

ALTON REVITALIZATION PROGRAM

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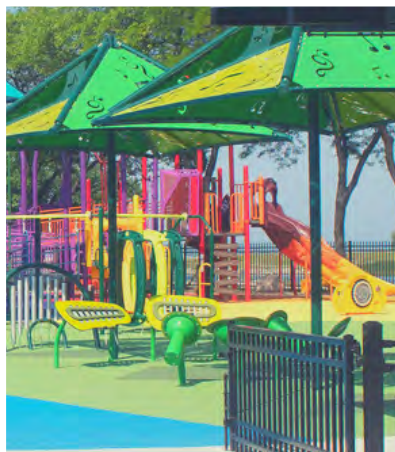
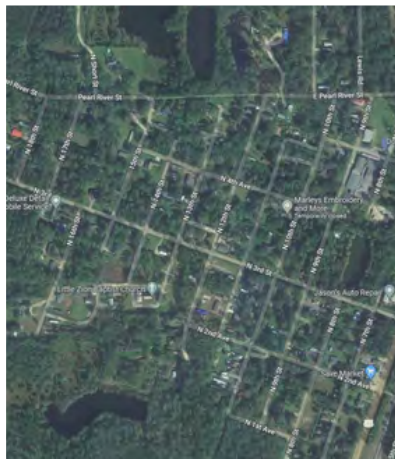


Table of Contents

1.0 Introduction	9
1.1 Study Area	9
1.2 History	1
1.3 Purpose of Program	0
2.0 Findings	12
2.1 Residential and Commercial Development	12
Study Area 1 (Eagle Mobile Home Park)	12
Zoning and Land Uses	12
Residential	13
Commercial	13
Study Area 2 (Alton Neighborhood)	14
Zoning and Land Uses	14
Residential	15
Commercial	17
Study Area 3 (East Alton)	18
Zoning and Land Uses	18
Residential	19
Commercial	19
2.1a Other Consideration	20
MHO (Manufactured Housing Overlay)	20
Property Access	20
2.2 Transportation and Mobility	22
Streets	22
Sidewalks	24
Streetlights	25
2.2a Other Consideration	27
Pavement Markings	27
Neighborhood Entrance from Hwy 11	27
2.3 Traditional Public Infrastructure	27
Study Area 1 (Eagle Mobile Home Park)	31
Potable Water and Sanitary Sewer	31

Drainage	31
Study Area 2 (Alton Neighborhood)	31
Potable Water	31
Sanitary Sewer	32
Drainage	32
Study Area 3 (East Alton)	33
Potable Water and Sanitary Sewer	33
Drainage	33
2.4 Other Quality of Life Considerations	33
Community Facilities	33
Little Zion Baptist Church	33
3.0 Community Meetings	34
3.1 Community Meeting (01)	34
3.2 Community Meeting (02)	40
3.3 Community Meeting (03)	44
4.0 Redevelopment	48
4.1 Minimum Redevelopment	48
Reshape Ditches	49
Opinion of Probable Cost Estimate	51
Parks and Playground	52
Opinion of Probable Cost Estimate	56
Walking Trail	56
Opinion of Probable Cost Estimate	57
1st St Roadway Addition	58
Opinion of Probable Cost Estimate	58
New Sidewalks	60
Opinion of Probable Cost Estimate	61
N 3rd St Reconstruction	62
Opinion of Probable Cost Estimate	63
Engineering Fees	65
4.2 Moderate Redevelopment	66
Connect Roadway	67
Opinion of Probable Cost Estimate	68

N 4th Ave. and N 5th Ave. Reconstruction	69
Entrance to Neighborhood	71
Opinion of Probable Cost Estimate	73
Additional Fire Hydrants	74
Opinion of Probable Cost Estimate	74
Streetlights Addition	76
Opinion of Probable Cost Estimate	76
Engineering Fees	78
Re-Zoning for Commercial Development	79
4.3 Extensive Redevelopment	81
Utility Upgrades	81
Potable Water	81
Sanitary Sewer	82
Drainage	83
Opinion of Probable Cost Estimate	84
Roadway Rehabilitation	85
Full Depth Remove and Replacement (Ave.) – Opinion of Probable Cost Estimate	86
Full Depth Remove and Replacement (St.) – Opinion of Probable Cost Estimate	87
Full Depth Remove and Replacement (St.) – Opinion of Probable Cost Estimate	88
Full Depth New Roadway (Ave.) – Opinion of Probable Cost Estimate	89
Full Depth New Roadway (St.) – Opinion of Probable Cost Estimate	90
Engineering Fees	91

List of Figures

Figure 1 – Overview Map	9
Figure 2 – Household Income Map	11
Figure 3 – Study Area 1 – Zoning and Land Uses	12
Figure 4 – St. Tammany Assessor’s Office GIS snapshot (Study Area 1)	13
Figure 5 – Study Area 2 – Zoning and Land Uses	14
Figure 6-7 – St. Tammany Assessor’s Office GIS Snapshot (Study Area 2)	15-15
Figure 8-10 – Comparable Properties Sold	16-16-
Figure 11 – Study Area 3 – Zoning and Land Uses	17 18
Figure 12-13 – Images of Home in Study Area 3	19-19
Figure 14-16 – St. Tammany Assessor’s Office GIS snapshot	20-21-
Figure 17 – N First Ave.	21 22
Figure 18 – Example of Safety Concern	23
Figure 19-20 – Vandalized and Damaged Signs	23-23
Figure 21 – Resident Walking in Roadway	24
Figure 22 – Demonstration of Vehicle Turning	24
Figure 23 – Resident Owned Streetlights	25
Figure 24 – Overview Streetlight Map	25
Figure 25 – Overview Sewer Map	26
Figure 26 – Overview Water Map	28
Figure 27 – Overview Drain flow	28
Figure 28 – Outfall from Receiving Station	31
Figure 29 – Alton Well	31
Figure 30 – Ditch filled with Debris	32
Figure 31-32 – Broken Tree Inside Ditch	32-32
Figure 33 – Survey Poll (1st Community Meeting)	35
Figure 34 – Survey Poll Results	36
Figure 35 – Community Meeting 01 Minutes	37
Figure 36 – Community Meeting 02 Minutes	41
Figure 37 – Community Meeting 03 Minutes	45

Figure 38 – Minimum Redevelopment Overview	48
Figure 39 – Comparison of Conventional and Two-Stage Ditch	49
Figure 40 – Receiving Station Rd Ditch	50
Figure 41 – Estrid Ave. Ditch	50
Figure 42 – 1st Ave. Ditch	50
Figure 43 – City Park Woldenberg Great Lawn	52
Figure 44 – Diagram of possible benefit of Open Space	53
Figure 45 – Multi-purpose Court	54
Figure 46 – Kids Playground (medium size)	55
Figure 47 – Adult Exercise Playground	55
Figure 48 – Recommend Walking Trail	57
Figure 49 – N 9th St. Current Condition	60
Figure 50 – N 9th St. Concept	60
Figure 51 – N 3rd St. Current Condition	62
Figure 52 – N 3rd St. Concept	62
Figure 53 – Fee for Basic Services	62
Figure 54 –Moderate Redevelopment Overview	66
Figure 55 – Example of Inaccessible Lots	67
Figure 56 – Example of Protected Left Turn Lane	71
Figure 57 – Hwy 11 at N 3rd St. Current Conditions	71
Figure 58 – Hwy 11 at N 3rd St. Concept	72
Figure 59 – Hwy 11 at N 5th Ave. Current Conditions	72
Figure 60 – Hwy 11 at N 5th Ave. Concept	72
Figure 61 – Additional Fire Hydrant Recommendation	75
Figure 62 – Streetlight Recommendation	77
Figure 63 –Fee for Basic Services	78
Figure 64 – Possible Commercial Development	79
Figure 65 – Re-Zoning Recommendation	80
Figure 66 –Waterline Upgrade Recommendation	82
Figure 67 – Sewer Addition Recommendation	82
Figure 68 – Drainage Upgrade Recommendation	83
Figure 69 – Fee for Basic Services	91

List of Tables

Table 1 – Minimum Redevelopment Opinion of Probable Cost Estimate	49
Table 2 – Reshape Ditch Opinion of Probable Cost Estimate	51
Table 3 – Parks and Playground Opinion of Probable Cost Estimate	56
Table 4 – Walking Trail Opinion of Probable Cost Estimate	57
Table 5 – 5th St. Roadway Addition Opinion of Probable Cost Estimate	59
Table 6 – New Sidewalks Opinion of Probable Cost Estimate	61
Table 7 – N 3rd St. Reconstruction Opinion of Probable Cost Estimate	64
Table 8 – Moderate Redevelopment Opinion of Probable Cost Estimate	66
Table 9 – Connect Roadway Opinion of Probable Cost Estimate	68
Table 10 – N 4th Ave. and N 5th Ave. Reconstruction Opinion of Probable Cost Estimate	70
Table 11 – Entrance to Neighborhood Opinion of Probable Cost Estimate	73
Table 12 – Additional Fire Hydrants Opinion of Probable Cost Estimate	74
Table 13 – Streetlight Additions Opinion of Probable Cost Estimate	76
Table 14 – Extensive Redevelopment Opinion of Probable Cost Estimate	81
Table 15 – Utility Upgrade Opinion of Probable Cost Estimate	84
Table 16 – Roadway Rehabilitation Opinion of Probable Cost Estimate	86
Table 17 – Full Depth Remove and Replacement (Ave.) Opinion of Probable Cost Estimate	86
Table 18 – Full Depth Remove and Replacement (St.) Opinion of Probable Cost Estimate	87
Table 19 – Full Depth New Roadway (Ave.) Opinion of Probable Cost Estimate	88
Table 20 – Full Depth New Roadway (St.) Opinion of Probable Cost Estimate	89
Table 21 – Patch Mill Overlay Opinion of Probable Cost Estimate	90

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1.0

INTRODUCTION

1.0 Introduction

1.1 Study Area

The Alton Neighborhood is a unique neighborhood with rich history and massive potential in growth economically and socially. Being one of the oldest neighborhoods in Slidell, Alton is roughly 630 Acres and bounded by Dr. T.J. Smith Sr. Expressway on the North, half a mile past Highway 11 on the East, Pine Place on the South, and the Bayou Vincent on the West. Alton is 8.5 miles away from Lake Pontchartrain shorelines with an elevation of 25ft. The neighborhood is under the Parish Governing Authority District 14 of St. Tammany Parish and reside, 20.5 miles away from St. Tammany Parish Government. Alton Revitalization Program's original boundaries were land and residents in between Bayou Vincent and Highway 11. However, during the development process, the boundaries were extended to include Eagle Lake Mobile Home Park and residents who resides east of Highway 11. The Study Area has been split into 3 different sub-sections to help explain in detail for this report. (See **Figure 1** for overview map).

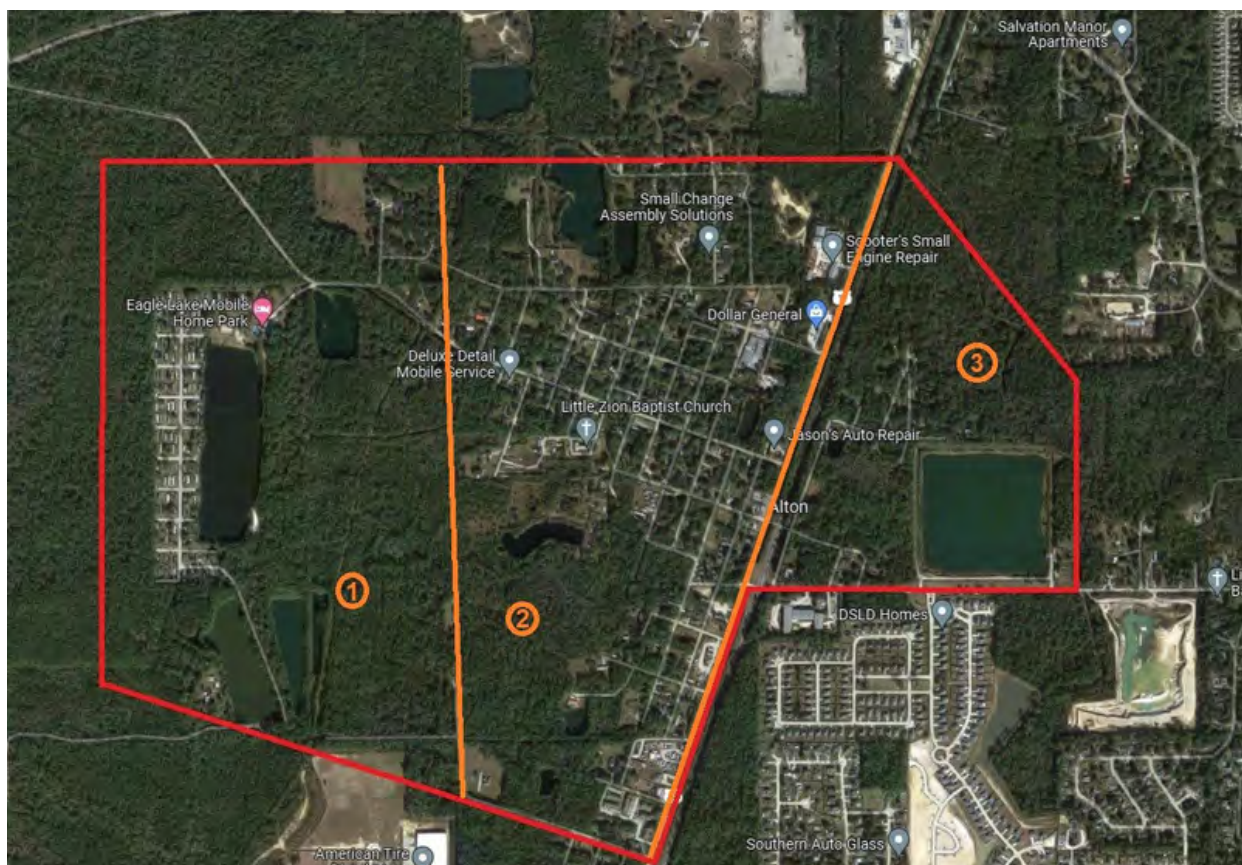


Figure 1 – Overview Map

1.2 History

The Alton Neighborhood began its development around 1880, after the end of the Civil War (1865). With the Victory of the Union, many black families were now free from slavery and anxious to become independent landowners. They were able to purchase lands in Alton through the Homestead Law which was passed in 1862. This allowed residents and future citizens to purchase up to 160 acres of public land for a small registration fee and agreed to live and improve the land for 15 years. Early settlers and previous landowners had sold and exchanged lands frequently. However, the black community within the Alton Neighborhood were determined to remain on the land and work in unity for survival.

Early records show that Julius Woods bought a few acres of land in 1883 which was sold to Chares Porter in 1887. Porter's plan for this land was to build Porter and Farve Lumber Company but fell short and a portion of the land was given to Antonie Missendez. Porter also sold a portion of his land to John Mace and Peter Lewis in 1898 and in joint with Alton Natiosh, the plan for the land was to build Alton Lumber Company, which was never developed as well. With this Porter, Farve, Lewis, and Alton owned more than 1,000 acres of land in Alton together, and Peter Lewis offered to sub-divide all land at no cost. Black property owners and Peter Lewis began surveying and developing streets to sub-divide the lands. Some landowners agreed, but some were suspicious of the offer and refused.

As, a result Alton Neighborhood is developed as a Grid-Style Plan, but some streets are dead ends and land locked. After, 15 years the properties were registered with the United States

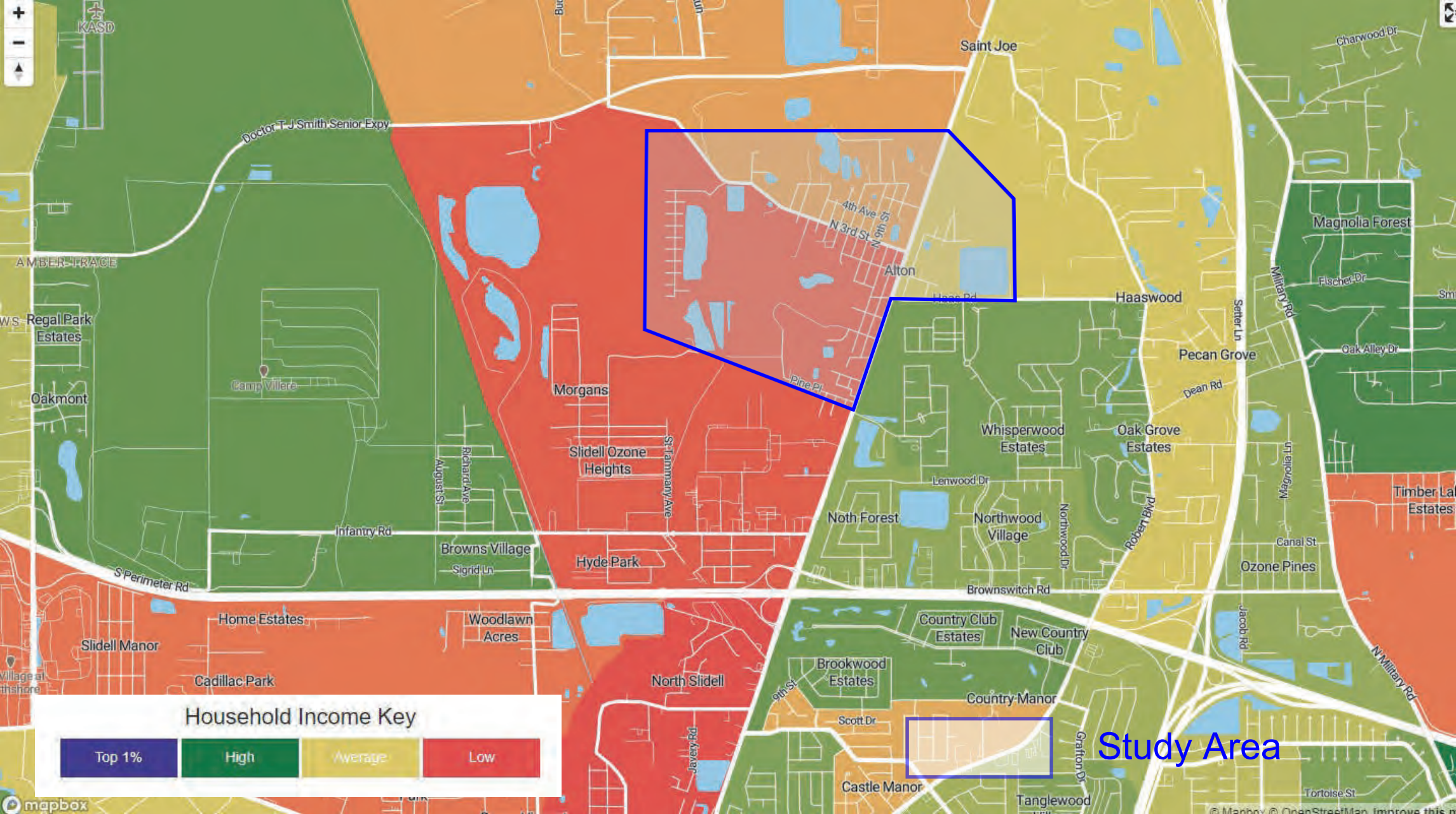
Department of Interior (1894). Although, the core development of Alton Neighborhood was due to black families, the lands owned by black families were not registered on the Parish Books until 1937. (Reference: History of Alton Township Little Zion Church Alton Junior High School)

1.3 Purpose of Program

According to *bestneighborhood.org*, Alton Neighborhood's average household income has been identified as Low to Low Average (See **Figure 2** for Household Income Map).

The St. Joe neighborhood, just north of Alton, has been rated Low Average to Average with a median household income of \$32,660. Using this data, it is assumed that Alton neighborhood's median household income ranges from \$27,000 to \$30,000. As, the map shows, Alton is surrounded by neighborhoods with higher household incomes to the east and the west.

The purpose of the Alton Revitalization Program is to perform a comprehensive assessment of existing community conditions for the purpose of planning moderate to major quality of life improvements. Specifically, we will be analyzing Residential and Commercial Development, Traditional Public Infrastructure, Transportation and Mobility, and Other Qualify of Life considerations.



Household Income Key



Study Area

An aerial, slightly blurred photograph of a park or natural area. A light-colored path or road winds through green grass and clusters of trees. The background shows more distant greenery and a hazy horizon.

2.0

FINDINGS

2.0 Findings

2.1 Residential and Commercial Development



Study Area 1 (Eagle Lake Mobile Home Park)

Zoning and Land Uses

Study Area 1 contains 2 zoning classifications: A-2 Suburban District and A-6 Multiple Family Residential District. (See Figure 3). The different definitions of each zoning are listed below.

A-2 – Suburban District

Provides a single-family residential environment on large, multi-acre lots. Located primarily in less populated areas where the character of the area should be preserved through low densities. To protect the intention of the district, permitted activities are limited to single-family dwellings, certain specified agricultural, and utility uses. All strictly commercial uses are prohibited in the A-2 Suburban District.

Majority of Study Area 1 has been classified as an A-2 Suburban District.

A-6 – Multiple Family Residential

Provide medium density residential development in an urbanized location where it may serve as a transitional district between less intense commercial or industrial environments. This district is to be served by central utility systems, be convenient to commercial and employment centers, and have easy access to thoroughfares and collector streets.



Figure 3 – Study Area 1
Zoning and Land Uses

To protect the intentions of the district, permitted activities are limited to residential uses, both private and public, and utility uses. All strictly commercial uses are prohibited in the district.

The Eagle Lake Mobile Home Park is classified as A-6 Multiple Family Residential, and the entire area is privately owned.

Residential

Properties

According to St. Tammany Assessor's Office website, most of the land within the Study Area 1 is undeveloped and is not registered with the St. Tammany Parish Tax Assessor. The area has multiple opportunities for growth and development. (See **Figure 4**).

Eagle Lake Mobile Home Park

Eagle Lake Mobile Home Park is a privately owned property to the west of the Study Area with over 200 mobile homes at 1200 – 1500 sq. ft available to own or rent. St. Tammany Parish Government does not maintain any utilities or roadways within the community due to Eagle Lake Mobile Home Park being privately owned.



Figure 4 – St. Tammany Assessor's Office GIS Snapshot (Study Area 1)



Study Area 2 (Alton Neighborhood)

Zoning and Land Uses

Study Area 2 contains several zoning classifications: residential, commercial, industrial, and educational. (See **Figure 5**). The definition of each zoning is listed below.

A-4 – Single Family Residential District

Provide single-family dwellings in a setting of moderate urban density. Central utility systems, convenience to commercial and employment centers, and efficient access to major transportation routes are locational characteristics of this district. To protect the intention of the district, permitted activities are limited to single-family dwellings and utility uses. All strictly commercial uses are prohibited in the A-4 Single-Family Residential District.

Currently a majority of the Study Area 2 is classified as A-4.

HC-3 – Highway Commercial District

Provide for the location of large-scale, heavy commercial retail, office, and service uses with primary accesses being collectors constructed for the development or arterials roadways.

Currently the very southern part of Study Area 2 is listed as HC-3. The only apartment complex within the Study Area is Stones Throw Apartments.

I-1 – Industrial District

Provide for the location of industrial uses of moderate size and intensity along major collectors and arterials in such a fashion and location as to minimize the conflict with nearby residential uses.

Within the Study Area 2, the only area classified as I-1 is Jason's Auto Repair shop located on N 3rd St. and Highway 11.

I-4 – Heavy Industrial District

Provide for the location of industrial uses of large scale and highly intense industrial uses along major collectors and arterials in such a fashion and location as to minimize the conflict with nearby residential uses.

Within the study area, the northeastern part of the neighborhood is classified as an I-4 district. This area is south of Dr. T.J. Smith Sr. Expressway and Northeast of the E Pearl River St.



Figure 5 – Zoning Map (Study Area 2)

ED-1 – Primary Education District

Provide for the location of public or private schools that are generally served by buses or serve smaller student populations.

Alton Elementary School is located at 38276 N 5th Ave. and has been identified as a Primary Education District.

NC-4 – Neighborhood Institutional District

Provide for the location of uses which provide a service at the neighborhood level but could result in large influx of customers or clientele at a specific time because of scheduled gatherings, classes, or meetings.

The Dollar General located on N 5th Ave. and Highway 11 is the only area classified within Study Area 2 as NC-4 Neighborhood Institutional District.

Residential

Properties

Several properties located within Study Area 2 were not found to be registered to the Tax Assessor. With this it is currently difficult to determine property ownership. On **Figure 6** and **Figure 7**, the red circle shows example of properties that are not currently registered with the Tax Assessor.



Figure 6 – St. Tammany Assessor's Office GIS Snapshot (Study Area 2)



Figure 7 – St. Tammany Assessor's Office GIS Snapshot (Study Area 2)

HOUSING

Within, the Study Area 2, an average single dwelling home with a 3-bedroom 2-bathroom roughly 1,300-1,500 sq. ft were sold in 2011-2014 for an average of \$58,900 and \$68,500 in 2015-2018 (See **Figure 8** and **Figure 9**). With new developments of DSLD homes nearby and increase in housing demands, similar properties at 1380 sq. ft were sold roughly \$100,000 in 2019 and \$150,000 in 2021. (See **Figure 10**). Developments near the neighborhood show significant increase in economic growth in residential properties. With this and large vacant lands, there are significant opportunities for residential growth within Alton Neighborhood.

Figure 8 – Comparable Properties Sold 2011-2014



Bed: 3
Bath: 2
Sq Footage: 1294
Sold Price: \$42,900
Sold Date:
 11/8/2011



Bed: 3
Bath: 2
Sq Footage: 1500
Sold Price: \$57,000
Sold Date: 5/23/2014



Bed: 3
Bath: 2
Sq Footage: 1294
Sold Price: \$76,900
Sold Date: 4/6/2012

Source: MLS DATA

Figure 9 – Comparable Properties Sold 2015-2018



Bed: 3
Bath: 2
Sq Footage: 1380
Sold Price: \$90,000
Sold Date: 11/21/2018



Bed: 3
Bath: 2
Sq Footage: 1380
Sold Price: \$62,875
Sold Date:
 11/28/2017



Bed: 3
Bath: 2
Sq Footage: 1380
Sold Price: \$62,875
Sold Date:
 11/28/2017

Source: MLS DATA

Figure 10 – Comparable Properties Sold 2019-2021



Bed: 3
Bath: 2
Sq Footage: 1380
Sold Price: \$150,000
Sold Date: 9/30/21



Bed: 3
Bath: 2
Sq footage: 1380
Sold Price: \$100,000
Sold Date: 8/26/2019



Bed: 3
Bath: 2
Sq Footage: 1380
Sold Price: \$97,500
Sold Date: 7/30/2019

Source: MLS DATA

Commercial

Stones Throw Apartments

Stones Throw Apartments is located in the southern part of Study Area 2 and is the only apartment complex within the Study Areas. This apartment complex was built in 1985 and includes 64 units. The apartment complex features 1–3-bedroom floorplans with averaging at 1000sf for 2-bedroom apartments and 1200sf for 3-bedroom apartments. This apartment complex is low-income base, in which rates are determined by reviewing one's current income. Currently, the apartment complex is occupied at a 100% capacity with no additional units available.

Alton Elementary

The neighborhood is home to a high tier Elementary School, Alton Elementary, located Northeast of the neighborhood at 38276 N 5th Ave.

According to www.usnews.com Alton Elementary is currently ranked 8 out of 29 Elementary schools in St. Tammany Parish and 142 out of 862 Elementary schools in Louisiana. Alton Elementary currently has a total enrollment of 187 students at a 14:1 Student/ Teacher Ratio. 85.6% of the students are categorized as a minority in which over 57% are Black or African Americans.

Shopping / Markets

Currently within the Alton Neighborhood, the only Shopping / Market Area is a Dollar General located near 5th Ave. on Highway 11 and a Save Market which is a convenience store near N 2nd Ave. on Highway 11. Other than these 2 locations, residents in need of groceries within the Alton Neighborhood must drive roughly 3.5 miles south to a Neighborhood Walmart located within Castle Manor Neighborhood, or 2.5 miles North to Jubilee foods located within the Pearl River Neighborhood.

Study Area 3 (East Alton)

Zoning and Land Uses

Study Area 3 contains 3 different zoning classifications including, A-3 Suburban District, A-4 Single Family Residential District, and the PF-1 Public Facilities. (See Figure 11).

A-3 – Suburban District

Provide a single-family residential environment on moderate sized lots which reserved by central utility systems and other urban services. The A-3(D) district is located in areas appropriate for urbanized single-family development in areas convenient to commercial and employment centers. To protect the intention of the district, permitted activities are limited to single-family dwellings and utility uses. All strictly commercial uses are prohibited in the A-3(D) Suburban District.

The majority of the eastern side of Study Area 3 which is currently undeveloped has been classified as A-3.

A-4 – Single Family Residential District

Provide single-family residential dwellings in a setting of moderate urban density. Central utility systems, convenience to commercial and employment centers and efficient access to major transportation routes are locational characteristics of this district. To protect the intention of the district, permitted activities are limited to single-family dwellings and utility uses. All strictly commercial uses are prohibited in the A-4(D) Single- Family Residential District.



Figure 11 – Zoning Map (Study Area 3)

Currently Study Area 3 only has roughly 1 mile of roadway built in which residents resides on the west side of the Study Area.

PF-1 – Public Facility District

Provide for the location of governmental and other uses providing institutional uses to the public.

A pumping station with a body of water measured at roughly 30 acres is located southern part of the Study Area 3 and is considered a Public Facility District.

Residential



Figure 12 – Home Rated in Good Condition (example)

Within the Study Area 3, most homes are mobile homes built on piers with conditions ranging from good to average. (See **Figure 12** and **Figure 13**). As, displayed in Study Area 2, several properties are not registered with the Assessor's office and are hard to determine property ownership.



Figure 13 – Home Rated in Average Condition (example)

Commercial

Currently there are no commercial properties within Study Area 3. Majority of the land is undeveloped and have several opportunities for commercial development.

2.1.a Other Consideration

MHO (Manufactured Housing Overlay) Zoning Classification

The purpose of the Manufactured Home Overlay is to provide zones that will permit the placement of manufactured homes for occupancy as single-family residential dwellings on individual lots or within an approved land lease development. All of Study Area 1 and Study Area 2 are listed under the MHO. Manufactured Housing requires less maintenance and are cost efficient alternative for a property.

Property Access

Currently, there are several lots that are not accessible due to unconstructed right of ways as well as overgrown trees. On **Figure 14-16**, the red X represents where roadways discontinue, and red squares represent lots that cannot be accessed by the public. Due to no access, the lots located within these red squares are financially more burdensome to develop for potential development.



Figure 14 – St. Tammany Assessor's Office GIS Snapshot (Study Area 2)

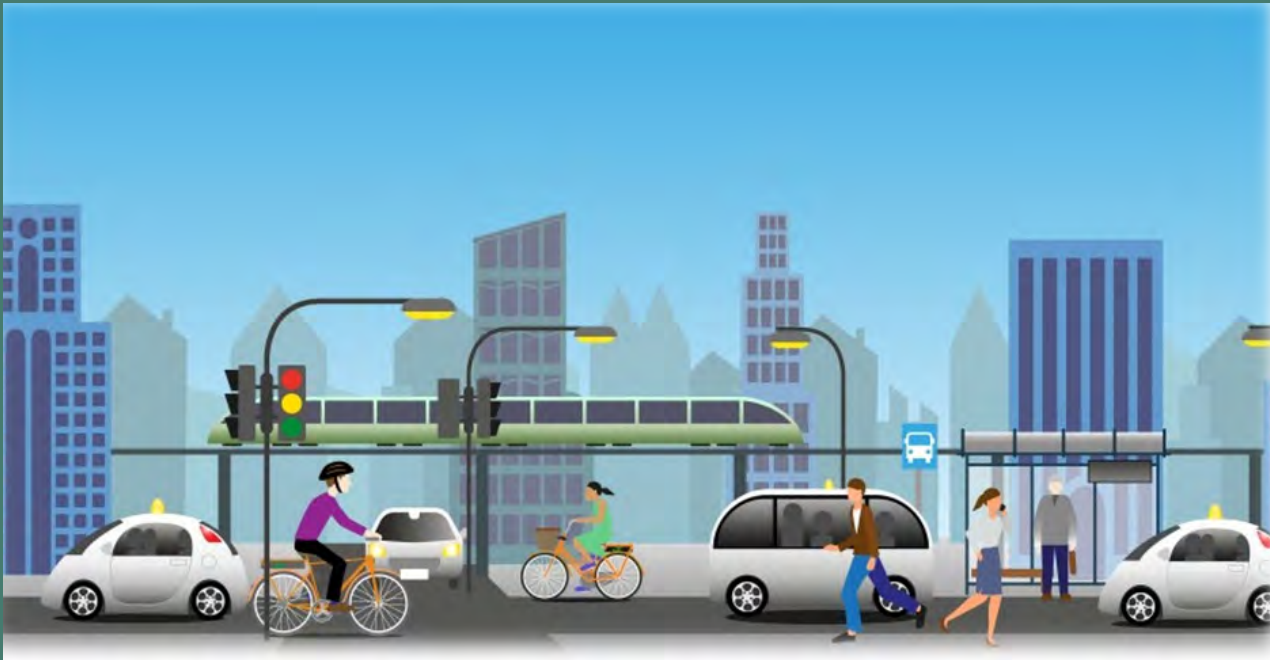


Figure 15 – St. Tammany Assessor's Office GIS Snapshot (Study Area 3)



Figure 16 – St. Tammany Assessor's Office GIS Snapshot (Study Area 3)

2.2 Transportation and Mobility



Currently all Study Areas lack 3 important standards for Transportation and Mobility.

1. Standard Street Width
2. Sidewalks and Handicap Ramps
3. Street Lights

The Alton Neighborhood has been developed as a Grid Plan with streets running at right angles to each other. Streets running North and South are narrow at an average width of 13 feet and are numerically numbered. Streets running East and West are wider it's width at 19 feet and are also, numerically numbered, but have been labeled Avenues. Most streets have ditches roughly 6 feet wide and run as deep as 4 feet on each side of the street. (**See Figure 17** for existing Avenue roadway in the Study Areas) According to National Fire Protection Association (www.nfpa.org), the minimum width requirement for roadways accessible for the fire department is 20ft. This allows for one fire apparatus vehicle to pass while another is working at a fire hydrant. Due to the current width and ditches on the side of the roadway, a majority of the streets in Alton are not up to National Fire Protection Association standards. **Figure 18** shows an example of how the narrow roadway restricts Firetrucks (average width 10') and Ambulance (average width 8.1') from safely passing when a vehicle is parked on the roadway. This raises a major safety concern during structure fires or providing help to residents when in need. Although the roadway pavement conditions have been identified as good to fair, the streets are currently missing or have damaged safety components such as striping, speed limit signs, cautionary signs, and street signs. (See **Figure 19** and **Figure 20** for vandalized and damaged signs).



Figure 17 – N First Ave.



Figure 18 – Example of Safety Concern



Figure 19 – Vandalized Sign



Figure 20 – Damaged Sign

Sidewalks

According to a study by the UNC Highway Safety Research Center conducted for the Federal Highway Administration, the likelihood of a site with a paved sidewalk being a crash site is 88.2 percent lower than a site without a sidewalk after accounting for traffic volume and speed limits [McMahon et al., 2002]. It is assumed sidewalks can be a large influence on safety. Also, having sidewalks help promote healthier life by allowing kids to walk to school and residents to exercise safely. Currently, there are no sidewalks within the Study Areas. Due to the narrow roadways and the ditches on the side of the roadway, walking on the roadway can be unsafe. See **Figure 21** for resident walking in roadway and **Figure 22** for a vehicle turning which would give no room for pedestrians when waiting at intersection to cross.



Figure 21 – Resident Walking in Roadway



Figure 22 – Demonstration of Vehicle Turning

Streetlights

Streetlights are essential safety features for Transportation and Mobility. The reduction of crime such as robberies, burglaries, property defacement as well as improving drivers and pedestrian visibilities are some of the key benefits to streetlights. The majority of the streetlights in the Study Areas are currently privately owned and paid for by the residents. **Figure 23 and Figure 24** are examples of private owned streetlights. **Figure 25** shows an overview map of identified streetlights in the Study Areas. Streetlights publicly owned have been color coded green and streetlights privately owned have been color coded blue. With this, due to the placements and the quality of current streetlights, the Study Areas become harder for residents to navigate at night.



Figure 23– Resident Owned Streetlights



Figure 24– Resident Owned Streetlights

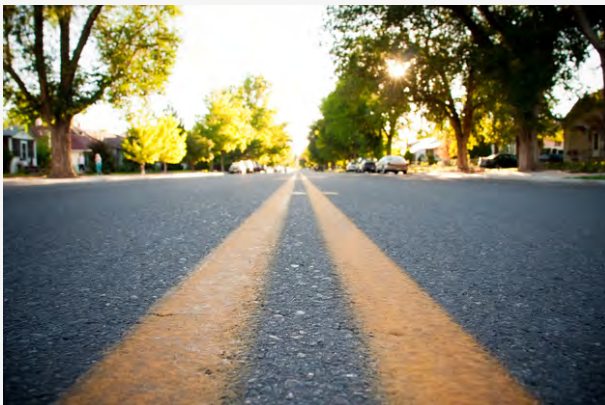
2.2.a Other Considerations

Pavement Markings

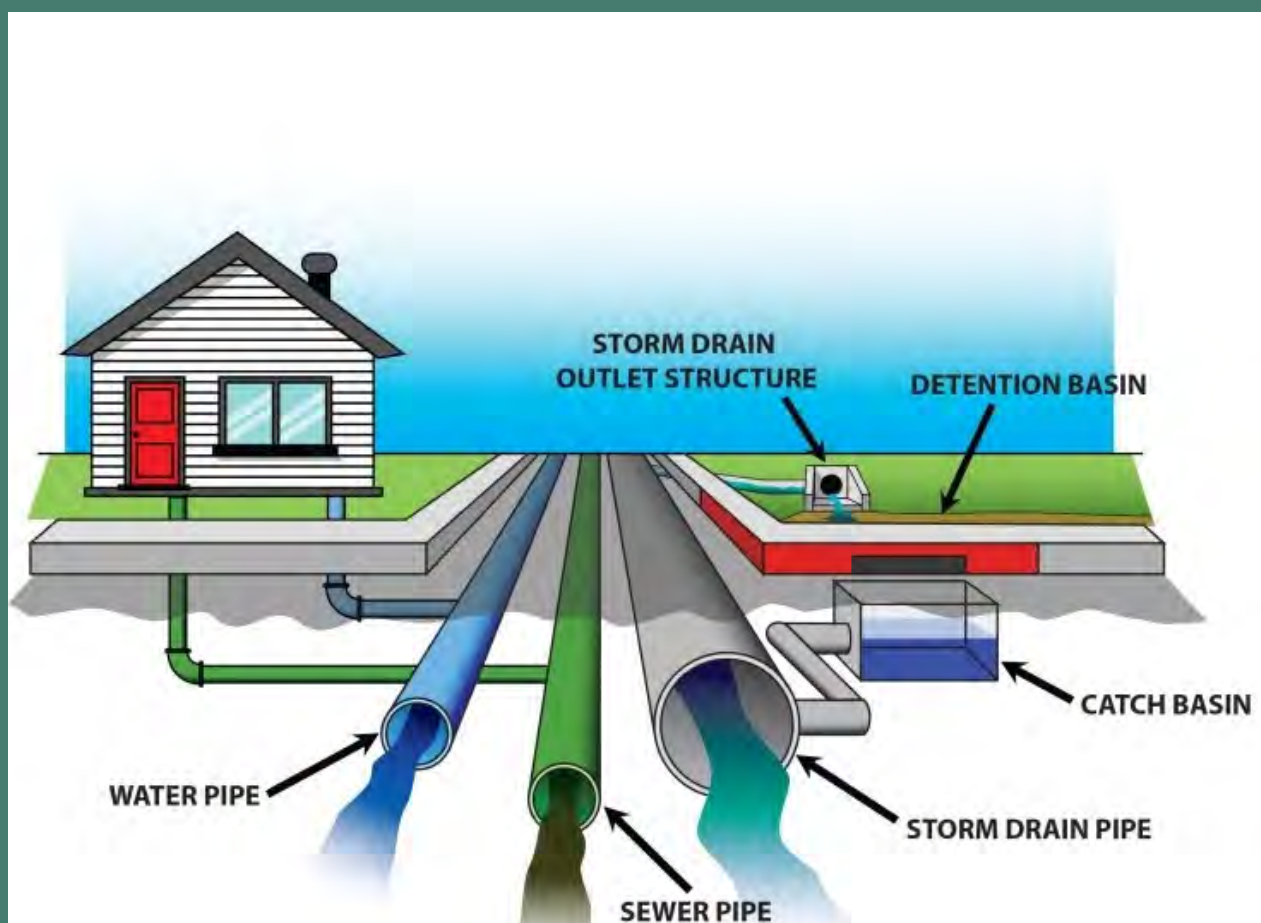
Pavement markings can be defined as set of rules to help the flow of traffic and reduce potential accidents. These markings are placed to give the driver insight into the roadway ahead, the flow of traffic, and provide a safety barrier for vehicles not in the flow of traffic. The demand for increase safety features on vehicles and the rapid growth of innovation in car safety has made pavement marking even more essential. These innovations rely heavily on pavement marking to function properly. With improper pavement markings, it can lead to devastating accidents. There are currently no pavement markings within the Study Areas.

Neighborhood Entrance from Hwy 11

Hwy 11 is a two-way, one lane freeway with a speed limit of 50 mph. Most vehicles on this road travel at an average of 60-80mph. Currently the entrance to Alton Neighborhood (Haas Rd., N 3rd St., and N 5th St.) do not have a protected left turning lane. There have been several reports of accidents where residents are trying to turn in or are waiting for the oncoming traffic. This also increases stress for residents as well as other vehicles since it causes traffic.



2.3 Traditional Public Infrastructure



Potable Water and Sanitary Sewer

Currently, St. Tammany Parish only services sewer within Study Area 2 north of N 3rd St. and water services only north of Haas Rd. All other residential water and sewer connections are either through a private company or are served on a private well for water and a septic tank within the property for sewer. See overview map on **Figure 26** for Sewer and **Figure 27** for water for the known public infrastructure.

Drainage

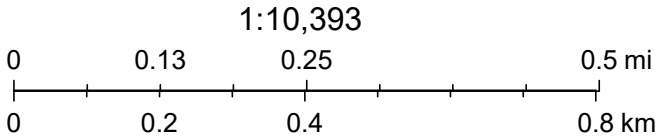
Currently, stormwater runoff flows through ditches within the Study Areas and outfalls into either Bayou Vincent or W-15 Canal see **Figure 28** for Drainage Flow overview.

St. Tammany External GIS Portal



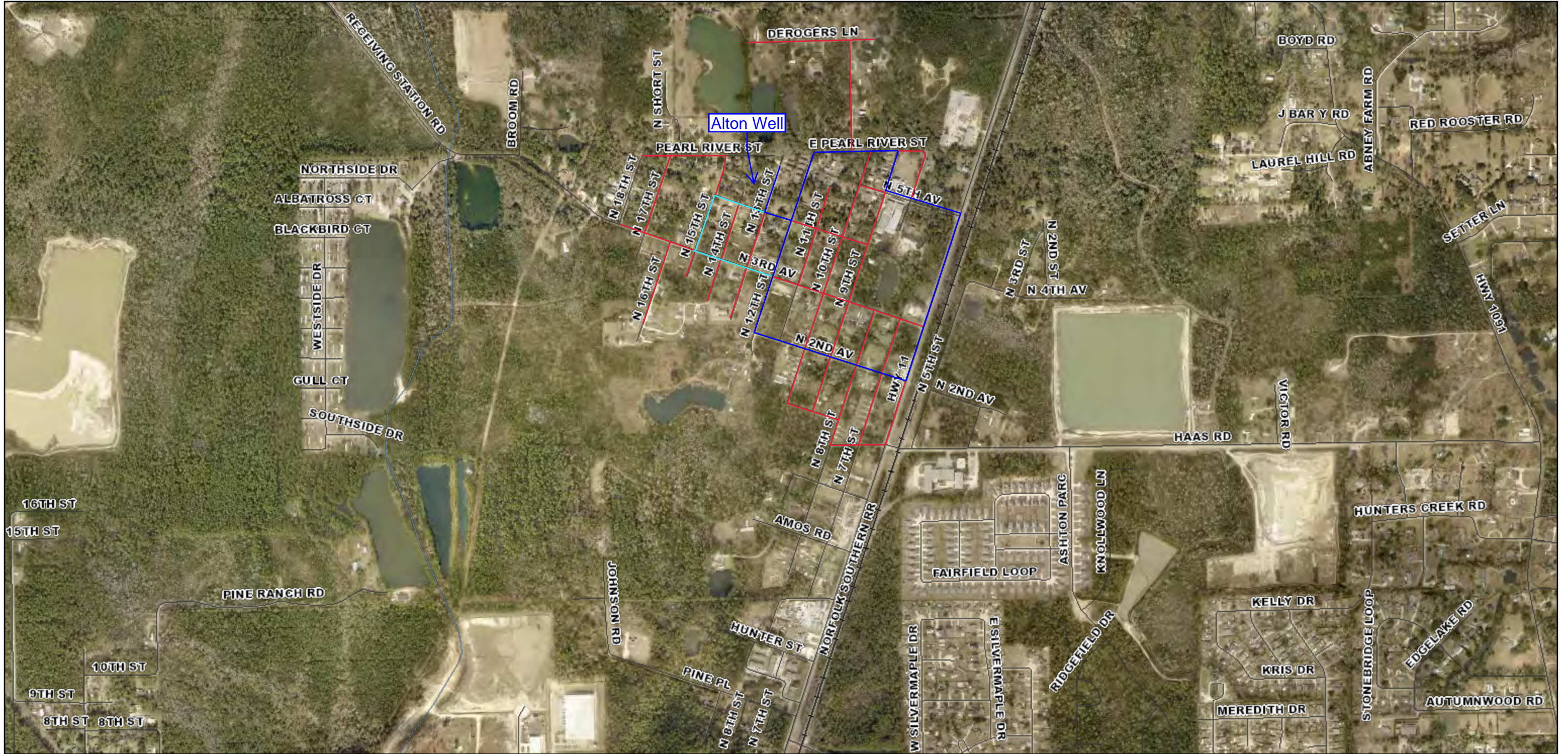
April 13, 2022

-  Sewer Lift Station
-  8" Sewer Line
-  4" PVC Force Main
-  3" PVC Force Main



STP GIS, STP GIS, STP 911

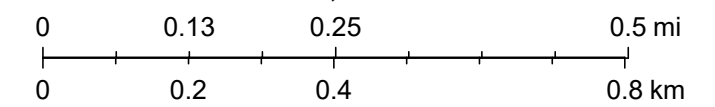
St. Tammany External GIS Portal



April 13, 2022

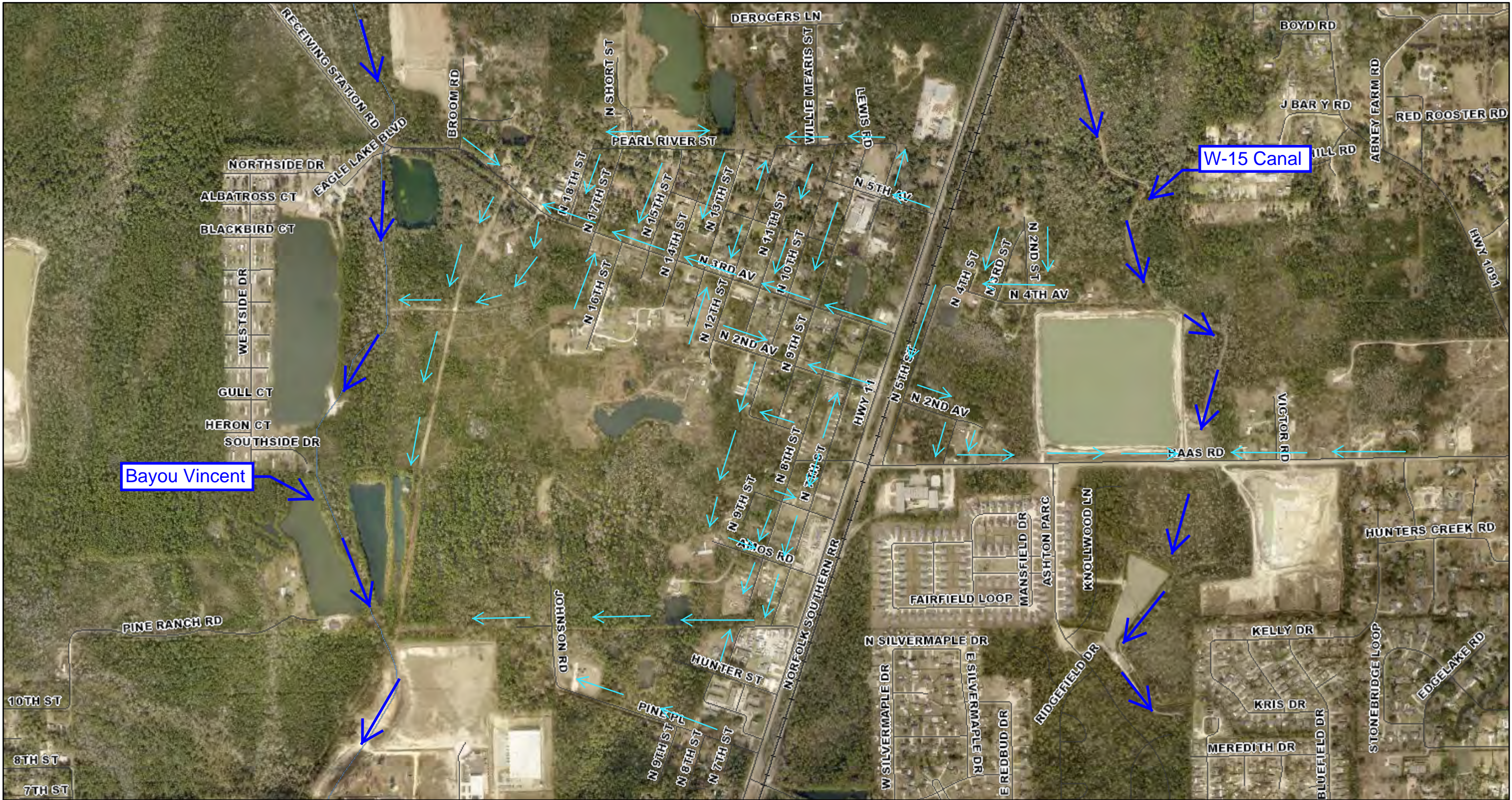
1:10,393

 4" Waterline
 6" Waterline
 8" Waterline



STP GIS, STP GIS, STP 911

St. Tammany External GIS Portal



April 7, 2022

→ Drainage Flow

1:9,507

STP GIS, STP GIS, STP 911

Study Area 1 (Eagle Lake Mobile Home Park)

Potable Water and Sanitary Sewer

Currently, there are little to no information on Public Infrastructure within Study Area 1. Eagle Lake Mobile Home Park is a privately owned entity, and no information was available for evaluation of the property. The remaining Study Area is undeveloped land and does not have any sewer or water lines that are maintained by St. Tammany Parish.

Drainage

As, shown in the overview drainage flow map **Figure 27**, almost all stormwater captured from Study Area 2 drains to N 3rd St. towards the Receiving Station, and into the ditches that lead into Bayou Vincent. Although, the elevation of the entire neighborhood is 25 feet, due to outfall being dictated by Bayou Vincent and the ditches off of Receiving Station, it is important to maintain the outfall ditches to prevent roadways within the Study Areas from flooding. **Figure 29** shows the current condition of the outfall ditches from Receiving Station Rd.



Figure 29 – Outfall from Receiving Station Rd.

Study Area 2 (Alton)

Potable Water

Currently, all residents in Study Area 2 above Haas Rd. are being serviced by the Alton Well located at 62200 block of N 13th St. (See **Figure 30**). The well was built in 1992 at ground elevation of 25ft and a depth of 1120ft. The pump yields 752 gallons per min with a drawdown of 27.5ft. This was tested during an 8-hour continuous pumping on 12/4/91. The pump is designed to pump at a rate of 750 gallons per min for 24 hours a day for 365 days per year. All residents below Haas Rd. are currently serviced by either private wells or a private company.



Figure 30 – Alton Well

Sanitary Sewer

Alton residents above N 3rd St. are currently under the St. Tammany Parish sewer system. The sewer system consists of gravity flow pipes as well as force mains that leads sewer out of the neighborhood. Most mains measure at 8" diameter and a slope of roughly 0.3%-0.5% depending on the distance. There are two sewer lift stations within the neighborhood. The sewer collected at the lift station at N 5th Ave. and N 10th St. is pushed onto a main at 10th St. by a 3" force main. All other mainlines flow onto the lift station located at N 3rd St. and N 14th St. which are all pumped out of Alton Neighborhood by a 4" sewer force main at N 3rd St. All residents below N 3rd St. are currently serviced either by a private company or a septic tank within their property.



Figure 31 – Ditch filled with Debris

Drainage

Stormwater within the Study Area 2 is captured and drained by ditches on the side of the roadway. The ditches ranges from 4-9 feet wide and in some areas are as deep as 5 feet. Almost all ditches northside of Study Area 2 flows towards N 3rd St. West side of N 11th St. stormwater on N 3rd Ave. flow towards Study Area 1 and east side of N 11th St. on N 3rd Ave. drains towards Highway 11. The ditches southside of Study Area 2 drains to the nearest Ave blocks and flows towards Highway 11. As mentioned before, **Figure 27** shows an overview map of drainage flow. Although ditches are more cost effective to construct, they require more maintenance for proper performance. Without proper maintenance, ditches become less effective and causes more headaches. Due to down trees, leaves, debris, etc. ditches in Alton Neighborhood are non-functional in some areas and causes upstream areas to hold water and flood. Additionally, when water is held and stagnate over a long period of time, it attracts mosquitos and bacteria. (See **Figure 31**, **Figures 32**, and **Figure 33** for examples of ditches that are less effective and require maintenance).



Figure 32 and Figure 33 – Broken Tree Inside Ditch

Study Area 3 (East Alton)

Potable Water and Sanitary Sewer

Currently residents within Study Area 3 are not connected to the parish's sewer or water system. With this, it is assumed residents are either connected to a private company system or a private well for water and a septic tank within the property for sewer.

Drainage

The French Branch Basin, comprised of approximately 7,300 acres of land, is identified under the St. Tammany Parish Master Drainage Plan to drain stormwater from North to South through various canals. Within the French Branch Basin, the W-15 is a natural stream which flows generally in a southeasterly direction draining stormwater from Pearl River to Doubloon Bayou. As the W-15 Canal cuts through Study Area 3, to help alleviate the stormwater, a portion of the stormwater is split into the Haas drainage pumpstation located on Haas Rd. This drainage pump station eventually pumps the stormwater back into the W-15 canal when reaching certain head.

2.4 Other Qualify of Life considerations

Community Facilities

According to The First National Study of Neighborhood Parks, neighborhood's parks are classified as any size park within a mile of the neighborhood. Currently there are no parks within the neighborhood and the nearest parks from the Study Areas are approximately 3-4 miles. Most residents are using the Alton Elementary School Playground located across the street from the school but, have limited access due to school hours and closing during after-hours. There are several possible considerations for potential parks and playground, however due to limited access and private areas, these considerations would require extensive construction.



Little Zion Baptist Church

Little Zion Baptist Church is currently located at the southern dead end of N 13th St. Early settlers originally met in their homes for a weekly prayer meeting and in 1884 a community church was organized and was first built at the end of Third Street. As, the church grew in numbers, there was not enough room inside and often members would participate in service standing outside. With this, a larger church was built at its current location today. Little Zion Baptist Church was an essential part of Alton Neighborhood's history and continues to be a strong influence on the Alton Neighborhood. *(Reference: History of Alton Township Little Zion Church Alton Junior High School)*





3.0

COMMUNITY MEETINGS

3.0 Community Meetings

To help better focus the Study Areas' needs, numerous community meetings were held. The purpose of the community meetings was to first introduce and explain the program's objectives, listen to residents' needs within the community, and finally display different options to solidify a strategic plan for developments.

3.1 Community Meeting (01)

On March 10, 2022, the first community meeting for Alton Revitalization Program was held at the Alton Elementary School Cafeteria. The purpose of the community meeting was to introduce the program and to listen to what Alton Neighborhood's needs are from the residents themselves. A survey poll was conducted as a starting point for neighborhood needs and each category was discussed during the community meeting. **(See Figure 34)**. As a result, most residents were 100% supportive of the topics suggested. **(See Figures 35** for results of poll).

In addition to the survey polls, attendees were given the opportunity to express their concerns and request additional adjacent areas to be investigated within the program. As a result, residents living on the east side of Highway 11 within the area were added onto the project as well as the Eagle Lake Mobile Home Community. Common concerns among residents were the upkeep of ditches which are currently filled with debris and causes flooding during heavy rain events.



Alton Revitalization Program Community Meeting Minutes

Date: March 10, 2022

Location: Alton Elementary School (Cafeteria)

Time: 6:00pm – 7:00pm

Speakers:

- 1) TJ Smith (Councilman) – Introduced the community to Wingate and Habitat.
- 2) Kentrell Jones (Habitat for Humanity) – Explained that Habitat for Humanity will be present throughout the study, for questions/concerns.
- 3) Ross Liner (St Tammany Planning and Development) – Explained prior meetings and why this meeting differs from previous – Engineer firm on board.
- 4) Randy Smith (Wingate) – Explained the purpose of the feasibility, why Wingate is involved, and how critical this study is for future changes of Alton.
- 5) Daniel Lee (Wingate) – Directed everyone to the survey and explained each item/encouraged community members to vote on survey.

PowerPoint – Daniel Lee

Possible changes for Alton Neighborhood

Transportation

- Bike Paths
- Connect Roadways
- Striping
- Street Lights

Community Facilities

- Walking/Running Trails
- New Playgrounds
- Public Parks

Infrastructure

- Improvements on underground utilities
- Drainage

Comments from Speakers:

- 1) Ross Liner
 - Consideration of land donation from community members with vacant lots for Alton development
- 2) Kentrell Jones:
 - Encouraged community members to bring in their neighbors/more meeting attendance.
- 3) TJ Councilman:
 - Encouraging the community to educate others on the importance of not littering.
 - Identifying what properties do not have sewer/water.
 - Include Alton citizens that are on the other side of the railroad tracks (some do not have gas services) as well as Eagle Lake to be a part of the study/west side of Alton

Community Comments/Suggestions:

- 1) More concerned about drainage/streetlights, less on parks and community activities
- 2) Entrance of Alton floods, by the dollar store.
- 3) 12th St and 2nd St floods, does not take much rain. Other Streets are higher and water sits, personal property blocks water from going to canal.
- 4) Ditches are closed up and clogged with debris and actual trash.
- 5) On 9th St near Alton Elementary, people dump trash on empty lot (illegal dumping)
- 6) Pass 2nd down 12th to dump trash, how to prevent people from coming into Alton and dumping trash. (Parish wide problem)
- 7) Better communication system between community and government (not just submitting a work order)
- 8) North 8th St (and other areas) – Services of water/sewerage does not connect to all properties. Outrageous cost to add services.
- 9) Frequent boil water advisory's, poor water quality.
- 10) Corner of School – plugged well.

Number to Submit Work Orders to St. Tammany: 985-898-2591



ALTON REVITALIZATION SIGN IN SHEET

DATE: _____

NAME	CONTACT PHONE #	EMAIL ADDRESS
Josha Torreyano	504-813-3479	Josha@wingateengravers.com
Daniel Lee	504-644-1190	Daniel@wingateengravers.com
Dominique Stres	504-330-0274	Dominique@wingateengravers.com
T. J. Smith, Jr.	985-285-0447	tjs1119@gmail.com
Brunetta Weeden	985-285-4472	
Kevin McPherson	985-445-2367	
Azatha Ambro	985-788-3137	ajamboss@gmail.com
Darlean Francois	985-445-5663	Francoisdarlean@gmail.com
Valerie Cheneau	985-707-3624	Vcheneau52@outlook.com
Ramona Harris	(985) 685-7212	ramonaharris30@gmail.com
Mary Cousin	985 503 5389	my872@gmail.com
James Cooper	985-710-3123	61534 14th Street Sidel
Angelica Little	985-6456140	francescooper56@gmail.com
		angelica.littles657@gmail.com









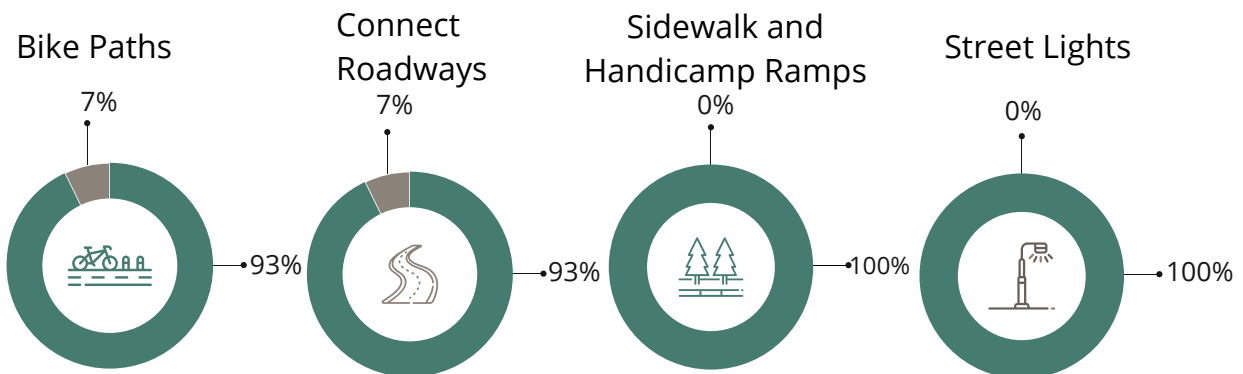
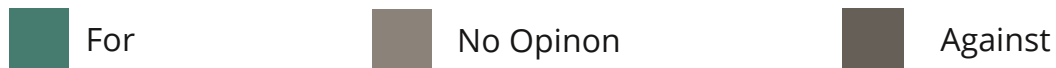
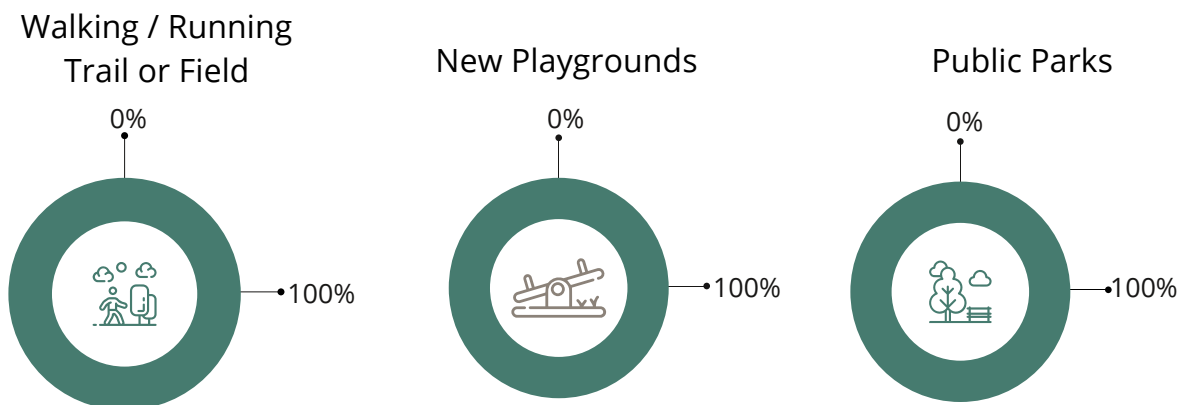
Alton Revitalization Survey Poll						
Public Improvements	Description	Pros	For	No Opinion	Against	
Transportation						
	<i>Bike Paths</i>	Incorporating Bicycle Lanes on the Roadway for safer Bicycle Riders	<i>Bike Lanes protects bicycle riders from vehicles</i>			
	<i>Connect Roadways</i>	Open dead ended roadways (where possible) and connect streets	<i>Provides Emergency Vehicles access to homes quicker and safer.</i>			
	<i>Sidewalks and Handicap Ramps</i>	Construct Sidewalks and Handicap Ramps at intersections	<i>Having Sidewalks and Handicap Ramps will protect and give accessibility to all pedestrians</i>			
	<i>Street Lights</i>	Install Street lights at Roadways	<i>Lighting can reduce accidents and crimes at night</i>			
Community Facilities						
	<i>Walking / Running Trail or Field</i>	Build a Walking/Running Field or Trail	<i>Having a Walking/Running Field or Trail will support healthy lifestyles</i>			
	<i>New Playgrounds</i>	Build Playgrounds that will include Baseball or Soccer field, and or Basketball Gym.	<i>Playgournds provide children and young adults healthier lifestyles</i>			
	<i>Public Parks</i>	Build New Public Parks	<i>Public Parks helps build stronger community and support a healthy life</i>			
Infrastructure						
	<i>Remove Ditches</i>	Remove ditches and Install underground drainage	<i>Removing ditches and replacing with underground drainage will help reduce flooding and maintenance</i>			
	<i>Improvements on Underground Utilities</i>	Install and/or upgrade existing underground utilities such as Sewer and Water	<i>Upgrading underground utilities increase output of utilities and reducing the maintenance cost and time.</i>			
Additional Comments / Sugquestion Box			Contact us			
			<p>Alton@WingateEngineers.com</p>			

Figure 35 – Survey Poll

Transportation



Community Facilities



Infrastructure

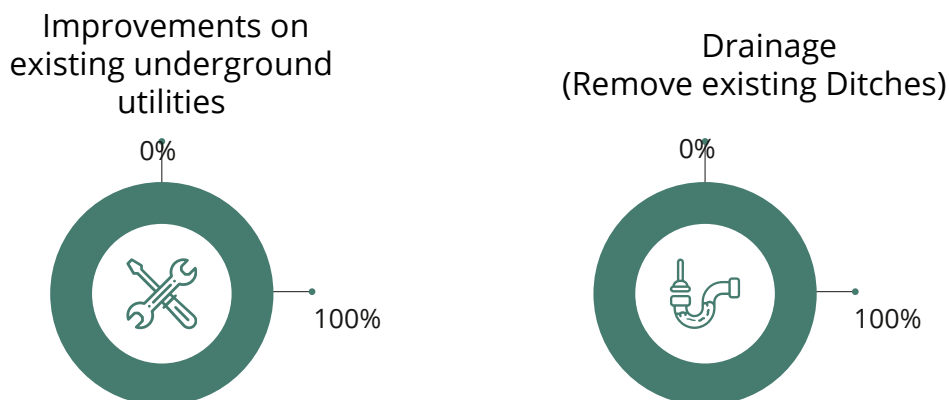


Figure 35 – Survey Poll Results

3.2 Community Meeting (02)



On May 19th, 2022, the 2nd Community Meeting was hosted for the Alton Revitalization Program at Alton Elementary School Cafeteria. The meeting began with a brief introduction and a recap of the 1st community meeting. Areas of Weakness within the Study Area and recommendations to resolve these issues were presented to the community. These recommendations were categorized into the following categories: Residential and Commercial Development, Transportation and Mobility, Public Infrastructure, and Other Quality of Life. The meeting continued with an explanation of each recommendation with supporting reasonings. This included Connecting Roadways, Modifying Entrance to the Neighborhood, N 3rd St. Reconstruction, Parks and Playground recommendations, and etc. The presentation also included other considerations such as the Affordable Connectivity Program and Street Light Districts within St. Tammany Parish. Following the presentation, opportunities were given to residents to provide feedback as well as voice any other concerns. The residents spoke on replacement of private septic tanks and security needs if a park is developed. **See Figure 36** for complete meeting minutes of the community meeting.



Community Meeting #2

5/19/22

Meeting Minutes

In Attendance:

Wingate Engineers – Dominique Sotres, Daniel Lee, Joshua Torregano, Randy Smith
Councilmen TJ Smith Jr
St. Tammany Parish Members
Community Members of Alton (3)

Meetings Key Points:

- Enlarged area of study, larger land mass.
- Recap of purpose and goals of program – weaknesses and gaps.
- Project timeframe – Estimated completed date of October 4th, 2022 (report)
- Survey results from meeting #1
 - Areas of weakness – Entrance of neighborhood, no sidewalks, open ditches, boil advisory, lot ownership.
 - Infrastructure needs being main priority
- Development of the neighborhood by bringing in commercial properties
- A map of roads that may be an option to connect, to create grid system.
- Extending roadways and creating protected left turn lane on highway 11 to create a safer entrance to the neighborhood (and school entrance)
- Redevelopment of N 3rd St, main street in Alton
- Parks & Rec – Such as multi-purpose court, playgrounds, and walking trails.
- Internet Services & Streetlights – making everyone aware of ACP and lighting district

Community Members Thoughts/Comments

- Coordinate Keep St Tammany Beautiful for catch basin cleaning (Consideration)
- St Tammany currently working to help prevent water boil advisory by adding a secondary source
- Concerns about security in parks for the children
 - Big parks mean more people from different communities coming in.
 - Parks to close at a certain time, gated.
- Program awareness about getting sewerage connected to individual properties.



Wingate Notes:

- Include St. Tammany members in Alton email communications (emails will be on sign-on sheet)
- Community meeting #3 scheduling 30-45 days from May 19th.
- Better plan to notify for community meeting #3
- Become more familiar with the street names – helps residents resonate with the proposed ideas.

Name	Contact Phone #	Email Address
Dominique Satres	504-330-0271	dominique@wingateeng.com
Daniel Lee	504-644-1190	Daniel@wingateengineers.com
Helen Lambert	985-292-2579	hlambert@stpgov.org
T.J. Smith		
Jeanne Morino	985-601-6609	jmorino@stpgov.org
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Randy Smith	504-236-3772	Randy@wingateengineers.com
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Janjia Braun	504/215-4149	mja542@icloud.com
Brunetta Weeden	985-285-4472	
Frances Cooper	985/10-3123	francescooper56@gmail.com

3.3 Community Meeting (03)

On July 21st, 2022 the 3rd and final community meeting was hosted for the Alton Revitalization Program at Alton Elementary School Cafeteria. The meeting began with an introduction to the program, a recap of previous community meeting for the program, and the importance of planning and possibilities with the program.



The community meeting progressed into a presentation of 3 different redevelopment scenarios: Low, Mid, and High Impact. Each scenario contained multiple recommendations that would benefit the Alton Community from different levels such as impact, cost, and benefits. Following the presentation, residents were invited to provide questions and/or comments. Several requests and questions were brought up which can be identified under the meeting minutes **Figure 37**.





Community Meeting #3

7/21/2022

Meeting Minutes

In Attendance:

Wingate Engineers – Daniel Lee, Joshua Torregano, Randy Smith

Councilmen TJ Smith Jr

St. Tammany Parish Members – Ross Liner, Jay Watson, Helen Lambert, Jeanne Marino

Habitat for Humanity – Kentrell Jones, Kriston Renee

Community Members of Alton

Meetings Key Points:

- Introduction by Council TJ Smith Jr
- Introduction to the program by Planning Department Director Ross Liner
- Brief word from Habitat for Humanity Executive Director Kentrell Jones
- Wingate Engineers discussed program's purpose and goals and project timeframe – Estimated completed date of October 4th, 2022
- Identified Areas of Weakness within Alton and Possible Recommendations to strengthen or eliminate weaknesses
- Discussed Low Impact Scenario
 - Reshape Ditches
 - Parks and Playground
 - Walking Trail
 - N 1st St Addition
 - N 3rd St Reconstruction
 - New Sidewalks
- Discussed Mid Impact Scenario
 - All work from Low Impact Scenario
 - Connecting Roadways
 - Modifying Entrance to Neighborhood
 - Re-zoning for Commercial Development
 - N 2nd Ave and N 4th Ave Reconstruction
- Discussed High Impact Scenario
 - All Work from Mid Impact Scenario
 - Upgrading and addition to public utilities (Sewer, Water, Drain)
 - St Tammany ownership of Sewer, Water, and Drain within the study area.

Community Members Thoughts/Comments

- Open space and parks should have overhead shelter to protect from sun and rain events
- Consideration for Football fields, Gymnasium, Youth development programs
- Consideration to connect E Pearl St directly to Hwy 11.
- Residents east of Hwy 11 to be more considered in development
- Access for emergency vehicles should be a priority
- Questions on who determines the work and when will the work begin
 - Mr. Randy Smith replied that these are only recommendations provided by Wingate Engineers for St Tammany Parish to begin considering for projects
 - Mr. Ross Liner added that a plan must be put in place first so St Tammany Parish can request for funding for developments
- Concerns regarding insufficient street lights within the study area
 - Mr. Jay Watson explained lighting district and that they are created by a vote and it is funding through parcel fees
 - St Tammany Parish requested Wingate Engineers to identify and strategically plan streetlight locations
- Residents stated priorities for the Alton Community should be to widen roadways and add sidewalks
- Concerns on cost increase if additional infrastructure is in place
- Concerns about previous drainage projects that were completed in Alton
 - Mr. Jay Watson informed residents he is knowledgeable in the project and is willing to discuss the concerns

In closing, Council TJ Smith mentioned that this is not the end and that there can be more community meeting if needed. Also, for any additional questions and concerns, residents can email Wingate Engineers at Alton@Wingateengineers.com

Alton Revitalization Community Meeting #3
July 21st, 2022

Name	Contact Phone #	Email Address
David Lee	(504)-644-1190	Altan(a)wingateengineers.com
Tosh Telegard		Tosh(a)wingateengineers.com
Ray Bulser	504-458-1853	Raymnl. Bulser Trw Sidel Memorial - org
Brunetta Weeden	985-285-4472	
Wanda (Doll) Goo	985-900-60288	
Joyce Henson	985-290-8532	Joyce Henson 88@yahoo.com
Carenne Andrew	504-813-8651	Nora
Brenda Brown	985-863-2513	62269- N 18th St
Calvin Russell	985-774-0776	Callor 51(a)yahoo.com
Kelley E. K. K.	985-710-2190	62159 4th St
Kim M.	985-445-2367	



4.0

REDEVELOPMENT

4.0 Redevelopment

4.1 Minimum Redevelopment

The intention of the minimum redevelopment scenario is to focus on the critical developments that will be most beneficial to the community while considering cost as a priority. The following improvements will be recommended in this scenario; Reshape Ditch, Construct New Roadway, N 3rd St. Reconstruction, Build New Park/Playground and Walking Trail, and Add New Sidewalks. See **Table 1** for the cost breakdown of each task.



Figure 38 – Minimum Redevelopment Overview

Table 1	Minimum Redevelopment
Item	Estimated Cost
Reshape Ditch	\$328,000.00
Parks and Playground	\$811,375.00
Walking Trail	\$375,000.00
1 st St Roadway Addition	\$2,651,597.01
New Sidewalks	\$6,967,950.62
N 3 rd St Reconstruction	\$8,112,858.25
Total Construction Cost	\$19,246,780.89
Total Engineering Fees	\$2,294,132.75
Total Estimated Cost	\$21,540,913.64

Reshape Ditches

As mentioned in previous section, most stormwater within the Alton Neighborhood drains toward N 3rd St. and Estrid Ave. which outfalls into Bayou Vincent through large conventional ditches. These ditches currently do not provide positive flow and causes flooding. To resolve these issues, the ditches would need to be reshaped deeper with a 1V:2H. However, due to the outfall being dictated by the Bayou Vincent, reshaping deeper would cause more backflow. To resolve this issue, a 2-stage ditch with a 1V:2H slope is recommended. 2-step ditches consist of a small ditch within a larger ditch at different elevations. The small ditch is considered the main channel that carries low water flow on average and the larger ditch is used during heavy rain events to hold additional stormwater. **See Figure 39** for a diagram. This design is recommended due to the outfall limiting the depth required as well as to control erosion.

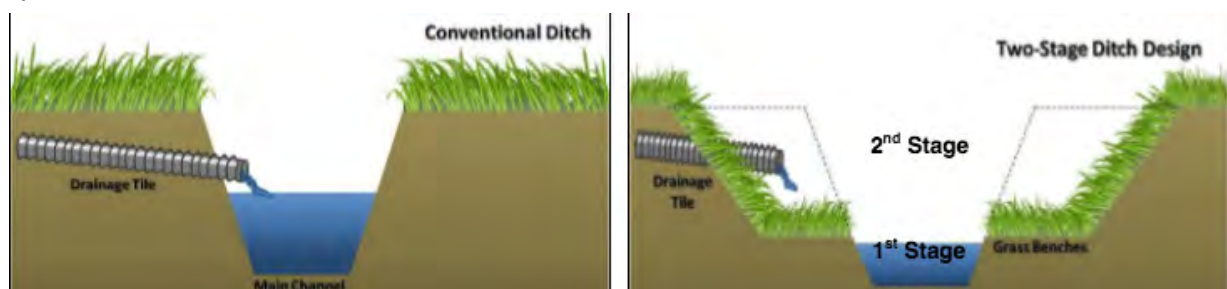


Figure 39 – Comparison of Conventional and Two-Stage Ditch

Reshaping 3 major ditches within the Study Area is recommended. The Receiving Station Rd. Ditch, the 1st Ave. Ditch, and Estrid Ave. Ditch. These ditches are responsible for draining majority of the stormwater within the Alton Neighborhood. **See Figure 40-43** for the current ditch conditions along with their locations. As these images show, not only do these ditches require reshaping, but cleaning as well due to excessive vegetation. It is important to clean and reshape these ditches to prevent backflow of stormwater as well as reduce future maintenance issues. It is also recommended to create new ditch along a new roadway that will be constructed along 1st Ave. from N 10th St. to N 16th St. that will be discussed under the 1st Roadway Addition recommendation.

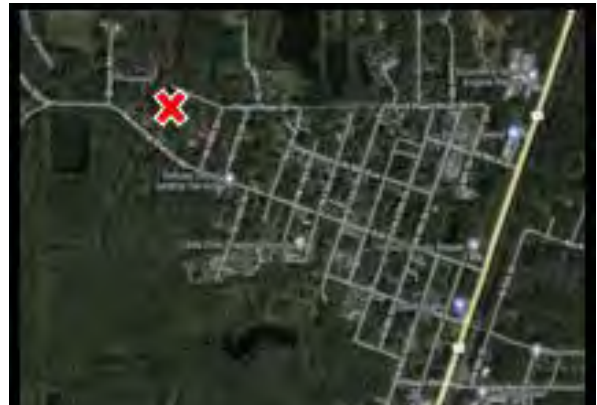


Figure 40 – Receiving Station Rd. Ditch

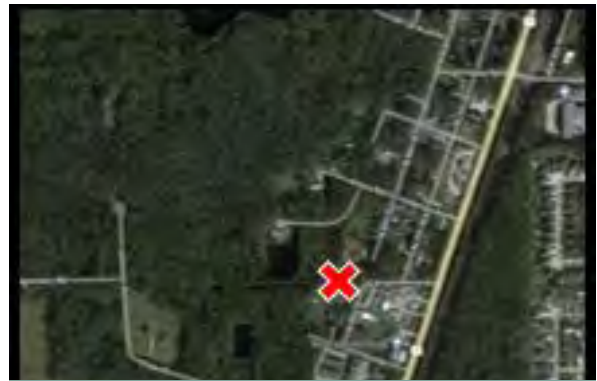


Figure 41 – Estrid Ave. Ditch

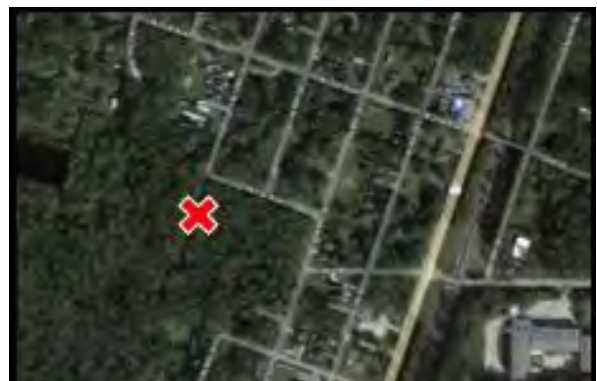


Figure 42 – 1st Ave. Ditch

Opinion of Probable Cost Estimate

For estimating, a total linear foot of reshaping and creating new ditches were measured at 6,150LF. Using historic unit pricing from similar projects, reshaping / new ditches averaged at \$32.50 per Linear Feet at the time of this report. The listed unit price is an assembly price and is provided for preliminary cost evaluation. As shown on **Table 2**, the total opinion of probable cost for reshaping ditches with 25% contingency is estimated at \$328,000.00

Table 2		Reshape Ditches		
Item	Unit	Unit Price	QTY	Total
Reshape Ditch (Receiving Station)	LF	\$32.00	1800	\$57,600.00
Reshape Ditch (1st Ave)	LF	\$32.00	1200	\$38,400.00
New Ditch (1st Ave)	LF	\$32.00	2500	\$80,000.00
Reshape Ditch (Estrid)	LF	\$32.00	2700	\$86,400.00
		Total		\$262,400.00
		Contingency	25%	\$65,600.00
		Total Cost		\$328,000.00

Parks and Playground



Typical neighborhood parks and community facilities are designed to serve at least the residents within a 1-mile radius. When analyzing the Study Areas, it was determined the most ideal location for a park, or a communal facility would be an undeveloped 4-acre land at the corner N 8th Street and N 1st Avenue. This is indicated on **Figure 38** as the green circle. The first recommendation in this scenario would be to develop a 2-acre open space for picnic, events, sports, etc. An open space area can provide major benefits for residents and also is a low maintenance amenity for a park. See **Figure 43** for example of Woldenberg Great Lawn and its use.



Figure 43 – City Park Woldenberg Great Lawn

A large open space can also be used to help manage stormwater from the 1st Ave. ditch. Currently, as **Figure 44** shows, large area within Alton drains toward the 1st Ave ditch which then bottle necks into the Amos Rd. ditch. The large open space can be used to retain and drain naturally into the soil during heavy rain events.



Figure 44 – Diagram of Possible Benefit of Open Space



Another recommendation in this scenario would be to build (2) multi-purpose courts. Multi-Purpose courts is playable surface with multiple sets of lines for different sports such as basketball, tennis, soccer, badminton, etc. This can bring tremendous benefits to the neighborhood because not only is it feasible, but it also provides opportunities for individuals to learn and try new sports. See **Figure 45** for examples of a multi-purpose courts.



Figure 45 Multi-Purpose Court





Figure 46 – Kids Playground (medium size)

In addition to multi-purpose courts and open space areas, playgrounds are a great development to enhance quality of life and residential developments. In this scenario, it is recommended to develop a medium size kids playground along with an adult exercise playground to accommodate all ages. **Figure 46** shows an example of a typical kids playground and **Figure 47** shows an example of an adult exercise playground.



Figure 47 –Adult Exercise Playground

Opinion of Probable Cost Estimate

Due to the area being undeveloped, Tree Clearing would be required for development of parks and playground. The cost to clear a heavily forested land ranges from \$3,395 to \$6,155 per acre. The average was calculated at \$4,775.00. Approximately 4 AC was estimated to be cleared for development. See **Table 3** for the opinion of probable cost estimate for Parks and Playgrounds which totals to \$778,920.00.

Table 3		Parks and Playground		
Item	Unit	Unit Price	QTY	Total
Tree Clearing	AC	\$4,775.00	4	\$19,100.00
Open Space	EA	\$90,000.00	1	\$90,000.00
Multi-Purpose Court	EA	\$20,000.00	2	\$40,000.00
Playground (Large)	EA	\$500,000.00	1	\$500,000.00
		Total		\$649,100.00
		Contingency	25%	\$162,275.00
		Total Cost		\$811,375.00

Walking Trail

Walking/Running trails provide communities with numerous benefits and tend to boost the overall well-being of the surrounding areas. These facilities usually come with minimum construction cost and little maintenance cost. Centers for Disease Control and Prevention (CDC) recommends individuals to walk 10,000 steps a day. On average, each person walks roughly 3,000-4,000 steps in a day which averages to 1.5 – 2 miles a day. In this scenario, 2.5 – 3-mile trail will be developed which is equivalent to roughly 5,000-6,000 steps to complete the recommended steps a day. The walking trail will be a 6-foot concrete walking pad with positive drainage slopes and will ensure to have point of returns at convenient locations.



Figure 48 – Recommended Walking Trail

Opinion of Probable Cost Estimate

The cost to develop a $\frac{1}{4}$ mile of walking trail is estimated to be approximately \$30,000. Based on the site identified, 2.5 miles of the trail can be constructed. See **Table 4** for summary of the opinion of probable cost estimate.

Table 4		Walking Trail		
Item	Unit	Unit Price	QTY	Total
Walking Trail	EA	\$30,000.00	10	\$300,000.00
		Total		\$300,000.00
		Contingency	25%	\$75,000.00
		Total Cost		\$375,000.00

1st St. Roadway Addition

In addition to the new park and playground development along with the walking trail, it is also recommended to build and connect N 1st Ave. to N 16th St. This will not only help access the parks, playground, and walking trail but also help alleviate stormwater that currently collects toward Amos Rd. The new roadway would be constructed at a minimum width of 20 feet with ditching on the north side and sidewalks and handicap ramps constructed on the south side of the roadway. New Water and Sewer mains will also be extended to provide connections for restrooms.

Opinion of Probable Cost Estimate

Tree clearing is required to construct a new roadway within an undeveloped area. Estimated clearing 1,500ft in length and 50ft in width, this sums up to roughly 2 acres of tree clearing. To prevent future settlements from tree stumps, Removal of tree stumps will also be considered in this estimate. The average cost for tree stump removal estimates to roughly \$317.50 each stump. All other unit prices were collected by taking average prices from projects of similar sizes. The roadway is recommended to be an asphalt roadway with 2.5" of wearing course and 4.5" of binder course. The roadway subbase will be an 8" base of 610 crushed concrete with Geotextile fabric and Geogrid for separation and stabilization. A sewer main would need to be extended from N 3rd St. and a new water main from N 2nd St. to service the park, **See Table 5** for the opinion of probable cost estimate.

Table 5		1st St Roadway Addition		
Item	Unit	Unit Price	QTY	Total
Tree Clearing	AC	\$4,775.00	4	\$19,100.00
Roadway Excavation	CY	\$96.71	1852	\$179,092.59
Tree Stump Removal	EA	\$317.50	100	\$31,750.00
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	463	\$29,300.93
Geotextile Fabric	SY	\$12.63	8333	\$105,250.00
Geogrid		\$14.54	8333	\$121,166.67
Base Course	CY	\$237.92	1852	\$440,592.59
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	4333	\$221,780.00
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	4333	\$322,313.33
Concrete Sidewalk (4")	SY	\$107.67	666.7	\$71,780.00
15" RCP	LF	\$267.17	50	\$13,358.50
New 6" PVC (Watermain)	LF	\$201.14	700	\$140,798.00
New 8" PVC (Sewermain)	LF	\$283.33	1500	\$424,995.00
		Total		\$2,121,277.61
		Contingency	25%	\$530,319.40
		Total Cost		\$2,651,597.01

New Sidewalks

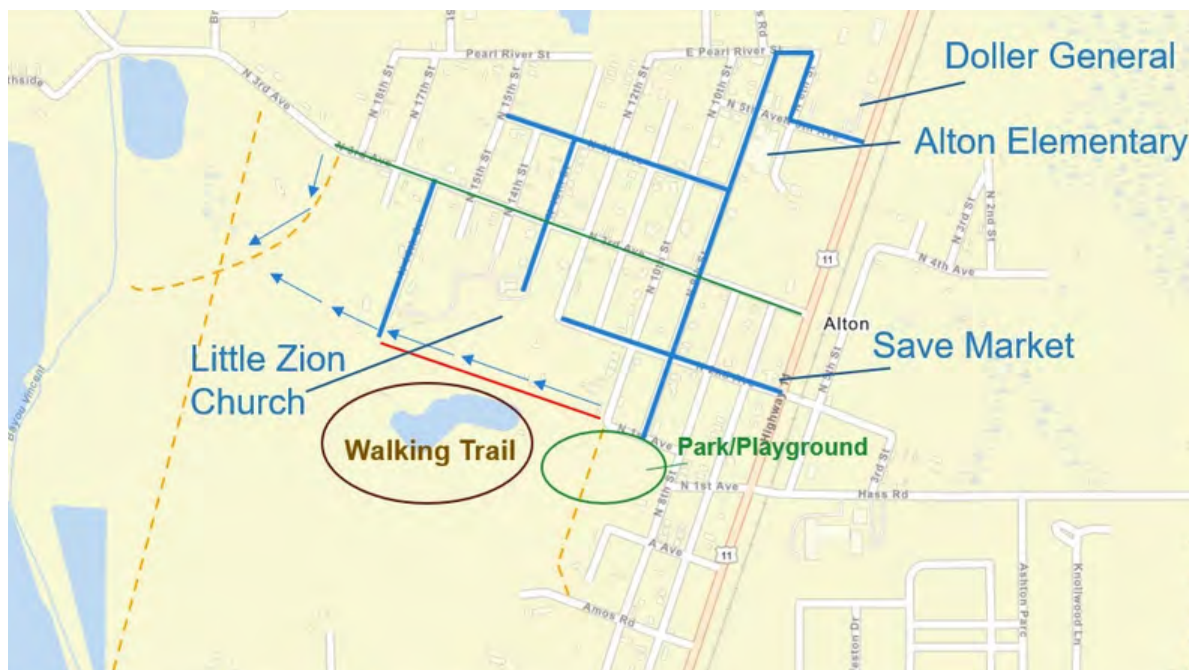
Residents are currently forced to walk in the roadway due to the lack of sidewalks of the Alton Neighborhood. Although Alton Neighborhood is a residential area with low traffic, pedestrians sharing roadway with vehicles is very dangerous. In this recommendation, we suggest filling the ditches on one side of the road and replacing with sidewalks on N 9th St., N 13th St., and N 16th St. The intention is to ensure all residents travel safely to essential community areas such as the Park, Alton Elementary, Little Zion Church, etc. Roadways within these areas will also be resurfaced to ensure positive flow and drop inlets at low spots with drainage pipes tying into ditches. (See Figure 49 and 50).



Figure 49 – N 9th St. Current Condition



Figure 50 – N 9th St. Concept



Opinion of Probable Cost Estimate

A total length of 8,000LF was measured for adding sidewalks within the Study Area. For blocks running north and south it is recommended to add sidewalks for N 9th St. – 1st Ave. to E Peal St., N 13th St. – Little Zion Church to N 4th St., and N 16th St. – New 1st Ave. addition to N 3rd St. For blocks running east and west it is recommended to add sidewalks on 1st Ave. – N 8th St. to N 10th St., N 2nd Ave. – Highway 11 to N 12 St. and N 4th Ave. – Highway 11 to N 15th St. To add sidewalks, ditches located on one side of the street will be filled and prepped for the sidewalk while the other ditch will be reshaped to ensure positive flow. It is also estimated to perform a patch mill overlay which is to cold mill the top layer of asphalt, identify and patch any failures by removing and replacing full depth, and laying a new top layer of asphalt. Understanding a Patch Mill Overlay will not change the slope of the roadway, drop inlets will also be installed at low spots to channel stormwater across the roadway and into the drain with a 15" Reinforced Concrete Pipe. See **Table 6** for the opinion of probable cost associated with the above improvements.

Table 6		New Sidewalks		
Item	Unit	Unit Price	QTY	Total
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	5926	\$375,051.85
Reshape Ditch	LF	\$32.50	6400	\$208,000.00
Roadway Excavation	CY	\$96.71	5778	\$558,768.89
Base Course	CY	\$237.92	5778	\$1,374,648.89
Cold Mill	SY	\$23.50	23111	\$543,111.11
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	23111	\$1,182,826.67
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	5778	\$429,751.11
Concrete Sidewalk (4")	SY	\$107.67	3556	\$382,826.67
ADA Accessible Curb Ramps	SY	\$244.79	502.8	\$123,080.41
15" RCP	LF	\$267.17	1320	\$352,664.40
12x12 Drop inlet	EA	\$1,454.35	30	\$43,630.50
		Total		\$5,574,360.50
		Contingency	25%	\$1,393,590.12
		Total Cost		\$6,967,950.62

N 3rd St. Reconstruction

Analyzing Study Area 1 and 2, N 3rd St. is the most used roadway for Alton residents and also the only access from Highway 11 for Eagle Mobile Home Residents. With this, widening N 3rd St. is very important to reduce accidents. For drainage, almost all stormwater currently drains toward N 3rd St. which outfalls to Bayou Vincent. Being the only outfall within the neighborhood, it is important to keep the drainage free from debris. In this scenario, it is recommended N 3rd St. from Highway 11 to Receiving Station Rd. will receive a full depth roadway replacement. This includes new standard width roadway with curbs, gutters, sidewalks, handicap ramps, and crosswalks at intersections. Ditches will also be filled and replaced with traditional drainage underground with catch basins to prevent excessive stormwater clogs. The new roadway connecting N 1st Ave. and N 16th St. will also receive a full reconstruction. **Figure 51** and **Figure 52** shows current conditions of N 3rd St. and the concept of N 3rd St. Reconstruction.



Figure 51 – N 3rd St. Current Condition





Figure 52 – N 3rd St. Concept



Opinion of Probable Cost Estimate

N 3rd St. Reconstruction will require filling in ditches as well as full removal with replacement of entire street. The total length of N 3rd St. from Highway 11 to Receiving Station Rd. was measured at 3,000LF. Drainage along with manholes and catch basins are included in the estimate to install traditional drainage. Roughly 2,000LF of waterline replacement is included in the estimate to consider upgrading existing 4" main to 6". See **Table 7**

Table 7		N 3rd St Reconstruction		
Item	Unit	Unit Price	QTY	Total
Remove Existing Pavement	SY	\$57.13	8666.67	\$495,126.67
Roadway Excavation	CY	\$96.71	1925.93	\$186,256.30
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	4444.44	\$281,288.89
Geotextile Fabric	SY	\$12.63	8666.67	\$109,460.00
Geogrid		\$14.54	8666.67	\$126,013.33
Base Course	CY	\$237.92	1925.93	\$458,216.30
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	8666.67	\$443,560.00
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	8666.67	\$644,626.67
Concrete Sidewalk (4")	SY	\$107.67	2666.67	\$287,120.00
6" Concrete Barrier Curb and Gutter	LF	\$104.42	6000.00	\$626,520.00
ADA Accessible Curb Ramps	SY	\$244.79	553.08	\$135,388.45
15" RCP	LF	\$269.17	600.00	\$161,502.00
24" RCP	LF	\$395.50	1000.00	\$395,500.00
30" RCP	LF	\$480.00	1500.00	\$720,000.00
36" RCP	LF	\$480.00	500.00	\$240,000.00
30"x15" Wye	EA	\$1,281.25	40.00	\$51,250.00
No1 Drain Manhole	VFH	\$2,216.67	72.00	\$159,600.24
No1 Catch Basin	EA	\$11,911.11	40.00	\$476,444.40
New 6" Valve	EA	\$11,266.67	8.00	\$90,133.36
6" PVC New Watermain with main line fittings	LF	\$201.14	2000.00	\$402,280.00
		Total		\$6,490,286.60
		Contingency	25%	\$1,622,571.65
		Total Cost		\$8,112,858.25

Engineering Fees

For calculating the Engineering Fees, the State of Louisiana Facility Planning & Control (FP&C) Representatives Fees curve was used, applying the 2021's BCI and CPI based on total construction cost. The adjusted fee was estimated at \$1,287,168.71. This includes Design, Bid & Award, Construction Administration, and Closeout. For Surveying, an average unit price of \$7.00 was used with a 25% Contingency to conclude a total of \$44,625.00 in survey fees. For Resident Inspection cost, 5% of total construction cost was estimated; \$962,339.04 (see below). In conclusion, the engineering fees are estimated at \$2,294,132.75

FEE FOR BASIC SERVICES			
BCI & CPI			
FOR 2021			
BCI		CPI	
1306	1975	53.8	
6912	2021	271.0	
	CURRENT AFC:		\$19,246,780.89
FEE PERCENTAGE =	46.10		
	LOG	(AFC (1975 BCI / CURRENT BCI))	
FEE PERCENTAGE =	46.10		
	6.56069755		
FEE PERCENTAGE =	7.027 %		
FEE =	0.070266918 (AFC (1975 BCI / CURRENT BCI))(CURRENT CPI/1975 C		
UNADJUSTED FEE =	\$ 1,287,168.71		
Adjustment Factor (if ar	1	Renovation Factor <	
ADJUSTED FEE	\$ 1,287,168.71	Resident Inspection	\$962,339.04
		Survey Fee	\$ 44,625.00

4.2 Moderate Redevelopment

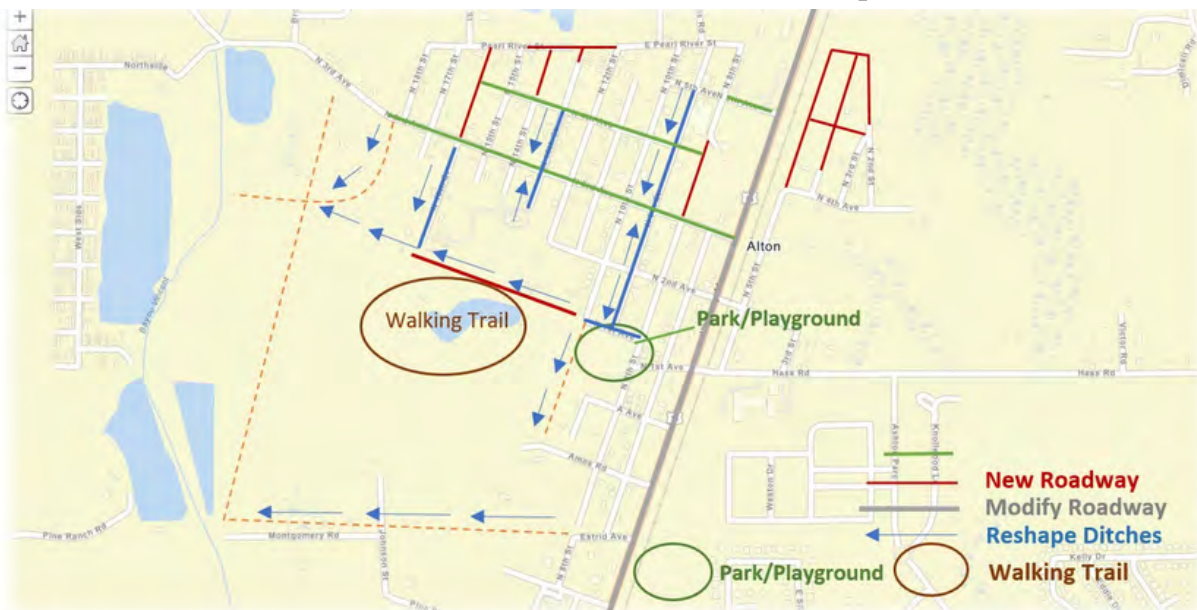


Figure 53 – Moderate Redevelopment Overview

The intention of the Moderate improvement scenario recommendation is to focus on critical developments beneficial to the community and considering cost as equal priority. Recommendations mentioned within the minimum scenario will either be applied or enhanced within the moderate recommendation as well as adding the following additional recommendation; Connect Roadways, Entrance to Neighborhood, 4th St. Reconstruction, and Additional Fire Hydrants. See **Table 8** for summary of total cost.

Table 8	Moderate Redevelopment
Item	Estimated Cost
Minimum Development	\$17,017,878.88
Connect Roadway	\$7,574,614.59
N 4 th Ave and N 5 th Ave Reconstruction	\$5,024,140.74
Entrance to Neighborhood	\$1,302,670.90
Additional Fire Hydrant	\$475,649.81
New Streetlights	\$935,527.30
Total Construction Cost	\$32,330,482.22
Total Engineering Fees	\$3,791,796.29
Total Estimated Cost	\$36,122,278.51

Connect Roadways

As mentioned in our findings, there are several lots with no access due to public roads not developed. This makes these lots unprepossessing to new property owners since they would have to consider an additional cost to access the property itself. See **Figure 54** for examples. In this scenario, it is recommended to construct new roadways to connect various roads within Study Area 2 and Study Area 3 as well as extending water and sewer mains to the new streets. Not only does this benefit residential development, but with the narrow roads demonstrated in the findings section, connecting roadways will also help emergency vehicles access homes quicker and safer.





Figure 54 – Example of Inaccessible Lots

Opinion of Probable Cost Estimate

A total linear footage of roughly 6,600 feet was measured to build new roadways. All new roadways will be built to standard with 8"- 610 crushed concrete base and 7" of Asphalt. Although the roadways will be 26 feet in width, 50 feet in width was estimated for tree clearing. To consider future developments, new sewer and water mains are to be installed as well as ditches for drainage. See **Table 9**

Table 9		Connect Roadway		
Item	Unit	Unit Price	QTY	Total
Tree Clearing	AC	\$4,775.00	8	\$38,200.00
Tree Stump Removal	EA	\$317.50	50	\$15,875.00
Roadway Excavation	CY	\$96.71	4237.037	\$409,763.85
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	1059.259	\$67,040.52
Shape Ditches	LF	\$32.50	13200	\$429,000.00
Geotextile Fabric	SY	\$12.63	19066.67	\$240,812.00
Geogrid		\$14.54	19066.67	\$277,229.33
Base Course	CY	\$237.92	4237.037	\$1,008,075.85
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	19066.67	\$975,832.00
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	19066.67	\$1,418,178.67
6" PVC New Watermain with main line fittings	LF	\$201.14	2435	\$489,775.90
New 8" PVC (Sanitary Sewer)	LF	\$283.33	2435	\$689,908.55
		Total		\$6,059,691.67
		Contingency	25%	\$1,514,922.92
		Total Cost		\$7,574,614.59

N 4th Ave. and N 5th Ave. Reconstruction – Cost Estimate

In the minimum development scenario, N 4th Ave. and N 5th Ave. are classified to have new sidewalks. In the moderate development, it is recommended that these streets undergo a full reconstruction to help better safety, traffic flow, and pedestrian convenience. All unit prices were retrieved from prior bid tabulation for projects similar in nature. Similar to N 3rd St. Reconstruction, fill will be required to replace ditches with sidewalks and roadways will be a full remove and replace with traditional drainage and catch basins. Water mains will also be recommended to upsize to 6" to increase longevity of pipes. The following table is the opinion of probable cost estimate for the above improvements.

Table 10		N 4th Ave and N 5th Ave Reconstruction		
Item	Unit	Unit Price	QTY	Total
Remove Existing Pavement	SY	\$57.13	5777.778	\$330,084.44
Roadway Excavation	CY	\$96.71	1283.951	\$124,170.86
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	2962.963	\$187,525.93
Geotextile Fabric	SY	\$12.63	5777.778	\$72,973.33
Geogrid		\$14.54	5777.778	\$84,008.89
Base Course	CY	\$237.92	1283.951	\$305,477.53
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	5777.778	\$295,706.67
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	5777.778	\$429,751.11
Concrete Sidewalk (4")	SY	\$107.67	1777.778	\$191,413.33
6" Concrete Barrier Curb and Gutter	LF	\$104.42	4000	\$417,680.00
ADA Accessible Curb Ramps	SY	\$244.79	553.08	\$135,388.45
15" RCP	LF	\$269.17	2240	\$602,940.80
No1 Drain Manhole	VFH	\$2,216.67	48	\$106,400.16
No1 Catch Basin	EA	\$11,911.11	28	\$333,511.08
6" PVC New Watermain with main line fittings	LF	\$201.14	2000	\$402,280.00
		Total		\$4,019,312.59
		Contingency	25%	\$1,004,828.15
		Total Cost		\$5,024,140.74

Entrance to Neighborhood

US Hwy 11 is a major state highway that travels North and South in Slidell, LA and extends roughly 1.4 miles or 7,392 feet. Alton Neighborhood resides off of Highway 11 and can be accessed by turning onto Haas Rd, N 2nd Ave., and N 3rd Ave. The neighborhood can also be accessed through N 5th Ave. which is also the entrance to Alton Elementary School. Being a two-lane highway, these entrances to the neighborhood do not have protected left turn lanes. There have been numerous reports of accidents involving residents entering and existing these streets. In this scenario, it is recommended Highway 11 be modified at N 3rd St. and N 5th Ave. by mimicking the protected left turn lane at Little Pearl Elementary. This can be done by extending asphalt roadway onto the shoulder lanes and restriping as shown below.



Figure 55 – Example of Protected Left Turn Lane



Figure 56 – Highway 11 at N 3rd St. Current Conditions



Figure 57 – Highway 11 at N 3rd St. Concept



Figure 58 – Highway 11 at N 5th Ave. Current Conditions



Figure 59 – Highway 11 at N 5th Ave. Concept

Opinion of Probable Cost Estimate

All cost was retrieved from LA Department of Transportation and Development (DOTD) public bid tabulations H.010266.6 for St. Tammany Parish LA 22: Right Turn Lane at Beau Chene Blvd. To extend and restripe Highway 11, roughly it estimates to \$1,817,955.10. See **Table 11**

Table 11		Entrance to the Neighborhood		
Item	Unit	Unit Price	QTY	Total
Pavement Widening 10" Thick	SY	\$95.93	13141.3	\$1,260,691.91
Temporary Signs and Barricades	LS	\$10,500.00	1	\$10,500.00
Plastic Pavement Legends and Symbols (Arrow - Right Turn)	EA	\$534.17	2	\$1,068.33
Plastic Pavement Striping (8" Width) (Thermoplastic 90 mil)	LF	\$10.29	14784	\$152,152.00
Plastic Pvmnt Strip (Dotted Line)(8" W)(3' L)(Thermo 90 mil) Type B	MIL E	\$21,394.17	1.4	\$29,951.83
		Total		\$1,454,364.08
		Contingency	25%	\$363,591.02
		Total Cost		\$1,817,955.10

Additional Fire Hydrants

There are roughly 22 fire hydrants servicing the Alton Neighborhood. According to St. Tammany's Ordinance Sec. 125-86. (d)(2) – *"There shall be a fire hydrant at each street intersection with intermediate fire hydrants located not more than 500 feet apart "*. With this, current Alton Neighborhood's water system is not in compliance to the St. Tammany Parish Ordinance. It is recommended to add 20 additional fire hydrants placed strategically within the areas being serviced by St. Tammany Parish. See **Figure 60.**



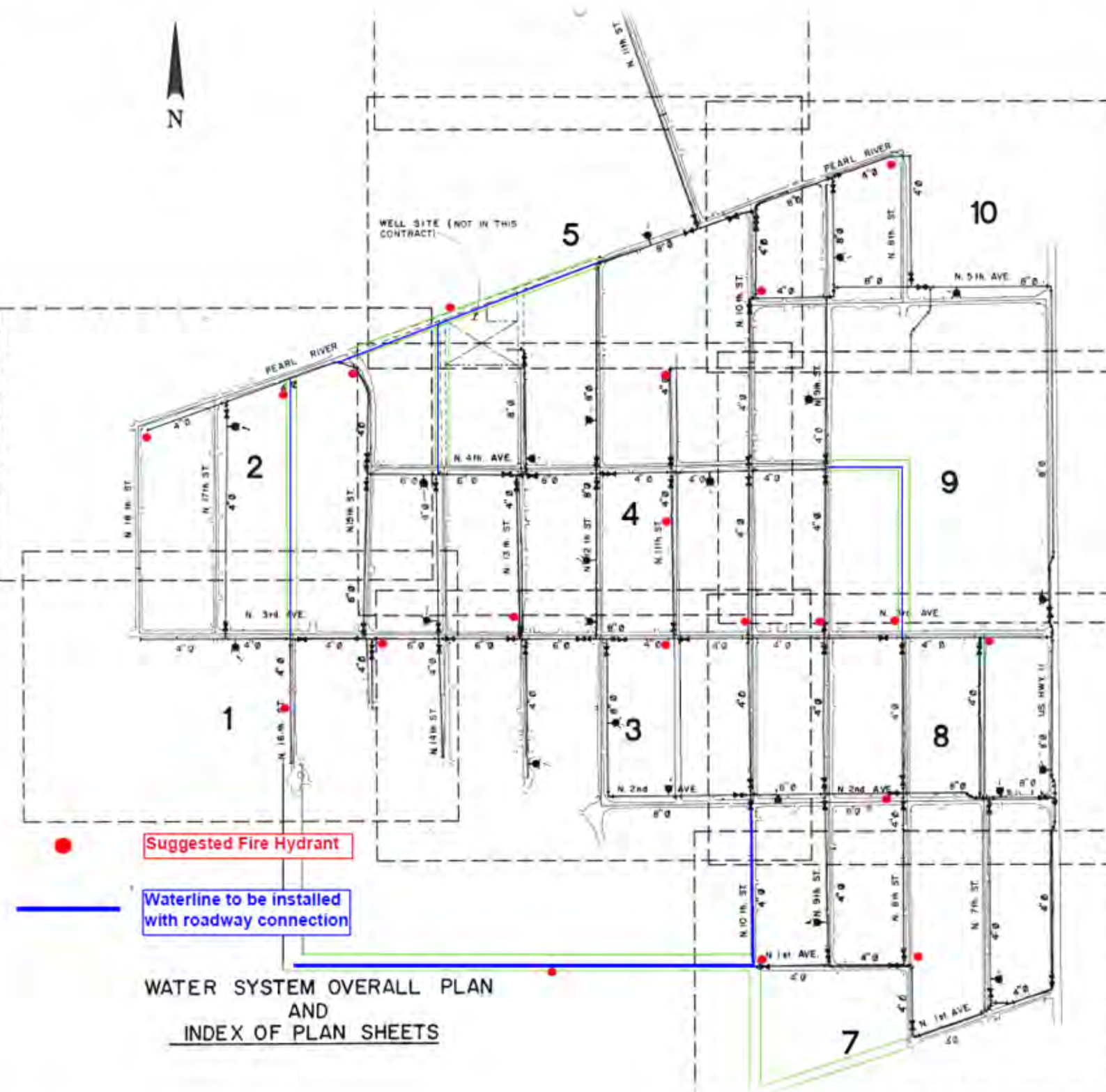


Figure 60 – Additional Fire Hydrant Recommendation

Opinion of Probable Cost Estimate

20 fire hydrants were estimated along with 15LF of 6" watermain per fire hydrant to connect to watermain in the street. With this, removal and replacement of pavement was estimated at 300LF and 6LF in width. Total estimated cost for additional fire hydrant was \$475,649.81. See **Table 12**.

Table 12		Additional Fire Hydrant		
Item	Unit	Unit Price	QTY	Total
Remove Existing Pavement	SY	\$57.13	200	\$11,426.00
Roadway Excavation	CY	\$96.71	44.44	\$4,298.22
Geotextile Fabric	SY	\$12.63	200	\$2,526.00
Geogrid	SY	\$14.54	200	\$2,908.00
Base Course	CY	\$237.92	44.44	\$10,574.22
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	200	\$10,236.00
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	200	\$14,876.00
6" NEW WATER MAIN WITH MAIN LINE FITTINGS AND TIE-INS (PVC)	LF	\$201.14	300	\$60,342.00
New Fire Hydrant	EA	\$13,166.67	20	\$263,333.40
		Total		\$380,519.84
		Contingency	25%	\$95,129.96
		Total Cost		\$475,649.81

Streetlights Additions

As noted under the findings section, the Study Areas currently lack in visibility due to insufficient streetlights. Currently there are only a handful of streetlights that face the street, and all other streetlights are privately owned and face the property. See **Figure 25** for an overview of current streetlight locations. In this recommendation, a total of 185 streetlights will be placed within the Study Area. These streetlights will be installed on a 6ft aluminum arm and are placed strategically at roughly 170 feet from each other to light up the Study Areas but prevent excessive light pollution. Cost saving was possible by identifying and utilizing existing poles to place streetlights. As shown on **Figure 61**, of the 185, 82 are listed as new streetlights with a new 25ft concrete pole (indicated in orange) and 76 are new streetlights installed on existing poles (indicated in yellow). St. Tammany Public Street Lights are serviced by lighting districts which are created by Parish Council and are funded by parcel fees approved by the voters. It is important to note this recommendation will only be considered successful if residents are in agreement to fund the management fee from their parcel fee.



Opinion of Probable Cost Estimate

Using historical similar project information, to install new 25ft concrete pole and 6ft aluminum arm attachment with lights would be \$5,241.92, and to install new streetlight on existing pole would be \$4,191.90. With this, the total cost of new streetlights in this recommendation concludes to is \$935,527.30

Table 13		Streetlights Additions		
Item	Unit	Unit Price	QTY	Total
Install 28ft Concrete Pole with 6ft Aluminum Arm (Streetlight)	EA	\$5,241.92	82	\$429,837.44
Install 6ft Aluminum Arm (Streetlight) onto existing pole	EA	\$4,191.90	76	\$318,584.40
		Total		\$748,421.84
		Contingency	25%	\$187,105.46
		Total Cost		\$935,527.30

Engineering Fees

For calculating the Engineering Fees, for basic services, the FP&C curve was based off of total construction cost using 2021's BCI and CPI; \$2,090,397.18. This includes Design, Bid & Award, Construction Administration, and Closeout. For Surveying, an average unit price of \$7.00 was used with a 25% Contingency to conclude a total of \$84,875.00 in survey fees. For Resident Inspection cost, 5% of total construction cost was estimated; \$1,616,524.11. See below. In conclusion, the engineering fees are estimated at \$3,791,796.29

FEE FOR BASIC SERVICES			
BCI & CPI			
FOR 2021			
BCI	1975	CPI	
1306		53.8	
6912	2021	271.0	
	CURRENT AFC:	\$32,330,482.22	
FEE PERCENTAGE =	46.10		
	LOG (AFC (1975 BCI / CURRENT BCI))		
FEE PERCENTAGE =	46.10		
	6.78595163		
FEE PERCENTAGE =	6.793 %		
FEE =	0.067934466 (AFC (1975 BCI / CURRENT BCI))(CURRENT CPI/1975 CPI)		
UNADJUSTED FEE =	\$ 2,090,397.18		
Adjustment Factor (if any)	1	Renovation Factor	<
ADJUSTED FEE	\$ 2,090,397.18	Resident Inspecton	\$1,616,524.11
		Survey Fee	\$ 84,875.00

Re-Zoning for Commercial Development

The last recommendation for the Moderate Redevelopment Scenario is to re-zone for commercial development. As discussed in the findings section, currently the Study Areas do not have commercial developments, but have large potentials. An analysis was conducted of a 24 Acre open land bounded by Highway 11, Ashton Oaks neighborhood, Ashton Parc neighborhood, and Spiehler Rd. located south of Study Area 2. See **Figure 62** below. This area is classified A-3 Suburban District which is intended to provide single-family residential environments on moderate sized lots, which are served by central utility systems and other urban services. All strictly commercial uses are prohibited. It is recommended to change this zone to HC-3 Highway Commercial District which provides for location of larger-scale heavy commercial retail, office and service uses with primary accesses being collectors constructed for the development of arterial roadways.

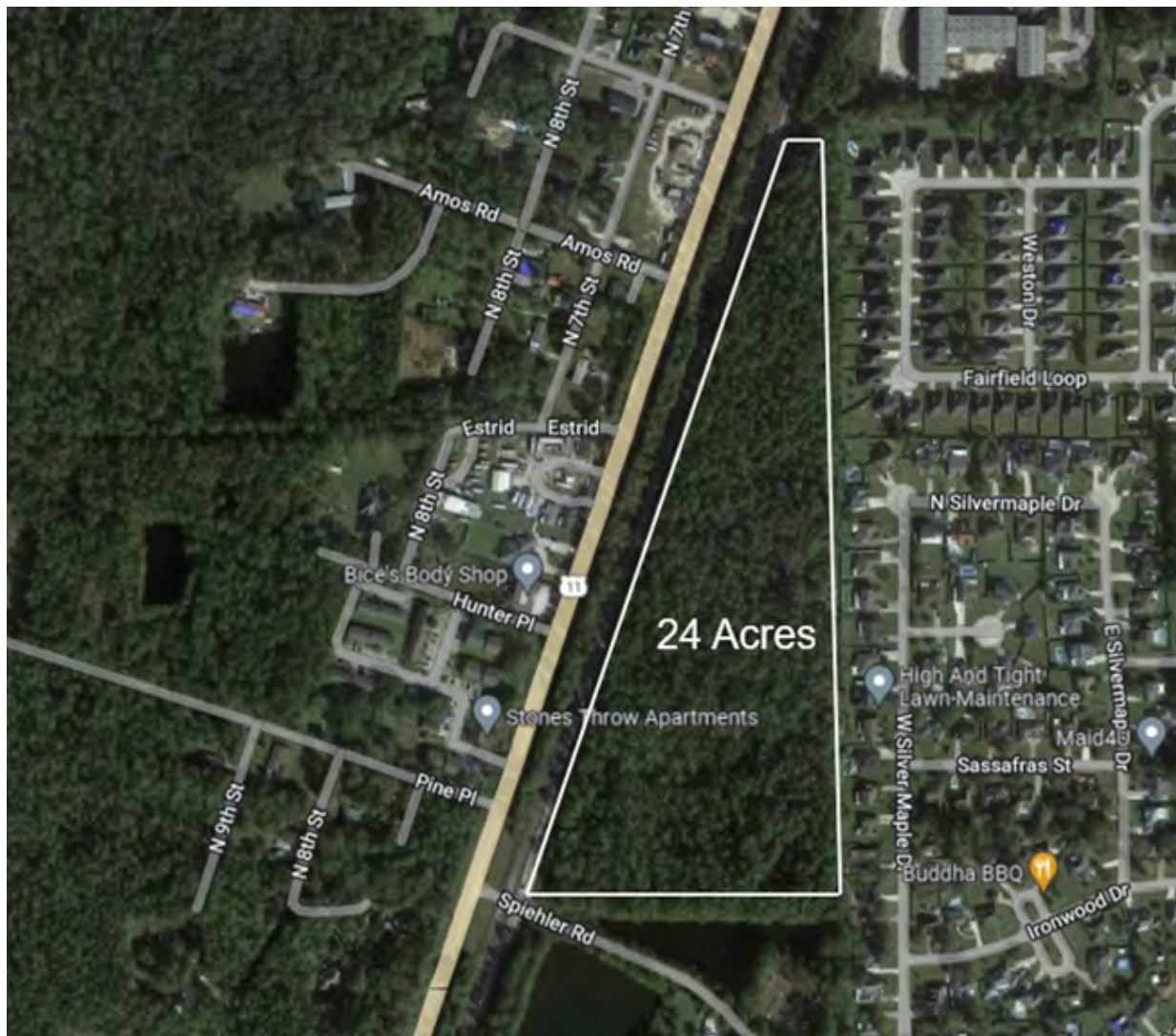


Figure 62 – Possible Commercial Development



Figure 63 – Re-Zoning Recommendation

4.3 Extensive Redevelopment

The intention of the Extensive improvement scenario is to focus and plan critical developments as a long-term plan. In this scenario, all previous recommendations mentioned in moderate will be included as well as additional recommendations. This entails utility addition/upgrades for sewer, water, and drainage as well as roadway rehabilitation. Below are explanation and cost estimate for each recommendation.

Table 14	Extensive Development
Item	Estimated Cost
Reshape Ditch	\$248,000.00
Parks and Playground	\$811,375.00
Walking Trail	\$375,000.00
Entrance to Neighborhood	\$1,320,670.90
New Streetlights	\$935,527.30
Utility Repairs	\$41,527,741.29
Roadway Rehabilitation	\$48,915,398.56
Total Construction Cost	\$94,115,713.05
Total Engineering Fees	\$10,653,402.27
Total Estimated Cost	\$104,769,115.32

Utility Upgrades

Potable Water

Currently, Alton Neighborhood's water is only serviced through the Alton Well located on N 13th St. Being a single source for water, Alton Neighborhood experiences numerous of issues and boil advisories. To minimize these issues, a secondary source should be fed into the system. It was found that St. Tammany Parish has plans to use the waterline located on Haas Rd. as a secondary source. The water upgrade shown on **Figure 66** is based on recommendations assuming the Haas Rd. addition is already approved. Existing water main overview can be found in **Figure 24**.

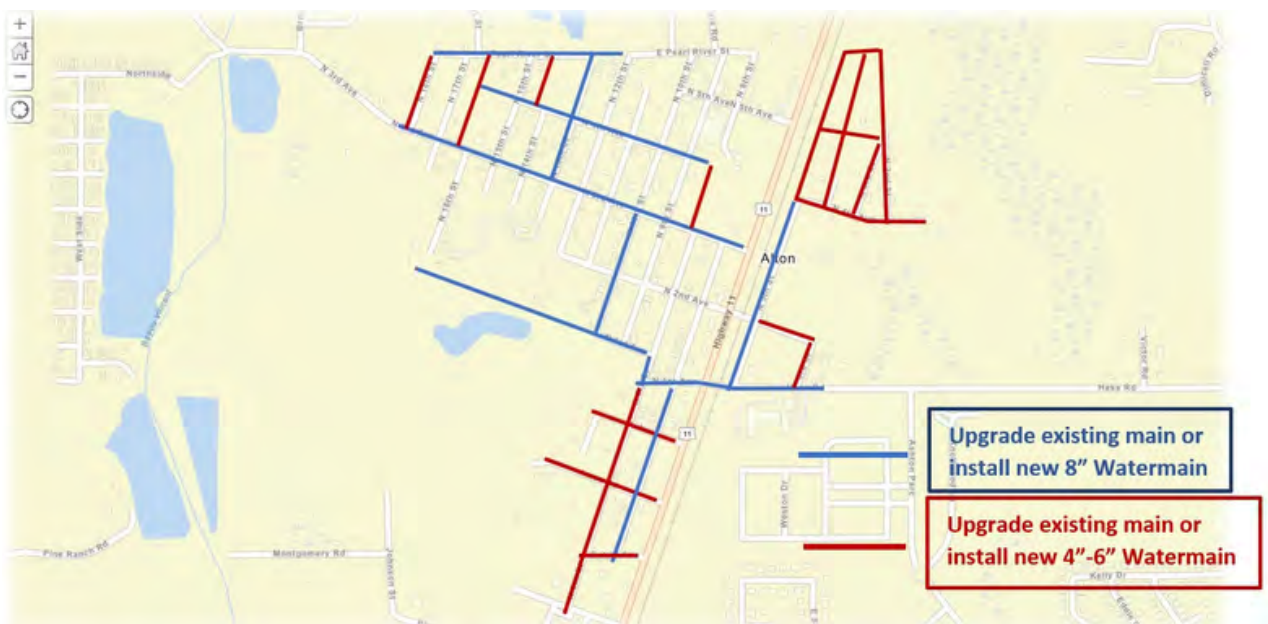


Figure 66 – Waterline Upgrade Recommendation

Drainage

All stormwater captured within the Study Areas is currently drained through ditches. As discussed in the reshape ditches recommendation, most stormwater flows toward 3 important ditches and eventually outfalls into Bayou Vincent. As the outfall ditches are properly reshaped, modification upstream become more plausible. With the recommendation of replacing existing water and sewer, it would be ideal to eliminate all ditches and place traditional underground drainage. In 2016, a Hydrologic and Hydraulic (H&H) Study was performed. Using this data, it is recommended to place underground drainage on every street. See **Figure 68** for the drainage addition recommendation.

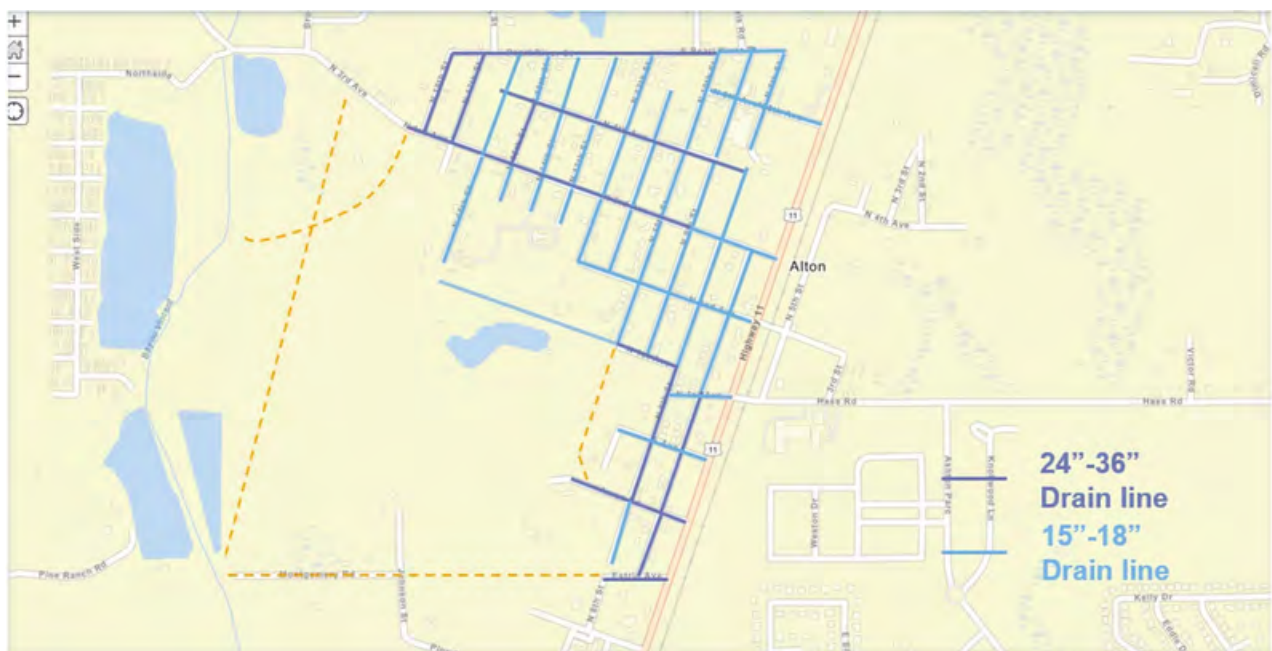


Figure 68 – Drainage Upgrade Recommendations

Opinion of Probable Cost Estimate

Water valves were generalized and estimated to be constructed every 350 feet of waterline. Sewer manholes, measure in foot-height were also estimated to be constructed every 350 feet and set at a maximum of 6 feet in depth. For drainage, assuming the pipes will be gravity fed and at minimum slope, it is estimated to construct manholes every 250 feet of drain line at a max depth of 4 feet. See **Table 15** for further details on the opinion of probable cost.

Table 15		Utility Upgrades		
Item	Unit	Unit Price	QTY	Total
Water				
6" PVC New Watermain with main line fittings	LF	\$201.14	13470	\$2,709,355.80
New 6" Valve	EA	\$11,266.67	39	\$439,400.13
8" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	LF	\$267.78	13870	\$3,714,108.60
NEW 8" VALVE	EA	\$14,127.78	40	\$565,111.20
		Total		\$7,427,975.73
Sewer				
New 8" PVC (Sanitary Sewer)	LF	\$283.33	26790	\$7,590,410.70
Install Sewer Manhole	FTHT	\$2,900.00	462	\$1,339,800.00
		Total		\$8,930,210.70
Drain				
15"-18" RCP	LF	\$286.00	23680	\$6,772,480.00
24"-36" RCP	LF	\$437.75	12300	\$5,384,325.00
No1 Drain Manhole	VFH	\$2,216.67	576	\$1,276,801.92
No1 Catch Basin	EA	\$11,911.11	288	\$3,430,399.68
		Total		\$16,864,006.60
		Total		\$33,222,193.03
		<i>Contingency</i>	25%	<i>\$8,305,548.26</i>
		Total Cost		\$41,527,741.29

Roadway Rehabilitation

With excessive utility upgrades within the extensive redevelopment scenario, roadways would also require rehabilitation. Avenues that run East and West that are averaging in width roughly 19 feet will be extended to 26 feet. Streets that run North and South are averaging in width about 13 feet will be extended to 13-15 feet. To remove existing ditch and place traditional drainage underground, a roadway would be required a full depth replacement. This is due to designing and changing elevation to ensure positive drainage. If a full depth replacement is not required, a roadway will be classified as a Patch Mill Overlay. Below are the 5 different categories the roadway rehabilitation will be classified as. The cost is listed in **Table 16** as well as broken down by each classification in **Table 12-16**.

- **Full Depth Remove and Replacement (Ave)**
 - To remove existing pavement, upgrade or add necessary utilities, replace full depth pavement, and extend roadway to 26 feet in width.
- **Full Depth New Roadway (Ave)**
 - To remove existing soil, upgrade or add necessary utilities, prep and place new pavement to roughly 26 feet in width.
- **Full Depth Remove and Replacement (St)**
 - To remove existing pavement, upgrade or add necessary utilities, replace full depth pavement, and extend roadway to 13-15 feet in width.
- **Full Depth New Roadway (St)**
 - To remove existing soil, upgrade or add necessary utilities, prep and place new pavement to roughly 13-15 feet in width.
- **Patch Mill Overlay**
 - To mill (2") of top layer of asphalt, upgrade or add necessary utilities by trenching, and overlaying (2") with new asphalt.

Table 16		Roadway Rehabilitation		
Item	Unit	Unit Price	QTY	Total
Full Depth Remove and Replacement (Ave)	LF	\$1,539.63	11750	\$18,090,653.83
Full Depth Remove and Replacement (St)	LF	\$1,026.45	19730	\$20,251,880.22
Full Depth New Roadway (Ave)	LF	\$1,336.89	2750	\$3,676,447.36
Full Depth New Roadway (St)	LF	\$925.08	1750	\$1,618,891.78
Patch Mill Overlay	LF	\$593.65	8890	\$5,277,525.36
		Total		\$48,915,398.56

Full Depth Remove and Replacement (Ave.) – Opinion of Probable Cost Estimate

Table 17		Full Depth Remove and Replacement (Ave)		
Item	Unit	Unit Price	QTY	Total
Remove Existing Pavement	SY	\$57.13	33944.44	\$1,939,246.11
Roadway Excavation	CY	\$96.71	7543.21	\$729,503.83
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	17407.41	\$1,101,714.81
Geotextile Fabric	SY	\$12.63	33944.44	\$428,718.33
Geogrid		\$14.54	33944.44	\$493,552.22
Base Course	CY	\$237.92	7543.21	\$1,794,680.49
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	33944.44	\$1,737,276.67
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	33944.44	\$2,524,787.78
Concrete Sidewalk (4")	SY	\$107.67	10444.44	\$1,124,553.33
6" Concrete Barrier Curb and Gutter	LF	\$104.42	23500.00	\$2,453,870.00
ADA Accessible Curb Ramps	SY	\$244.79	590.79	\$144,619.48
		Total		\$14,472,523.06
		Contingency	25%	\$3,618,130.77
		Total Cost		\$18,090,653.83

Full Depth Remove and Replacement (St.) – Opinion of Probable Cost Estimate

Table 18		Full Depth Remove and Replacement (St)		
Item	Unit	Unit Price	QTY	Total
Remove Existing Pavement	SY	\$57.13	28498.89	\$1,628,141.52
Roadway Excavation	CY	\$96.71	6333.09	\$612,472.79
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	29229.63	\$1,849,943.26
Geotextile Fabric	SY	\$12.63	28498.89	\$359,940.97
Geogrid		\$14.54	28498.89	\$414,373.84
Base Course	CY	\$237.92	6333.09	\$1,506,767.92
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	28498.89	\$1,458,573.13
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	28498.89	\$2,119,747.36
Concrete Sidewalk (4")	SY	\$107.67	17537.78	\$1,888,292.53
6" Concrete Barrier Curb and Gutter	LF	\$104.42	39460.00	\$4,120,413.20
ADA Accessible Curb Ramps	SY	\$244.79	992.02	\$242,837.65
		Total		\$16,201,504.18
		Contingency	25%	\$4,050,376.04
		Total Cost		\$20,251,880.22

Full Depth Remove and Replacement (St.) – Opinion of Probable Cost Estimate

Table 19		Full Depth Remove and Replacement (St.)		
Item	Unit	Unit Price	QTY	Total
Tree Clearing	AC	\$4,775.00	1.64	\$7,837.75
Roadway Excavation	CY	\$96.71	1765.43	\$170,734.94
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	4074.07	\$257,848.15
Geotextile Fabric	SY	\$12.63	7944.44	\$100,338.33
Geogrid		\$14.54	7944.44	\$115,512.22
Base Course	CY	\$237.92	1765.43	\$420,031.60
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	7944.44	\$406,596.67
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	7944.44	\$590,907.78
Concrete Sidewalk (4")	SY	\$107.67	2444.44	\$263,193.33
6" Concrete Barrier Curb and Gutter	LF	\$104.42	5500.00	\$574,310.00
ADA Accessible Curb Ramps	SY	\$244.79	138.27	\$33,847.11
		Total		\$2,941,157.89
		Contingency	25%	\$735,289.47
		Total Cost		\$3,676,447.36

Full Depth New Roadway (Ave.) – Opinion of Probable Cost Estimate

Table 20		Full Depth New Roadway (Ave)		
Item	Unit	Unit Price	QTY	Total
Tree Clearing	AC	\$4,775.00	0.52	\$2,493.83
Roadway Excavation	CY	\$96.71	561.73	\$54,324.75
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	2592.59	\$164,085.19
Geotextile Fabric	SY	\$12.63	2527.78	\$31,925.83
Geogrid	SY	\$14.54	2527.78	\$36,753.89
Base Course	CY	\$237.92	561.73	\$133,646.42
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	2527.78	\$129,371.67
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	2527.78	\$188,016.11
Concrete Sidewalk (4")	SY	\$107.67	1555.56	\$167,486.67
6" Concrete Barrier Curb and Gutter	LF	\$104.42	3500.00	\$365,470.00
ADA Accessible Curb Ramps	SY	\$244.79	87.99	\$21,539.07
		Total		\$1,295,113.43
		Contingency	25%	\$323,778.36
		Total Cost		\$1,618,891.78

Full Depth New Roadway (St.) – Opinion of Probable Cost Estimate

Table 21		Full Depth New Roadway (St)		
Item	Unit	Unit Price	QTY	Total
Unsuitable Subgrade Excavation and Sand Filling	CY	\$63.29	13170.37	\$833,552.74
Roadway Excavation	CY	\$96.71	2195.06	\$212,284.42
Base Course	CY	\$237.92	2195.06	\$522,249.09
Cold Mill	SY	\$23.50	12841.11	\$301,766.11
2.5" Thick Superpave Asphalt Wearing Course	SY	\$51.18	12841.11	\$657,208.07
4.5" Thick Superpave Asphalt Binder Course	SY	\$74.38	9877.78	\$734,709.11
Concrete Sidewalk (4")	SY	\$107.67	7902.22	\$850,832.27
ADA Accessible Curb Ramps	SY	\$244.79	446.99	\$109,418.49
		Total		\$4,222,020.29
		Contingency	25%	\$1,055,505.07
		Total Cost		\$5,277,525.36

Engineering Fees

For calculating the Engineering Fees, the State of Louisiana Facility Planning & Control (FP&C) Representatives Fees curve was used using the 2021's BCI and CPI based on total construction cost. The adjusted fee was estimated at \$5,695,756.62. This includes Design, Bid & Award, Construction Administration, and Closeout. For Surveying, an average unit price of \$7.00 was used with a 25% Contingency to conclude a total of \$251,860.00 in survey fees. For Resident Inspection cost, 5% of total construction cost was estimated; \$4,705,785.65. See below. In conclusion, the engineering fees are estimated at \$10,653,402.27

FEE FOR BASIC SERVICES			
BCI & CPI			
FOR			
2021			
BCI		CPI	
1306	1975	53.8	
6912	2021	271.0	
	CURRENT AFC:	\$94,115,713.05	
FEE PERCENTAGE =	46.10		
	LOG (AFC (1975 BCI / CURRENT BCI))		
FEE PERCENTAGE =	46.10		
	7.250001584		
FEE PERCENTAGE =	6.359 %		
FEE =	0.063586193 (AFC (1975 BCI / CURRENT BCI))(CURRENT CPI/1975 CP		
UNADJUSTED FEE =	\$ 5,695,756.62		
Adjustment Factor (if any	1	Renovation Factor <	
ADJUSTED FEE	\$ 5,695,756.62	Resident Inspecton	\$4,705,785.65
		Survey Fee	\$ 251,860.00