asphalt roadway is 20 years at best. Pavement Surface Evaluation and Rating System (PASER) ratings in 2012 found only 8% of City streets to be in "Good" condition, down from 28% in 2008.

Investment in streets is vital to accomplishing the goals of the Master Plan and should be considered an investment in other aspects of the community. The goods and people transported by the street network supports commerce, industry, health, education, activity, and other important functions. Land use changes in the City and their relationship to the changing transportation needs should be analyzed in great detail as part of any redevelopment project. The Master Plan discussed a number of concepts and techniques to consider in various parts of the City to reflect the change in context, multi-modes of transportation available, and current practices in the industry.

Opportunities to make improvements, such as instituting Complete Streets, converting one-way streets to two-way in the area, consolidating curb cuts, reconnecting cul-de-sac streets, road diets, reconfiguring intersection alignments, removing traffic signals that are no longer needed, signal technology improvements, and access management (all of which are discussed in detail in the Master Plan Chapter 6), can all contribute to "right-sizing" the roadway network to meet the needs of the new Flint and be a critical infrastructure improvement for implementation of all aspects of the Master Plan. Eliminating some roadway segments can be done without compromising local mobility or character of neighborhoods, and these segments then do not compete with critical segments for maintenance dollars. There are numerous four-lane roadways throughout the City that have Average Daily Traffic (ADT) totals below 20,000, making them candidates for a road diet via conversion to three-lanes or narrow median four-lane boulevard, along with other improvements specific to the modal requirements of the corridor. A number of the projects included below include review of feasibility of a road diet implementation (see page 125 of the Master Plan for a complete list and map).

NOTE: It is anticipated that moving forward the City will spend an average of $75,000 each year for general engineering services. In addition, it is anticipated that the annual cost for bridge inspections and engineering services by consultants will be $44,000. These annual costs are not included as line items within the following CIP project table.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Lapeer Road – I-69 to Dort Hwy. Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from I-69 to Dort Highway. Cost includes PE, construction, and CE.	2 – IMPORTANT	$1,382,973	$276,595	$1,106,378
Future TIP projects Not identified projects 1.5 million dollars for FY21 at assumed 20% cost-share. TIP projects for 2017-2020 recognized individually as new projects in CIP. FY2021 only year with unidentified projects.	2 – IMPORTANT	$1,500,000	$300,000	$1,200,000
Lapeer Road – Center Rd. to Railroad Tracks Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from Center Road to Dort Highway. Cost includes PE, construction, and CE.	2 – IMPORTANT	$1,127,085	$225,417	$901,668

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Stewart Avenue Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from Andrew Street to Dupont Street. Cost includes PE, construction, and CE.	2 – IMPORTANT	$1,633,690	$326,738	$1,306,952
Mackin Road Total reconstruction with storm sewer upgrades, new sidewalk, drive approaches, ADA ramps and signals from Ballenger Highway to Grand Traverse. Cost includes PE, construction, and CE.	2 – IMPORTANT	$2,500,000	$485,000	$2,015,000
Martin Luther King Avenue Total reconstruction with storm sewer upgrades, new sidewalk, drive approaches, ADA ramps and signals from Pierson to downtown. Cost includes PE, construction, and CE.	2 – IMPORTANT	$3,750,000	$750,000	$3,000,000
Hamilton Avenue Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Chevrolet to ML King. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award	2 – IMPORTANT	$830,285	$166,057	$664,228
Atherton Road Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Ogema to Dort Highway. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$745,316	$149,063	$596,252
Grand Traverse Street Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Welch to Court. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$2,282,663	$456,526	$1,826,106

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Flint Cemetery driveway Construct a new driveway to improve accessibility to the cemetery, particularly for veterans.	3 – DESIRABLE	$100,000	$100,000	$0
Saginaw Street Brick Resurfacing Resurface existing brick-surfaced segment of Saginaw Street from the Flint River to Court Street with brick and other materials to improve road surface and environment for safe travel of motorists, bicyclists and pedestrians. TIP application submitted. Competing for federal funding award.	3 – DESIRABLE	$3,859,415	$771,883	$3,087,532
Andrew Street Full reconstruct of Andrew Street from Stewart to Wager. Andrew will remain a 3 lane, one-way road with the potential to be converted to two-way in the future. Cost includes PE, construction, and CE. Preliminary design completed by MDOT. Project to be constructed during calendar year 2016.	1 – URGENT Grant Funds Secured	$874,971	$0	$874,971
Stewart Avenue Full reconstruct of Stewart Ave from James P. Cole to Dort. Stewart will be reduced from a six lane roadway to 5 lanes. Cost includes PE, construction, and CE. Preliminary design completed by MDOT. Project to be constructed during calendar year 2016. Additional $192,000 grant awarded to cover projected project cost overrun.	1 – URGENT Grant Funds Secured	$1,628,097	$0	$1,628,097
Residential Streets Includes a variety of road treatments to preserve and maintain residential streets annually at a cost of $2,000,000. Three-year prioritization list to be determined by April 2016 to assist in implementation of Master Plan to meet estimated $50,000,000 need. Residential paving program to be initiated spring 2016. Enacted Road Funding Bill to provide additional funds for road/bridge maintenance.	1 – URGENT	$12,000,000	$12,000,000	$0
Miscellaneous projects Projects identified for FY 2016/2017 Includes contribution to preliminary engineering for S. Saginaw Street road diet ($25,000) and funding source identification for Leith Street access project ($20,000).	2 – IMPORTANT	$45,000	$45,000	$0

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Fenton Road Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from Hemphill to Campbell Street. Cost includes PE, construction, and CE. Fleis & Vandenbrink performing preliminary engineering and design. Construction anticipated calendar year 2016.	1 – URGENT Grant Funds Secured	$788,591	$157,718	$630,873
Dupont Street Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from Stewart Avenue to Carpenter Road. Cost includes PE, construction, and CE. Preliminary design completed. Project to be constructed during calendar year 2016.	1 – URGENT Grant Funds Secured	$1,970,574	$656,860	$1,313,714
Fenton Road Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from I-69 to Campbell Street. Cost includes PE, construction, and CE. Fleis & Vandenbrink performing preliminary engineering and design. Construction anticipated calendar year 2016.	2 – IMPORTANT	$1,984,569	$661,910	$1,322,700
MDOT Projects Annual projects anticipated for FY 2015, 2016, and 2017 that require a cost-share by the City to participate. City cost share represents 12.5% of MDOT local share of federal project costs for improvements within City jurisdiction. MDOT completed construction I-69. Construction I-475 scheduled for 2016.	1 – URGENT Grant Funds Secured	TBD	$556,000	TBD
Hamilton Avenue Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from ML King to Broadway. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$1,928,498	$385,699	$1,542,798

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN				
PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Court Street Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Crapo to Center. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$3,296,932	$659,386	$2,637,546
Davison Road Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Hamilton to Dort. Cost includes PE, construction, and CE.	2 – IMPORTANT	$1,983,650	$396,730	$1,586,920
Fleming Road Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Pasadena to Bell Creek. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$1,762,578	$352,516	$1,410,062
Kearsley Street Resurfacing project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines Chevrolet to Beach. Cost includes PE, construction, and CE. Wade Trim performing preliminary design. Construction anticipated FY 2017.	2 – IMPORTANT Grant Funds Secured	$1,318,891	$263,778	$1,055,113
Van Slyke Road Project to include milling the existing pavement, pavement repairs, placement of 4 inches of HMA over existing pavement, manhole adjustments, sidewalk ramps and associated sidewalks and curbs reconstructed in accordance with ADA guidelines from Atherton to Hemphill and a pedestrian crosswalk added at the Atherton Rd intersection. Cost includes PE, construction, and CE. TIP application submitted. Competing for federal funding award.	2 – IMPORTANT	$858,837	$171,767	$687,070

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Technology & Wayfinding

Projects on the transportation network to improve mobility are not restricted to paving or reconstruction. There are many low cost improvements that can be considered that can have a dramatic positive impact on mobility. Given the reduction in population, it is very likely that some intersections that are currently signalized would no longer warrant them. The City has 288 signalized intersections, well over twice the number anticipated for the population according to the Institute for Transportation Engineers (ITE). Conversion of signalized intersections to two-or four-way stop control can save several thousand dollars annually in electricity costs, not to mention the cost of hardware and controllers. For intersections where signals are warranted, improvements can still be made, including coordinating a series of signals on major arterial roadways to allow vehicle platoons driving the posted speed limit to progress through a corridor. Where synchronization isn't an option, alternatives such as changing the cycle length as warranted by traffic throughout the day or addition of vehicle detection systems to modify signal phasing based on traffic volumes in real time can be considered to minimize queuing of vehicles and wasted green time. These changes, in addition to emergency signal preemption and transit signal priority can assist in improving mobility for emergency vehicles and buses.

Another, often overlooked, method of improving mobility is through improved wayfinding signage. Addition of distinctive, uniform, and attractive signage along key corridors, intersections, and locations can be instrumental in directing visitors to key destinations, such as downtown, public parking, parks, hospitals, schools, colleges, motels, restaurants, etc. Within key areas such as downtown, additional pedestrian-level maps can further highlight attractions in each area. As the Master Plan is implemented it is very likely that a number of projects in addition to those listed will be identified to improve mobility. The City should collaborate with entities such as MDOT to review traffic signals on state routes and downtown business groups for ideas on wayfinding programs in the downtown. It is also feasible that student projects at one of the local colleges could be done for wayfinding recommendations and options throughout the City.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Analysis of City traffic signals Review of all City traffic signals to determine if they are war- ranted and, if so determine if synchronization, cycle length changes, etc. can	2 – IMPORTANT	TBD	TBD	TBD
Pierson Road CMAQ Project LED and wireless traffic signal upgrades at 6 of 12 intersections from Harvard to Dort Highway. Traffic signal improvements at the following locations: Pierson Road at Harvard Street, Saginaw Street, Selby Street, and Horton Ave. Improvements include full signal replacement and ADA ramp upgrades at each intersection. Traffic signal removal at the following locations: Pierson Road at North Street and Pierson Road at Industrial Ave. This is the second phase of a project completed in 2012 to	COMPLETED	$420,517	$0	$420,517

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Infrastructure Design

Street network improvements that are not typical resurfacing or reconstruction can also have a dramatic impact on mobility. Implementation of "Complete Streets" designed and operated to be safe for pedestrians, bicyclists, motorists, and transit riders of all ages and abilities can often not only ease congestion but also support economic growth, improve safety, encourage walking and biking, improve air quality, and enhance mobility for children. A Complete Streets approach to roadway infrastructure promotes the development of a multi-modal transportation network where safe alternatives to cars are available. The City has adopted a non-binding Complete Streets ordinance stating its support for development of multi-modal corridors, and a logical next step is adopting a binding policy outlining how various components can be integrated into future public and private development projects. The components could include design guidelines, technological improvements, signage, education programs and outreach, road diets, one-way to two-way conversions, addition of bike lanes, access management, mid-block pedestrian crossings/pedestrian signals, traffic calming, and intersection realignment, among others. The Master Plan has already identified a number of corridors in the City that could be candidates for a road diet (conversion from four full width travel lanes, often with full length center left turn lane to generally 2 travels lanes with on-street parking, transit lanes, bike lanes, and/or medians added). A handful of projects have been identified below as a first step in the Complete Streets program for the City during implementation of the Master Plan.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Saginaw Street Milling and resurfacing of existing pavement, pavement repairs, manhole adjustments, and reconstruction of curb ramps from Hamilton Avenue to the Flint River. Cost includes PE, construction, and CE.	2 – IMPORTANT	$1,940,822	$388,164	$1,552,658
Buick City redevelopment perimeter streets Total reconstruction with storm sewer upgrades, new sidewalk, drive approaches, ADA ramps and signals to facilitate redevelopment in the area. Cost includes PE, construction, and CE.	2 – IMPORTANT	$3,750,000	$750,000	$3,000,000
South Saginaw Street road diet Planning staff received a $30,000 grant to complete the road diet for S. Saginaw St. from I-69 to Hemphill Rd. These resources will result in new bike lanes being created on Saginaw St., a streetscape plan with gateway enhancements being generated and minor streetscape improvements being implemented.	1 – URGENT Grant Funds Secured	$30,000	$0	$30,000
Harrison Street Enhancement Cost includes CE and construction. Rowe Professional Services completed preliminary design. Construction scheduled calendar year 2016	2 –IMPORTANT	$385,189	$106,884	$278,345
Saginaw Street Construction and CE for 1.77 miles of road rehabilitation, including cold-milling of existing asphalt roadway, placement of HMA surfacing, select curb repair, minor base repair including detail 7 & 8 joint repair, manhole cover adjustments, ADA compliant ramp improvements, select storm sewer improvements, traffic signal improvements, pavement markings and restoration from Hamilton to Pierson.	COMPLETE	$2,449,677	$444,616	$2,005,061

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Mobility & Access

Given the fact that the City's transportation network hosted much higher traffic volumes than are expected in the future, the existing network is likely a candidate for other improvements not already mentioned that would improve mobility and access. The City should consider a comprehensive analysis of the street network within the City to ascertain what improvements best meet the needs, both current and future. The scope of this analysis should build upon that already completed in the Master Plan but go to a higher level of detail, looking at additional data such as traffic counts, crash data, land use, etc. and develop a more comprehensive listing of projects that can be discussed at a future update of this CIP. This study should also consider the need for connectivity to Bishop International Airport and the state highways and interstate highways in the City (M-21, M-54, I-69, I-75 and I-475), transit needs of MTA, and regional mobility. Other factors to consider is reconnecting cul-de-sacs where mobility would be enhanced, making new network connections to eliminate isolation from a neighborhood, and street removals that no longer serve their original purpose.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
City-Wide Transportation Network Analysis Study suggested performing a thorough analysis of the true needs of the City's roadway network.	1 – URGENT	TBD	TBD	TBD
Bus Rapid Transit The City, in partnership with the Mass Transit Authority (MTA), should pursue a feasibility study on BRT transit along Saginaw Street. Identified as the "primary artery" within Flint, BRT along Saginaw Street would provide increased accessibility and access through much of the City's core.	3 – DESIRABLE	TBD	TBD	TBD
Leith Street (Access Point) Total reconstruction with storm sewer upgrades, new sidewalk, drive approaches, ADA ramps and signals from Dort to Saginaw, which would restore east-west access across I-475 and Buick City and provide access on the north side of the City. Cost includes PE, construction, and CE.	3 – DESIRABLE	$18,750,000	$3,750,000	$15,000,000
Leith Street Bridge Preventative maintenance of the bridge over the C&O railroad includes substructure repairs of the piers under the fascia beams. Costs include construction and CE.	COMPLETED	$41,977	$2,098	$39,878

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Bridges

As would be expected, bridges in the City are in a similar situation when compared to the streets. There are a number of vehicle and pedestrian bridges that are in need of regular maintenance, rehabilitation, or replacement. At least 53 bridges in the City are rated as "structurally deficient" or "functionally obsolete" according to a Highway Bridge Report prepared by MDOT in 2013. The City has a total of 32 bridges under its jurisdiction, 23 of which (72%) were found to be "structurally deficient" or "functionally obsolete" according to a Bridge Technical Report prepared by Genesee County Metropolitan Planning Commission. All of these bridges facilitate the movement of vehicles over freeways, other roadways, railroads, and watercourses and are essential to the movement of goods and people in the City. It is unlikely that any of the vehicle bridges are no longer required; however there are some pedestrian-only overpasses that no longer serve their original purpose due to the changes in population, closing of schools, etc.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Atherton Road over Carmen Creek Bridge Preventative maintenance of the bridge over Thread Creek. Cost includes PE, construction, and CE.	1 – URGENT Grant Funds Secured	$425,000	$85,000	$340,000
12th Street Pedestrian Bridge Demolish pedestrian bridge over 12th Street and railroad at Southwestern Academy. Verify that bridge no longer is needed to meet future plans of Flint Community Schools and Master Plan implementation.	3 – DESIRABLE	$150,000	$150,000	$0
Kearsley Park Boulevard Bridge Preventative maintenance of the bridge over Gilkey Creek. Cost includes PE, construction, and CE.	1 – URGENT Grant Funds Secured	$135,000	$32,400	$102,600
Barton Street Bridge Preventative maintenance of the bridge over Thread Creek. Cost includes PE, construction, and CE.	1-URGENT Grand Funds Secured	$183,750	$44,100	$139,650
Bridge Maintenance Projects Annual allocation to perform miscellaneous routine bridge maintenance projects FY2017 to FY2021. $200,000 annually.	1 – URGENT	$1,000,000	$1,000,000	$0
Torrey Road (12th Street) Bridge over Carmen Creek Bridge replacement. Costs include PE, construction, CE. Construction anticipated in FY2017	2 - IMPORTANT Grant Funds Secured	$1,227,500	$245,500	$982,000
S. Saginaw Street Bridge over Flint River Preventative maintenance project. Costs include PE, construction, CE. Construction anticipated in FY2018	2 – IMPORTANT Grant Funds Secured	$387,500	$77,500	$310,000
Stewart Street Bridge Preventative maintenance of the bridge over the C & O Railroad includes pin and hanger replacement, deck joint replacement, and cleaning and coating the beam ends. Costs include construction and CE.	COMPLETED	$414,754	$20,737	$394,016

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Pedestrian Network

The City has a comprehensive sidewalk network that serves its neighborhoods, commercial areas, and recreational areas. The condition of many sidewalks is deteriorating and areas exist where gaps limit pedestrian safety and mobility. There is no detailed inventory of sidewalks but there is extensive evidence of the need for significant work being needed to maintain, repair, or replace sidewalks. Sidewalk maintenance is an on-going challenge given Flint's limited resources, a problem common in most urban areas. A walkability audit should be performed that identifies pedestrian paths and physical barriers to walking, access to transit, and accessibility to persons with disabilities.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Sidewalk repairs Repairs to sidewalks city-wide with estimated cost of $40,000,000 minimum. By ordinance, sidewalk repairs are the responsibility of the property owner and a cost-sharing program is being evaluated to facilitate city-wide improvements. An accurate, detailed inventory is needed to assess most critical areas based on Master Plan implementation goals.	2 - IMPORTANT	TBD	TBD	TBD
Walkability audit of City pedestrian network Review of entire network of City sidewalks to determine condition and ADA compliance to allow prioritization of projects. Should include extensive public involvement and be consistent with the implementation of the Master Plan.	2 - IMPORTANT	TBD	TBD	TBD

Right-of-way Maintenance

The City has recently completed a comprehensive street tree audit. These findings are under review and will determine specific monetary amounts dedicated to street tree maintenance for the upcoming years. Additionally, fleet service and upgrades are ne eded for winter maintenance activities.

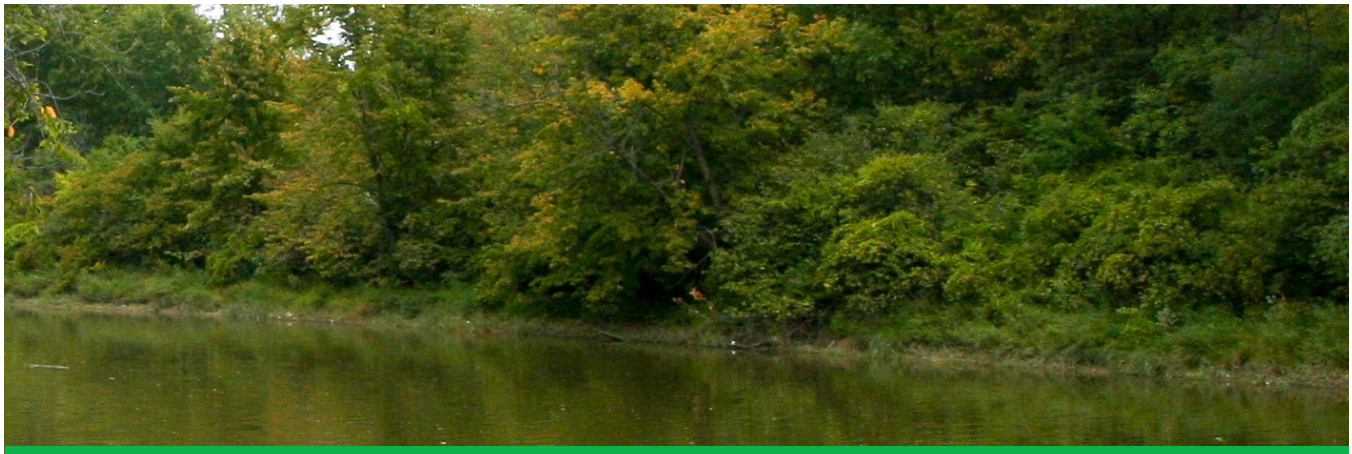
PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Street Tree Maintenance Annual allocation to perform routine maintenance of urban tree system as recommended in the Street Tree Management Plan. Costs include tree removals, plantings, and routine maintenance activities.	2 - IMPORTANT	TBD	TBD	TBD
Salt Storage Facility Secure additional salt storage facility in northern section of City to decrease salt truck reload time and improve plowing efficiency.	2 - IMPORTANT	TBD	TBD	TBD
Equipment Storage Facility Facility to store vehicles to protect engines and mechanical parts to decrease startup time/downtime and improve response times.	2 - IMPORTANT	TBD	TBD	TBD
Tandem Trucks Purchase two trucks per year for the next three years, thereafter follow approved depreciation schedule for vehicle replacements ($175,000 each)	1 - URGENT	$1,050,000	$1,050,000	$0

TRANSPORTATION & MOBILITY CAPITAL IMPROVEMENT PLAN

Trail Improvements

Trails provide many benefits to the community including an improved transportation system, health and safety, environmental preservation, and economic vitality for the community. Trails and pathways are an important component of creating a livable community and attracting a talented workforce to the City of Flint and Genesee County. The Genesee County Regional Trail Plan included a number of trail projects that should be considered both within the City as well as regional trail connections. The Genesee County Plan identified the Flint River Trail, Genesee Valley Trail, and Grand Traverse Greenway as the top 3 priority trail projects in the county. Groups, such as the Genesee Regional Trail Council (GRTC), consisting of representatives from local communities, Friends of the Flint River Trail, M-15 Heritage Route, Clio Area Pathways, Genesee County Parks and Recreation Commission, Genesee County Road Commission, Genesee County Land Bank, MTA, MDOT, University of Michigan-Flint, Ruth Mott Foundation, and numerous other groups. The purpose of the GRTC is to create an interconnected system of trails linking people and communities throughout Genesee County and guide the development of the countywide trail plan. There are a number of agencies and organizations that offer funding for the development of non-motorized trail systems. The Federal and state government, non-profit organizations, and corporations all offer programs for trail funding, and several funding sources can only be used for non-motorized trail systems. Maintaining eligibility for the various funding sources and seeking funding for improvements is critical to meeting the goals for trails in the City.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Northeast Flint River trail extension (3.8 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$1,140,000	$1,140,000	$0
Eastern Flint River trail extension (4.9 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$1,470,000	$1,470,000	$0
Western Flint River trail extension - Carriage Town (1.3 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$390,000	$390,000	$0
Southern Flint River trail extension - Flint Golf Club (2.0 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$600,000	$600,000	$0
Western Flint River trail extension - Mott Park (2.2 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$660,000	$660,000	$0
Southern Flint River trail extension - Swartz Creek (2.8 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$840,000	$840,000	$0
Southern Flint River trail extension - CSX railroad (3.1 miles) Estimated from Genesee County Regional Trail Plan (2007)	3 – DESIRABLE	$930,000	$930,000	$0
Genesee Valley Trail Construct 10-foot wide non-motorized pathway from Chevrolet Ave. to M-21.	COMPLETED	$655,803	$131,070	$524,733



5 CAPITAL IMPROVEMENT PLAN

ENVIRONMENTAL FEATURES, OPEN SPACE & PARKS

Built around the Flint River, the City has always had a direct relationship with the natural environment. The Master Plan presents an opportunity for the City to generate greater social and capital benefits from its environmental features, open spaces, and parks.

Open space and parks are critical components of urban life. They provide opportunities for passive and active recreation, access to nature, enhanced air and water quality, and help define the character of each neighborhood and community as a whole. They also present possibilities for improving the efficiency of the City's infrastructure and capital systems.

Accordingly, the Master Plan establishes the framework for more extensive blue/green corridors throughout the City, that are complemented by linked trails, paths, parks, and other open space amenities. Investment in environmental features, open spaces, and parks capital is needed to generate greater benefits from these assets.

The Environmental Features, Open Space & Parks Plan in the Master Plan aims to balance some of Flint's most significant challenges with unique opportunities to enhance the quality of life for its residents, and create a natural framework around which to build a new, prosperous Flint. It also identifies ways that water bodies, green open spaces, and parks can dovetail into other planning efforts, including land use, transportation, community facilities, public safety, and more.

CIP Vision for Environmental Features, Open Spaces & Parks

Imagine a new national reputation for Flint, with the City positioned as a post-industrial leader in protecting the environment and building upon its natural assets to clean polluted air, land, and water, and confront climate change. Imagine an extensive network of well-kept parks, safe and accessible to all and beautifully maintained. Imagine the Flint River revitalized by an alliance of City, non-profit, volunteer, and resident partners. Imagine the Flint River as an anchor for economic growth and recreation and home to a vibrant "green waterfront" of parks and trails spanning the entire length of the river.

CIP Overview

Primary capital investments within Flint parks system should be made in conjunction with the land use and transportation and mobility plans, ensuring that any investment, even minimal in nature, over the next 5-years be targeted at the vulnerable populations, thus aiding neighborhood stabilization and our Youth demographics.

Increased emphasis should be placed on implementing alternative methods to address the traditional landscapes that are found throughout many Flint parks today. By identifying portions or entire public spaces that are unused, transitions to native landscapes shall be prioritized as part of a comprehensive park naturalization process.

This approach is highlighted within the Chevy Commons Greening Project that incorporates both active and passive landscapes with non-traditional greening processes, ultimately reducing long term maintenance costs while providing benefits to infrastructure systems through new green and blue infrastructure methods.

City of Flint Parks Millage

The parks millage, which ends in 2016, is the only dedicated source of funding for City parks and open space. Maintaining our extensive network of parks is costly and the revenue brought in by our millage has been on a steady decline due to decreased property values. In 2015, the parks millage only generated $312,000 of which 90% was spent the most basic of mowing services and utilities. Staffing in parks has also been vastly decreased. In 2008 the City had the equivalent of 65 full time positions. In 2015 it had less than one full time position shared by four staffers. Renewing the parks millage in 2016 and finding additional long term funding is necessary as the parks millage alone is not sufficient to our needs. Despite budget constraints, the City continues to aggressively pursue grant funding to supplement the millage.

Parks & Open Space – 2015 CIP Progress

Over the past year, the City has made great progress on major capital projects. In all, 8 projects have been completed totaling $575,000 in capital upgrades during 2015. Additionally, 7 projects worth $1.24 million remain in progress.

The following list details the significant projects and investment made towards improving Flint's infrastructure. A full list of the projects can be found on the project spreadsheet listed within this chapter.

Brennan Park Improvements
A $55,000 community-build project that to improve the playground.

Riverbank Park Development
A $500,000 phased improvement project that will increase access to the park, complete with a new ADA ramp.

Max Brandon Park Eco-Park
A $137,500 project to naturalize parts of Max Brandon Park while incorporating community engagement through interpretative signage

Environmental Features, Open Spaces & Parks Policy

The following environmental features, open space, and parks policies are derived from the Master Plan and should shape all projects moving forward. These policies should provide a frame- work for evaluating the merits of any capital improvement project. For detailed discussion of each policy, please refer to the Master Plan section and the page referenced.

Flint River revitalization.
One of the defining projects in the revitalization of Flint should be transforming the Flint River and its riverfront into a clean and appealing recreational and entertainment destination. Projects should include increased waterfront park space, re-design of Riverbank Park, increased connectivity to Downtown and neighborhoods, and better utilization of University Pavilion.

Master Plan reference: Flint River, pp. 150-151; Flint River & Water- front, pp. 220.

River greenbelt.
Vacant land adjacent to the Flint River should be assembled for "blue/green infrastructure" that can both absorb rainwater and provide additional natural spaces for residents.

Master Plan reference: Greenbelt (Blue/Green Infrastructure), pp. 151-152.

Water quality.
The Flint River, Thread Lake, Kearsley Reservoir, Flint Park Lake, and other waterways should be protected from pollution and contamination.

Master Plan reference: Water Quality, p. 150.

Park access.
All residents should have reasonable access to safe and attractive parks and natural areas, including having a neighborhood park within ½ mile of their home and a larger park within 1 mile. All park improvements should be ADA compliant.

Master Plan reference: Park Standards, p. 156.

Operation & maintenance.
Operational & maintenance Partnerships for shared responsibility for each of the City's parks should be dictated by the number of park users, with small local parks maintained by neighborhood groups and large regional parks transferred to state, county, or regional control. All parks would remain under the oversight of the City of Flint and a Parks Advisory Board comprised of residents and stakeholder
Master Plan reference: Park Maintenance, p. 158.

Park Partners and Partnerships.

Park partners, who currently work in over 40 of Flint's 68 parks, have also contributed to capital improvements at Max Brandon, Flint Park Lake, Hardenbrook, Longway, Mott, Sarginson, and Bassett parks.

Master Plan reference: Park Partners, 158.

Naturalization.
The transition of under-utilized parkland from manicured turf or fields to native vegetation represents an opportunity to increase park beauty and reduce maintenance costs.

Master Plan reference: Naturalization, pp. 160-161.

ENVIRONMENTAL FEATURES, OPEN SPACE & PARKS CAPITAL IMPROVEMENT PLAN

The City of Flint Parks and Recreation Master Plan 2013-2017 was adopted in late 2012, which includes additional information about the park system. Maintenance of a current park master plan is a requirement for eligibility of numerous grant programs and the City is urged to keep this plan updated. The City has been very successful at obtaining various grants to make improvements and, given the budget issues of the City, continued grant acquisition will be needed to make any improvements of significance. Recommendations of the park master plan should be reviewed in concert with Master Plan recommendations to ensure that the distribution of park funding is equitable, serving populations in need, and strategic investments in parks and community centers serve to stabilize neighborhoods.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
McKinley Park Improvements The City was awarded a Natural Resources Trust Fund grant from MDNR to make improvements to McKinley Park, which is located on Thread Lake. Grant to be matched by donations. Project will include tennis court renovations, improved waterfront access, new playground equipment and accessibility improvements, pavilion and overlook construction, parking improvements, and related items.	1 – URGENT Grant Funds Secured	$300,000	$0	$300,000
Riverbank Park improvements Make upgrades to meet ADA standards, barrier-free access to amphitheater stage including new railings, landscaping enhancements, and kayak access to river. This project is funded by a grant from the Michigan DNR.	1 – URGENT Grant Funds Secured	$500,000	$0	$500,000
Brennan Park Improvements Improvements to the park and playground equipment.	1 – URGENT Grant Funds	$55,000	$15,000	$40,000
Bassett Park Master Plan CIP Improvements consistent with the park master plan developed in 2012, including filling the side yard, construct storage shed and concrete slab, improve tennis courts and ball diamonds, improve playground, and add mulch to trails.	2 – IMPORTANT	$124,000	$15,000	$110,000
Hardenbrook Park Master Plan CIP Improvements consistent with the park master plan developed in 2013, including pavilion repairs, installation of a new pavilion, benches, picnic tables and grills, landscaping, and new playground equipment.	2 – IMPORTANT	$87,000	$0	$87,000
Longway Park Improvements CIP Developed in early 2016 through the Adopt-a-Park program, project includes removal of hazardous equipment, new play scape, improvements to the soccer/rugby fields, picnic area, and wooded area.	3 – DESIRABLE	$55,000	$0	$55,000

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Mott Park Improvements CIP Project includes removal of hazardous equipment, new play equipment, improvements to the street hockey court, picnic area, and brush removal area.	3 – DESIRABLE	$60,000	$0	$60,000
Sarginson Park Improvements CIP Project includes removal of hazardous equipment, new ball field, bleachers, and improved picnic area.	3 – DESIRABLE	$65,000	$0	$65,000
Kearsley Park Softball Field Improvements Improvements to the Kearsley Park softball field, which Mott intends to use for their women's softball team. Improvements include the installation of evening lighting, dugouts, bleachers, scoreboard, fencing, and the construction of a concession stand/clubhouse.	COMPLETED	$195,000	$0	$195,000
Durant Park Master Plan CIP Improvements consistent with the park master plan developed in 2012, including basketball upgrades, playground equipment, sidewalk improvements, tree removal, and mower purchase.	COMPLETED	$54,339	$0	$54,339
Mann Hall Park Master Plan CIP Improvements consistent with the park master plan developed in 2012, including new playground equipment, flag pole, concrete pavilion pad, playground safety surfacing, benches, and landscaping.	COMPLETED	$84,021	$0	$84,021
Max Brandon Park Playground Improvements A new playground added. Completed by the County.	COMPLETED	$60,000	$0	$60,000
Flint Park Lake Playground Improvements A new playground added. Completed by the County.	COMPLETED	$50,000	$0	$50,000
Rollingwood Park Master Plan CIP Improvements include playground equipment, baseball infield and benches, horseshoe pits, flagpole lighting, fishing dock, scoreboard, bleachers, and lights.	COMPLETED	$79,100	$79,100	$0
Woodlawn Park Master Plan CIP Improvements include a shade structure, play equipment, shade trees, and repair tennis court.	COMPLETED	$43,200	$43,200	$0
Bassett Park Maintenance Partnership Crim Fitness Foundation will take on maintenance and operations oversight in Bassett Park for FY 2015 under a two- year partnership agreement beginning in FY 2014.	REMOVED			

ENVIRONMENTAL FEATURES, OPEN SPACE & PARKS CAPITAL IMPROVEMENT PLAN

Naturalization

Naturalization is the transition of parkland from manicured turf or fields to native vegetation. There are many benefits to naturalizing part of Flint's park inventory including a reduction in operating expenses, the creation of a healthier environment through increased local biodiversity, and improved storm-water management.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Park Naturalization Plan Develop a Park Naturalization Plan to identify and prioritize City- owned parks for naturalization and reduced maintenance.	2 – IMPORTANT	TBD	TBD	TBD
Max Brandon Park - Park Naturalization/Education Project Project to promote naturalization within Max Brandon Park through eco-educational curriculum, restoration of the park's wetland, increased access through construction of a boardwalk, and hazardous tree removal.	1 – URGENT Grant Funds Secured	$137,500	$50,000	$87,500
Park Forestry Management The City has secured the services of Genesee Conservation District to manage tree removal within the City's network of parks for FY 2015. Using trained forestry staff, and informed by a street and park tree inventory that is currently underway, GCD will ensure that the City's limited forestry funds will be used in a manner that is both equitable and efficient.	1 – URGENT	$10,000	$10,000	$0
Park Maintenance Partnership Genesee County and City of Flint partnership in which the County will take on maintenance and safety patrols in four of Flint's largest parks under a pilot program. 5-year cost.	1 – URGENT	$100,000	$100,000	$0
Park Naturalization Project - Tree Plantings The City is interested in working with Fresh Coast Capital in inactive and underutilized parkland to farm poplar trees. FCC would maintain the property for 15 - 18 years at no cost to the city and share 10% of sale revenue. Parkland would remain open to the public and educational signage would be installed.	3- DESIRABLE	TBD	$0	TBD

Open Space Brownfield Remediation

Brownfields are parcels of land where the presence of environmental contamination complicates redevelopment. In addition to redeveloping brownfields for economic development and community revitalization purposes, there is a rising interest among communities to redevelop brownfields as environmental assets for active and passive recreation.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Oak Park decommissioning Located in an inaccessible area surrounded on three sides by the Buick City brownfield site, this park is proposed to be decommissioned and integrated into the redevelopment plans of the area.	3 – DESIRABLE	$0	$0	$0
Chevy Commons Greening Project Phase III of remediation of Chevy Commons into an active/passive public open space.	1 – URGENT Grant Funds Secured	$200,000	$0	$200,000
Chevy Commons phytoremediation Phase III Phase III of remediation of Chevy Commons, funding is Great Lakes Restoration Initiative grant.	1 – URGENT Grant Funds Secured	$200,000	$0	$200,000

Flint River Restoration

As a prime natural resource, the Flint River served as the basis for the founding of the City of Flint. Historically, the Flint River was used for drinking water, power, and transportation. Currently, the river is utilized much less, in part due to water quality and infrastructure concerns. In order for the City to successfully achieve its goal related to environmental features and open space, revitalization and enhancement of the Flint River must be a major focal point.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Flint River Restoration Plan - Season 3 Implementation of the 2010 report "Flint Riverfront Restoration Plan".	3 – DESIRABLE	$5,300,000	$5,300,000	$0
Flint River Restoration Plan - Season 2 Implementation of the 2010 report "Flint Riverfront Restoration Plan".	3 – DESIRABLE	$6,700,000	$6,700,000	$0
Flint River Restoration Plan - Season 1 Implementation of the 2010 report "Flint Riverfront Restoration Plan".	3 – DESIRABLE	$7,100,000	$7,100,000	$0
Flint River Restoration Plan - Future Projects Implementation of the 2010 report "Flint Riverfront Restoration Plan".	3 – DESIRABLE	$40,000,000	$40,000,000	$0

6 CAPITAL IMPROVEMENT PLAN

INFRASTRUCTURE & COMMUNITY FACILITIES

In 1960, 197,000 people lived in Flint, and the community was bracing for rapid growth around its core industries. Infrastructure was in place to support over 200,000 people. Flint's population has dropped by 48% since that time, yet the City is still responsible for maintaining infrastructure systems capable of servicing its peak population.

Chapter 6 in the Master Plan considers ways to tailor infrastructure and services to suit local population centers and anticipated long-term development patterns.

The Master Plan establishes a coordinated vision for Flint's government facilities, infrastructure, and utilities where infrastructure and services are closely coordinated with housing, economic development, the environment, parks and open space, and transportation, as well as a community that is fiscally responsible and able to support these systems in a fair and equitable way.

This chapter represents perhaps the most substantial capital challenges to the City and consists of the highest cost items. Given the many unknowns at this time of the water infrastructure, this chapter was developed and formatted to be adaptable and flexible dependent upon further data collection and analysis that will occur extensively throughout the FY16-17 year. The attempts at project costs and timeline will fluctuate throughout the year, dependent on the emergency situation that currently exist in the City.

Flint Water Crisis

In April 2014, the City of Flint formally transitioned its primary source of drinking water by connecting to the Flint River. As a result of this switch, the corrosive nature of the treated river water has led to an accelerated aging process of the City's water infrastructure. Additionally, an unexpected result of the switch has directly led to shortened usefulness of this infrastructure.

Perhaps the most damning result of this switch has been the exposure of lead to residents of Flint and in particular children of Flint.

Identifying the extent of damage to the water distribution system and the location of lead service lines is a critical priority and a necessary step before replacing and repairing the affected infrastructure occurs. This must occur to fully resolve the ongoing public health emergency and the City of Flint does not have the resources to cover these costs.

With a roughly estimated cost for replacement of all City-owned water mains and property service lines sitting around approximately $1 billion, State and/or Federal help is urgently needed to accomplish these tasks.

CIP Vision for Infrastructure & Community Facilities

Imagine an efficient and reliable system of infrastructure and community services that ensures the safety of the Flint community meets the needs of residents and supports investment in businesses, innovation, and the local economy. Imagine a Flint that serves its residents through an effective local government and quality facilities. Imagine a Flint that invests in infrastructure in order to spark new development, restore the environmental integrity of the area, meet the needs of various activities throughout the City, and is not only capable, but is also dependable.

CIP Overview

The City has an overwhelming task of addressing its numerous dated facilities and the tremendous amounts of inefficient and aging water and sewer possessions. Immediate improvements to the water and sewer system should be prioritized so they address the areas contributing to the most substantial water losses within the city.

In concert with the land use plan areas identified as primary residential and business and economic hubs, improvements should be prioritized to meet the needs of the business community while ensuring quality services for Flint's tax-paying residents. Future capital improvements in place types with lower densities should have a lower priority in order to ensure the highest cost/benefit ratio.

Immediate actions should also be taken to right-size the facilities within the city. Substantial decline in staffing levels as well as decades of inadequate preventative maintenance has resulted in millions of dollars needed to just improve these public places to satisfactory levels. A study shall be conducted to look at alternatives for major sites such as City Hall and the Police and Fire headquarters, while also considering the disposition of the buildings to be vacated and sold.

Infrastructure & Facilities – 2015 CIP Progress

CIP Progress

Project Completed in 2015 -

Project On-Going from 2015 -

Project Added from 2015 -

Project Removed:

These projects are identified in their respected charts as "removed".

In all, there were 13 major projects completed, totaling $4.25 million in capital upgrades. Also, an additional 8 remain in progress. The completion of these will result in an additional $12.3 million in City-led upgrades to its systems.

The following list details the significant projects and investment made towards improving Flint's infrastructure:

Bio solids Load Out Facility
Construction of a bio solids load out facility at the WPC center.

Valve Exercising
Approximately 1,430 valves were exercised throughout the system

Roof Replacements
Plant 2 lab and operations center was treated with a new roof

City Hall Campus LED Lights
Installation of energy efficient LED lights around City Hall.

IT/IS Upgrades
$639,415 was spent in 2015 Fiscal Year. Activities included maintenance for dell desktop workstations, routers, and BS&A Software, and Microsoft software. Some activities that were not completed include Backup servers, new routers, and a much needed phone system upgrade. Overall $220,000 in improvements was not completed.

Infrastructure & Community Facilities Policy
The infrastructure and community facilities policies are derived from the Master Plan and should shape all projects moving forward. These policies should provide a framework for evaluating the merits of any capital improvement project. For detailed discussion of each policy, please refer to the Master Plan section and the page referenced.

Infrastructure & Land Use Plan alignment.
The provision of infrastructure and community services throughout the City should be aligned with the Land Use Plan, with land use typologies informing "right-sizing" and investment decisions.

Master Plan reference: Infrastructure & Future Land Use, pp. 175-176.

Sustainability.
Green technology should be leveraged to reduce energy costs, improve air quality, and increase long-term sustainability. While sustainable approaches to infrastructure improvements may require additional up-front costs, long term cost savings should be considered when evaluating project costs

Master Plan reference: Sustainable & Renewable Infrastructure, p. 177.

Facility maintenance & efficiency upgrades.
To ensure the long-term viability of City facilities, the City should conduct on-going maintenance, employ new technologies, increase energy efficiency, and identify consolidation opportunities.

Master Plan reference: Government Facilities, p. 178.

Dams.
The Hamilton and Utah Dams should be removed, the Fabri Dam should be reconstructed, the Kearsley Dam should receive maintenance, the need for the Holloway Dam should be assessed, and a fish passage should be constructed at Thread Dam.

Master Plan reference: Dams, p. 186.

Sanitary & storm sewer system.
Sewer systems should receive necessary ongoing maintenance as recommended by staff and engineers, and short- term upgrades and long-term capital improvements including investments in green infrastructure should be identified, planned, and budgeted for.

Master Plan reference: Sanitary Sewer System, p. 185

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

City Hall

Flint's administrative center consists of a number of buildings, including City Hall, City Hall North, City Hall South, and City Hall Dome, which collectively total more than 187,000 square feet. According to City Facilities, Grounds, & Maintenance Division staff, the condition of these buildings ranges from poor to fair. Constructed in 1956, these four buildings house a majority of Flint's governmental operations and are in need of extensive upgrades, repairs, system replacement, and maintenance. Significant reductions (well over 50% from historic levels) in staffing at departments housed at the City Hall complex has resulted in significant portions of the buildings being unused or used for storage.

The list of necessary capital improvements for the four City Hall buildings is only a portion of what is likely needed, and there are serious questions as to the long-term viability of the buildings considering their age, condition, and cost of corrections needed. The City should consider a study of alternative options for right-sizing their facilities to meet projected staffing needs, either in a renovated facility that is purchased or leased or a new facility constructed in the downtown area. The study could also look at partnerships with the County for a combined City-County Government Complex. The study would also need to consider the disposition of the existing complex and buildings to be vacated if the study shows this to be the most viable option.

The administrative center complex at one time was considered to be an architectural masterpiece; but due to outdated components, lack of maintenance and energy inefficiencies the buildings require extensive emergency repairs and extensive maintenance has been deferred due to budgetary constraints. City Hall north is essentially vacant due to staff reductions and a leaking roof. The existing windows in all buildings are single pane, aluminum frame and highly inefficient, as are the light fixtures inside and outside the buildings. The boilers and chillers are 80% efficient at best and in need of replacement soon. The marble on the façade, once a major contributor to the beauty of the building, suffers from water intrusions that have caused these large marble slabs to fall off the building. Significant information technology improvements are needed throughout to modernize computer servers, other hard- ware, and cabling. The elevators at City Hall break down regularly and create a safety hazard to users trapped inside until repairs can be made. The pavement in the parking lot used by employees is in very poor condition. Sidewalks are in various states of disrepair and in need of replacement.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Study to determine options for housing City Hall staff Commission a comprehensive study of the Civic Center Complex to determine best option to right-size in the most cost-effective manner. City should enlist a committee to develop a comprehensive scope of services for a Request for Proposals that includes budget to adequately investigate the existing facilities and options and costs available to house City operations long-term.	1 – URGENT	TDB	TDB	TDB
City Hall Dome drains Repair roof drains at the City Hall Dome to fix leaks.	1 – URGENT	$1,640	$1,640	$0
City Hall North Building Roof Repairs to the roof on the City Hall North Building to fix areas that currently	1 – URGENT	$99,384	$99,384	$0
City Hall chiller Replace 1 of 2 chillers at City Hall.	1 – URGENT	$155,000	$155,000	$0
Emergency repairs Annual cost of $225,000 for emergency repairs to various City facilities.	1 – URGENT	$4,500,000	$4,500,000	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Walkway between Police and City Hall Repair and seal walkway between Police Station and City Hall.	2 – IMPORTANT	$20,000	$20,000	$0
City Hall Dome repairs Various maintenance and repairs to the City Hall Dome.	2 – IMPORTANT	$90,000	$90,000	$0
Window replacement Replacement of single pane, aluminum frame windows in City Hall. Energy Analysis Report identified payback of 15 years in energy savings.	2 – IMPORTANT	$400,000	$400,000	$0
City Hall façade Remove existing and replacement of the façade of City Hall. Existing marble siding is falling off the building and is a safety hazard. Gaps behind the marble allow water intrusions, exacerbating the problem.	2 – IMPORTANT	$3,000,000	$3,000,000	$0
City Hall heating/cooling system Total replacement and upgrades of controls and boilers/chillers to the City Hall heating/cooling system.	2 – IMPORTANT	$3,300,000	$3,300,000	$0
Separate utility meters Separate the utility meter for City Hall, Police HQ, and Fire Station #1 to monitor energy use.	3 – DESIRABLE	$24,000	$24,000	$0
City Hall 7th Street parking lot Rehabilitation of parking lot at City Hall.	3 – DESIRABLE	$100,000	$100,000	$0
City Hall 5th Street parking lot Rehabilitation of parking lot at City Hall.	3 – DESIRABLE	$132,000	$132,000	$0
Information technology improvements Includes a variety of IT improvements, including backup servers, new Dell workstations, routers and switches, software, cabling and fiber, etc. Long-term needs should be assessed to prioritize and fund projects.	3 – DESIRABLE	$3,730,246	$3,730,246	$0
Building Management System Upgrades to the BMS controls are on-going.	2 – IMPORTANT	$148,000	$148,000	$0
Council Chambers light fixtures Convert existing light fixtures to LED to save energy costs.	2 – IMPORTANT	$24,000	$24,000	$0
City Hall Ceilings Replacement of ceiling tiles throughout City Hall. Improvements to multiple offices have been completed.	3 – DESIRABLE	$70,000	$70,000	$0
Council Chambers renovations Renovations to Council Chambers to include windows, painting, and ceiling, and IT upgrades to add projection screens.	3 – DESIRABLE	$350,000	$350,000	$0
City Hall Elevator Removal and installation of two new efficient elevators at City Hall	2- IMPORTANT	$400,000	$400,000	$0
South City Hall Building bridge Bridge connecting the South City Hall Building to 7th Street is closed and	COMPLETED	$30,000	$30,000	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Other City Facilities

City facilities outside of the City Hall complex, public safety departments, and public works are limited. The primary facilities in this category would include the Street Maintenance & Sanitation Department, public parking lots, District Court, and anything else that does not fit into another category or department. All of these facilities have needs for various maintenance, etc. and should be considered to generally be important to fund as soon as possible. A number of projects were identified during discussion with City staff and are presented below; however, a comprehensive evaluation of the Street Maintenance & Sanitation Department facility has not been performed and is needed to ensure all projects are accounted for.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Street Maintenance & Sanitation Department facility improvements Various capital improvements needed at the facility that would be identified following a comprehensive audit of the facility.	2 – IMPORTANT	TDB	TDB	TDB
12th Street garage roof repairs Repairs to the garage used to service the City fleet vehicles (located at the Street Maintenance & Sanitation Department facility).	COMPLETED	$266,900	$266,900	$0
Parking lot lighting New lighting for the Stevens Street/7th Street/City Hall/Police Station parking lot to improve safety, lot is currently not lit.	COMPLETED	$250,000	$250,000	$0
District Court improvements Repairs, maintenance, etc. at the District Court building and grounds that are the responsibility of the City per the lease agreement with Genesee County (the owner of the building).	REMOVED	$125,000	$125,000	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Water Department

The Water Department is responsible for the treatment and distribution of potable water to customers utilizing an extensive infrastructure system. Their facilities include six (6) dams, numerous buildings and related facilities, pumping stations and storage facilities, and conveyance system of approximately 600 miles of water distribution and transmission pipes and appurtenances. The existing City water system was designed to service a much larger population and significantly more industry than is currently being served.

The various facilities of the Water Department have been grouped below to allow for an individual discussion of each. The current water system has twice the storage and pumping capacity that is needed to operate the system. A number of options to reduce pumping and storage were identified in a Water Reliability Study (prepared by Rowe and Potter Consulting in 2011). Implementing these operational changes going forward will allow the city to operate more cost effectively and concentrate on upgrading and maintaining key infrastructure.

It is important to note that the City's water system suffers from a number of problems which can be at least partially corrected by making the necessary capital improvements, which should be prioritized and done to be consistent with the implementation of the Master Plan and modified as needed. The most prevalent problems were discussed in great detail in the Water Reliability Study, including the age and efficiency of the water system. Much of the water distribution sys- tem is over 70 years old and is in need of rehabilitation or replacement. There is a significant amount of water-main in the system that is over 70 years old, prone to breaks, and unable to provide modern pressures and fire flows.

Water system efficiency analysis indicated that the City of Flint system is at 68.41% (i.e., only 68.41% of the water that was purchased from Detroit was recovered by user fees). This indicates that the city has significant leaks, inaccurate meters and/or illegal connections to the system. This inefficiency results in lost revenue in the range of $1.5 million to $2.0 million dollars per year. A program to improve the water system efficiency should be put in place. A high priority should be placed on implementing a program to reduce the unaccounted for water.

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Dams

The six dams owned and operated by the City are critical to the water supply system of the City, as well as providing various recreational opportunities. This is even more important currently as the City is dependent on the Flint River as an emergency back-up source to supply water to its customers Various studies have been done on the dams to determine their condition and future plans for either replacement or removal. Improvements to Hamilton Dam, built in 1920, have been mandated by the state due to its poor condition and deteriorating structural deficiencies. A study was completed by the City in 2008 that evaluated various options. Hamilton Dam is located just upstream from Fabri Dam. Fabri Dam is an inflatable dam in the downtown area constructed in 1979 for visual and recreational enhancement. The 2008 study reviewed options for its removal.

Utah Dam was built in 1928 to prevent industrial oil discharges from entering the City's water intakes and is located downstream from both Holloway Reservoir and Kearsley Creek. Utah Dam serves no viable purpose and the gates are permanently locked in an open position. Utah Dam has been recommended for removal. Holloway Dam was constructed in 1953 for potable water supply and flow augmentation of wastewater effluent. The Holloway Reservoir serves as emergency back-up supply of water, with a storage capacity of17,500 acre-feet of water, and is the structure furthest upstream in the system. Kearsley Dam, constructed in 1928 for water and ice supply, has a storage capacity of 1,800 acre-feet and is used primarily for recreation and occasional flow augmentation. Kearsley Creek joins the Flint River a short distance downstream from the dam just upstream from Utah Dam.

Thread Dam, also build in 1928, impounds 80 acres of water on Thread Creek, providing recreational opportunities. Thread Creek joins Swartz Creek west of the lake, with Swartz Creek flowing into the Flint River downstream of the other five dams. Capital projects on the six dams that require expenditures of City funds should be kept to the minimum needed to prevent further degradation of the dams and to meet regulatory requirements until such time as higher priority projects in the City have been completed. In accordance with the Flint River Restoration Plan, dams that can be removed should be considered for removal and funding sought from various sources that promote dam removal for river restoration and removal of barriers for boating and fish movement.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Thread Dam improvements Replace dam.	1 – URGENT	$655,600	$655,600	$0
Hamilton Dam Removal Removal of the Hamilton Dam.	1 – URGENT	$3,500,000	$1,060,000	$2,500,000
Holloway Dam Drum Gate Rehabilitation	2 – IMPORTANT	$1,600,000	$1,600,000	$0
City-Wide Dam Inspection & Maintenance Plan Develop a comprehensive plan to address the City's six failing and/or obsolete dams along the Flint River.	3 – DESIRABLE	$0	$0	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Buildings & Related Facilities

The Water Department has a number of buildings and related facilities for which they are responsible. The most significant is the Water Treatment Plant (WTP) located at 4500 N. Dort Highway, which includes Plant 2 (Plant 1 has been decommissioned), water testing laboratory, and a number of smaller facilities. The WTP was put into service in 1954 and significant upgrades were completed in 2006 to meet state regulatory requirements. The WTP operated an average of 20 days per year previously since water from Detroit was treated but the plant will be operated on a continual basis. A significant number of upgrades, replacement of equipment, and regular maintenance are required for the WTP to properly take in raw water, treat it through the entire process, and transmit treated water to the conveyance system. In addition to the facilities at the WTP, the Water Department is also responsible for the Water Service Center (located at 3310 E. Court Street) and the Water Department has a need for a variety of large vehicles and other equipment.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Electrical upgrades Electrical upgrades at various facilities.	1 – URGENT	$1,167,100	$1,167,100	$0
Fencing Water plant security fencing.	1 – URGENT	$109,300	$109,300	$0
Alum feed system Alum feed system for water treatment process. Project will be complete in 2016. Project is tied to KWA.	1 - URGENT	$39,300	$39,300	$0
Phosphoric acid feed system - Partially Complete Phosphoric acid feed system for water treatment. Temporary feed system set up, long term system for KWA system needs to be established.	1 - URGENT	$185,800	$185,800	$0
Post filtration system Post filtration system for water treatment process.	1 - URGENT	$387,200	$387,200	$0
Vehicles dump trucks, flatbed, tractor, etc. Annual cost for 6 years.	2 - IMPORTANT	$13,631,400	$13,631,400	$0
SCADA upgrades - In Progress Upgrades of Supervisory Control and Data Acquisition (SCADA) to allow system to operate more efficiently and with lower labor costs by using SCADA to operate and analyze the water system and its operation.	1 – URGENT	$836,400	$836,400	$0
Security cameras - (2 installed, need 3 more) Install security cameras at water treatment plant.	1 – URGENT	$7,000	$7,000	$0
Roof replacements - Partially complete At various pump stations throughout the system. West Side reservoir & pump station complete. Cedar Street reservoir & pump station and Torrey Rd. booster station still needed.	1 – URGENT	$500,000	$500,000	$0
Water Plant rehabilitation - In Progress Rehabilitation of Phase II, Segment I.	2 – IMPORTANT	$1,030,000	$1,030,000	$0
Roof replacement - Complete Plant 2 lab and operations center.	COMPLETED	$257,500	$257,500	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Pumping Stations & Storage Facilities

The Water Department operates several pumping and water storage facilities.

- Dort Reservoir and Pumping Stations No. 3. (PS #3) and No. 4 (PS #4) – located at the WTP, the reservoir is a 20-million gallon (MG) ground storage facility. This facility was constructed in 1966 and is used primarily for emergency water storage and for use during peak water demand periods. PS #4 total pumping capacities is 46 million gallons per day (MGD) with a firm pumping capacity of 26 MGD. The pumping station was rehabilitated in 1994 with two new 20 MGD pumps and one 6 MGD pump to induce turnover of the Dort Reservoir. This pumping station is primarily used to provide supply from the Dort Reservoir during emergency situations and peak demand events. A 2.0 MG elevated water storage tank is also located at the WTP that is used primarily for emergency water storage and as a pressure buffer. The elevated tank fills and drains as system demands and pressures dictate. A 3.0 MG ground storage tank is also located at the WTP complex. This storage tank was constructed in 1954 and is used primarily as an emergency water supply and pumping source during peak demand events.
- Cedar Street Reservoir and Pumping Station – the Cedar Street Reservoir is a 20 MG ground storage facility located between 1-69 and Swartz Creek, off of Cedar Street. This facility was constructed in 1948 and is primarily used as an emergency water supply and a pumping source during peak demand events. The pumping station electrical controls have not been updated since the original construction. The station requires significant upgrades to bring it up to current automatic operation standards. The pumping station is equipped with three pumps installed in 1948 and are primarily used to supply water from the Cedar Street reservoir during emergency events and peak demand periods. This pumping facility has a total pumping capacity of 30 MGD and a firm pump capacity of 18 MGD. Pump operation and filling of the reservoir can be controlled from the WTP or manually at the pumping station. The pumping station is equipped with chlorination facilities to provide additional chlorine residual as needed.
- West Side Reservoir and Pumping Station – the West Side Reservoir is a 12 MG ground storage facility located near Mackin Road and Jean Avenue. This facility was constructed in 1970 and is primarily used as an emergency water supply and a pumping source during peak demand events. The West Side Pumping Station is equipped with four pumps, all installed in 1970, and has a total pumping capacity 24 MGD with a firm pump capacity of 16 MGD. Pump operation and filling of the reservoir can be controlled from the WTP or manually at the pumping station. The pumping station is equipped with chlorination facilities to provide additional chlorine residual as needed.
- Torrey Road Pumping Station – the Torrey Road pumping station is equipped with two pumps installed in 1954. The station has a total pump capacity of 6.8 MGD and a firm pump capacity of 2.8 MGD. The primary function of this station is as an in-line booster pumping station to provide increase pressures to the southwest portion of the city. This pumping station takes suction from the 24" transmission main along Hammerburg Road and discharges to the 18" transmission main supplying the southwest pressure district. There is no standby power provided to this pumping station.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Pump replacement Pump station #3 pump with variable frequency drive (VFD).	1 – URGENT	$140,000	$140,000	$0
Electrical upgrades New feeder to pump station 4.	1 – URGENT	$466,600	$466,600	$0
Valve rebuild Elevated tank altitude valve.	2 – IMPORTANT	$54,600	$54,600	$0
Pump replacement Replace pumps 1 and 2 at pump station #4 new pumps with VFD. Pump # 2 has been replaced. Pump # 1 still needed	1 – URGENT	$270,000	$270,000	$0
Electrical upgrades At Cedar Street Pump Station.	COMPLETED	$120,000	$120,000	$0
Roof replacement Westside pump station.	COMPLETED	$1,200,000	$1,200,000	$0
Lift pump station Plant 2 to Dort Reservoir.	REMOVED	$2,100,000	$2,100,000	$0

INFRASTRUCTURE & COMMUNITY FACILITIES CAPITAL IMPROVEMENT PLAN

Conveyance Systems & Appurtenances

The conveyance system of the Water Department includes all transmission and distribution pipes, valves, hydrants, and water meters. The conveyance system of the City of Flint consists of water mains ranging in size from 4" to 72" in diameter. Many of these mains exceed 70 years old, and the majority constructed of cast iron or ductile iron pipe up to 24" in diameter. Transmission mains larger than 24" are primarily constructed of steel piping. A majority of the system has adequate transmission piping to convey sufficient flows and pressure for fire protection. However, the distribution and transmission systems are old and in serious need of replacement. A large number of water main breaks occur every year and are repaired by staff, with a significant number of breaks occurring due to the harsh 2013-14 winter season. These breaks result in water service disruptions and potential water quality problems to customers. The system appurtenances are generally over 50 years old and in constant need of repair or replacement also.

As projects are considered, opportunities should be evaluated to right size the water distribution system and make the most effective and efficient use of existing infrastructure. In accordance with the Master Plan, infrastructure may be modified to provide the level of service appropriate for a given place type.

The information below if summarized directly from the Water Reliability Study.

- ***Piping System.*** Much of the City of Flint's water distribution system is over 70 years old and is in need of rehabilitation or replacement. There is a significant amount of 4" water main in the system that is over 70 years old, prone to water main breaks, and unable to provide modern pressures and fire flows. The 20-year plan for the water distribution system is twofold: 1) rehabilitate or replace the primary transmission system that serves the City and 2) abandon 4" water mains where there is a suitable parallel main or replace the 4" with 8". The priority of these replacements should be consistent with the needs of the Master Plan implementation. The Water Department has also included replacement of 3,800 feet of transmission mains annually, the prioritization of which should consider severity of current problems, needs for implementation of the Master Plan, and ability to service high water users adequately.
- ***Valves***. The City of Flint distribution system currently has a total valve count of 7,258 valves to be operated and maintained (20 72" valves, 661 24"–72", 737 16"–20", 1,398 12", and 4,462 <12). Critical valves are 16" and larger valves that are on the primary transmission mains around the city and in the event of a break in a major transmission main, valve failure, or multiple valve failures, could result in shutting down a significant portion of the city. The Water Reliability Study noted that there are 1,418 critical valves in the system and these valves should receive primary attention. Primary attention would consist of operating the valves on a rotating two-year basis and making all repairs and replacements that are necessary. Approximately 700 critical valves would be operated and maintained each year. Subcritical valves are the 12" valves on minor transmission mains and the failure of one or more of these valves could result in shutting down a residential area.There are 1,398 subcritical valves in the system. These valves should receive secondary attention which would consist of a 5-year plan for operation and maintenance. This would require that approximately 280 valves be operated and maintained each year. Normal valves are any valve smaller than 12" and the failure of one or more of these valves would shut down a small residential area. There are 4462 of these valves in the system and these valves should receive operation and maintenance attention on a 10-year rotating basis. Approximately 450 valves would require attention each year. The total valve operation and maintenance program would require that approximately 1,430 valves receive routine maintenance each year in addition to any emergency repair and replacement that is required during the course of a year.
- ***Hydrants***. The City of Flint has 3,605 hydrants in the water system and many are in excess of 50 years old. In the spring of 2010 the City purchased 80 hydrants to begin replacing old hydrants. Similar to the asset management approach to the valve maintenance, the plan for hydrants would include a transition from reactive maintenance to planned maintenance and replacement. The goal would be to analyze the hydrant age in the system and begin to change out hydrants in excess of 50 years old and then over a period of twenty years create a system where hydrant age did not exceed 25 years.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Water line loop Install 24" loop at the WTP to increase distribution options.	2 – IMPORTANT	$100,000	$100,000	$0
Raw water line Provide raw water line to Pump Station 4.	2 – IMPORTANT	$636,500	$636,500	$0
Water Main Replacement Replace various sections of residential water mains with a goal of 3800' per year.	2 - IMPORTANT	$16,000,000	$16,000,000	$0
Yard valves Replace yard valves, cost is for 6 years.	2 – IMPORTANT	$1,000,000	$1,00,000	$0
Water Meters – Partially Complete Annual replacement of water meters throughout the system, cost is for 6 years.	2 – IMPORTANT	$8,500,000	$8,500,000	$0
Valve exercising Operate the approximately 8,000 system valves throughout the system on a 2 - 10 year basis.	2 - IMPORTANT	$500,000	$500,000	$0
Valve Repairs	1 - URGENT	$200,000	$200,000	$0
Valve excavation **Gain access to over 600 paved over system valves to evaluate, maintain accessibility, and replace if necessary.**	1 - URGENT	$2,000,000	$2,000,000	$0
24'' Transmission main replacement 3800' of 24'' transmission main at various locations annually. Project is designed in 5 segments with one segment scheduled for completion each year.	1 - URGENT	$18,000,000	$18,000,000	$0
Lead Service Line Replacement Replace lead service lines leading to customer's residence and businesses.	1 - URGENT	TBD	TBD	TBD
Valve exercising Operate the approximately 1,430 valves throughout the system on an annual basis.	COMPLETED	$400,000	$400,000	$0
Hydrant replacement program Replace hydrants throughout the City on 20-25 year rotation, cost is for 20 years. FY 15 cost $250,000 with	REMOVED	$6,227,284	$6,227,284	$0

Sewer Department

The Sewer Department is responsible for the collection and treatment of wastewater at various facilities, most notably the 50 MGD wastewater treatment plant referred to as the Water Pollution Control Facility (WPCF) located at G-4652 Beecher Road. The City of Flint also accepts wastewater from the Beecher Metropolitan Sewer District (BMSD). The WPCF has a peak capacity of approximately 85 MGD. The City has an extensive sanitary and storm sewer collection and treatment system that includes approximately 569 miles of gravity sanitary sewers and force mains, 11 pump stations (1 additional pump station on the system is operated by BMSD), an 8-foot 6-inch deep tunnel (10 MG of storage), a 10 MG Retention Treatment Basin (RTB), WPCF and a number of associated buildings, and 350 miles of storm sewers.

The WPCF provides primary and secondary treatment to the sanitary wastewater, with primary treatment consisting of physical removal of suspended solids via grit tanks and primary sedimentation basins. Secondary treatment is performed through the activated sludge process, which consists of aeration and final settling tanks. Chlorination and dechlorination, using liquefied and gaseous chlorine and sulfur dioxide, is used to disinfect the final effluent prior to its discharge into the Flint River. Even though the sanitary and storm sewer systems are separated, the 10 MG capacity of the RTB can be exceeded, resulting in a discharge to the river. All overflows receive skimming, settling, and disinfection prior to release. Since January of 2009, the City has experienced 11 partially treated discharges.

The City was awarded a State Revolving Fund (SRF)/Strategic Water Quality Initiatives Fund (S2) Grant from the Michigan Department of Environmental Quality (MDEQ) in 2011 (study prepared by Rowe and Fishbeck, Thompson, Carr, & Huber, Inc. in 2013). The scope of the grant-funded engineering study included smoke testing in areas of the City suspected of containing sources of inflow and infiltration (I/I), as well as a sanitary manhole inspection program focusing on the manholes located along the creeks and rivers where water was suspected of entering the sanitary system during high river elevations. The Sewer System Evaluation Study (SSES) included smoke testing of approximately 2,397 manholes and the inspection of 256 manholes along the rivers. Although the sanitary system is separated, wet weather brings significant flow increases into the system. Most footing drains are connected to the sanitary system; however, during these large rain events, the City's deep tunnel and RTB's capacity can be exceeded, and it results in discharges from the RTB to the Flint River.

Green Infrastructure

The Master Plan calls for the development of green infrastructure to absorb rainwater, reduce flooding, and lessen the burden on the City's sewer infrastructure. The City should also promote the use of Best Management Practice (BMPs) and Low Impact Development (LID) techniques that help protect and restore water quality while reducing the quantity of storm water run-off throughout the City. Vacant or underutilized parcels within Green Neighborhood and Green Innovation place types may also present opportunities for large scale green infrastructure projects.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Green Infrastructure Assessment Undertake a study to identify opportunities for the implementation of large scale green infrastructure projects that will limit the volume of storm water	1 – URGENT	TDB	TDB	TDB

Buildings & Related Facilities

The Sewer Department operates the Water Pollution Control Facility (wastewater treatment plant) and 29 buildings at the WPCF grounds. The buildings on the grounds of the WPCF are of variable age and condition and require a variety of upgrades, replacement of equipment, and regular maintenance to properly treat the wastewater collected from system users and discharge it to the Flint River consistent with regulatory requirements. The Department has similar needs to that of the Water Department for large vehicles and other equipment.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Wastewater Plant roof Repair roof at WPC.	1 – URGENT	$106,100	$106,100	$0
Disinfection process upgrades Improvements to processes for treating wastewater.	1 – URGENT	$150,000	$150,000	$0
Lighting upgrades Lighting upgrades at WPC.	1 – URGENT	$212,200	$212,200	$0
Samplers Samplers at WPC.	2 – IMPORTANT	$35,000	$35,000	$0
Air compressor Air compressor.	2 – IMPORTANT	$44,000	$44,000	$0
Primary tank rebuild Rebuild primary tank at WPC.	2 – IMPORTANT	$75,000	$75,000	$0
Lighting panel upgrades Upgrade lighting panel at WPC.	2 – IMPORTANT	$87,400	$87,400	$0
Coarse bubble diffusers Coarse bubble diffusers at WPC.	2 – IMPORTANT	$100,000	$100,000	$0
Meter replacement Final effluent meter.	2 – IMPORTANT	$109,300	$109,300	$0
Meter replacement Battery A influent meter.	2 – IMPORTANT	$109,300	$109,300	$0
Air diffuser upgrades Battery B.	2 – IMPORTANT	$109,300	$109,300	$0
Vehicle storage addition Addition to vehicle storage.	2 – IMPORTANT	$130,000	$130,000	$0
Controls Root blowers at WPC.	2 – IMPORTANT	$175,000	$175,000	$0
HVAC equipment HVAC improvements at WPC.	2 – IMPORTANT	$200,000	$200,000	$0
Aeration blower replacement Replace aeration blower at WPC.	2 – IMPORTANT	$238,700	$238,700	$0

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Final tank installation Install final tank at WPC.	2 – IMPORTANT	$274,488	$274,488	$0
Sludge cake storage Storage facility for sludge cakes.	2 – IMPORTANT	$327,800	$327,800	$0
Concrete repairs Major concrete repairs at WPC.	2 – IMPORTANT	$380,000	$380,000	$0
Blower header insulation Insulate blower header.	2 – IMPORTANT	$437,100	$437,100	$0
Grit piping Battery B.	2 – IMPORTANT	$491,700	$491,700	$0
Concrete coatings Concrete coatings.	2 – IMPORTANT	$600,000	$600,000	$0
Solids disposal Ultimate disposal of solids.	2 – IMPORTANT	$800,000	$800,000	$0
Headworks & bar screens Headworks and bar screens at WPC.	2 – IMPORTANT	$1,000,000	$1,000,000	$0
Lab Remodeling of lab, new equipment, sample lines, and ventilation.	2 – IMPORTANT	$1,000,000	$1,000,000	$0
4160 volt switchgear 4160 volt switchgear at WPC.	2 – IMPORTANT	$2,185,500	$2,185,500	$0
Battery A grit chamber Replacement of Battery A grit chamber.	2 – IMPORTANT	$5,500,000	$5,500,000	$0
HVAC upgrades - In Progress HVAC upgrades at WPC.	1 – URGENT	$400,000	$400,000	$0
Final tank retrofits - In Progress At final 4 tanks at WPC.	2 – IMPORTANT	$695,200	$695,200	$0
Modulating Valve B grit Butterfly Valve	2 – IMPORTANT	$100,000	$100,000	$0
Air diffuser upgrades Battery A.	COMPLETED	$190,000	$190,000	$0
Sump pumps Sump pumps.	COMPLETED	$85,000	$85,000	$0
Biosolids load out facility engineering For biosolids load out facility.	COMPLETED	$90,000	$90,000	$0
Biogas pump house Biogas pump house.	COMPLETED	$100,000	$100,000	$0

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Outdoor lighting Lighting at WPC.	COMPLETED	$130,000	$130,000	$0
Biosolids load out facility - 95% Complete Construction of biosolids load out facility at WPC.	COMPLETED	$1,300,000	$1,300,000	$0
Isolation gates Battery B isolation gates.	REMOVED	$106,100	$106,100	$0
Heavy mobile equipment Purchase of heavy equipment required to respond to emergency repairs.	REMOVED	$163,900	$163,900	$0
Sodium hypochlorite Purchase of sodium hypochlorite used in water treatment process.	REMOVED	$650,000	$650,000	$0
Vehicles, dump trucks, vactor, etc. Annual cost for 20 years.	REMOVED	$9,352,700	$9,352,700	$0

Pumping Stations & Storage Facilities

As mentioned above, the City operates 11 pump stations. Storage facilities include an 8-foot 6-inch deep tunnel (10 MG of storage) and a 10 MG Retention Treatment Basin (RTB). The deep tunnel was constructed of concrete in the late 1970s as part of the RTB project. The flow is transported through a series of interceptors to the three main feeder pump stations (East Pump Station, Third Avenue Pump Station, and Northwest Pump Station). These three main pump stations then pump the flow to the WPCF for treatment. Both the East Pump Station and the Northwest Pump Station are located next to the WPCF. The Third Avenue Pump Station is located southeast of the WPCF and requires 18,181 feet of force main to send the flows to the WPCF.

The 8-foot 6-inch tunnel is upstream of the East Pump Station and discharges to the station. During large rain events, the tunnel is used for storage. The flow is allowed to accumulate in the tunnel and the East Pump Station pumping rate is reduced to allow the flow from the Northwest Pump Station and Third Avenue Pump Station to be pumped to the WPCF without restriction. The latter have essentially no storage capability, and must pump ac- cording to flow received. If the flows from the Northwest Pump Station and Third Avenue Pump Station exceed the capacity of the WPCF, the excess flow is diverted to the 8-foot 6-inch tunnel through the same 48" pipe that normally conveys sewage from the East Pump Station to the WPCF. Should the rain event be large enough to fill the tunnel, then flow from the tunnel will overflow to the 10 MG RTB for temporary storage. The RTB provides skimming and disinfection should its capacity be exceeded, prior to discharging flows to the river.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Electrical upgrades Various lift stations.	1 – URGENT	$82,000	$82,000	$0
Replace lift station. Replace lift station 6.	1 – URGENT	$250,000	$250,000	$0
Replacement pumps At northwest pump station.	1 – URGENT	$318,300	$318,300	$0
Switchgear at EPS Replace switchgear at East Pump Station.	1 – URGENT	$450,900	$450,900	$0
Replace pumps East pump station.	1 – URGENT	$655,600	$655,600	$0
Replacement pump Third Avenue pump station.	1 – URGENT	$1,700,000	$1,700,000	$0
Electrical switchgear Third Avenue pump station.	1 – URGENT	$1,900,000	$1,900,000	$0
High pressure header Third Avenue pump station.	2 – IMPORTANT	$300,000	$300,000	$0
Retention basin Improvements at retention basin at WPC, including metering, concrete work, and chemical feed upgrades.	COMPLETED	$100,000	$100,000	$0

Conveyance Systems & Appurtenances

The City has an extensive sanitary sewer collection and treatment system that includes approximately 569 miles of 8" to 72" gravity sewers and force mains, with manholes at regular intervals. The majority of the gravity sewers were constructed between the 1920s and 1950s, consisting mostly of vitrified clay, concrete, and some newer polyvinyl chloride (PVC) segments. The sanitary manholes are either block or pre-cast concrete. Televising portions of the system during the 2011 SSES revealed joint integrity to have been compromised along sections of the interceptors adjacent to Swartz and Thread Creek. Both sections of interceptors televised had root balls reducing the flow capacity at multiple locations by as much as 80 to 90%. The video also shows stretches of pipe with root infiltration at every joint, reducing flow capacity ranging from 15 to 50%. Some minor infiltration was observed; how- ever, the root balls hindered the camera progress through the sections of pipe at the creek crossings and therefore potential inflow from the creeks was not determined. The integrity of the pipe itself appeared to be sound; however, most joints appeared to have some separation where root infiltration was present. This separation could potentially allow infiltration to occur during wet weather conditions. There was some sediment buildup observed in a few spots along the interceptors; however, there was not enough to reduce capacity of the interceptor.

Manhole inspections were performed on the manholes that parallel Swartz, Carman, Gilkey and Thread Creeks. The creeks are upstream of Meter 9 which appears to have significant (I/I). Ninety-three (93) manholes with perforated covers, which would be submerged during a "design storm" or a larger wet weather event, were found. Besides the perforated covers, several manholes were found to be in poor condition structurally and leaking. The Huron-Camden and Northwest areas have been identified as problems areas with regards to I/I, based on studies conducted in the past. Additional and more recent studies had flow meters strategically placed in the sanitary trunk line sewers around the City. These flow meters identified a significant flow increase to the sanitary system during rain events throughout the City. In the past, the use of dye testing procedures was used to identify cross- connections with some degree of success. However dye testing does not allow for a complete identification of all potential inflow sources; therefore, smoke testing of the system was the most economical and timely procedure to identify additional sources of inflow. The purpose of smoke testing was to identify potential sources of significant I/I through cross connections between sanitary and storm sewer collections systems. The smoke testing was performed as a team effort between City staff and ROWE.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Manhole rehab in floodplains Replace perforated covers and rehab/lining of manholes located within floodplains to reduce water inflow/infiltration (I/I).	1 – URGENT	$1,200,000	$1,200,000	$0
Root control Root control within existing pipes to remove roots which might block waste flow, cost if for 20 years.	1 – URGENT	$9,331,830	$9,331,830	$0
Pipe lining Lining of existing pipes to reduce water infiltration, cost if for 20 years.	1 – URGENT	$15,000,000	$15,000,000	$0
Major valve repairs Repair major valves in system.	2 – IMPORTANT	$200,000	$200,000	$0
Meter replacement	2 – IMPORTANT	$8,400,000	$8,400,000	$0

7 CAPITAL IMPROVEMENT PLAN
ECONOMIC DEVELOPMENT & EDUCATION

Economic development and education will form the foundation of the future of Flint and there will need to be multi- sector alignment and substantial investments in people, places, and planning to achieve the City's economic development vision.

The City of Flint was built on the automotive industry. While the auto industry continues to play an important role in the economy, other sectors are evolving including life sciences, transportation, distribution/logistics, advanced manufacturing, and information technology. The emergence of these and other industries is needed to diversify the City's economy and create growth and new opportunities for employment.

In addition, the City must also recognize that the 21st century economy is unpredictable and in constant flux. To stay competitive moving forward, the City must continually and proactively reassess its economic development strategies and targeted sectors of investment to meet changing market needs.

To realize the economic development and education vision and goals of the Master Plan, the City must support and in specifically, concentrate and coordinate work force and economic development facilities in line with the Master Plan, strive to reuse Brownfield sites for productive purposes, and ensure that educational facilities and opportunities are well connected and reinforced by the City's capital improvements and infrastructure.

CIP Vision for Economic Development & Education

Imagine Flint as a dynamic college town, a center of innovation and entrepreneurship, a top destination for medical sector companies, an international hub for trade and transportation and a community where residents of all backgrounds share equally in Flint's economic rebirth. Imagine an entrepreneurial youth population, equipped for success through a robust education system and an extensive network of local businesses and institutions. Imagine a thriving small business scene, where aspiring businesses owners are empowered to open shops in neighborhoods across the City. Imagine transforming our current liability of vacant land into new green spaces for economic growth, creating jobs for residents in alternative energy, local food production, or "green initiatives" fields.

CIP Overview

A sluggishly growing economy with a surplus of available work- force labor and inexpensive, vacant commercial space can be found throughout all areas of Flint. Reshaping the economy in Flint is a primary principle of the master plan and is addressed through a variety of new, unique place types that focus increased improvements and investment strategically within these areas.

Neighborhood Centers, City Corridors, Commerce & Employment Centers, Production Centers and the Innovation District should represent the focus of future economic development initiatives and capital upgrades.

By emphasizing repairs and enhancements to these areas of perceived development, nodes of higher density and activity can develop creating enhanced options for workforce development, employment centers and future residential market demand. By reducing the importance on capital projects within current areas of commercial build slated for future areas of non-commercial, the City can focus its limited resources to invest in the future to achieve the goal of reshaping our economy.

Key Partners

It is important to remember that some of Flint's largest institutions such as Flint Community Schools, University of Michigan- Flint, Kettering University, Mott Community College, Baker College, and Hurley and McLaren Medical Centers have significant capital improvement needs and confront similar challenges in funding projects. This presents the City with a unique opportunity to coordinate our capital improvement efforts, seek additional cost savings by combining projects, jointly applying for grants, and eliminating reiterative work.

Developing stronger ties with Flint Community Schools on capital improvements has great potential given that many schools (open and closed) are located next to City parks, such as the Stewart School and Brennan Park. This connectivity allows for cooperation on maintenance and on improvements to facilities. In the case of closed schools, this would help position the vacant buildings for adaptive reuse. Examples of school adaptive reuse projects include community centers, art centers, and Flint's own Oak Street School, which is being transformed into apartments for seniors.

Economic Development & Education Policy

The economic development and education policies are derived from the Master Plan and should shape all projects moving forward. These policies should provide a framework for evaluating the merits of any capital improvement project.

For detailed discussion of each policy, please refer to the Master Plan section and the page referenced.

Community education.
The City and Flint Community Schools should work together to reestablish a sustainable version of community education, with schools serving as "homebases" within neighborhoods and providing programming, meeting space, and social services.

Master Plan reference: Community Education, p. 205.

K-12 and college curriculum integration.
Social and educational partnerships should be developed between Flint's public schools, Kettering University, UM-Flint, Baker College, and Mott Community College in order to better prepare Flint's K-12 students for college.

Master Plan reference: Integrating K-12 with Higher Education, p. 208.

Workforce development.
Adults, especially ex-offenders and those struggling with literacy should be provided with opportunities to gain additional education, skills, and training.

Master Plan reference: Adult Workforce Development, pp. 208-209.

Small business support.
Incentives, incubators, and assistance programs should be used to encourage small business development in the City Corridor and Neighborhood Center place types, especially in underserved areas experiencing significant levels of retail leakage.

Master Plan reference: Supporting Small Businesses, pp. 210-213.

Growth industries.
The City and its economic development partners should target retention and expansion efforts at the following six industries, which were determined by the Flint Regional Cluster Project to offer the highest potential for growth: life sciences; transportation, distribution, and logistics; automotive and transportation equipment manufacturing; machinery manufacturing; information technology; and food manufacturing.

Master Plan reference: Flint Regional Cluster Project, p. 203.

Blue and green economy.
Leverage Green Innovation areas and the construction of the Karegnondi Water Pipeline for the creation of new "green" and "blue" jobs.

Master Plan reference: Green Initiatives, p. 214; Blue Economy, p. 214.

Commercial demolition & revitalization.
A Commercial Areas Investment Framework, grounded in the Land Use Plan, should be developed that can created a targeted framework for demolition, public investment, and reuse of commercial properties.

Master Plan reference: Redeveloping & Repurposing Properties, p. 215-216.

Brownfields.
Capitalize on Flint's existing infrastructure and well-connected transportation network to spur redevelopment of the Buick City and Delphi East brownfield sites, in alignment with the Land Use Plan.

Master Plan reference: Redeveloping & Repurposing Properties, pp. 215-216.

Downtown Revitalization.
Four catalyst projects were identified that can best continue revitalization efforts in the Downtown area: (1) development of the Flat Lot; (2) restoration of Capitol Theatre; (3)redevelopment of Riverbank Park, including better utilization of the University Pavilion and new waterfront park space; and (4)creation of the Flint Health and Wellness District.

Master Plan reference: Downtown Flint, pp. 218-220.

Innovation District.
The City should encourage increased physical, social, and transportation linkages between key employers and institutional anchors clustered around the center of the City, from McLaren Regional Medical Center in the west through Downtown to Delphi East in the east.

Master Plan reference: Innovation District, p. 221.

New residents.
Residential growth into the City should be encouraged and incentivized, particularly for foreign-born immigrants, current commuters, veterans, young professionals, and city employees living in Flint.

ECONOMIC DEVELOPMENT & EDUCATION CAPITAL IMPROVEMENT PLAN

Placemaking

Flint's Innovation District encompasses the University Avenue and Court Street corridors, the Flint River, and Delphi East. This area includes the region's largest employers, research institutions, and cultural assets such as: Kettering University, Mott Community College, University of Michigan - Flint, Genesys Downtown Flint Health Center, Hurley Medical Center, McLaren Regional Medical Center, Delphi East, and the Flint Cultural Center. Capital improvements within the Innovation District should be evaluated and prioritized to maximize benefits to the district's anchor institutions and their users.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Innovation District Comprehensive Plan The Innovation district stretches from the McLaren Regional Medical center in the west, to Mott Community College in the east, and also contains Flint's Downtown, Kettering University, and other civic and cultural assets.	2 – IMPORTANT	$150,000	TBD	TBD
Wayfinding Signage – Innovation District Expand wayfinding program to roadways within the Innovation District, consistent with the design of the Downtown wayfinding program.	3 – DESIRABLE	TBD	TBD	TBD
Grand Traverse Greenway Trail Development 3-mile multi-use trail on the abandoned CSX Railroad to connect Downtown Flint, the Flint River, and surrounding neighborhoods to the southern part of the City.	2 – IMPORTANT	TBD	TBD	TBD
International Academy Safe Routes to School Improvements Improvements include: replacing sections of sidewalk along Oakley Street and Saginaw Street, updating ADA ramps and installing pedestrian heads at Oakley and Grand Traverse Street, and repainting crosswalks and updating pedestrian lights at Oakley and Saginaw.	COMPLETED			

Commercial Area Enhancement

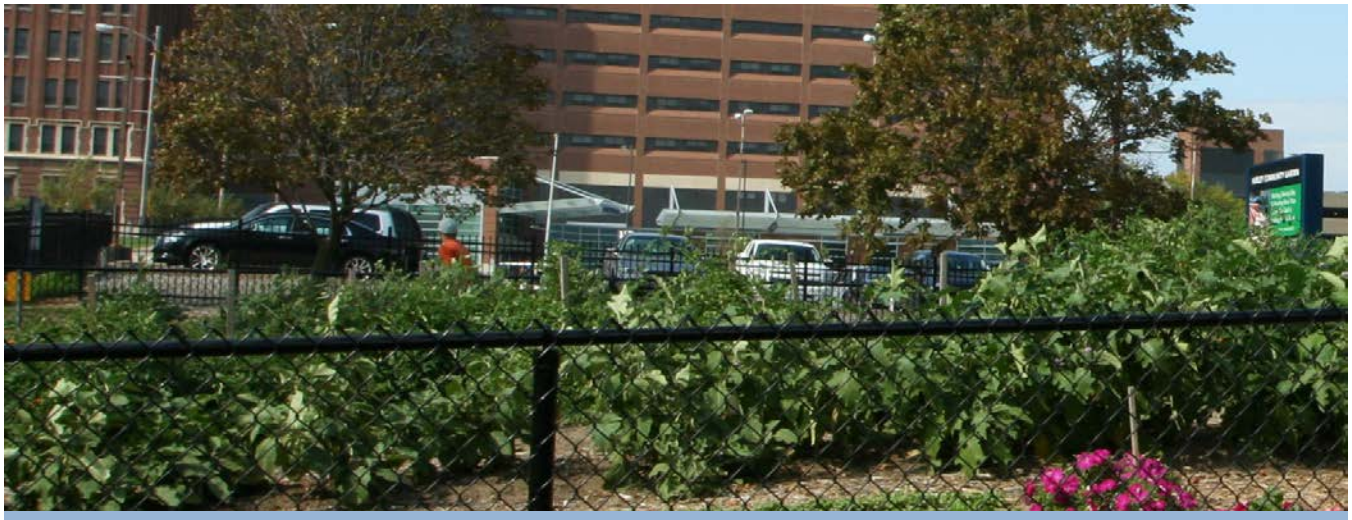
PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Buick City Accelerator Building Development and construction of a spec. building that would serve as an incubator on the Buick City site and allow for organizational growth.	2 – IMPORTANT	TBD	TBD	TBD
Commercial Structure Demolition Working from the Blight Elimination Framework, 432 blighted commercial structures have been identified as priority demolitions to enhance economic development within City commercial/retail nodes.	2 – IMPORTANT	$21,600,000	TBD	TBD
Oak Business Center Facility Improvements Current large parking lot (formerly the lot of an auto dealership) needs to be replaced. Asphalt will be torn out and replaced and new striping put down.	COMPLETED	$50,000	$50,000	$0

ECONOMIC DEVELOPMENT & EDUCATION
CAPITAL IMPROVEMENT PLAN

Information Technology Upgrade

Information Technology Services for the City of Flint is responsible for planning and upgrading the information technology systems that allow the city to remain responsive and efficient when providing services to residents. A goal of the City is to develop free wireless internet accessibility in key community areas.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Consolidation and Construction of City owned Fiber Optic Network The construction and upgrade of Fiber optic communication lines that connect City offices in a Metropolitan Area Network (MAN) can strategically be done with Collaboration and consolidation partners such as the GISD and local universities can connect networks. The benefits are lower operating costs and more control and flexibility. Investment lasts 12 Years.	2 – IMPORTANT	$240,000	$240,000	$0
Mesh Wireless Internet Accessibility for Residents A community run wireless network could be created with Mesh technology. Currently this technology is being piloted in Detroit and can be applied to Flint.	3 – DESIRABLE	$900,000	TBD	TBD



8 CAPITAL IMPROVEMENT PLAN
PUBLIC SAFETY, HEALTH & WELFARE

community organizations must

Crime affects not only the everyday quality of life for Flint's residents, but also the City's regional and national perception. Moving forward, increasing the safety of residents will be dependent upon providing adequate resources to our at-risk youth; finding innovative new strategies, technologies, and partnerships to prevent crime; and sustaining effective, proactive, and responsive police and fire departments.

The transportation systems that this CIP works to improve and inspire are important not for their own sake but for the public safety, health, and welfare that they work to advance. Healthy transportation choices will rely on investment in sidewalks, bike paths, and supporting systems that provide full accessibility to all residents, regardless of age or level of mobility.

Social service providers and reinforce agencies and institutions that provide health care and education. Through this holistic and collaborative approach, the Flint community will be empowered to instill positive change that leads to a healthier population and a higher quality of life.

CIP Vision for Public Safety, Health & Welfare

Imagine Flint as one of the safest cities in the country, with a proactive and technologically- savvy police force trusted by residents. Imagine Flint as a regional hub for fresh and locally grown produce, where a thriving movement of entrepreneurial growers transform vacant lots into gardens and provide healthy food to schools, farmers markets, restaurants, and stores across the City. Imagine all of Flint's youth growing up in stable neighborhoods that are clean, safe, and welcoming, patrolled by police officers known to residents and home to community centers providing around-the-clock activities and services for youth.

CIP Overview

The City faces a constant battle against extremely high levels of crime and the general health welfare of Flint residents. Strapped with debilitating staffing levels, public safety operations must be at the forefront of efficiency to ensure adequate service support for the Flint community. Old and dysfunctional facilities must be prioritized first and receive significant improvements and upgrades in order to meet the growing need and demand for smart, data driven policing and fire safety procedures. As noted previously in the com- munity facilities section, a study to determine the feasibility of full re- habilitation or potential new build remains of substantial importance.

Key Partners

The City only has five community centers: Haskell, Berston, Hasselbring, Brennan, and McKinley. Two of these centers are so well utilized that they have already exceeded their capacity, demonstrating a clear need for community centers in the City, especially for youth.

Throughout the Master Plan, we overwhelmingly heard from youth that there are no safe places to go. Youth often cited this fact as a reason from high crime in the City. Thus, it is critical that the City work with community partners to raise substantial funds to make much needed upgrades to these community facilities. Sadly, with the City's fiscal crisis, little has been done to these facilities, but based on the priorities outlined in the Master Plan, funding improvements to these facilities must be a priority. When cities have invested in community centers, they often have seen significant declines in crime.

Public Safety, Health & Welfare Policy

The public safety, heath, and welfare policies are derived from the Master Plan and should shape all projects moving for- ward. These policies should pro- vide a framework for evaluating the merits of any capital improvement project. For detailed discussion of each policy, please refer to the Master Plan section and the page referenced.

Facility maintenance and location.
To ensure the long-term viability of the City's public safety facilities, the City should conduct on-going maintenance, employ new technologies, increase energy efficiency, and identify consolidation opportunities. The location of Neighborhood Service Centers should be aligned with the Land Use Plan.

Master Plan reference: State-Of- The-Art Police & Fire Departments, pp. 238-239; Government Facilities, p. 178.

Police and Fire Department staffing.

New revenue streams and strategies should be identified that can help sustain adequate personnel levels, including grants, inter-department collaboration, and possible creation of an auxiliary or reserve force.

Master Plan reference: State-Of- The-Art Police & Fire Departments, pp. 238-239.

Crime Prevention through Environmental Design (CPTED).
Environmental contributions to crime should be eliminated through strategies such as territoriality, natural access control, informal surveillance, regular maintenance, and code enforcement.

Master Plan reference: Crime Prevention through Environmental Design, p. 242.

Community policing and holistic partnerships.
The City and law enforcement entities should take a holistic approach to public safety through partnerships with community organizations, social service providers, educators, and health providers that can built trust with residents and offer alternative paths to at-risk youth and ex-offenders. The development of "wrap-around community centers" was identified by residents as one of the most important steps towards achieving this end.

Master Plan reference: Community Partnerships, p. 242-244.

Healthcare access.
While the City's role in healthcare is very limited, it should actively support policies, practices, and funding opportunities that increase awareness of existing services, expand services, increase accessibility of facilities, and reduce citizen dependence on drugs, alcohol, and smoking.

Master Plan reference: Community Partnerships, p. 242-244.

Urban food production.
Vacant lots and green space should be used for localized food production that can generate affordable fresh foods for residents.

Master Plan reference: Nutrition & Access to Produce, pp. 250-252.

Physical activity & exercise.
Changes in policies, programs, and the built environment (e.g. walkability and bikeability) should play a proactive role in reversing poor health trends and increasing healthy lifestyles.

Master Plan reference: Physical Activity & Exercise, pp. 252-253.

PUBLIC SAFETY, HEALTH & WELFARE CAPITAL IMPROVEMENT PLAN

Police Department

The facilities of the FPD include Police Headquarters, located on the City Hall Complex site, along with several service centers. The headquarters facility has a number of issues associated with it. Constructed at the same time as City Hall (1956), the 62,400 square foot building suffers from many of the same problems and inefficiencies. Many building components are outdated and in need of maintenance or replacement. The building is extremely energy inefficient. The list of necessary capital improvements for FPD facilities is only a portion of what is likely needed, and there are serious questions as to the long-term viability of at least some of the buildings considering their age, condition, and cost of corrections needed. The City should consider including in a study of options for right-sizing their facilities to meet projected staffing needs the needs of the Police Department, especially the head- quarters. Opportunities could also exist as part of the implementation of the Master Plan to repurpose FCS facilities into combined police mini-stations/ community centers/senior centers.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Police Station bridge to 5th Street Improvements to the public access from 5th Street. Includes improvements for emergency exit from facility by employees.	1 – URGENT	$30,000	$30,000	$0
Flint City Lock-Up Door Replacements Replace doors in temporary lock-up facility located on the 3rd floor of Police Station. Doors currently do not operate or close as they should.	1 – URGENT	$50,000	$50,000	$0
Police Station HVAC Improvements to the heating and cooling system at Police Station.	2 – IMPORTANT	$1,685,000	$1,685,000	$0
Police Station remodeling Remodeling of interior space.	2 – IMPORTANT	$250,000	$250,000	$0
Police Station roof repairs Repairs to the roof to prevent and correct leaks.	1 – URGENT	$100,000	$100,000	$0
Police Station electrical upgrades Improvements to the electrical system at the Police Station.	2 – IMPORTANT	$200,000	$200,000	$0
Police Station -Property Room Fencing and shelving for property, Move blood drying cabinets to MPO and construct venting system, create electrical supply for blood drying Cabinets, connect water supply to Blood Drying Cabinets. Electronic door entry readers, Dehumidifiers, Air purifiers, Labor to move Drying cabinets, sprinkler Fire Suppression System, Security Cameras and paint.	1 – URGENT	$209,450	$209,450	$0
Police Station- General Improvements New paint and replacement of kickplate trim throughout entire building. Replacement of windows and fix the flooding issues on east end of building	1-URGENT	$517,000.00	$517,000.00	$0
Police Station- Patrol Operations Upgrades Upgrades include removing old wiring, flooring, ceiling tiles and replacing with new wiring, new paint and new carpet.	1-URGENT	$68,900	$68,900	$0

Police Department

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Police Station- Control Center (formally TRU) New wire room for feeds, installation of new video monitors and replacement of ceiling tiles and new paint	1-URGENT	$21,500	$21,500	$0
Police Station- Juvenile Offices Repairs and upgrades to the offices include flooring, bathrooms and holding cells	2- IMPORTANT	$30,000	$30,000	$0
Police Station Lighting Installation of new, motion sensor lights	2-IMPORTANT	$100,000	$100,000	$0
Police Station- Front Desk Workspace overhaul and remodel.	2- IMPORTANT	$20,000	$20,000	$0
Police Station- Traffic Bureau Replace carpet and new paint	2- IMPORTANT	$8,500	$8,500	$0
Police Station HVAC Improvements to the heating and cooling system at Police Station.	2- IMPORTANT	$1,685,000	$1,685,000	$0
Police Station- Crime Stoppers Office Replace carpet that was flooded and now smells moldy	2- IMPORTANT	$5,000	$5,000	$0
Police Station- Women's Locker Room Replace broken toilet in handicapped stall	2- IMPORTANT	$500	$500	$0
Police Station – City Lock Up Substantial upgrades and rehabilitation to the BLOCK's, Female holding area and the Booking Room	2- IMPORTANT	$35,000	$35,000	$0
Police shooting range Improvements to police shooting range.	REMOVED			

PUBLIC SAFETY, HEALTH & WELFARE CAPITAL IMPROVEMENT PLAN

Fire Department

The Fire Department includes six (6) fire stations (with old Station 5 and Station 7 being closed) which are in various conditions. All have needs to varying degrees for upgrades or other improvements. There is no comprehensive facility assessment known for any of the fire stations and this should be considered. It is very likely that these facilities have many of the same issues as others of the City, with the added concerns of FFD staff being on duty 24 hours, 365 days a year. The assigned station is home to firefighters, who perform their duties as assigned, eat, and sleep at the station. This aspect presents unique issues not present in other facilities, such as kitchen remodeling and updates appliances, etc.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Atherton Road Station Roof Repair Repairs to the roof at the Atherton Road Fire Station**.**	1 – URGENT	$10,000	$10,000	$0
Fire Station 2 Roof Repairs to the roof at Fire Station 2.	1 – URGENT	$15,000	$15,000	$0
Fire Station 1 Kitchen Remodeling of the kitchen at the main Fire Station.	2 – IMPORTANT	$60,000	$60,000	$0
Fire Station 5 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 5, including security upgrades, Nederman unit, bay door, refrigerator, etc.	2 – IMPORTANT	$90,000	$90,000	$0
Fire Station 8 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 8, including tiles, plumbing, Nederman unit, HVAC unit, etc.	2 – IMPORTANT	$95,000	$95,000	$0
Fire Station 6 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 6, including minor roof repairs, HVAC unit, tiles, lighting, painting, etc.	2 – IMPORTANT	$96,500	$96,500	$0
Fire Station 1 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 1, including a new HVAC unit, carpeting, ceiling tiles, painting, etc.	2 – IMPORTANT	$145,000	$145,000	$0
Fire Station 3 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 3, including a new AC unit, minor roof repairs, parking lot gate, bay door, etc.	2 – IMPORTANT	$150,000	$150,000	$0
Fire Station 4 Miscellaneous Items Updates and maintenance to miscellaneous items at Fire Station 4, including various systems and furnishings.	2 – IMPORTANT	$150,000	$150,000	$0
Fire Station 1 HVAC Improvements to the heating and cooling system at Fire Station 1.	2 – IMPORTANT	$845,000	$845,000	$0
Fire Station 1 Roof Replacement Replace roof at Fire Station 1.	COMPLETED	$127,400	$127,400	$0

Community Wellbeing

The City currently has two senior centers (Brennan and Hasselbring), two youth centers (Berston and Haskell), and the McKinley Center (run by VISTA Drop-In Center). All are well utilized, with programming at all of the centers if provided by various non-profit partners. Some are utilized to the point that they physically cannot accommodate more users without capital investments, an indication of the need for more centers and partners to help with programming. Utilization of senior and community centers can be a key component in implementation of the Master Plan and many of the different place types, which can include adaptive reuse of FCS facilities. There is an immediate need for improvements at the two senior centers and it is likely that improvements are needed at the others. Identifying funding for necessary projects needs to be a priority, along with project partners.

PROJECT NAME	PRIORITY	TOTAL COST	CITY COST SHARE	NON-CITY FUNDS
Facility Needs Assessment Undertake a study to identify improvements needed at the various com- munity centers (Berston, Brennan, Haskell, Hasselbring, and McKinley) and identify long term goals for providing services at each center.	1 – URGENT	TBD	TBD	TBD
Soil\Turf repairs at Haskell Youth Center Soil cap design and construction for the demolished swimming pool site at Haskell Youth Center.	2 – IMPORTANT	$13,000	$13,000	$0
Pierce Community Center HVAC Replacement of air conditioning units at Pierce Community Center.	3 – DESIRABLE	$15,000	$15,000	$0
Fire Sprinkler System at Berston Field House Fire sprinkler system installation at Berston Field House. Cost estimate by Sedgewick & Ferweda Architects in on- site survey and analysis report (May 19, 2014).	3 – DESIRABLE	$150,000	$150,000	$0
LED Lighting Conversion Convert existing lights at city-owned community centers (including Berston, Haskell, Pierce, McKinley, Mott Park, Brennan, and Hasselbring) to high- efficiency LED fixtures to reduce long-term utility costs. Total cost represents a rough estimate based on the cost of conversion for gym lighting at Berston Field House.	3- DESIRABLE	$210,000	$210,000	$0
Bishop & MLK Service Center Improvements to the Service Center that are needed.	COMPLETED	$50,000	$50,000	$0
Berston Lighting Improvements Installation of new energy efficient lights	COMPLETED	$37,850	$37,850	$0
McKinley Center HVAC Repairs Emergency replacement of multiple furnaces in the McKinley Center	COMPLETED	$10,194	$10,194	$0
Hands Free Faucets **Installation of hands-free faucets at Berston, Haskell, McKinley, and Mott Park.**	REMOVED			

9 CAPITAL IMPROVEMENT PLAN
MOVING FORWARD

NEXT STEPS

The City of Flint is gathering significant momentum towards a rebirth. Implementation of the Master Plan will require significant capital investments. The projects listed in this CIP are but a fraction of what is needed for the City to once again attain its previous status.

The next steps required for the growth and development of Flint over the next 20 years include:

- Use of the Master Plan to guide City policies and decision-making;
- Review and update of the Zoning Ordinance, which is currently underway, and other development controls to reflect policies presented in the Master Plan;
- Use of this CIP to plan for recommended infrastructure improvements;
- Promote cooperation and participation among various agencies, organizations, community groups, and individuals;
- Prepare and implement a 5-year Strategic Plan to prioritize objectives and list accomplishments of preceding years;
- Explore possible funding sources and implementation techniques for projects;
- Enhance public communication and community engagement in decision-making; and,
- Update the CIP, Strategic Plan, and Master Plan at regular intervals.

ADOPTING AN ANNUAL CIP PROCESS

The CIP is a distinct element of the annual budget process that flows through City government in separate, but linked channels. The CIP process typically occurs earlier than the budget process, as the CIP will be used in developing the capital projects portion of the annual budget. The process for developing the CIP generally involves the following steps.

Step 1: Organize the Process

Since the City has not had a formal process for collaborating on development of a CIP, the first step should be to develop and organize a process for doing so. Staff members whose work duties, responsibilities, and/or expertise are impacted by or affect capital improvement projects should be identified as members of the CIP Team. These meetings should occur on a regular basis throughout the year and not wait until immediately prior to the budget process, as the CIP process will take on less meaning if it is merged in any way with the budget. The CIP draft should be completed well prior to beginning the budget process, with adjustments to the CIP made as needed based on budget discussions.

Step 2: Identify Needs

Each member of the CIP Team identifies the needs within or affected by its particular asset area. Team members should develop their CIP "wish list" of needs for facilities they are responsible for throughout the year and bring this list to the first CIP Team meeting. These needs can be identified by reviewing the findings of the City's various master plans, maintenance records and experiences of staff, and citizen requests submitted since the last CIP process.

Step 3: Identify Key Scope Items

Next, each member of the CIP Team identifies key scope items that are likely to influence the cost and/or schedule requirements of the project to address the needs. These items may include: impacts to natural features; changes to the character of an area; locations within established boundaries such as historic districts, DDA, Master Plan place types, etc.; impacts on other utility infrastructure systems or their operations; special assessment or other outside funding component; need to obtain right-of-way or easement area; or, require a public engagement process.

There are tools that can be utilized in this process. One is the utilization of the City's geographic information system (GIS), which should contain an inventory and status or condition of many of the key items listed above. By identifying the location of a particular need, the presence or absence of many key items can be determined. Another tool, though not as technical as the GIS, is the broad perspective of the CIP Team members. By leveraging the expertise of the various staff involved with, or affected by, the operations and improvement of a particular asset area, many critical scope items can be factored into the planning and programming of a project to address a particular need.

If these scope items are not taken into account as part of the CIP process, the implementation of many projects is likely to encounter delays and cost over- runs as these items are discovered during the actual project study and design activities.

Step 4: Prioritize Needs

The key task for the CIP Team is to evaluate and prioritize the many identified needs. This is a critical component of the CIP process. Project selection and scheduling is constrained by the amount of funding anticipated to be available for capital projects. Shrinking funds and rising costs incurred in maintaining and rehabilitating deteriorating infrastructure make the process of selecting the most vital capital projects even more crucial and difficult. The merits of each need must be judged against the policies and criteria of the CIP process and the goals of each component of the Master Plan, as well as against the other competing needs.

Collaborative Classification Process

This CIP utilizes the collaborative classification method to prioritize projects. This method considers the varied perspectives on a given project to arrive at a prioritization relative to the other needs within that project category.

Prioritization or Weighting Model

Some communities utilize a detailed, yet clear method of prioritizing projects. The City of Flint should consider use of a prioritization or weighting model, which employs the following procedure:

1. Determine the decision criteria to be used in the prioritization analysis

2. Assign relative weights to the criteria from 0 to 100, with 100 being the most important
criteria and the others weighted relative to the most important

3. Determine performance measures from 0 to 10 for each criterion

4. Score each need/project for each criterion

5. Run the model

The results of the prioritization model express the overall, relative benefit of each need/project compared to the others in that particular category. These results are reviewed to confirm that the criteria, weighting, and scoring have not produced improper results. If it is determined by the team that some aspects of the results are in- appropriate, the criteria, weighting, and/or scoring should be reviewed and adjusted and the model re- run. The purpose of this iterative process is to better calibrate the model, but care must be taken to not adjust the model to produce "desired" results.

Note that while priorities for projects are included in the project listings, it is incumbent on the City to determine the final priority for projects between departments once department heads have prioritized projects within their own area of responsibility. Regardless of the method employed (prioritization model, collaborative process, or other means), this step is to be conducted without consideration of project cost or availability of funding or staffing resources. The goal of this step is to assign a priority to each project to allow for subsequent steps to be completed.

Step 5: Schedule Projects

During previous steps, CIP Team members identified needs, developed scope, and prioritized needs based on use of some method for doing so. An item of major importance is the scheduling of projects based on the initial estimate of the project costs, proposed funding source(s) for those costs, and prioritization.

The CIP Team members should develop an initial proposed schedule for the projects based on their understanding of the need and its relative priority within its asset category. Unlike a budget, a CIP is not required to be fiscally constrained based on available dollars, but it should have some semblance of reality to be effective and serve its intended purpose of providing guidance to future budget cycles.

The projects should initially be grouped by the fiscal year in which funding is proposed. The CIP Team should then evaluate each fiscal year grouping and adjust project schedules until an overall schedule of projects is established wherein:

Higher priority needs are addressed before lower priority needs.

Available funding limits are not exceeded for the upcoming budget cycle.

Staffing resources are anticipated to have capacity to perform the projects.

Step 6: Prepare, Adopt & Approve

As the process continues, and increasingly detailed information emerges, projects may be added, altered, or abandoned. Eventually, the CIP Team arrives at a final list of projects that is submitted to the City Planning Commission for review.

The Planning Commission evaluates the CIP package in light of additional information, holds a public hearing, and makes final programming decisions before adopting the CIP and sending it on to City Council. Council approves the CIP after its review. Approval is not a commitment to finance the approved projects, but is a statement of policy regarding the City's approach to meeting its future capital needs. However, the first two years of the CIP do form the initial basis for the Capital Projects Budget portion of the City's Annual Budget.

Policy Assessment

The City Council ultimately approves the assumptions, criteria, policies, and recommendations of the CIP Team and City Planning Commission by approving the CIP. Depending on the policy orientation, modifications are expected throughout the process. This is considered an essential part of the procedure, placing the burden on those who dissent to assess the policies underlying the recommendations and to advocate their differences, resulting in the necessary evolution of the entire capital planning process.

Highlight Priority Needs Regardless of Funding

It is inevitable that the number of projects required to address all of the City's infrastructure needs will exceed the available funding. In the endeavor to provide better service to the community, capital projects are proposed at times which, unfortunately, are moved to a later date when funding is available, or are determined to be un- funded or unprogrammed. This process should not discourage staff from continuing to submit identified needs, but should develop into a mechanism to help in the effort to uncover alternate sources of funding and see that higher-priority projects get implemented.

APPENDIX

The attached Appendix includes the CIP spreadsheet that pro- vides more detailed information about budget cycles, funding sources, and project costs for projects listed in this CIP. Several projects do not have a detailed scope or cost determined and there are numerous additional studies and investigations needed for the City to document existing conditions and fully understand infrastructure and capital improvement needs. Additional discussion on "Moving Forward" can be found in Chapter 12 of the Master Plan.