As Mayor of Orange Walk I reiterate my commitment and the commitment of the Council to the Municipal Development Plan. The MDP has been formally adopted by all municipalities, the first crucial step to a structured, concrete and measurable agenda for the positive growth of each municipality and the people within their limits.

In Orange Walk, the Plan ensures attention to all facets of development – social and infrastructural, from green spaces and recreational zones for our residents, to proper infrastructure, drainage and sanitary services. These are the very basic services demanded by residents and are the responsibility of every municipal administration. Through the Municipal Development Plan, the approach to these various aspects of community growth and development will be coordinated and set in the framework of a timeline through which we can measure our successes and also areas in which we are lacking.

I and my Council believe in the importance and worth of the Municipal Development Plan, which has input from all stakeholders. We commit to the implementation of the Plan for the benefit of our community and our people.

Kevin Bernard
Mayor
Members of Orange Walk Town LPWG:

1. **Mayor Kevin Bernard**, Orange Walk Town
2. **Ricardo Moguel**, Community Representative (Lead Author Chapter 1)
3. **Efrain Alpuche**, OWTC Representative
4. **Mynor Ramirez**, OWTC Representative (Chapters 1-3)
5. **Osmany Salas**, Community Representative
6. **Omar Mendez**, OWTC Representative
7. **Neri Ramirez**, OWTC Representative
8. **Jaime Briceno**, Community Representative
9. **Adrian Leiva**, Community Representative
10. **Josue Carballo**, OWTC Representative
11. **Yolanda Gomez**, Community Representative
12. **Wender Alamilla**, OWTC Representative (Chapters 4-5)

With the support of:

**German Novelo**, Public Relations Officer, OWTC
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TABLE OF CONTENTS

INTRODUCTION TO THE MDP........................................................................................................... 1

CHAPTER 1: ASSESSMENT OF EXISTING CONDITIONS........................................................................ 2

DISTRICT SCALE................................................................................................................................ 3

1.1 Role of the municipality within the district.................................................................................. 3
1.2 Physical description ...................................................................................................................... 4
1.3 Environmental and natural assets .............................................................................................. 4
1.4 Cultural heritage, archeological and historic assets ..................................................................... 6
1.5 Inter-region transportation links .................................................................................................. 6

MUNICIPAL SCALE .......................................................................................................................... 7

1.6 Our Story .................................................................................................................................. 7
1.7 Population .................................................................................................................................. 9
1.8 Economy and labor force ........................................................................................................... 11
1.9 Land Area .................................................................................................................................. 12
1.10 Spatial development pattern, land, and land use ...................................................................... 12
1.11 Environmental areas and open space ....................................................................................... 15
1.12 Public spaces ............................................................................................................................ 15
1.13 Cultural and historic assets and sites ....................................................................................... 17
1.14 Public services .......................................................................................................................... 17
1.15 Recreational facilities ............................................................................................................... 18
1.16 Transportation and accessibility .............................................................................................. 18
1.17 Priority investments, and future projects ................................................................................. 18
1.18 Climate change related hazards, risks and disaster preparedness ......................................... 20
1.19 Infrastructure and utilities ....................................................................................................... 20
1.20 Municipal finance, management and strategies for plan implementation .............................. 22

CHAPTER 2: VISION, STRATEGY AND DEVELOPMENT SCENARIOS .............................................. 23

2.1 A Vision for Orange Walk ......................................................................................................... 24
2.2 Orange Walk Development Strategy ....................................................................................... 25

CHAPTER 3: LAND USE PROPOSALS ......................................................................................... 34

3.1 Introduction: Land Use Planning and Draft Municipal Development Plans ............................... 35
3.2 Validation: Preferred Development Scenarios and Policies ....................................................... 35
3.3 Overall Development Concept .................................................................................................. 36
3.4 Land Use proposals indicated on a map ...................................................................................... 37
3.5 Land Use proposals not indicated on a map ............................................................................... 42
3.6 Guidelines for establishing planning indicators and development standards ......................... 42

CHAPTER 4: INFRASTRUCTURE PLANNING AND INVESTMENTS ............................................. 48

4.1 Overall infrastructure works needs assessment .......................................................................... 49
4.2 Infrastructure priorities and servicing criteria ............................................................................ 51
4.3 Infrastructure improvement programs and investments .............................................................. 54
4.4 Other programs and investments .............................................................................................. 61

CHAPTER 5: IMPLEMENTATION STRATEGIES .......................................................................... 65

5.1 Managing the Municipal Development Plan ............................................................................. 66
5.2 MDP Implementation Strategy ................................................................................................. 69
List of Figures

Figure 1: Map of elevations ............................................................................. 5
Figure 2: Population by 5 year Age Group and Sex –Orange Walk Town ......................... 9
Figure 3: National Population by District and Place of Birth, Belize 2010 ................................ 10
Figure 4: Population with No education and Primary Education .................................. 10
Figure 5: Population with Post-Secondary and University Education .......................... 11
Figure 6: Map of surrounding communities ....................................................... 13
Figure 7: Map of land uses .................................................................................. 14
Figure 8: Map of built up area, vacant land and environmentally sensitive areas ........... 16
Figure 9: Map of road hierarchy ........................................................................ 19
Figure 10: Map of flood risk .............................................................................. 21
Figure 11: World Bank study urban population projections for Belize ......................... 25
Figure 12: SIB Belize Postcensal Population Estimates, 2010 to 2020 - Urban Areas .......... 26
Figure 13: Existing population growth projections for Orange Walk .......................... 26
Figure 14: Population growth scenarios 1, 2 and 3 ............................................... 27
Figure 15: Population growth scenarios for Orange Walk ...................................... 27
Figure 16: Estimation of land needs for Scenarios 1, 2 and 3 ..................................... 28
Figure 17: Estimation of population and land needs for Scenario 4 .......................... 29
Figure 18: Map of land use planning proposals .................................................... 38
Figure 19: Indicative guidelines for developing planning indicators and development standards .... 46
Figure 20: Estimation of population and land needs for Scenario 4 .......................... 50
Figure 21: Summary of Orange Walk MDP development strategy .......................... 52
Figure 22: Prioritisation criteria for streets and drain improvements ......................... 53
Figure 23: Land use planning zones in the Orange Walk Town MDP ........................ 54
Figure 24: Intersection Improvement Project ...................................................... 55
Figure 25: Streets improvement project in Orange Walk Town ................................ 57
Figure 26: Drain provision costs ........................................................................ 59
Figure 27: Proposed network of strategic arteries and collectors .............................. 60
Figure 28: Rendering showing Market Place improvement project .......................... 62
Figure 29: MDP Implementation and Coordination -Orange Walk .......................... 68
Figure 30: Phasing of Public Outreach Strategies in Municipalities .......................... 93
INTRODUCTION TO THE MDP

Orange Walk Town’s vision for future development and management is founded upon the principle of a local government that will function in a fair and transparent manner and provide a high quality of services to its residents in exchange for the payment of property taxes.

The Orange Walk Municipal Development Plan (MDP) has been formulated as a long-term planning strategy to assist the Town Council in carrying out its municipal management responsibilities, respond to population and economic change, manage urban expansion, and provide the services required to ensure social, economic, functional and environmental cohesion and a good quality of life for residents of the community. The Orange Walk MDP is structured as follows:

- **Chapter 1, Assessment of Existing Conditions**, provides important documentation about Orange Walk; this information will be kept up-to-date and will be made available to citizens, businesses and the Town Council.

- **Chapter 2, Vision, Strategy and Development Scenarios**, will be referenced by the Town Council in developing its programmes and activities and will be reviewed and updated on an annual basis.

- **Chapter 3, Land Use Proposals**, outlines the spatial development policies of Orange Walk Town that support the desired urban development and land uses; the proposals will be referenced by different departments in the Town Council in making decisions that impact development and the provision of services within each of the designated development zones. The Town Council will also closely liaise with the Land Utilization Authority and National Land Use Planning Taskforce to ensure that subdivisions under review for approval will give due regard to the plan.

- **Chapter 4, Infrastructure Planning and Investments**, will be used to develop the Town’s public investments programme on an annual and longer-term basis.

- **Chapter 5, Implementation Strategies**, will be used to guide and manage the implementation of the MDP and the allocation of staffing and financial resources to support its implementation.
CHAPTER 1: ASSESSMENT OF EXISTING CONDITIONS
1.1 Role of the municipality within the district

The Orange Walk District, located on the North of Belize, has an area of 1829 square miles or 4,636 square kilometers. It is the second largest district in Belize, the second most important population center and the second poorest. It borders the Belize and Cayo Districts in the south, the Corozal District in the east, the Republic of Mexico on the north and west and the Republic of Guatemala on the west.

The economy of the region is based on the cultivation and industrialization of sugar cane. Sorghum, rice, corn, beans, papayas, lemons, pineapple, potatoes, onions and vegetables are also grown here with a significant amount of this agriculture done by Mennonite farmers. Orange Walk is also important for the production of dairy products, beef and rum.

The population of the district is mostly Hispanic, 76.21%, descendants of the 15,000 refugees that came from Yucatan in waves during the Caste War of 1847. They still preserve their culture and language. The Mennonites are the next largest group with 10.7% of the population.

Orange Walk Town is the capital, administrative and commercial center of the Orange Walk District. It is located on the western bank of the New River, 53 miles north of Belize City, 30 miles (50 km) south of Corozal Town, and 43 miles from Chetumal, Quintana Roo, Mexico. Belize has a tremendous economic impact in Chetumal because of the cheaper goods, fuel and services that can be obtained there. Over 1 million Belizeans cross our Northern border into Mexico every year. The
inverse is not happening because of the Belize policy on border admissions. The Mexican government facilitates Belizeans entry into Mexico but Belize does not facilitate entry with the exception of the Commercial Free Zone. That makes it virtually impossible for Mexicans to visit taxable national Belizean territory. The University of Quintana Roo, Universidad de la Frontera Sur and Instituto Technologico de Chetumal have over 100 Belizean students at University level.

The town has a long unrecorded history. In the pre-Columbian era, according to Eric Thompson, the town was known as Holpatin. Orange Walk Town is as enigmatic as it is attractive to its residents. Its citizens are described as hard working intelligent individuals with an enviable work ethic. Of the 45,946 district population, 4,927 live abroad and 532 are not reported. Many work outside the area especially in Belize City or the Commercial Free Zone in Santa Elena on the Northern Border with Mexico.

1.2 Physical description
Most of the northern half of Belize lies on the Yucatán Platform, a tectonically stable region. Although mostly level, this part of the country also has occasional areas of hilly, karst terrain, such as the Yalbac Hills along the western border with Guatemala. The New River, which flows through the northern sugar-growing areas before emptying into Chetumal Bay possess fertile alluvial soils that has supported considerable cultivation and human settlement for millenniums. The Rio Hondo demarcates the border with Mexico.

Hydrology. The rivers, lagoons, and swamps or wetlands of northern Belize are its lifelines. They provide the drainage from rains and are transportation routes for nutrients and wildlife from the interior to the sea. In the Colonial era the rivers were the major communication arteries of the colony. Big passenger boats like the Africola used to connect Orange Walk Town to Belize City. The sugar produced in Orange Walk is transported in river barges to Belize City for export.

Orange Walk Town is nestled in the fertile land between the New River and the Rio Hondo. The town lies on the west bank of the New River. The Rio Bravo is an extension of the Hondo River. There is a major pond within Orange Walk Town that plays an important role in surface drainage. This has forced the town to expand to the west.

1.3 Environmental and natural assets
Northern Belize is blanketed by 65,000 acres of apparently flat sugar cane fields, the mainstay of the area.

Soils. The northern half of the Belizean mainland is a plain that was once a seabed. The land is covered with a thin layer of soil that supports scrub vegetation and dense hardwood tropical forest. The lands in and around the municipality are very fertile and easy to cultivate. There are very few rocks scattered around the fields. On the south is sandy loam soil, on the west a small area of lowland
Figure 1: Map of elevations
especially around the San Lorenzo Housing site south to the old electricity generating plant. Adjacent is fertile land on the Ann Gabourel Area where Belize Sugar Industry (BSI) has impressive cane fields. The New River has deposited rich alluvial soil on its banks that has supported population for mil two rivers to establish cocoa, maney and a variety of vegetables that were exported as far away as South America in big dugout vessels. This rich soil is the basis for the prosperous sugar cane industry. Land beyond the town are mostly sugar cane lands and pasture.

1.4 Cultural heritage, archeological and historic assets

Orange Walk, Cuello Site on the western outskirt, is where the splendor of the Maya Civilization began. Nohmul, Ka’xob, Petville and Indian Hill are all within a 5 mile perimeter of Orange Walk Town.

Some world known famous archaeological Maya sites located in the district are Cuello, Lamanai Archeological Reserve, Noh Mul, Pozito and Chan Chich. Other less known sites are Kax’ob, near San Jose, Indian Hill and Petville. Due to their draw for visitors, these cultural heritage assets, primarily Cuello Sita and Lamanai are important sources of tourism revenue for Orange Walk.

1.5 Inter-region transportation links

Orange Walk is the transportation hub of the district. There is one major highway bisecting the town, the Philip Goldson or Northern Highway and three main feeder roads connecting the town to the rest of the district. On the south, the highway connects the town to Tower Hill, home of Belize Sugar Industries Limited, Belize City and to the Western or George Price Highway that takes us to Belmopan, Guatemala and beyond. On the North, this highway connects the town to Corozal Town, the Commercial Free Zone and to Mexico.

There are three important arteries that connect Orange Walk Town to the villages in the district. On the east, the San Estevan Road takes us to Muffles Junior College, the Orange Walk Bypass, Honey Camp Lagoon, San Estevan, and Progresso Lagoon and to the Caribbean Sea. On the South the San Antonio Road takes us to, San Antonio, Yo Creek all the way to Blue Creek and to La Union, Mexico. Also on the South, the San Lorenzo Road takes us to San Lorenzo Housing site, ITVET, Bishop Martin High School and finally connects to a sugar road that leads us to San Antonio or to the Northern Highway.

Orange Walk is connected to the Island of San Pedro via air. Tropic Air has two daily flights from Orange Walk and San Pedro departing from 8:30 am and 2:00 pm and extra flights on Fridays and Sundays to and from Orange Walk and San Pedro departing at 5:30pm.
1.6 Our Story

The true written history of Belize and in particular the story of Orange Walk is not precise, concise or readily available. An almost impenetrable veil of fiction, as dense as our tropical rainforest, mantles the first 200 years of our colonial life after the 1537 Spanish conquest. Fragments of our history are dispersed and hidden in dusty archives in various libraries of other countries. It is difficult to give cohesiveness. The easily available version for popular consumption is plagued with irregular interpretations that are not accurate or genuine interpretations of our history.

All this is by design because the British Empire eradicated the first 200 years of our Spanish colonial history to justify their presence and give legality to their land appropriation.

The genesis of Mayan evolution as a great civilization, the most evolved one in the new world and one of the great world civilizations, started in Belize 4,600 years ago in our backyard at Cuello site in Orange Walk, a site continuously inhabited for almost 3000 years.

Following Spanish withdrawal from Belize in the eighteenth century, the British intensified their logging operations in the region after the 1779 Treaty with Spain. Their interest in Lamanai revolved around an ill-fated millworks for sugarcane processing during the last quarter of the nineteenth century. A number of British workers and their families resided at Lamanai using ancient Maya house mounds as the bases for their own houses. As it stands now, Lamanai bears the distinction of being the longest continuously occupied site in the Maya Lowland area.

Orange Walk Town has a long unrecorded history. In the pre-Columbian era, according to Eric Thompson, the town was known as Holpatin. The inception of the town as we know it today began little after 3rd September, 1783 when the Treaty of Versailles between Spain and England officially recognized British woodcutter’s rights to extract logwood, the mainstay of the settlement, by the British from Rio Hondo to Belize River. Orange Walk is one of the oldest towns of Belize.

Because of the high ground and strategic location on the west bank of the New River, the site became a major logging camp. The woodcutters planted orange trees on their yards that was visible from the New River, the main transportation artery of the time, thus the name Orange Walk.
SOME OF THE KEY MILESTONES IN THE DEVELOPMENT OF ORANGE WALK:

500 B.C. – Cuello Site settled and the beginning of Maya City Building. The Mayas built one of the most advanced new world civilization.

12th October 1492 – Beginning of the formalized New World Invasion and occupation by Europeans

1546 – Yucatan subjugated but not the end of Maya resistance. Mayas move in bulk into Northern Belize.

1637 – Peter Wallace settles Belize.

1779 – Prior to this year, British were extracting logs from the Rio Hondo to the Sibun River.

1783 – 3 September, Treaty of Versailles, Spain formally recognized extraction of logwood by the British from Rio Hondo to Belize River.

1786 – Convention of London recognized the situation prior to 1779.

1848 – Beginning of different waves of Yucatan refugees immigrating into northern Belize until they number 15,000. A Catholic priest, Fr. Antonio Glory, accompanied them.

1850 – Corozal, Orange Walk and San Estevan have over 3,000 residents and 28 villages in the North.

1857 – 1st Maya attack on Northern Belize

1864 – Marcos Canul becomes chief of the Icaiche Maya

1866 - April, Marcos Canul attacks Qualm Hill in Orange Walk District

1867 a village militia is formed. Reinforcement arrives from Jamaica

1867 a Frontier Police Force is instituted to patrol the border.

1872 the rebel Mayas under Marcos Canul attack Orange Walk Town.

1874 Fort Mundy is built, named after Lieutenant-Governor Major Robert Mundy who served in Belize from 1874 to 1876.

1876 Fort Cairns is built, named after Lieutenant-Governor William Wellington Cairns who served from 1870 to 1874)

1890 – Demand for chicle expands

1900, Fire destroys the Catholic Church

1931 - Hurricane destroys Belize City

1942 hurricane devastates the town.

1950,s – British Honduras Airways had daily flights to Orange Walk Town for a fee of BH $11.00
1.7 Population
According to the Statistical Institute of Belize (SIB) Orange Walk Town had a population of 13,709 in 2010 and ranked as the 5th largest urban area in Belize, after Belize City, San Ignacio/Santa Elena, Belmopan and San Pedro. Based on SIB’s data, Orange Walk Town population grew from 11,000 to 13,500 in 1991-2000 at an annual growth rate of 2.7% per annum. This growth contrasts with the period 2000-2010 when the recorded figures show population stagnation with a minimum change of only 209 people and an annual growth rate of 0.1%. The national average growth rates for all urban areas during the same period was 2.7% per annum.

Population analysis. While the Census indicates that there is no real population growth in the town, it also shows that growth is actually occurring right outside of the municipal boundary. There are two villages, namely Trial Farm to the North and San Jose Palmar to the south, which have virtually merged with Orange Walk Town. The Census records a population change in Trial Farm from 3,158 in 2000 to 4,264 in 2010 (equivalent to 3% per annum). San Jose Palmar’s population increased from 863 to 1,355 in the same period and expanded at 4.5% per annum.

Baseline population (2012). Starting with Orange Walk 2010 Census figure (13,709) and using SIB’s projected growth rate of -0.03% per annum until 2020, Orange Walk’s baseline population would be 13,700 in 2012. If we take the Orange Walk Town, Trial Farm and San José as a single urban area, the total baseline population would be about 20,000 in 2012.

Average household size. SIB data shows a decreasing average household size in Orange Walk Town has from 4.4 in 2000 to 4.1 in 2010.

Age and sex distribution. There is an almost perfect gender balance in our municipality. There are 6,730 males, 49 % and 6,979 females 51 % in Orange Walk Town, 249 more females than males.

Figure 2: Population by 5 year Age Group and Sex–Orange Walk Town

Source: Census 2010
Migration. Some of the population movements from Orange Walk Town to other areas is mostly by our young graduates seeking better job opportunities mostly in Belize City and untrained labor in the Commercial Free Zone. This is compensated with movements from the villages into our town. We are growing incrementally by natural growth; we are not having a large influx of immigrants as we did like the 1980’s when over 30,000 civil war refugees from Central America entered our country. Our closest neighbor, Mexico, now has a more stable economy than ours; our economy is not conducive.

Ethnicity. According to official data, Hispanic is the main ethnic group in Orange Walk District with 76.2% of the total population. It is followed by Mennonites (10.7%) and Creoles (5.3%)

Population by highest level of education completed. Only 6.6% of the population living in Orange Walk District have a post- secondary and/or a university degree. Thirty-one per cent (13,031) have only completed primary education. 41.8% of the district population (17,534 residents) have not completed any education level. Altogether, 72.81% of the residents (30,565) have no education or have only completed primary education, a poor figure only topped by Toledo (74.6%) and Corozal 73.96%.

The low-level of education figures are on par with the rest of the country. Almost three quarters of our population can barely read or write. Only a minimal percentage, 8%, have post- secondary education except in Belize City which has almost double the district’s rate, 12.44 %, while the rest of the country oscillates between 6 and 7 % with the exception of Toledo which is half of that, 3.23%.

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>District Population</th>
<th>No Education</th>
<th>%</th>
<th>Primary Education</th>
<th>%</th>
<th>Total no education and only Primary</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corozal</td>
<td>37,084</td>
<td>15,099</td>
<td>40.72</td>
<td>12,329</td>
<td>33.24</td>
<td>27,428</td>
<td>73.96</td>
</tr>
<tr>
<td>Orange Walk</td>
<td>41,977</td>
<td>17,534</td>
<td>41.77</td>
<td>13,031</td>
<td>31.04</td>
<td>30,565</td>
<td>72.81</td>
</tr>
<tr>
<td>Belize</td>
<td>83,250</td>
<td>23,328</td>
<td>28.02</td>
<td>28,870</td>
<td>34.67</td>
<td>52,198</td>
<td>62.69</td>
</tr>
<tr>
<td>Cayo</td>
<td>66,351</td>
<td>25,621</td>
<td>38.61</td>
<td>18,574</td>
<td>27.99</td>
<td>44,195</td>
<td>66.61</td>
</tr>
<tr>
<td>Stann Creek</td>
<td>29,559</td>
<td>11,335</td>
<td>38.35</td>
<td>10,309</td>
<td>34.87</td>
<td>21,644</td>
<td>73.22</td>
</tr>
<tr>
<td>Toledo</td>
<td>27,957</td>
<td>13,169</td>
<td>47.15</td>
<td>7,666</td>
<td>27.42</td>
<td>20,835</td>
<td>74.57</td>
</tr>
<tr>
<td>TOTAL</td>
<td>286,178</td>
<td>106,086</td>
<td>37.07</td>
<td>90,779</td>
<td>31.72</td>
<td>196,865</td>
<td>68.78</td>
</tr>
</tbody>
</table>

Source: SIB, Main Results of 2010 Population and Housing Census
**Figure 5: Population with Post-Secondary and University Education**

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>District Population</th>
<th>P.S., Post-Secondary %</th>
<th>University %</th>
<th>Total P.S. and University %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corozal</td>
<td>37,084</td>
<td>2,007</td>
<td>5.4</td>
<td>623</td>
</tr>
<tr>
<td>Orange Walk</td>
<td><strong>41,977</strong></td>
<td><strong>2,029</strong></td>
<td><strong>4.83</strong></td>
<td><strong>763</strong></td>
</tr>
<tr>
<td>Belize</td>
<td>83,250</td>
<td>6,752</td>
<td>8.11</td>
<td>3,606</td>
</tr>
<tr>
<td>Cayo</td>
<td>66,351</td>
<td>2,921</td>
<td>4.4</td>
<td>1,722</td>
</tr>
<tr>
<td>Stann Creek</td>
<td>29,559</td>
<td>1,347</td>
<td>4.55</td>
<td>595</td>
</tr>
<tr>
<td>Toledo</td>
<td>27,957</td>
<td>593</td>
<td>2.12</td>
<td>311</td>
</tr>
<tr>
<td>TOTAL</td>
<td>286,178</td>
<td>15,469</td>
<td>5.40</td>
<td>7,620</td>
</tr>
</tbody>
</table>

Source: SIB, Main Results of 2010 Population and Housing Census

### 1.8 Economy and labor force

The primary motor of the Orange Walk economy and all of northern Belize is without a doubt the cultivation and industrialization of sugar cane. The generation of electricity by Belcogen is a byproduct of this industry. Forestry has declined but there is still one big operation, New River Enterprises. The breakdown of the economic activity is best presented with the Trade List that has been elaborated under goods offered in our town.

**Unemployment.** According to the 2010 Census, 20.4% of Orange Walk District labor force of 17,869 were unemployed. The incidence of unemployment was sharper among the 14-19 year old group (39%), and still above average in the 15-24 age group (23.8%). Females displayed a higher unemployment rate of 35.7%. Their median average monthly income is also lower ($822.00 or $205.50 weekly) as compared to $922 or $230.50 weekly for their male counterparts. 8,338 women are not factored in the labor force.

**Tourism.** The tourism industry has been emerging in Northern Belize. With the economic sugar problems of the 1980’s tourism was identified as part of the diversification plan. The sugar industry has recovered and tourism has been slow to rise. Today there is a comprehensive tourism plan in the making funded by the IADB Sustainable Tourism Project.

Orange Walk has all the ingredients for a well packaged tourist destination: a healthy population of tropical wildlife; world class archaeological sites including Lamanai; a bird watcher’s paradise with over 400 recorded bird species in the district; a rich heritage of Maya-Yucatan culture that predominates the district, many settlements of German speaking Amish Mennonites. The district is also the home Belize Sugar Industries Limited, Caribbean an Old Master rum factories and two rivers, the Rio Hondo, which also forms part of the border with Mexico, and the New River, which has as its source Belize's largest body of water, the New River Lagoon.
The culinary diversity of Orange Walk has great potential for tourism. Local restaurants specializing in Mestizo cuisine have won first prize for authentic Belizean dishes. There are 76 registered eating places that include (24) Chinese restaurants, (1) Hindu Restaurant, (2) Salvadorian Restaurants, (6) fry chicken places, (3) marine ceviches specialized restaurants and many ambulant food stalls scattered over town that specialize in Tacos, hot dog, corn panades, and refreshing drinks like coconut water, shaved ice, green tea or snow cones. There are 15 hotels in the district with 12 in Orange Walk Town out of 612 registered business establishments.

Orange Walk has an array of festivities to please all. There are the yearly Fiestarama with all the mechanical rides and business displays and the Rum Festival. There is also the pre-lent celebration of the carnival with traditional dances, the yearly celebration of the patron saint of San Jose Palmar with their hogs head dance, the cane farmers day, the all saints day prayers and homage to the dead, the 24th May Orange Walk Day with horse races, the monthly planned rock concerts, Sunday’s karaoke under the old big tree in Fort Cairns, weekly produce days and Saturdays flea market days.

1.9 Land Area
According to the information provided by the Lands Information Center (LIC) the land area within the proposed municipal boundary of Orange Walk Town is 1,747 acres.

1.10 Spatial development pattern, land, and land use

Original town. Orange Walk Town was once a sleepy rest stop on the western bank of the New River between the rich Mohagony forest of Gallon Jug and the Belize City. In 1848 some of the Caste War refugees settled here and the town expanded considerably. The eastern bank opposite the town is marshy lowland.

Our Town has experienced haphazard growth. The town developed around the western bank of the New River. Its growth was natural. With the advent of the highway after World War 2, the new highway became the focus of development. This was the only direct link to Mexico or Belize City. In 1964 Tate and Lyle contracted Taylor Wood Roe to construct a sugar mill in Tower Hill, Orange Walk that opened in January 1967. This brought a boom to the town with new better paying jobs. New housing sites were opened in Union Town and on Clarke Street a housing compound was built for middle management. Top management had their houses on the Golf course next to the sugar mill. The town had a rapid influx of workers and grew chaotically.

Growth pattern. The entire of the old town may be classified as mixed use in terms of land use. The periphery is developing into bedroom communities. One area rapidly changing is the Clarke Street vicinity where a lot of high price housing has been built. Many upper managers of BSI have built houses here. The areas that are currently being developed for residential use are on the west side of town, on land belonging to the Dr. George Estate now owned by Albert Burns. These are old cattle pasture developed with minimum infrastructure. Potable water supply and electricity may be partially available but connectivity to the town infrastructure is negligible.
The San Lorenzo area is a housing site located on San Lorenzo Road built around 2000 the only planned housing site in Orange Walk Town. There is also a vocational school, a high school and land BSI made available to the community. In the lowlands adjacent to this area, there is a plot of former BSI land that has been parcelled for distribution.

For the past decade growth has been actually occurring outside of town in the bordering villages of Trial Farm (4,264), and to a lesser extent in San Jose Palmar (1,355). San Jose Palmar was bequeathed land by the crown to the original settlers. They could not sell to outsiders, hence the urban area expanded towards Trial Farm.
Cost of land. There are a number of reasons, which could explain the acceleration of growth outside the boundary. The first one is the cost of land and household affordability; a regular house lot in Orange Walk Town could cost between $12,000.00 to $15,000.00 while a similar lot in the village of Trial Farm or Palmar would cost two to three times less, about $5,000.00. In addition, village residents do not pay
property tax. In parallel, Orange Walk Town is becoming congested and moving towards apartments and no unallocated crown land is available.

**Land use.** The majority of the land in Orange Walk Town is used for residential purposes. Green spaces are very limited and with change of administrations, once areas declared as parks were bequeathed to private individuals including lots on the river reserve. The land for industrial use is negligible within Orange Walk Town, but it is more abundant along the highway and bypass in San Jose Palmar. The main commercial areas in Orange Walk are Main Street, Belize Road, Guadalupe Street and the area around the Central Park and Market Square. There could be as many as 1,175 vacant plots which are owned but unoccupied and many deteriorated houses in the town.

**“Gross” vacant land.** Based on the analysis of the land use map provided by the Lands and Surveys Department, there are 724 acres of vacant land in Orange Walk. This is a “gross” figure that includes all vacant plots as well as all the land that is being used for agriculture. Considerations limiting the suitability of this vacant land for development still need to be analyzed to come up to a “net” vacant land figure.

**Urbanized area size.** The size of Orange Walk’s urbanized area has been estimated at 1,196 acres. This area includes all plots with an assigned land use and excludes large, mostly open space, lots and all vacant lots. Public rights of ways serving the urbanized area have been accounted for by adding up an additional 30% to the previous figure.

**Population density.** The population density of Orange Walk’s urbanized area is 11.5 persons / acre. This figure results from dividing the baseline population (13,700) by the size of the urbanized area (1,196 acres).

1.11 **Environmental areas and open space**

Despite the generally flat terrain, there are undulating sections within our town. The police station and surrounding public buildings sit atop a Maya Pyramid and this is the highest point in Orange Walk Town, 49 meters.

There are 3 major flood prone areas in our town. One is part of the New River Watershed that is directly to the east of the New River. The Albert Burns Swamp provides drainage for a large section of this part of town. The Marcos Canul Area and the San Lorenzo Housing site are also situated on low land.

Majestic old trees are scattered all around town.

1.12 **Public spaces**

The Central Park area is the main public space in Orange walk Town. This encompasses the Market square behind the Municipal building.
Figure 8: Map of built up area, vacant land and environmentally sensitive areas

Source: 2011 Ecosystems map (Meerman), 2013 30 meter Landsat 7 images, and 2012 Municipal Land Use maps (for existing survey's) (MNRA). Identified rivers, floodplains, wetlands.
1.13 **Cultural and historic assets and sites**

There are many fine monuments within Orange Walk Town. These include the Marcos Canul Monument next to the Town Barracks; the World War 2 soldier in Independence Park; the monolith at La Inmaculada Church; the trenches dug around fort Cairns in 1876 to protect the colonial town; Fort Mundy; La Inmaculada Church; the Anglican Church in its full colonial architecture; the magistrates building and police station, seat of the Colonial Powers facing the New River; many colonial buildings built to fit the tropics; the Tobacco drying sheds on the Chan Pine Ridge Road. The old standard colonial water tower in the center of town is a classic example of British Colonial influence. The police station in Orange Walk Town sits on top of a Maya Pyramid. In the Pre-Columbian - era the area was known as Dzuluinicob, “land of foreigners.”

1.14 **Public services**

There are about 44 Government and quasi government offices in Orange walk Town. Some outstanding services are:

- The Northern Regional Hospital. There are 25 Doctors in OW Town and 13 private clinics.

- Orange Walk Town is the educational center for the region. The district administration education office is located here. There are 26 pre- schools in the Orange Walk District, 11 in Orange Walk Town. There are 36 Primary Schools in the Orange Walk District and 7 in Orange Walk Town. There are 8 secondary schools in the District, 6 in Orange Walk Town.

- There are 2 permanent tertiary educational facilities in the district: The Orange Walk District student population according to the 2010 census is 11,784: Primary: 8,806, Secondary: 1,932, 2,029 post -secondary graduates, 764 University Graduates and 17,534 with no formal education.

- The National Fire Service has a fire station here with 2 fire engines.

- There are 7 financial institutions in Orange walk Town

- There are 6 insurance agents in Orange Walk Town

- There are 40 registered Churches in Orange Walk Town.

- The two telephone companies, BTL and Smart, have district administrative offices here.
Local television stations, Northern Cable TV and Centaur Communication Corp. call this their home. Orange Walk is also connected to 6 radio stations.

1.15 Recreational facilities
The People’s Stadium is the premiere recreational facility in Orange Walk Town. It has a multipurpose complex, a roof area for basketball, volleyball and other multitude required facility, a walking track, a race track, deteriorated tennis courts, a softball pitch and areas for outdoor activities.

1.16 Transportation and accessibility
Orange Walk is the transportation hub of the district. According to the Orange Walk Municipal Transport Authority, there are:

- 22 daily buses coming in from all over the district to the municipal bus depot.
- 45 daily buses running a national route to all municipalities and Chetumal in Quintana Roo from a National Bus Depot. Buses leave every ½ hour between 5:30 am and 7:30 pm.
- The Mexican bus group ADO has a stop here that directly connects Orange Walk Town to Merida and Cancun. Their daily arrivals are 4:30 am and 5:30 am and their daily departures are 8:30 pm and 9:00 pm.
- Tropic Air has 2 daily flights from Orange Walk and San Pedro departing from 8:30 am and 2:00 pm and extra flights on Fridays and Sundays to and from Orange Walk and San Pedro departing at 5:30 pm.

Road and street accessibility in Orange Walk are all in deplorable state and need immediate improvement.

1.17 Priority investments, and future projects
Orange Walk Town has the key ingredients, open spaces grouped together next to our Central Park and a willing Municipal Administration to create and enhance a town worthy of its residents and potential tourist visitors. The modification of our Central Public Plaza in the historic center of our town will be enhanced by a development plan that will incorporate the Central Park, the Municipal building and the Market area. This is going to be incorporated in the Municipal Development Project funded by the World Bank.

The projects identified as part of Phase 1 of the BMDP project in Orange Walk focused on paving, drainage and sidewalk provision, downtown improvement to create an attractive place for residents and visitors, the creation of a bus facility terminal and the development of a scenic walk along the river. They included:

1. Paving of four major streets: Tangerine, Santa Familia, San Ignacio and Avilez Lane;
2. Constructing sidewalks and drainage system along Stadium Street, adjacent to the People’s Stadium;
3. Uplifting of center of town including: Restoration of Town Clock, Upgrade of the Central Park, Upgrade of Queen Victoria Avenue, Expansion of the Market;

Two additional projects requiring major resources were identified and decided to be developed in phases, namely:
4. Relocate current parking area for buses to the current Ministry of Works compound.
5. River Walk Project

Figure 9: Map of road hierarchy
The prioritized list of BMDP Phase 2 projects in Orange Walk include:
1. Upgrading of Central Park
2. The extension of the Municipal Market
3. Rehabilitation of Muffles and Mahogany Streets
4. Drainage works on San Andres Street
5. Construction of Sidewalks on Stadium Street
6. Rehabilitation of Staines Alley

1.18 Climate change related hazards, risks and disaster preparedness
The study by Chung’s Engineering Co. Ltd., Municipal Drainage Assessment (June 2010), identified the areas and main causes of flooding in several areas in Orange Walk Town. Due to the lack of solid hydrology and elevation data most of the information gathered focused on collecting it directly from the municipalities.

Most flooding issues reported were on the outskirts of town and city centers – these are usually residential and were rapid unplanned development has occurred in the last 20 – 30 years. Many of these can be remedied by drain redesign, drain addition or the removal of a particular bottleneck. As such, this report focuses on solving local flooding issues while keeping an eye on possible flooding downstream.

Situated on the banks of the New River, Orange Walk is as undulating land separating the river to the east from wetlands to the west. According to the study, there are a number of major drainage issues in Orange Walk. The major flood prone areas are Boundary Sore (15 affected households) and Palmer Road area (60 affected households), Cinderella Store as well as the San Andres and Stadium Street areas. In the town center, Fort Cairns is affected. Outfall and drain formalization is required in these areas. Other areas of concern include many dilapidated drains in the old parts of the town, namely the drains on Gravel Lane and Bakers Street.

According to the study the Orange Walk Town Council seems very aware of the major drainage issues faced by the town. As such, the Council in recent years has built a few drainage elements with its limited funds to relieve flooding in particular areas. Cleaning of unlined drains occurs year round, but intensifies just before the wet season starts in June. During this time as much a 30 persons can be working on cleaning drains

1.19 Infrastructure and utilities
All infrastructure and utilities are in a deep deteriorating phase. Despite herculean efforts by the present Town Council to fix some streets, and BMDP to fix a few more, the overwhelming 160 kilometers of roads presents a maintenance burden; the advent of the rains make the situation worse. Public utilities are kept within acceptable standards.
Figure 10: Map of flood risk

Source: King et al. (1992) Land System Map and Chung’s Engineering Co. Ltd., Municipal Drainage Assessment (June 2010)
1.20 Municipal finance, management and strategies for plan implementation

Main revenue sources. The main sources of local revenue for the municipality are property tax, followed by motor vehicle licenses, trade licenses and subventions. Similarly to other municipalities, Orange Walk town is facing problems with local tax collection, namely property and trade related taxes. In general, there is a need to emphasize the linkage between paying of their taxes and the services residents receive in return from the council.

The property tax on occupied properties is calculated as follows:
- Residential uses: 5.5% of the annual rental value.
- Commercial: 25% of the annual rental value.
- Industrial: 5.5% of the annual rental value

Rates are given by the central government and the TCC can make recommendation for adjustment within a certain range.

Main expenditure items. Wages and salaries followed by fuel account for the main expenditure items for Orange Walk municipality.

Strategies for MDP implementation. Strategies to tie tax collection and services provision in a given area could be explored as pilot projects in conjunction with the residents and business owners. Two areas have been preliminary identified for a pilot project in Orange Walk town.

- The Pasadita Area is on the western side of the highway. It is a dense area where many professionals live (e.g. teachers, nurses, policeman, etc). In this area, SIF as part of the BMDP Phase 2 will complete the paving of the Santa Familia Street. Due to its location and social fabric, it could be an interesting neighborhood to do a pilot project focusing on upgrading involving the community.

- Guadalupe Street from the artery to the municipal bus stop is a main commercial spine, in partnership with business owners.

In addition, the Municipal Development Plan needs to be given a legal status. If it remains just a written document it will not be sufficiently regarded in making planning decisions. When it comes to making decisions about any development within town, the council needs to have some say before the LUA or the relevant authority.
CHAPTER 2: VISION, STRATEGY AND DEVELOPMENT SCENARIOS
2.1 A Vision for Orange Walk

Orange Walk is a thriving town with a colonial charm that provides a diversity of employment opportunities for its residents. It has strong cultural values, pride in its successful sporting history, and is committed to continuous community development. The town council manages the affairs of the town using transparent and participatory governance approaches. The people of Orange Walk envision their town as an economically vibrant, well-planned, sustainable community with thriving industries and good jobs for residents and a place where local history and culture are valued and preserved. Orange Walk will continue to enjoy its reputation as hardworking community where people are safe from crime.

By 2030, Orange Walk will be home to an emerging local IT industry that builds on the intellectual capital of the community—particularly on the knowledge and skill base of Orange Walk’s younger generation benefiting from advanced tech education opportunities in the library and schools. Orange Walk also is a center for an expanded agricultural processing industry, building on its traditional agriculture industry and an expansion of agricultural products for exportation.

Orange Walk is envisioned as a community with more amenities that contribute to a better quality of everyday life for residents including:

- A well-designed, active Market Place in center of the town that is compatible with the Town’s historic architecture.
- More parks and public open space in residential subdivision areas.
- Regular open-air concerts for the town's residents.
- A modern bus terminal at the current Ministry of Works site.
- Good drainage and roads.
- Free Wi-Fi throughout the town.
- The ability of the municipality to determine the nature of the town's development.

Youth will grow up healthy and safe in Orange Walk with upgraded playgrounds for children and good sports facilities for basketball, softball and football fields upgraded to FIFA standards. With new and improved sports and recreation facilities, it will keep its reputation as one of Belize’s most competitive and talented sporting communities.

Orange Walk will be recognized as a unique historic and cultural center in Belize and a town with historic colonial charm and character with well-preserved historic architecture together with new buildings designed to fit into the historic character of the central area. The town will also be an environmentally sustainable community with for example the promotion of photovoltaic solar panels for houses and a Riverside boardwalk that will be a bird watchers' paradise. The town will be a center for
local Mayan archaeology with many well-protected and well-managed archaeological sites accessible to everyone. Moreover it will be a community where traditional indigenous identity is valued and encouraged and the history and culture of the people is appreciated by all residents.

Orange Walk’s municipal government will function in a fair and transparent way where people understand the value of paying property taxes and local government reciprocates by providing a high quality of services. Information will be accessible to citizens online and the Town’s 2013 Municipal Development Plan will be available to public (on-line).

2.2 Orange Walk Development Strategy

The vision for Orange Walk is pursued through a comprehensive development strategy that includes a range of development policies and planning proposals.

2.2.1 Existing population projections

There are two available population projections for Belizean urban areas—those provided by SIB (through 2020) and by the World Bank study (through 2050). While both are supported in past population growth figures, the World Bank estimates are higher because they account for overall urbanization trends as foreseen by the United Nations Population Division (UN-DESA) for Belize in 2020-2050.

The World Bank growth projections of individual cities/towns are based on UN-DESA urban population projections for Belize during the period 2020-2050. The total number of urban residents in all cities/towns in a given year was constrained to equal the projected total urban population in that year. Then, the added population to a given municipality was assumed to be proportional to the average of three values: the population that was added to the municipality between 1991 and 2000, the population that was added to the municipality between 1980 and 2000, and the population that was added to the municipality between 1970 and 2000. The figure below summarizes the World Bank projections until 2030 for the towns and cities that are relevant for the “MDP—Preparation of Development Plans project”.

**Figure 11: World Bank study urban population projections for Belize**

<table>
<thead>
<tr>
<th>City and town</th>
<th>2010</th>
<th>2020</th>
<th>Annual % Change</th>
<th>2030</th>
<th>Annual % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corozal</td>
<td>9,901</td>
<td>14,583</td>
<td>3.9%</td>
<td>17,955</td>
<td>2.1%</td>
</tr>
<tr>
<td>Orange Walk</td>
<td>13,400</td>
<td>17,538</td>
<td>2.7%</td>
<td>20,518</td>
<td>1.6%</td>
</tr>
<tr>
<td>San Ignacio/Santa Elena</td>
<td>16,977</td>
<td>29,082</td>
<td>5.5%</td>
<td>37,800</td>
<td>2.7%</td>
</tr>
<tr>
<td>Benque</td>
<td>5,824</td>
<td>9,135</td>
<td>4.6%</td>
<td>11,520</td>
<td>2.3%</td>
</tr>
<tr>
<td>Belmopan</td>
<td>13,351</td>
<td>27,067</td>
<td>7.3%</td>
<td>36,945</td>
<td>3.2%</td>
</tr>
<tr>
<td>Danriga</td>
<td>9,096</td>
<td>11,521</td>
<td>2.4%</td>
<td>13,268</td>
<td>1.4%</td>
</tr>
<tr>
<td>Punta Gorda</td>
<td>5,205</td>
<td>8,078</td>
<td>4.5%</td>
<td>10,147</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Total Urban</strong></td>
<td>138,796</td>
<td>211,000</td>
<td>4.3%</td>
<td>263,000</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Note: * = added by Consulting Team
Source: The World Bank (2011)

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The **Statistical Institute of Belize** (SIB) growth projections of individual cities are estimated with a mathematical model based on the 2000 and 2010 population censuses. The population was estimated at the national level, then disaggregated based on the growth patterns of the various districts and urban/rural areas. The figure below summarizes SIB’s projections until 2020 for the towns and cities that are relevant for the “MDP—Preparation of Development Plans project”.

### Figure 12: SIB Belize Postcensal Population Estimates, 2010 to 2020 - Urban Areas

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corozal Town</td>
<td>10,287</td>
<td>2.6%</td>
<td>13,314</td>
<td>2.61%</td>
</tr>
<tr>
<td>Orange Walk Town</td>
<td>13,709</td>
<td>0.1%</td>
<td>13,665</td>
<td>-0.03%</td>
</tr>
<tr>
<td>San Ignacio/Santa Elena</td>
<td>17,878</td>
<td>3.0%</td>
<td>23,583</td>
<td>2.81%</td>
</tr>
<tr>
<td>Benque Viejo</td>
<td>6,148</td>
<td>1.3%</td>
<td>7,087</td>
<td>1.44%</td>
</tr>
<tr>
<td>Belmopan</td>
<td>13,931</td>
<td>10.6%</td>
<td>25,583</td>
<td>6.26%</td>
</tr>
<tr>
<td>Dangriga</td>
<td>9,591</td>
<td>1.1%</td>
<td>10,680</td>
<td>1.08%</td>
</tr>
<tr>
<td>Punta Gorda</td>
<td>5,351</td>
<td>2.0%</td>
<td>6,530</td>
<td>2.01%</td>
</tr>
<tr>
<td>Country Urban</td>
<td>145,829</td>
<td>2.7%</td>
<td>187,249</td>
<td>2.53%</td>
</tr>
</tbody>
</table>

Note: * = added by Consulting Team
Source: SIB 2013

#### 2.2.2 Population Growth Scenarios
Starting with a population of 13,400 in 2010, the World Bank study projects that Orange will reach 17,538 by 2020 and 20,518 by 2030, what would mean expanding at annual growth rates of 2.73% and 1.58% respectively between 2010-2020 and 2020-2030. SIB’s projections are more moderate and starting with a 2010 population of 13,708 estimate that Orange Walk will decrease to 13,665 by 2020 and thus it would contract at an average rate of -0.03% per annum.

### Figure 13: Existing population growth projections for Orange Walk
Based on Orange Walk’s baseline population (2012) of 16,500 this LPWG has prepared three population growth scenarios for 2020 and 2030:

**Figure 14: Population growth scenarios 1, 2 and 3**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Annual % change</th>
<th>Number of households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>Scenario 1: growth rates similar to World Bank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>--</td>
<td>3,373</td>
</tr>
<tr>
<td>2020</td>
<td>16,994</td>
<td>2.7%</td>
<td>4,249</td>
</tr>
<tr>
<td>2030</td>
<td>19,878</td>
<td>1.5%</td>
<td>5,097</td>
</tr>
<tr>
<td>Scenario 2: growth rates similar to SIB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>--</td>
<td>3,373</td>
</tr>
<tr>
<td>2020</td>
<td>13,700</td>
<td>0%</td>
<td>3,373</td>
</tr>
<tr>
<td>2030</td>
<td>13,700</td>
<td>0%</td>
<td>3,373</td>
</tr>
<tr>
<td>Scenario 3: Expansion by natural growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>--</td>
<td>3,373</td>
</tr>
<tr>
<td>2020</td>
<td>18,749</td>
<td>4.0%</td>
<td>4,687</td>
</tr>
<tr>
<td>2030</td>
<td>22,855</td>
<td>2.0%</td>
<td>5,860</td>
</tr>
</tbody>
</table>

1. **Scenario 1** matches the World Bank’s growth rate projections. It assumes a stronger growth rate of 2.7% per annum until 2020 that would go down to 1.5% in 2020-2030.

2. **Scenario 2** matches SIB’s growth rate projections. It assumes a 0 growth rate until 2020 and in 2020-2030.

3. **Scenario 3** is based on the assumption that the Orange Walk Town will continue to expand due primarily to natural growth. To estimate Scenario 3 the amount of young people in reproductive ages (between 15 and 34) in Orange Walk as well as the average household size have been taken into account. Based on this scenario, Orange Walk population would expand at 4% per annum until 2020 and at 2% per annum until 2030.

**Figure 15: Population growth scenarios for Orange Walk**
The assumed average household size in Orange Walk is 4.1 (SIB 2010), and is projected to move down to 4.0 in 2020 and 3.9 in 2030.

**Estimation of future land needs (2020 and 2030).** Once the population has been projected, we can estimate the amount of additional land that will be required to meet projected growth in Orange Walk. Additional land requirements are based on the level of land consumption necessary to build new housing to accommodate new households, as well as shops and other commercial enterprises, schools, health facilities, government buildings, infrastructure, parks and other public open spaces necessary to support a town’s population and economic activities.

The estimation of land needs is based on the assumption that development will maintain the current urbanized area density in Orange Walk of 11.5 persons / acre. The underlying rationale for this is that at these early stages of the planning process the room needed to accommodate the projected growth should not be unnecessarily limited. This initial estimation of land needs is intended to provide an initial figure that could be further refined as part of the work for Chapter 3 on land use planning.

The “gross” amount of vacant land available within the proposed municipal boundary was estimated at 724 acres. Pending of additional analysis, the “net” amount of vacant land was estimated at 539. It can be preliminary asserted that Orange Walk municipality has vacant land to accommodate the projected population growth until 2020 under any of the three scenarios. After 2020, the town would run out of net vacant land to accommodate the projected growth.

**Figure 16: Estimation of land needs for Scenarios 1, 2 and 3**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Population density (persons / acre)</th>
<th>Urbanized area</th>
<th>“Gross” vacant land</th>
<th>“Net” vacant land</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total (acres)</td>
<td>Change (acres)</td>
<td>Amount left (acres)</td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>11.5</td>
<td>1,196</td>
<td>--</td>
<td>724</td>
</tr>
<tr>
<td>2020</td>
<td>16,994</td>
<td></td>
<td>1,484</td>
<td>+288</td>
<td>436</td>
</tr>
<tr>
<td>2030</td>
<td>19,878</td>
<td></td>
<td>1,735</td>
<td>+252</td>
<td>185</td>
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<td></td>
<td>Scenario 1: growth rates similar to World Bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>11.5</td>
<td>1,196</td>
<td>--</td>
<td>724</td>
</tr>
<tr>
<td>2020</td>
<td>13,700</td>
<td></td>
<td>1,196</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2030</td>
<td>13,700</td>
<td></td>
<td>1,196</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Scenario 2: growth rates similar to SIB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>13,700</td>
<td>11.5</td>
<td>1,196</td>
<td>--</td>
<td>724</td>
</tr>
<tr>
<td>2020</td>
<td>13,700</td>
<td></td>
<td>1,196</td>
<td>--</td>
<td>--</td>
</tr>
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<td>2030</td>
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<td>Scenario 3: Expansion by natural growth</td>
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<tr>
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<td>13,700</td>
<td>11.5</td>
<td>1,196</td>
<td>--</td>
<td>724</td>
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<tr>
<td>2020</td>
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<td></td>
<td>1,637</td>
<td>+441</td>
<td>283</td>
</tr>
<tr>
<td>2030</td>
<td>22,855</td>
<td></td>
<td>1,995</td>
<td>+358</td>
<td>-75</td>
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</tbody>
</table>
Scenario 4. A fourth scenario has been prepared by this LPWG. Scenario 4 looks at Orange Walk Town and its surrounding villages San Jose Palmar and Trial Farm as a single urban area with a joint population of 20,000 people in 2012. It assumes that the population growth rate for the whole area will be at around 2% per annum until 2020 and in 2020-2030.

Using the current population density for Orange Walk Town of 11.5 persons per acre, and assuming that it is maintained, the summary population and land estimation for this scenario are outlined below. The town’s available vacant land (539 acres) would fall short facing the additional 1,300 acres required to accommodate projected growth under this scenario.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Population density (persons / acre)</th>
<th>Urbanized area</th>
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<tr>
<td></td>
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<td></td>
<td>Total (acres)</td>
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<tr>
<td>2012</td>
<td>20,000</td>
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<tr>
<td>2020</td>
<td>23,433</td>
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<td>2,046</td>
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<tr>
<td>2030</td>
<td>28,565</td>
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<td>2,494</td>
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2.2.3 Development Strategy Policies and Proposals

The Orange Walk Town Development Strategy outlines policies and interventions to manage the municipality under these population growth scenarios in ways that begin to achieve the vision of the Town. These interventions include the kinds of services that can be provided and the opportunities that can be leveraged to meet the needs of the municipality.

Policy 1: Promote Economic Development that creates good jobs, specifically in the information technology, tourism and agricultural processing industries.

As a general policy, Orange Walk Town Council will take steps within its capacity to promote economic and business development that creates well-paid and reliable jobs and other opportunities for the residents. Creation of a local Information Technology industry, support for agricultural processing, promotion of the local tourism industry and support for small local businesses will be the goals of this policy.

Specific proposals to advance this policy:

Short term

Create an attractive and vibrant market place in the center of the town.

Increase local access to IT, particularly for libraries and students.

Expand the free access to Wi-Fi throughout the town.

Facilitate access to IT, particularly in the library and schools and colleges.
Support small businesses that create jobs: establish a business ombudsman office in the municipality.

Expand the incentive program for young entrepreneurs (reduced trade licensing fee) to “older’ entrepreneurs.

**Medium to Long term**

Develop local IT industry that builds on the intellectual capital of the community—particularly on the knowledge and skill base of Orange Walk’s younger generation benefiting from advanced tech education opportunities in the library and schools.

Expand the local agricultural processing industry for the export market.

Launch, with government assistance, a program to develop a large industrial park and export zone, using the co-generation grid, as an attraction for new businesses and investment.

Further develop the successful program of product-specific public markets at different times during the week and improve its management.

**Policy 2:**

**Promote Urban Design and Development to create a well-planned, sustainable community with efficient design and amenities that contribute to a better quality of life for residents.**

**Policy Objectives:**

Create urban design guidelines, for matters including the layout of streets and house lots, building densities and land uses, in a manner that will enable efficient provision of infrastructure, set the stage for new commercial investment and create attractive residential neighborhoods and mixed-use business districts that meet the needs and aspirations of the local community.

Develop means to ensure a well-planned community with new zoning and an effective development control enforcement capability.

Press for new planning legislation that gives the Municipality the power and authority to enforce zoning and other local land use regulations.

Protect and enhance buildings with colonial charm, and use them as models for new construction.

Augment the protection, management and the community's knowledge of its many archaeological sites.

**Urban Design and Development projects and proposals:**

**Short term**

Undertake, with assistance from central government, the development of a Business Improvement District (modeled on the concept of a Tax Increment Finance district) on Guadeloupe Street (and possibly other areas): for a designated period of time, businesses' and other property owners' property tax is reserved for the construction of infrastructure and other improvements within the designated district.

Explore the possibilities for incentives to encourage property owners to undertake construction and create employment, including look into the feasibility of levying a fee or property tax penalty
on property owners of land left vacant for an extended period.

**Short to Medium term**
Draft and institute new zoning and land use regulations that reflect the goals and intent of the Orange Walk Municipal Development Plan.

**Policy 3:**
**Preservation of Historic Architecture**
The objective is to ensure that the unique historic character of Orange Walk will be recognized in Belize because its well-preserved historic architecture and new buildings that are designed to fit into the historic character of the center of the Town.

**Historic preservation projects and proposals:**
Introduce incentives to maintain and upgrade attractive colonial style buildings.

Prepare, consult on and adopt a design code for new buildings that reflects the historic architectural character of the town center.

**Policy 4:**
**Improve existing urban infrastructure, including the comprehensive upgrading of the town's drainage system, solid waste and street network.**

**Infrastructure projects and proposals:**

**Short term**
Commission a comprehensive topographic study of the whole town to identify infrastructural and engineering needs and solutions to problems.

Install traffic lights with cameras at critical road junctions.

Street maintenance and renovation. Establish a system to categorize the town's streets to identify their levels of daily use.

Ensure sidewalks are put in place with all new street construction. Require each house benefiting from a new sidewalk to contribute finance to its construction in proportion to the length of sidewalk in front of it.

Install surveillance cameras at strategic locations in the town center to monitor anti-social / criminal activity attracted to the town by its entertainment.

**Policy 5:**
**Improve Public Transportation**
Transport Strategies:

**Short term**
Work with the current consolidation of the Belizean transport system to ensure efficient services for Orange Walk through the coordination of bus schedules and other efficiencies.

**Medium term**
Create a modern and efficient bus terminal at the current Ministry of Works site.
Policy 6:
Promote and improve Public Open Space

Projects and proposals:

Short term
Increase the parks and public open space requirements both in government and private subdivisions.

Promote more public open-air concerts in the town's parks.

Medium to long term
Upgrade public amenities and tourism facilities alongside the New River, to include a riverside boardwalk to promote the area's reputation as a bird watchers' paradise.

Policy 7:
Transform Orange Walk into an environmentally sustainable community

Projects and proposals:
Ensure the environmental sustainability of the community through the promotion of renewable energy systems.

Explore ways to encourage existing and new dwellings to use photovoltaic solar panels for energy production and consumption reduction.

Policy 8:
Provide Sport and Recreation opportunities to the town's youth
The objective is to ensure that the youth will grow up in a healthy and safe environment with access to good playgrounds and sports facilities for basketball, softball and football fields upgraded to FIFA standards. With new and improved sports and recreation facilities, Orange Walk will keep its reputation as one of Belize’s most competitive and talented sporting communities.

Sports and Recreation projects and proposals:

Upgrade children's playgrounds throughout the town.

Develop further sporting facilities, especially for the town's youth, including improved basketball and softball facilities.

Launch a program of sporting activities to guarantee excellent sporting achievement.

Upgrade the town's football field to FIFA standards.

Identify the demand and opportunities for alternative venues for young people's recreation.

Policy 9:
Social & Cultural Development

Upgrade the town's cemetery.

Value and nurture traditional indigenous cultural identity.
Encourage the study and appreciation of the history and culture of the people of Orange Walk.

Maintain and capitalize upon the district’s hard-working reputation.

Reduce crime and the causes of crime, and establish improved liaison with the local police.

Prevent the destruction and damage of historic ruins and sites, particularly through the levy of severe fines that can be used to fund archaeology studies.

**Policy 11:**
**Municipal Finance and Administration: Reform and Advocacy**

**Proposals and strategies to advance the interests of improved municipal management:**

**Short term**
- Impose a property tax penalty for leaving vacant private or granted land undeveloped.
- Establish the means to develop full GIS capacity in municipal management.
- Ensure fairness, equality and transparency in the evaluation and collection of property tax.
- Launch a program to inform the community on the social value of efficient property tax valuation and collection.
- Ensure there is effective consultation in the drafting of the Municipal Development Plan and that it is made available to the public (on-line).

Explore potential strategies to finance infrastructure through:
- Municipal bonds
- Revenue enhancements
- Tax + fees
- Land Value Tax (modeled on the Belmopan property tax system)

**Medium term**
- Lobby for political support to allow the Municipality to acquire land commensurate with its needs.
- Lobby for the transfer of a meaningful percentage of national income tax and social service / pension tax from national government to municipalities.
- Press for the municipality to act as the contractor for SIF projects (vs. SIF selected private contractors)
CHAPTER 3: LAND USE PROPOSALS
3.1 Introduction: Land Use Planning and Draft Municipal Development Plans

The Orange Walk Town Municipal Development Plan expresses the preferred form of development to cater to present and future needs. The Orange Walk Town Local Planning Working Group has drawn up development scenarios, and from these various policies objectives and actions have been recommended, which range over issues from land use to economic development to social progress.

Chapter Three of the MDP focuses on bringing the observations of Chapter One (Assessment of Existing Conditions) and the projections and development scenarios of Chapter Two (Vision, Strategy and Development Scenarios) into the Land Use Plan. This consists of both map-based and text-based information.

**Phased Implementation.** As the development proposals made in the MDP, whether map-based or text-based, are wide-ranging, and are intended to cater for a wide variety of future needs, the implementation of those proposals must be given a phasing format. Some proposals may be implementable in the short term (a nominal 1 – 3 years), some in the medium term (4 – 8 years), and some in the long term (9 – 16 years). Consequently, Chapter Three MDP proposals are assessed and categorized for their implementability in these terms.

3.2 Validation: Preferred Development Scenarios and Policies

The LPWG examined four population growth scenarios to estimate the necessary land requirements and based its assessment of projected growth on an intermediate scenario. The fourth scenario looks at Orange Walk Town and its surrounding villages of San Jose Palmar and Trial Farm as a single urban area with a joint population of 20,000 people in 2012. It assumes that the population growth rate for the whole area will be at around 2% per annum until 2020 and in 2020-2030.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Population density (persons / acre)</th>
<th>Urbanized area</th>
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<td>2030</td>
<td>28,565</td>
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<td>2,494</td>
</tr>
</tbody>
</table>

However, using the current population density for only Orange Walk Town (11.5 persons per acre) and assuming that it is maintained, the summary population and land estimation for this scenario shows that after 2020 the town will run out of net vacant land to accommodate projected growth.

Based on these findings, a synopsis of the policies and proposals generated by the LPWG in Chapter 2 are:

1: Economic Development

As a general policy, Orange Walk Town Council will promote economic and business development through the creation of (a) Information Technology industry, (b) support for agricultural processing, (c) promotion of the local tourism industry and (d) support for small local businesses.
2: Urban Design and Development
Undertake, with assistance from central government, the development of a Business Improvement District (modelled on the concept of a Tax Increment Finance district) on Guadeloupe Street (and possibly other areas).

4: Urban Infrastructure
Commission a comprehensive topographic study of the whole town to identify infrastructural and engineering needs and solutions to problems.

5: Public Transportation
Establish a modern and efficient bus terminal at the current Ministry of Works site.

6: Public Open Space
Increase the parks and public open space requirements both in government and private subdivisions.

7: Environment Sustainability
Ensure community environmental sustainability through the promotion of renewable energy systems.

8: Sport and Recreation
Upgrade children’s playgrounds throughout the town and develop further sporting facilities.

9: Social and Cultural Development
Upgrade the town's cemetery.

10: Municipal Finance and Administration

3.3 Overall Development Concept
The concept is based on the perception of the urbanized character and needs of Orange Walk Town together with its immediately surrounding villages of Trial Farm to the north and San Jose Palmar to the south. The concept identifies five development categories:

The historic Downtown Center of Orange Walk Town
Enhancement of the historic downtown area of Orange Walk Town through a Downtown Improvement Scheme to boost the attraction of the area for tourism and its economic activity.

Infrastructural Improvements and Urban Expansion
Zone One – focus on the needs of the urbanized part of the town.
Zone Two – the urbanizing areas of the town, and its need for infrastructural upgrading and scope for expansion.
Zone Three – rural land suitable for urban expansion.
Urban expansion taken up in available village lands.

Commercial and Industrial Development
The focus on suitable lands in San Jose Palmar, and sub-centers in Zone 1 (urbanized) and Zone 2 (urbanizing) parts of the town.
Strategic Connections
The identification, safeguarding and construction of a network of main / collector roads to serve the existing and expanded town.

Environmental Protection and the Town’s Drainage Pattern
Identification of areas needing protection for landscape or drainage pattern reasons.

3.4 Land Use proposals indicated on a map

3.4.1 Downtown Improvement Scheme
The historic center of Orange Walk Town is defined as the area contained within San Andres St., Fonseca St., San Antonio St., Guadeloupe St., Santa Ana St., Aurora St., Mahogany St., Main St., Santa Maria St., and continuing to the New River. Within this area lie the Northern Highway as it passes through town (regardless of the new by-pass), the Town Park, the Town Hall, the market, Police Station, many small to medium-sized shops, and most of the town’s hotel, restaurants, bars and tourist facilities, and several buildings of architectural interest.

While the area has experienced some inappropriate development over the years, some parts have recently been greatly improved, and the area has the potential to act both as a revitalized heart of the town and as a boost to the town’s tourism attraction. The downtown area is, however, complex and has multiple land uses, ownership, traffic and environmental issues. A comprehensive approach will be required to ensure all relevant matters are addressed in effective relation to each other. Consequently, a master plan will be required for improvement of the area. Matters that should be focused on include:

- Encouragement of small-scale retail uses to boost a vibrant downtown;
- Retention of residential use;
- The preservation of historic architecture;
- Incentives to encourage property owners to contribute to the area’s upgrading and beautification;
- The drafting of design guidelines to guide the construction of new buildings, the maintenance of historic buildings and appropriate building densities;
- Guidance and control of the land uses, to avoid non-compatible uses;
- Beautification projects to upgrade the parks, gardens and the New River frontage;
- Explore the possibility with the Local Building Authority for higher density land uses (smaller plot sizes, no setbacks, and party walls) in suitable areas;
- Measures to improve traffic flows and parking in the whole of the area;
- Relocation of the market and the bus terminal to more suitable sites;
- Expansion of the public wi-fi connectivity throughout the area.

3.4.2 Zone One
Zone One describes the urbanized area of Orange Walk lying beyond the historic downtown area. This area is defined: from the New River along San Lorenzo St., the San Lorenzo subdivision, east to Yo Creek St., taking in the eastern parts of the San Martin to San Jose streets, taking in San Andres to Stadium streets, the Stadium, the San Antonio Road, the east side of the savannah, south on Santa Familia St. to the Palmar boundary, east to the New River.
Figure 18: Map of land use planning proposals

Orange Walk: Planning Zones

Legend:
- Environmentally Sensitive
- Downtown
- Zone 1
- Zone 2: Expansion
- Zone 2: Upgrading
- Zone 3: Expansion
- Zone 3: Upgrading
- Small Stream
- River
- Paved Road
- Major Road
- Other Road
- Parcels

Map prepared by Ian Muffman
November 2013
UTM NAD 1983 Zone 18N
Here, most of the physical infrastructure is in place – all-weather roads, effective drains and electricity and water supply. Solid waste is collected. This cannot be considered a blanket description of service provision for the whole zone – there are many local exceptions, particularly as concerns drainage, roads in wet weather, and there are many unoccupied lots – yet in the main either all the infrastructure exists or there is sufficient to enable effective occupation of house and / or commercial lots.

Within this sector the existing infrastructure and utility provision will be maintained, and local improvements will be made. Main collector roads will be upgraded or paved to ensure accessibility, and streets leading off will be upgraded incrementally. Drains will be maintained and, where either ineffective or not in place, will be constructed to ensure effective run-off sufficient to allow sustainable occupation. Means will be sought to extend the central sewage disposal system.

3.4.3 Zone Two
This zone is identified as the ‘urbanizing’ area – where some subdivisions have been laid out, yet there is generally little actual occupation (often less than 25% the total number of lots). Some main collector roads have been cleared and dumped, yet are generally impassable in poor weather; streets have been surveyed but have not been made; drainage is mostly absent; and little or no utilities have been put in place.

The zone describes a belt lying to the west of Zone One. It encompasses the lying along the San Lorenzo Road east of ITVET and the Bishop Martin School, then covers a belt of land lying west of Zone One down to the San Antonio Road, it runs east of the smaller savannah area, then runs west of Santa Familia to the Palmar boundary. A creek (Ojo de Agua) runs along the western side of this zone, then continues through it up to the San Lorenzo Road. This and the low terrain acts as a major impediment to development, though lots have already been surveyed to the east and west of it north of the San Antonio Road.

In this zone the main collector roads will be upgraded to all-weather status, allowing the gradual upgrading of streets on a rolling programme; a comprehensive and strategic drainage scheme will be drafted, and main drains put in place, ensuring, at the minimum, that all creeks are properly channeled; utilities will be supplied as the basic infrastructural programme is implemented.

3.4.4 Zone Three
Zone Three describes the remainder of the agricultural or forested parcels that lie west of Zone Two. It is an extensive area, and consists of mainly agricultural (sugar cane) lands which drain east towards the Ojo de Agua creek. However, the land appears to be generally high and developable, given the drainage problems. There is little or no residential use on these land, and the planning intention is to ensure that these areas are reserved for future town expansion use which will correspond with existing urban uses, or that any subdivision that does occur fully coordinated with the overall Orange Walk MDP. Great attention will be required to ensure residential, or commercial use, avoids the land around the creek.

3.4.5 Village Expansion
Two areas for effective urban expansion are identified, in the north in lands adjoining Trial Farm village on the west, and in the south in land adjoining San Jose Palmar on the west. The land in both cases is high and developable, and has a considerable size of several hundred acres.
Though neither of these areas are within the town boundary (current or proposed) many Orange Walk Town residents, and other Belizeans, have sought house lots in both villages, in Trial Farm in particular, in response to the limitations on available land within the town boundary.

Road connections to the town and to the villages will be quite unproblematic – the Trial Farm area being serviced by the San Lorenzo Road and the Palmar area by the road running along the town boundary. Negotiation and complementary land use planning will be required between the Town Council and the village councils. This can be capitalized upon to establish the grounds for co-operative planning among all three communities.

3.4.6 Commercial and Industrial Development

One main large-scale commercial and industrial development area is identified, in land in the San Jose Palmar area lying between the Phillip Goldson (Northern) Highway and the Chan Pine Ridge road. This designation takes advantage of the existing commercial and industrial development in the area (largely related to the BSI site and associated uses), the easy access to the highway and to town, and the large acreage of land available.

Activities associated with BSI and with agricultural processing would be viable, yet this site could also accommodate the “large industrial park and export zone using the co-generation grid” the LPWG identified in its economic development policies. Development of this site will be contingent on the proper installation of service roads, utilities and drainage (dependent on a thorough assessment of the local drainage pattern). Conformity with the Department of the Environment’s environmental protection procedures will be mandatory. As the land lies within San Jose Palmar, not within the town boundary, further liaison with the village council will be required.

Neighborhood Sub-Centers

Four neighborhood commercial sub-centers are identified, intended to act as local shopping and recreational areas for subdivisions at some distance from downtown. As these areas are intended to act as community-friendly assets, giving the communities a local center, large scale commercial uses are to be avoided.

One is proposed in the Zone Two area around Santa Familia Street which is in the process of urbanizing. Another is proposed on the road defining the southern boundary with Palmar, where it will act to bind together the areas of urban expansion on both sides of the boundary. Two further sub-centers are proposed to serve urban expansion in the west of the town: one on the San Antonio Road and another just off the San Lorenzo Road in the vicinity of the Itvet. These sub-centers will be located on the proposed strategic road links or at their junctions.

3.4.7 Strategic Connections

Effective urban expansion is reliant on the identification and safeguarding of strategic ‘collector’ roads that will facilitate development and integration. A network is proposed in Zones 2 and 3, of roads running east to west and north to south. From east to west, four of these commence on existing roads in the town: extensions to Stadium Street and Pasadita Street, and the upgrading of the San Antonio Road and the road running along the town’s southern boundary. A new east to west road is proposed to run
along the south side of the San Lorenzo subdivision and the Itvet to meet with St Martin Street and feed into Yo Creek Street which will be extended north to the San Lorenzo Road.

Aligned north to south, one road is proposed to run from the San Lorenzo Road by Itvet, crossing the east-west roads, to join the Palmar boundary road, the other further to the west (west of Pico de Agua), again from San Lorenzo Road to the Palmar boundary road.

The route of these strategic collector roads will be safeguarded prior to their construction, and construction will take place as town expansion is planned. The sections serving Zone 2 will be prioritized. Where possible, these roads should be aligned with existing farm roads, though new alignments will be required in many instances. All roads will be constructed to all-weather standard, and will include effective drainage, culverting and, where they cross creeks, bridges.

3.4.8 Drainage

Drainage is complex in Orange Walk. The town is largely located on a watershed – natural drainage flowing east to the New River, and west to the Pico de Agua system, which flows generally north. Two large savannahs (swamps) occupy central locations immediately south of the San Antonio Road. The retention of these savannah areas appears to be critical to drainage in the west of the town.

The drainage patterns of the town and its surroundings require in-depth assessment to ensure effective run-off and the avoidance of flooding. It may be proposed that drains in the west of the town are directed either to the savannahs or to the Pico de Agua. Should that be the case, then drainage from the savannahs to the Pico de Agua must be kept open.

The need for greater information on detailed topography has been identified by most, if not all, municipalities, as a means to plan comprehensive drainage schemes. The optimal means identified is the use of LiDAR technology, which supplies detailed information on the topography, indicating changes in relief to centimetre specificity, enabling in-depth assessment of the land and its drainage patterns. A particular recommendation of this MDP is the need to prepare a proposal to commission a comprehensive LiDAR survey of all the municipalities in Belize.

3.4.9 Environmental Protection

Two particular natural areas have been identified by the LPWG as requiring protection: the banks of the New River; and the two savannahs along with Pico de Agua. The Riverside is an important asset to the town and is characterized by dense natural vegetation, with royal palms dotted throughout. It frames the river magnificently, is a very picturesque backdrop to the town, and acts as an attraction to locals and tourists for relaxation and bird-watching. Moreover, the riverside is generally low and swampy, becomes flooded in poor weather, and would be prohibitively costly to develop. Protection is required for both sides of the river. Any riverside development should avoid permanent constructions.

The two savannahs and the Pico de Agua water system identified above in 3.4.8 above are designated for protection primarily due to their importance for drainage. Other recreational uses or landscape values may be identified in time, and will be subject to management planning.
3.5 Land Use proposals not indicated on a map

3.5.1 Design Guidelines
A set of comprehensive architectural design guidelines are required to guide the construction of new buildings, the maintenance of historic buildings, and appropriate building densities. Such guidelines should apply to development in the downtown area in particular. To facilitate implementation, these guidelines should complement GOB guidelines where they exist, such as Central Building Authority (CBA) and Land Utilisation Authority (LUA) requirements. Illustration of appropriate building forms and styles would expedite the guideline’s use.

3.5.2 Building Improvement Incentives for Property Owners
The use of fiscal or licensing incentives to encourage property owners to improve the condition of their buildings and lots is proposed. Examples of the use of such incentives in other municipalities, whether in Belize or internationally, will be examined to gauge their suitability and implementability.

3.6 Guidelines for establishing planning indicators and development standards

The development standards provided in the National Guidelines for Subdivision and Consolidation of Land (LUA, 2010) support a low-density development pattern that is characteristic of Belize’s urban areas today.

While adequate for small rural communities, low density urban settings have some associated shortcomings, especially as the population expands, primarily:

- **Reduced mobility.** It makes public transportation unviable, yet it sharpens the distances between housing and commercial areas, public facilities, and other compatible services and amenities;

- **Infrastructure services.** The supply of piped potable water, central sewerage, and power becomes more costly when networks are extensive and have fewer household connections. Municipal services are also more expensive on a per capita basis in low density settings, which further reduces the Council’s ability to efficiently collect solid waste and to properly maintain streets.

- **Walkability and street activity.** Low density patterns hamper people’s ability to walk, which discourages pedestrian traffic and makes small-scale retail unviable.

- **Social divide:** Low density development tends to entail a larger divide between higher and lower income areas. In addition, longer commuting distances impose a higher cost to households that cannot afford owning private vehicles.

Chapter 2 presented the vision and objectives that should guide the development of the municipality between now and 2030. Higher mix of uses; walkability; overall urban greening; basic public facilities; attractive buildings and public space; and bike mobility are some of the planning-related objectives stated in this MDP.
Having found a discrepancy between municipal objectives and the ones being supported through the application of the current standards, the LPWG would like to include in its MDP some guidelines on indicators and standards that are more in line with its vision. The ultimate goal of this exercise is the promotion of a more sustainable pattern of land occupation that has lower economic and social costs for the municipality.

3.6.1 Description of planning zones

To organize this task, the area within and immediately adjacent to the municipality has been arranged in four planning sectors or zones (from now on “zones”) based on their current features. Objectives for the planning indicators and standards can be stated linked to those zones and their respective development goals, namely:

Downtown

Current features:
- Central part of the municipality where a majority of commercial activities are concentrated;
- Low densities compared to international standards, but higher than in other zones of the municipality –most of the lots are occupied.

Objectives for the indicators and development standards in this zone:
- Encourage compatible economic development activities;
- Support current residents with improvements in urban infrastructure and services;
- Consolidate its central character, encourage a higher density of occupation vis a vis other zones of the municipality and enhance public open spaces.

Zone 1

Current features:
- Urbanized areas adjacent to the Downtown where the density of occupation is not as high as in Downtown.

Objectives for the indicators and development standards in this zone:
- Encourage compatible economic development activities;
- Support current residents with improvements in urban infrastructure and services;
- Consolidate its central character, encourage a higher density of occupation vis a vis other sectors of the municipality and enhance public open spaces.

Zone 2

Current features:
- Non consolidated areas of the municipality that are currently developing and urbanizing;
- Low density, vacant land, unoccupied lots, limited infrastructure services;
- Primarily residential uses.

Objectives for the indicators and development standards in this zone:
- Consolidation to encourage significant level of occupation before occupation in zone 3;
- Promote a certain level of activity other than residential uses along main arteries and collectors;
- Provide a minimum set of rules and regulations for new construction.
Zone 3
Current features:
- Primarily vacant, un-subdivided land with no or very limited infrastructure services, where the municipality will expand in the future.

Objectives for the indicators and development standards in this zone:
- Promote a certain level of activity other than residential along main arteries and collectors;
- Guide development through the preparation of a separate Development Plan that draws on the indicators and standards presented in this section.

It should be noted that in countries with a longer urban planning tradition, the planning of areas similar to zone 3 is usually done through separate instruments referred to as “Area Development Plan”. By being area-based as opposed to municipality-based, these plans are better suited to provide detailed specifications that are more effective at guiding development and thus at achieving better urbanization results. The downside of these plans is that they involve a higher level of technical complexity that our municipality currently lacks.

As planning capacity is strengthened, both in the council and at the central government level, the goal should be to lean towards the preparation of Development Plan(s) in zone 3. In Orange Walk, this will require coordination with the surrounding villages.

3.6.2 Context and goal of the proposed indicators
The matrix included in the next page presents a preliminary selection of indicators and development standards ranging from building form, land use, public space, green areas, non-motorized mobility, and basic public facilities. Preliminary reference values and/or recommendations for each indicator are also provided by the matrix.

Indicators and reference values have been adjusted to reflect the differences among the four municipal sectors highlighted above. In addition, two special cases have been indentified to account for plot proximity to transportation axes, namely “Case A” referring to buildings or lots located below 50 meters (164 ft) from a main artery or collector; and “Case B” referring to buildings or lots located above 50 meters from a main artery or collector.

While the indicators are commonly used in other countries, the matrix is not a replica of development standards found elsewhere. Both the proposed indicators and reference values have been adjusted to account for Belize’s unique urbanization pattern and the standards that currently regulate development. Despite this effort, it is important to note that the matrix provides just an indicative framework and thus it is not a formal proposal by the LPWG.

The goal of the matrix is to help launch a discussion with relevant GOB departments and agencies on the development standards that are needed to meet the long term goals and aspirations of our municipality. In that context, the matrix provides the council with guidelines for that discussion, understanding that more analysis and work on the indicators and on-the-ground implications will be needed before a revised version can be produced. Special attention to assessing the impacts of proposed regulations on housing
affordability for lower income households should be paid. For a full description of each indicator, what it measures and how it is connected to sustainability see Annex 1.
**Figure 19: Indicative guidelines for developing planning indicators and development standards**

<table>
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<th>Indicator / Zone</th>
<th>DOWNTOWN</th>
<th>ZONE 1</th>
<th>ZONE 2 Case A</th>
<th>ZONE 2 Case B</th>
<th>ZONE 3 Case A</th>
<th>ZONE 3 Case B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building form</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01. Maximum no. of floors including ground level</td>
<td>3 floors</td>
<td>3 floors</td>
<td>3 floors</td>
<td>2 floors</td>
<td>3 floors</td>
<td>2 floors</td>
</tr>
<tr>
<td>02. Minimum density: dwellings units /acre (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>03. Minimum lot size</td>
<td>150 m2</td>
<td>150 m2</td>
<td>150 m2</td>
<td>300 m2</td>
<td>150 m2</td>
<td>300 m2</td>
</tr>
<tr>
<td>04. FAR (Floor Area Ratio) (built-up m2 /total m2)</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
</tr>
<tr>
<td>05. Minimum FAR in new development area (built-up m2 /total m2) (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4</td>
</tr>
<tr>
<td>06. Front setback</td>
<td>Maximum 2 meter (m)</td>
<td>Maximum 2 m</td>
<td>Maximum 2 m</td>
<td>Free setback</td>
<td>Maximum 2 m</td>
<td>Free setback</td>
</tr>
<tr>
<td>07. Maximum building depth (distance between front and rear façades)</td>
<td>Ground floor: 30 m</td>
<td>Ground floor: 30 m</td>
<td>Ground floor: 30 m</td>
<td>Ground floor: 30 m</td>
<td>Ground floor: 30 m</td>
<td>Ground floor: 30 m</td>
</tr>
<tr>
<td></td>
<td>Upper floors: 15 m</td>
<td>Upper floors: 15 m</td>
<td>Upper floors: 15 m</td>
<td>Upper floors: 15 m</td>
<td>Upper floors: 15 m</td>
<td>Upper floors: 15 m</td>
</tr>
<tr>
<td>08. Maximum height of ground floor</td>
<td>4 m</td>
<td>4 m</td>
<td>4 m</td>
<td>4 m</td>
<td>4 m</td>
<td>4 m</td>
</tr>
<tr>
<td>09. Maximum lot coverage</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>60%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>10. Maximum block length (maximum distance in between streets)</td>
<td>200 m</td>
<td>200 m</td>
<td>200 m</td>
<td>200 m</td>
<td>200 m</td>
<td>200 m</td>
</tr>
<tr>
<td><strong>Land uses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Maximum distance to commercial uses (from any residential use) (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>500 m</td>
<td></td>
</tr>
<tr>
<td>12. Floor area dedicated to retail (as a % of all floor area) (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>13. Space reserved to economic activity</td>
<td>Ground floor of 3-storey buildings</td>
<td>Ground floor of 3-storey buildings</td>
<td>Ground floor of 3-storey buildings</td>
<td>Ground floor of 3-storey buildings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Recommended concentration of commercial activity on ground floors (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Higher than 10 linear meters every 100 linear meters in main arteries and collectors</td>
</tr>
<tr>
<td><strong>Public space</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. On-street tree density</td>
<td>1 tree every 8 linear meters</td>
<td>1 tree every 8 linear meters</td>
<td>1 tree every 8 linear meters</td>
<td>1 tree every 8 linear meters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Maximum space dedicated to motorized vehicles (% of street) (lanes and on-street parking)</td>
<td>60% main arteries and collectors</td>
<td>60% main arteries and collectors</td>
<td>60% main arteries and collectors</td>
<td>80% main arteries and collectors</td>
<td>60% main arteries and collectors</td>
<td>80% main arteries and collectors</td>
</tr>
<tr>
<td>17. Minimum sidewalk width</td>
<td>2.5 m on main arteries and collectors</td>
<td>2.5 m on main arteries and collectors</td>
<td>2 m on main arteries and collectors</td>
<td>1 m</td>
<td>2 m on main arteries and collectors</td>
<td>1 m</td>
</tr>
<tr>
<td>18. Minimum street width (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Main arteries and collectors: 12 m / All other streets: 7 m</td>
<td></td>
</tr>
<tr>
<td>19. Provision of open public space for gathering (parks, squares, etc) (*)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 m2 per inhabitant</td>
<td></td>
</tr>
<tr>
<td>Indicator / Zone</td>
<td>DOWNTOWN</td>
<td>ZONE 1</td>
<td>ZONE 2</td>
<td>ZONE 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>----------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Street lighting requirements (relative level of provision)</td>
<td>Intermediate</td>
<td>Intermediate</td>
<td>High</td>
<td>Low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Tree density in designated green areas</td>
<td></td>
<td></td>
<td>1 tree every 30 m² within designated green areas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Paving materials in open spaces</td>
<td>At least 50% of original terrain</td>
<td>At least 50% of original terrain</td>
<td>At least 70% of original terrain</td>
<td>At least 70% of original terrain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-motorized mobility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Bike lanes provision</td>
<td></td>
<td></td>
<td>Bike lanes provided in every main artery and collector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Width of bike lane</td>
<td></td>
<td></td>
<td>Minimum 1.5 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Provision of parking spaces for bikes in commercial uses</td>
<td></td>
<td></td>
<td>1 every 50 m² of built commercial space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Provision of parking spaces for bikes in public facilities</td>
<td></td>
<td></td>
<td>1 every 100 m² of built public facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Distance to basic public facilities (health, education) (*)</td>
<td></td>
<td></td>
<td></td>
<td>Below 1 kilometer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Distance to shuttle stops / bike lane network (*)</td>
<td></td>
<td></td>
<td></td>
<td>Below 300 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Distance to open public space for gathering (parks, squares, etc) (*)</td>
<td></td>
<td></td>
<td></td>
<td>Below 600 metros</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic public facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Education facilities (*)</td>
<td></td>
<td></td>
<td>2 m² per inhabitant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Health (*)</td>
<td></td>
<td></td>
<td>0.1 m² per inhabitant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Sports (*)</td>
<td></td>
<td></td>
<td>1 m² per inhabitant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Case A:** Buildings or lots located closer than 50 m from a main artery or collector

**Case B:** Buildings or lots located further than 50 m from a main artery or collector

(*) Indicator to be developed through a Development Plan in Zone 3
CHAPTER 4: INFRASTRUCTURE PLANNING AND INVESTMENTS
4.1 Overall infrastructure works needs assessment

The quality of the infrastructure is intrinsically to the quality of life of a municipality. Good quality water, sanitation, streets, proper drainage, telecommunications and energy are essential in providing the municipality with the required services for economic growth and social development. As the population in the municipality increases the demand for these services also increases proportionally. Therefore, it is essential that the council identifies the infrastructure that will provide the impetus to support urban expansion in the future.

Streets, roads, drainage, public space and open space compound the chief categories of investment needs identified in BMDP-related consultations in Orange Walk Town.

The Northern Highway runs through Orange Walk and serves as the primary arterial for both local and through traffic. Estimated average daily traffic along the highway passing through town, including heavy vehicles, has increased steadily over the last 10 years as a result of increasing car ownership which has shown in high traffic revenue collection.

According to transportation study by Beca (2010), Orange Walk has the second highest vehicle ownership of the six study municipalities, with 4,219 vehicles and the second longest roadway system of all 6 municipalities. It encompasses 106 km of which 48 km are paved and 60% of them are in good condition. The remaining 58 km are unpaved with 70% listed as in good condition. In addition, Orange Walk has a growing stock of sidewalks. No dedicated accommodations for cyclists have been implemented to-date.

Main transportation issues include peak hour congestion, inefficient street layout, poor road conditions in important areas, lack of clarity on roadway priorities at junctions, poor maintenance leading to water ponds, damage and potholes, inadequate enforcement of setbacks and sight distances, and lack of specific cross-section designs and drainage considerations in new subdivisions.

In newer subdivisions, streets and drains are often substandard and provision of sidewalks and street lights is disregarded their lack acting as a disincentive to effective social settlement. Once the subdivision is approved, infrastructure becomes part of the council’s assets as it does its maintenance and/or rebuilding.

Drainage is complex in Orange Walk. The town is sitting in undulating land and largely located on a watershed – natural drainage flowing east to the New River, and west to the Pico de Agua system, which flows generally north. Two large savannahs (swamps) occupy central locations immediately south of the San Antonio Road.

4.1.1 Maintenance works

The total annual road maintenance budget for Orange Walk Town was estimated at BZ $3.76 million, of which BZ $2.7 million or 72% was dedicated to paved roads and the remaining BZ $ 1 million to unpaved roads (Beca, 2010). As a reference, the total annual property tax assessment is estimated at BZ
$678,000, which begins to reflect the difficulties faced by the council when it comes to undertaking its own both maintenance and capital works.\(^3\)

As part of the eligibility criteria for Phase 2 of the Belize Municipal Development Project (BMDP), Orange Walk Town has started the preparation of a physical asset maintenance plan. The plan and its corresponding budget will be incorporated in the annual Town Council budget. Once completed, the plan should be incorporated into the MDP together with relevant analysis conducted under the project.

### 4.1.2 Infrastructure standards

**Potable water demand.** Expansion of the current water supply system will be necessary. As the demand increases the reliable supply of potable water will have to go through a transition to maintain quantity and quality. This will involve a more advance treatment system, increase storage of treated water, larger pumps for distribution and a pipe network that can deliver the water with minimum head loses. As of today the Belize Water Services in responsible for water treatment and distribution, therefore they will have the primary responsibility for water supply.

“Scenario 4” estimated population growth in Orange Walk Town and adjacent villages San Jose Palmar and Trial Farm whose baseline population was estimated at 20,000 in 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Population density (persons / acre)</th>
<th>Urbanized area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total (acres)</td>
</tr>
<tr>
<td>2012</td>
<td>20,000</td>
<td>11.5</td>
<td>1,196</td>
</tr>
<tr>
<td>2020</td>
<td>23,433</td>
<td>11.5</td>
<td>2,046</td>
</tr>
<tr>
<td>2030</td>
<td>28,565</td>
<td>11.5</td>
<td>2,494</td>
</tr>
</tbody>
</table>

Assuming an average consumption of potable water 150 liters per capita/day the additional demand to the water supply system would be 515,000 liters/day by 2020 and 1.28 million liters/day by 2030. This estimate provides an order of magnitude and does not compute any consumption linked to industrial, commercial and open green space land uses.

**Wastewater treatment and disposal.** Wastewater can be adequately treated and disposed either by an independent treatment facility or a central system. The Ministry of Health provides guidelines and construction drawings for independent wastewater systems that consist of a septic tank and soaks away. This independent system can be used for treatment of wastewater for up to three hundred persons. The size is based on the number of bedrooms or occupants in the dwelling. Generally, only sewage (waste from toilet) should pass through the septic tank. Gray water from tubs, basins, laundry, sinks and effluent from septic tanks should be piped directly to a soak away. Hydraulic retention time for sewage in the septic tank should not be less than one to one and one half days. If wastewater treatment is required for persons is in excess 300, from one unit, then a mechanical treatment system should be considered.

---

\(^3\) Edmund A Zuniga, *Revenue Enhancement Support to Belize’s City and Town Councils* (First and Second Interim Report), June and September 2012
Department of the Environment provides guidance for the selection of a suitable mechanical treatment facilities.

**Streets, drains and culverts.** The Ministry of Works (MoW) standards for road services in new subdivisions should be enforced.

**Sidewalks, bikeways and street lighting** provision requirements should be added to the MoW standards, starting with primary and secondary roads (collectors), and boulevards. These requirements should also be included as part of future street upgrading projects starting with streets supporting heavier non-motorized and pedestrian traffic, as sidewalks, bikeways and lighting promote safety, walkability and reduce reliance on private vehicles.

Promoting solar powered and LED street lights is strongly recommended due to their low maintenance cost for the council. These investments could be secured through climate change mitigation and resilience grants.

Consideration must be given whether to use street level or raised sidewalk. Street level sidewalks are suitable for areas where the streets are wide in contrast to raised sidewalks for narrow streets where there is a high possibility of conflict with other users of the roadway. Raised sidewalks should not be more than four inches above the normal roadway. If concrete is used for construction of sidewalks, a minimum strength of 3,000 psi at 28 days should be used.

**Tree-planting** requirements should be added to the MoW road standards, starting with primary and secondary roads, and boulevards. These requirements should also be included as part of future street upgrading projects starting with streets currently supporting heavier non-motorized and pedestrian traffic, as tree shade promotes walkability and increased use and comfort of public spaces.

**Street infrastructure.** Standards from the MoW should be followed on height of pedestrian crossings, length, depth of bus bays and distance from street intersections and height of centre island if used.

### 4.2 Infrastructure priorities and servicing criteria

**4.2.1 Infrastructure priorities**

The Orange Walk Town development strategy generated by the LPWG in Chapter 2 identified ten overarching policies that will guide the town council between now and 2030. Chapter 3 furthered developed programs and projects under policy (3) Land use planning, zoning and design regulations.

Chapter 4 has focused on policies: (1) Promote economic development, (4) Improve infrastructure, (5) Improve public transportation, and (6) Promote and improve public open space, and further advanced it through a number of programs and projects, as summarized in the table below.
### Figure 21: Summary of Orange Walk MDP development strategy

<table>
<thead>
<tr>
<th>MDP OVERALL POLICIES</th>
<th>PROGRAMS</th>
<th>PROJECTS</th>
<th>ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Promote economic development</td>
<td>1.1: Small local business development</td>
<td>1: Market Place improvement and expansion</td>
<td>X</td>
</tr>
<tr>
<td>2: Land use planning, zoning and urban design regulations</td>
<td>2.1: Growth zones</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td></td>
<td>2.2: Industrial areas</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td></td>
<td>2.3: Neighborhood sub-centers</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td></td>
<td>2.4: Downtown Improvement Scheme</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>2.5: Architectural guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.6: Environmentally sensitive areas protection</td>
<td></td>
<td>X X</td>
</tr>
<tr>
<td>3: Preservation of historic architecture</td>
<td>Covered in Program 2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: Improve infrastructure</td>
<td>4.1: Street Improvement</td>
<td>1: Intersections</td>
<td>X X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2: Priority streets</td>
<td>X X X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3: Town-wide streets</td>
<td>X X X</td>
</tr>
<tr>
<td></td>
<td>4.2: Flood mitigation and resilience</td>
<td>4: LiDAR Survey</td>
<td>X X X X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5: Drainage upgrading</td>
<td>X X X X</td>
</tr>
<tr>
<td></td>
<td>4.3: Preparation of expansion zones</td>
<td>6: Main arteries and collectors</td>
<td>X X</td>
</tr>
<tr>
<td></td>
<td>4.4: Central sewerage</td>
<td>7: Feasibility Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.5: Solid waste disposal</td>
<td>8: Feasibility Study</td>
<td></td>
</tr>
<tr>
<td>5: Improve public transportation</td>
<td>5.1: Improvement of transportation facilities</td>
<td>1: Bus parking area upgrading</td>
<td>X</td>
</tr>
<tr>
<td>6: Promote and improve public open space</td>
<td>6.1: Open space provision and upgrading</td>
<td>1: Central Park</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2: Philip Alvarez Park</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3: Nature Park</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4: San Lorenzo Park</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5: Playground: Sandy Field Park</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6: New playground</td>
<td>X</td>
</tr>
<tr>
<td>7: Environmentally sustainable community</td>
<td>To be further developed in future MDP reviews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8: Provide sport and recreation opportunities</td>
<td>To be further developed in future MDP reviews</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9: Social and cultural</td>
<td>To be further developed in future MDP reviews</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ZONES**

- D-T
- Z1
- Z2
- Z3
### 4.2.2 Servicing criteria

The financing of all the necessary capital works programs and projects will not be available in full at any one time. Funding sources and strategies will only allow for limited funding to execute critical works on a phased basis.

Capital improvements, whether it is streets, drains, sidewalks, public facilities, etc, can contribute to increase business revenue, enhance property values, make areas more desirable for investment, and improve living conditions in lower income areas. By delivering better municipal infrastructure the council can also contribute to raising awareness about paying municipal taxes which will in turn enhance the municipality’s autonomy to undertake subsequent improvements and investments. A financially stronger and technically more experienced municipality will be more effective at building partnerships with GOB and external agencies and thus at finding the longer term support necessary to fund investments under this Municipal Development Plan.

As such, practical yet strategic ways of prioritising and justifying specific capital works must be found. The following figure presents phasing criteria that will be considered to evaluate and subsequently prioritise road, streets and drainage improvements in addition to their state or condition. Criteria are presented with a brief description of how they contribute to meeting general planning goals.

**Figure 22: Prioritisation criteria for streets and drain improvements**

<table>
<thead>
<tr>
<th>STREET IMPROVEMENTS</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic criteria:</td>
<td></td>
</tr>
<tr>
<td>1. Main traffic arteries and collector roads first; then expand to local streets within neighborhoods</td>
<td>Higher impact in traffic alleviation and in facilitating accessibility among neighborhoods</td>
</tr>
<tr>
<td>2. Commercial areas</td>
<td>Support local businesses and jobs</td>
</tr>
<tr>
<td>3. High tax collection area</td>
<td>Reward compliance and build municipal fiscal sustainability</td>
</tr>
<tr>
<td>Environment and climate change criteria:</td>
<td></td>
</tr>
<tr>
<td>1. Consolidated areas or proximity to built-up areas</td>
<td>Reduce leapfrog development and promote more efficient land use patterns</td>
</tr>
<tr>
<td>2. Suitable soil and topography</td>
<td>Reduce vulnerability to natural disasters and climate-change related events</td>
</tr>
<tr>
<td>3. Urbanizing areas with vacant lots</td>
<td>Promote occupation of vacant lots within municipality</td>
</tr>
<tr>
<td>Social criteria:</td>
<td></td>
</tr>
<tr>
<td>1. Commitment from communities to timely pay local taxes following improvements</td>
<td>Reward compliance and build municipal fiscal sustainability</td>
</tr>
<tr>
<td>2. Areas where public property such as government buildings, schools, hospitals</td>
<td>High impact areas</td>
</tr>
</tbody>
</table>
3. Low-income areas  
Ensure populations with less resources are not left out of the improvements

<table>
<thead>
<tr>
<th><strong>DRAINAGE IMPROVEMENTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic criteria:</strong></td>
</tr>
<tr>
<td>1. Flooding that can cause severe damage to roads and cause possible isolation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Environmental and climate change criteria:</strong></th>
<th><strong>Rationale</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Urbanizing areas with vacant lots</td>
<td><strong>Promote occupation of vacant lots within municipality</strong></td>
</tr>
<tr>
<td>2. Flooding that causes a potential health hazard</td>
<td><strong>Reduce vulnerability to health hazards</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Social criteria:</strong></th>
<th><strong>Rationale</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment from communities to timely pay local taxes following improvements</td>
<td><strong>Reward compliance and build municipal fiscal sustainability</strong></td>
</tr>
<tr>
<td>2. Flooding of public property such as government buildings, schools, hospitals</td>
<td><strong>High impact areas</strong></td>
</tr>
<tr>
<td>3. Low-income areas</td>
<td><strong>Ensure populations with less resources are not left out of the improvements</strong></td>
</tr>
</tbody>
</table>

### 4.3 Infrastructure improvement programs and investments

The programs and projects listed here further develop Policy 4 (Improve infrastructure). Their formulation is linked to the land use plan generated in Chapter 3, and more specifically to achieve the objectives for the different zones, in general:

**Figure 23: Land use planning zones in the Orange Walk Town MDP**

<table>
<thead>
<tr>
<th>Planning Zone</th>
<th>Objectives by 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown</td>
<td>To support smaller scale commercial and business development aimed at tourism;</td>
</tr>
<tr>
<td><strong>Zone 1: Urbanized</strong></td>
<td>To maintain existing infrastructure and utility provision and make local improvements in areas such as streets, drains, street lighting, public facilities, open space and recreation;</td>
</tr>
<tr>
<td><strong>Zone 2: Urbanizing</strong></td>
<td>To promote infill of vacant lots to encourage a significant level of occupancy through street and drain upgrading, and/ or reserve the alignment of strategic main roads for future development;</td>
</tr>
<tr>
<td><strong>Zone 3: Agricultural / Forested</strong></td>
<td>To reserve for future urban expansion and reserve the alignment of strategic main roads for future development;</td>
</tr>
</tbody>
</table>

In order to achieve those goals, the Orange Walk LPWG has generated the following capital improvement programs and projects, as summarized in the paragraphs below.
Program – Street Improvement

The LPWG has adopted the Town Council’s approach to streets improvement as an incremental upgrading program broken down in three main projects, as follows.

1- Intersection improvement

<table>
<thead>
<tr>
<th>Scope</th>
<th>Concreting of 30 intersections;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>Downtown and Zone 1</td>
</tr>
<tr>
<td>Selection criteria</td>
<td>Street condition and traffic volume</td>
</tr>
<tr>
<td>Funding</td>
<td>Secured: Council</td>
</tr>
<tr>
<td>Implementation timeline</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

Thirty major intersections are in the process of being concreted, starting from north of the town proceeding to the south. Criteria for selection include poor surfacing condition and intersections leading to streets carrying steady to heavy traffic volumes. They are represented in the map below:

Figure 24: Intersection Improvement Project
The council’s ability to undertaking intersection upgrading projects will be dependent on the availability of local revenue sources, and particularly on its ability to improve collection of local tax(es) and arrears, leverage community contributions (both in kind and cash) and secure external grants. Strategies for leveraging these types of resources are discussed in Chapter 5.

Some of the immediate needs and challenges the council faces for implementation of this project include:

- **Planning coordination**, both with the Ministry of Works for upgrading intersections on the main highway passing through the town, and with BWS for repairs involving street works;
- **Resources**. The council lacks resources to survey elevations for the works and thus relies on the Ministry of Works (MOWT) for technical support. Efficient machinery and equipment are also badly needed for the council to be able to undertake its own capital works.

### 2- Priority streets improvement

<table>
<thead>
<tr>
<th><strong>Scope</strong></th>
<th>Resurfacing: Concrete in Downtown and Zone 1; Gravel in Zone 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage</strong></td>
<td>Downtown, Zone 1, Zone 2</td>
</tr>
<tr>
<td><strong>Selection criteria</strong></td>
<td>Street condition, traffic volume, areas that are rapidly urbanizing</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>BZ $5 million (estimate): BZ $4 million in Zone 1; BZ $1 million in Zone 2</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation timeline</strong></td>
<td>Medium term</td>
</tr>
</tbody>
</table>

This project will conduct the resurfacing of streets through the connection of improved intersections. Initially the focus will be on the downtown area then the works will radiate outwards. Selected streets that are rapidly in Zone 2 will also be included to support a more sound development in those areas. Drainage, sidewalks, street lighting and other improvements that should also be considered as part of the overall upgrading have not been computed.

Some of the immediate needs and challenges the council faces for implementation of this project include:

- **Funding availability**. The key challenge to for implementation of this project is related to the Town Council’s ability to secure external funding --financing options are discussed in Chapter 5. The Town Council initiated communications with the Government of Belize to find funding options. Main options include borrowing, namely: (1) from a commercial bank with a guarantee from GOB; (2) a low interest loan from Social Security; and (3) loan from National Bank. Moving forward, it will be important to ensure that street investments in Orange Walk Town by all agencies are guided by the MDP.

### 3- Town-wide streets improvement

<table>
<thead>
<tr>
<th><strong>Scope</strong></th>
<th>Resurfacing of 113 streets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage</strong></td>
<td>Downtown, Zone 1 and Zone 2</td>
</tr>
<tr>
<td><strong>Selection criteria</strong></td>
<td>Remaining streets</td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>BZ $21 million (estimate)</td>
</tr>
<tr>
<td><strong>Funding</strong></td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation timeline</strong></td>
<td>Long term</td>
</tr>
</tbody>
</table>
To be further defined in subsequent updates of the MDP. Figure 25 illustrates the extent of this project.

**Figure 25: Streets improvement project in Orange Walk Town**
Program – Flood mitigation and resilience
The LPWG has identified the following key projects to support flooding mitigation and resilience in Orange Walk Town, as detailed here below:

1- LiDAR survey

<table>
<thead>
<tr>
<th>Scope</th>
<th>Aerial survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>Municipality and adjacent rural areas</td>
</tr>
<tr>
<td>Budget</td>
<td>BZ $ 142,000-152,000 (estimate)</td>
</tr>
<tr>
<td>Funding</td>
<td>Not secured.</td>
</tr>
<tr>
<td>Implementation timeline</td>
<td>Medium term</td>
</tr>
</tbody>
</table>

As mentioned in Chapter 3, the most effective and cost-efficient way to address the serious drainage issues faced by Orange Walk Town is by preparing a comprehensive drainage plan. To do so a critical piece of information is required – elevations. Currently there are no known elevation datasets with the required resolution to perform any meaningful drainage study for the municipality. As such, to effectively gather such data, it is recommended that a LiDAR (Light Detection And Ranging) study be conducted to capture elevation data with a resolution not greater than 1 foot.

LiDAR is a remote sensing technology used to gather various land information including elevation. At present there are a number of LiDAR companies in North America that are willing to provide this service. A few were contacted and asked to give a preliminary cost for the desired service. The cost breakdown is as follows: (1) Mobilisation: US$15,000 – US$20,000; (2) Remote sensing and data processing activities: US$4,000 per sq. km.

Therefore if a company was hired to conduct LiDAR services for the town of Orange Walk the cost would range from BZ $142,000-152,000, assuming an area of about 14 km2 including the town and the adjacent villages.

2- Drainage upgrading

<table>
<thead>
<tr>
<th>Scope</th>
<th>To be defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection criteria</td>
<td>Discussed in section 4.2.2</td>
</tr>
<tr>
<td>Coverage</td>
<td>Town-wide</td>
</tr>
<tr>
<td>Budget</td>
<td>To be defined</td>
</tr>
<tr>
<td>Funding</td>
<td>Not secured</td>
</tr>
<tr>
<td>Implementation timeline</td>
<td>Medium to long term (in phases)</td>
</tr>
</tbody>
</table>

The entire Orange Walk Town needs a comprehensive study and implementation to effective drain the town to the various sinks. It may be proposed that drains in the west of the town are directed either to the savannahs or to the Pico de Agua. Should that be the case, then drainage from the savannahs to the Pico de Agua must be kept open.

While detailed information on topography is being generated, there are particular areas that need urgent attention due to the repeated and severe incidence of flooding. These include high risk areas in the neighbourhoods of:
1. East bank of the New River;
2. Marcos Canul area;
3. San Lorenzo area;
4. Boundary Sore and Palmer Road area;
5. Cinderella Store;
6. San Andres and Stadium Street areas;
7. Fort Cairns;
8. Gravel Lane;

Many of these can be remedied by drain redesign, drain addition or the removal of a particular bottleneck. In addition, the provision of drains and sidewalks along Stadium Street, adjacent to the People’s Stadium, was identified as part of the BMDP Phase 1 public consultations and thus should also be included in the priority package.

**Figure 26: Drain provision costs**

<table>
<thead>
<tr>
<th>Drain Costs: (supply and install)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlined Drain (earthen):</td>
<td>BZ $7 per foot</td>
</tr>
<tr>
<td>Lined with 4” thick and 4 feet wide concrete base and 6” masonry block walls (no cover):</td>
<td>BZ $60 per foot</td>
</tr>
<tr>
<td>Lined drain as above but with cover (walkway):</td>
<td>BZ $95 per foot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Culvert Costs: (supply and install)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete culvert 3ft. x 3ft x 36ft:</td>
<td>~ BZ $18,000</td>
</tr>
<tr>
<td>Corrugated EDPM culvert 600mm with wing walls:</td>
<td>~ BZ $4,000</td>
</tr>
</tbody>
</table>

Once high-risk areas are upgraded and/or elevation data becomes available, the project will be rolled out in subsequent phases. Prioritisation criteria have been discussed in section 4.2.2 and, whenever possible, the upgrading of drains will be linked to the streets improvement program to maximize the impact in the residents’ quality of life.

Program – Preparation of expansion zones

| Scope: | Main arterials and collectors |
| Coverage: | Zone 2 and 3 |
| Budget: | To be determined |
| Funding: | Not secured. |
| Implementation timeline: | Short term (right-of-way demarcation); Medium to long term (actual construction) |

Effective urban expansion is reliant on the identification and safeguarding of strategic ‘collector’ roads that will facilitate development and integration of Zones 2 and 3 (Figure 28). As indicated in Chapter 3, the route of these strategic collector roads will be safeguarded prior to their construction, and construction will take place as town expansion is planned. Where possible, these roads should be aligned with existing farm roads, though new alignments will be required in many instances. Preliminary calculations indicate that the network of strategic collector roads totals 18.8 km (11.7 miles), of which 11.9 kilometers (7.4 miles) are in Zone 3. The figure below shows their alignment (in turquoise blue).
Figure 27: Proposed network of strategic arteries and collectors

Note: Road length for each segment is shown in kilometers.
Program – Central sewerage

Feasibility Study

<table>
<thead>
<tr>
<th>Scope:</th>
<th>To be defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage:</td>
<td>Municipality and adjacent rural areas</td>
</tr>
<tr>
<td>Budget:</td>
<td>To be defined</td>
</tr>
<tr>
<td>Funding:</td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation timeline:</strong></td>
<td>Medium term</td>
</tr>
</tbody>
</table>

With a population growth of 25,000 by 2030, a feasibility study shall be commissioned to explore the viability of building a central sewerage system in Orange Walk Town and surrounding villages.

Program 5 – Solid waste disposal

Feasibility Study

<table>
<thead>
<tr>
<th>Scope:</th>
<th>To be defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage:</td>
<td>Municipality and adjacent rural areas</td>
</tr>
<tr>
<td>Budget:</td>
<td>To be defined</td>
</tr>
<tr>
<td>Funding:</td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation timeline:</strong></td>
<td>Medium term</td>
</tr>
</tbody>
</table>

With a population growth of 25,000 by 2030, a feasibility study shall be commissioned to explore the viability of building a new solid waste disposal site serving Orange Walk Town and the surrounding villages.

4.4 Other programs and investments

Programs and investments listed in this section further develop: Policy 1 (Economic development); Policy 5 (Public transportation); and Policy 6 (Public Open Space). Their formulation must support the land use plan generated in Chapter 3 and, in particular, to achieve the different objectives for the different planning zones.

Program – Small local business development program

The LPWG has built on an ongoing initiative by the Town Council and presents a key project to support small local businesses in Orange Walk.

Market improvement and expansion

<table>
<thead>
<tr>
<th>Scope:</th>
<th>Construction of facilities, provision of parking area, lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage:</td>
<td>Downtown</td>
</tr>
<tr>
<td>Selection criteria:</td>
<td>The market is a main business hub</td>
</tr>
<tr>
<td>Budget:</td>
<td>To be defined</td>
</tr>
<tr>
<td>Funding:</td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation status:</strong></td>
<td>Medium term</td>
</tr>
</tbody>
</table>
An improved and expanded market place is a badly needed investment to support commercial activities and beautify the downtown area. Some of the immediate needs and challenges the council is facing for the implementation of this project include:

- **Funding availability.** The council is currently looking for funding partners for this project including the European Union (EU) and other agencies;

- **Area-based plan.** to anticipate needs and impacts within the surrounding areas, including traffic analysis and parking

![Figure 28: Rendering showing Market Place improvement project](image)

Program – Improvement of transportation facilities

The LPWG has built on an ongoing initiative by the Town Council and presents a key project to support the improvement of public transportation facilities within town.

**Bus terminal**

<table>
<thead>
<tr>
<th><strong>Scope:</strong></th>
<th>Construction of a terminal, relocation of offices, site improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage:</strong></td>
<td>Downtown</td>
</tr>
<tr>
<td><strong>Budget:</strong></td>
<td>To be defined</td>
</tr>
<tr>
<td><strong>Funding:</strong></td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation status:</strong></td>
<td>Long term</td>
</tr>
</tbody>
</table>

A new bus terminal and improved site is a badly needed investment to accommodate growing public transportation needs and to enhancing the overall perception of the downtown area. Some of the immediate needs and challenges the council is facing for the implementation of this project include:
- **Funding.** The Town Council is currently looking for funding partners for this project including the Ministry of Works and GOB.

Program – Open public space provision and upgrading
Chapter 2 envisioned Orange Walk Town as a community with good parks, playgrounds and sporting facilities that contribute to a better quality of life for the residents. The LPWG supports the council’s approach to open public space as an incremental program. Key needed projects and their status are identified here below.

1- Upgrading of Central Park

| **Scope:** Provision of wi-fi  
| **Coverage:** Downtown  
| **Selection criteria:** Main open space  
| **Funding:** Secured: BMDP Phase 2  
| **Implementation timeline:** Short term |

2- Upgrading of Philip Alvarez Park

| **Scope:** Provision of benches, street lighting, wi-fi  
| **Coverage:** Zone 1  
| **Selection criteria:** Support recreation needs in established neighborhood  
| **Funding:** Secured: Council  
| **Implementation timeline:** Short term |

3- Upgrading of Nature Park

| **Scope:** Provision of walkways, basketball courts  
| **Coverage:** Zone 1  
| **Selection criteria:** Support recreation needs in established neighborhood  
| **Funding:** Secured: Council and Area Representative  
| **Implementation timeline:** Short term |

4- Upgrading of Sandy Field Playground

| **Scope:** Provision of a new playground  
| **Coverage:** Zone 2  
| **Selection criteria:** Support recreation needs in developing neighborhood  
| **Funding:** Secured: Council  
| **Implementation status:** Short term |
5- Expansion of San Lorenzo Park

<table>
<thead>
<tr>
<th><strong>Scope:</strong></th>
<th>Park expansion and improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage:</strong></td>
<td>Zone 2</td>
</tr>
<tr>
<td><strong>Selection criteria:</strong></td>
<td>Support recreation needs in outer neighborhood</td>
</tr>
<tr>
<td><strong>Budget:</strong></td>
<td>To be determined</td>
</tr>
<tr>
<td><strong>Funding:</strong></td>
<td>Not secured</td>
</tr>
<tr>
<td><strong>Implementation status:</strong></td>
<td>Short to medium term</td>
</tr>
</tbody>
</table>

6- New playground

<table>
<thead>
<tr>
<th><strong>Scope:</strong></th>
<th>Provision of a playground</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coverage:</strong></td>
<td>Zone 2</td>
</tr>
<tr>
<td><strong>Selection criteria:</strong></td>
<td>Support recreation needs in developing neighborhood</td>
</tr>
<tr>
<td><strong>Budget:</strong></td>
<td>To be determined</td>
</tr>
<tr>
<td><strong>Funding:</strong></td>
<td>Not Secured</td>
</tr>
<tr>
<td><strong>Implementation status:</strong></td>
<td>Short to medium term</td>
</tr>
</tbody>
</table>

**Funding availability.** The Town Council is currently looking for external partners that can contribute to the funding of projects: (5) San Lorenzo Park and (6) New playground.
CHAPTER 5: IMPLEMENTATION STRATEGIES
5.1 Managing the Municipal Development Plan

This section describes how the municipality will manage the MDP.

The first phase in the implementation of the MDP will consist of an initial focus on an 18- to 24-month period to: acquire the necessary management experience; implement priority initiatives that illustrate the municipality’s commitment to improve management systems and revenue collection; develop working partnership structures with residents and other stakeholders; and to improve collaboration and partnerships with central government departments whose responsibilities are pertinent to the implementation of the MDP.

The Local Planning Working Groups, consisting of elected officials, municipal employees and community representatives received training and led the MDP process. The core technical team from the municipality should continue as an inter-departmental coordination team for the initial 18- to 24-month period of implementation of the MDP; its membership should be extended to include members from civil society and the business community who can participate in the review of the policies and programs, thereby providing linkages to the broader community.

The composition of the LPWG may change during the implementation of the MDP and broadening the participation of both the technical staff and civic partners will be important. For example, the Council should consider ways to continue its engagement in the BMDP and participate in its best practice networks; further its commitment to work with adjacent villages and other committees; and proactively engage with central government departments on those aspects of municipal planning and land management that impact the development of the municipality.

To manage the implementation of the Orange Walk Town Municipal Development Plan, the Council will adopt an incremental implementation approach with a particular focus on launching activities for the first 18 to 24 months of the MDP. The Council will reassess its management implementation requirements based on the experience gained by the staff in coordinating MDP activities, strengthening such existing initiatives as local revenue generation and working with communities and external partners.

The Local Working Planning Group that developed the Orange Walk Town MDP will play an important role in managing, monitoring, and updating its implementation on an annual basis, as well as revising the plan within three years. The LPWG will include:

- An inter-departmental staff team that will form provide technical support and coordinate the implementation of the MDP as part of their municipal functions;
- The extended LPWG will provide community feedback and policy and program guidance to further MDP implementation and attract investment and extend the participatory process to include the participation of interested public and private or parties.

Orange Walk Town is committed to engaging in knowledge-transfer and exchange of best practices in urban development and management with other Town Councils participating in the BMDP and to working with such central government authorities as the Land Utilization Authority, the Ministry of National Resources, the Ministry of Local Government, the Ministry of Works, and the Statistical Institute of Belize, whose functions are critical to the successful implementation of the MDP.

The Town Council will strengthen cooperation with the neighbouring villages of Trial Farm and San Jose Palmar. Consideration should also be given to the inclusion of Orange Walk Town Council
representatives on the local lots committee so that subdivisions under review for approval will give due regard to the plan.

5.1.1 Town Council, Mayor and Staff

This section outlines how the MDP will be managed, including its integration into the decision-making process and engagement of residents and other stakeholders in its further elaboration.

In order to implement the MDP and incorporate the implementation of its recommendations in the municipal decision-making process, the Orange Walk Town Council will appoint an Inter-departmental Strategy Team drawn from the LPWG core team and representatives of key municipal departments. Presided over by the Mayor, the Strategy Team will review progress in the implementation of the MDP and periodically propose specific interventions to implement its recommendations. It will assist the Town Council in the preparation of a three-year capital investment program and ensure that the annual budget clearly identifies capital and recurring expenditures specifically designated to implement MDP objectives. Where appropriate, the granting of licenses will include a review of the suitability of the proposed activity in the context of the MDP’s economic objectives.

In addition, the Strategy Team will actively engage residents and the broader community of stakeholders in the elaboration of the proposals outlined in the Plan for the implementation of the MDP. This includes the preparation of semi-annual progress reports on the implementation of the MDP for the residents and receiving recommendations and feedback on reports and updates provided. As part of this community outreach, Orange Walk Town will hold periodic meetings with the six neighbourhood areas designated by the Town Council and assigned to individual Councillors. See Annex 3: Public Outreach Strategy.

A utility coordination committee will be created to ensure effective coordination among all utility agencies in the upgrading of existing infrastructure systems and the provision of new infrastructure.

The successful implementation of the municipal development plan depends on accurate, reliable and up-to-date information. New statistical and spatial data created by the LPWG in the development planning process will be made available to all municipal departments and shared with the Lands and Surveys Department, the Ministry of Natural Resources and Agriculture, the Ministry responsible for Local Government, other national regulatory and permitting agencies NGO entities that are interested in the development of the municipality and with the private sector.

The municipality of Orange Town, under the guidance of the Mayor and the Town Administrator, will be responsible for the maintenance of this spatial database. It will be updated annually to include:

- Changes in land uses, including new subdivisions;
- Road alignments and road conditions; and
- Flood prone and environmentally sensitive areas.

These maps will be made available to the public.
Figure 29: MDP Implementation and Coordination-Orange Walk

<table>
<thead>
<tr>
<th>Responsible Body</th>
<th>Function</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Planning Working Group</td>
<td>• Monitors &amp; prepares annual MDP updates</td>
<td>Technical Core (Inter-Departmental Strategy Team)</td>
</tr>
<tr>
<td></td>
<td>• Ensures linkages to other municipal programmes and budget and investment planning</td>
<td>Policy and Programmes Council, Civil Society</td>
</tr>
<tr>
<td></td>
<td>• Revises MDP every 3-5 years</td>
<td></td>
</tr>
<tr>
<td>Public Utility Coordination Committee</td>
<td>• Coordinates with utility companies and the Public Utilities Commission (PUC) on service standards, programmes and projects</td>
<td>Representatives of all utility companies, council representative as chair, operations manager</td>
</tr>
<tr>
<td></td>
<td>• Develop its technical capacity to function as the Council’s Engineering Department</td>
<td></td>
</tr>
<tr>
<td>Communications Committee</td>
<td>• Promote the MDP externally (to GOB international development agencies, NGOs, funders and investors) and internally (with residents and the business community) by organizing neighbourhood meetings.</td>
<td>Locally appointed</td>
</tr>
<tr>
<td>Land/Lots Committee</td>
<td>• Coordinate with LUA regarding land development and new sub-divisions and growth areas within the town and in adjacent communities, ensuring alignment with the MDP and infrastructure</td>
<td>Council is represented on the committee through its Evaluation Dept., a representative from municipal works</td>
</tr>
</tbody>
</table>

5.1.2 Staffing and Human Resource Needs

This section highlights the staff resources needed to continue the planning process and implement and manage the plan. Suggested below are five skill sets that will be useful at the local level. Orange Walk should consider how to deploy these skills, whether through staff appointments or temporary consultancies.

Orange Walk Town Council is committed to engaging in the collaborative, inclusive, and transparent planning process outlined in the MDP and will continue to support the development of the urban planning and management skills among its staff initiated under the BMDP. The professional skills required for the implementation and periodic update of the plan include:

- **Urban Planning and Building Inspections** – to coordinate the planning and design of infill and expansion areas in the town in consultation with the community, the Land Utilization Authority, the MNRA, and other permitting and regulatory agencies. Initial efforts will focus on developing the capacity of staff in building inspections and land management and administration.

- **Infrastructure Planning and Investments** – to coordinate the maintenance and improvements of infrastructure systems through capital investments. Initial efforts will focus on building the capacity of current staff to manage the development and implementation of catalyst projects. This
includes assessing infrastructure needs; planning, budgeting and contracting for their improvement; and monitoring implementation and effectiveness.

- **Community Outreach** – to work with community and resident groups, NGOs and business associations, as well as central government agencies, to implement the MDP. Initial efforts will focus on building staff capacity including: strengthening communication skills; identifying and engaging critical stakeholders; promoting the municipality as a desirable location for private investment; and advocating the implementation of MDP catalyst projects.

- **Financial Planning and Revenue Enhancement** – to improve the valuation and assessments of real property and the effectiveness of tax collection; to develop annual budgets in the context of a multi-year capital investment strategy.

- **GIS and MIS** – to support management, with particular reference to: property evaluation and revenue enhancement; the delivery and management of such services as solid waste collection, and the maintenance and upgrading of infrastructure networks.

The initial stages of the MDP implementation will be used to build an inter-departmental team to provide strategic and operational guidance. In addition, some necessary skills can be acquired through short-term temporary consultancies. Obtaining advice on initial project concepts will be enhanced through the appointment of working committees; technical assistance programs from the GOB; the participation of the Engineering and Architectural Associations and other professional associations; and partnering with Belizean and, possibly, foreign universities.

### 5.2 MDP Implementation Strategy

This section links back to the overall MDP Policies, Programs and Projects identified in Chapters 2, 3 and 4 and offers to identify short-term, medium-term and long-term activities. The table is linked to text where examples of activities to be undertaken among the short, medium and long-term categories can be listed. Future updates to the MDP will provide the opportunity to adjust the timing of the projects, especially in regards to the short and medium term, based on progress in the last year and the availability of funding from local and external sources. Given that this is an implementation section that is linked more closely to your budgeting and management process, the time frames are shorter that noted in previous chapters.

The Orange Walk Town MDP has been developed to guide the future development of the municipality. The plan has been developed to implement the ambitious vision of the future articulated in Chapter 2, the practical and incremental implementation strategies proposed in Chapter 3, and the initial infrastructure programmes and projects outlined in Chapter 4.

<table>
<thead>
<tr>
<th>MDP OVERALL POLICIES</th>
<th>PROGRAMMES</th>
<th>PROJECTS</th>
<th>Short Term</th>
<th>Medium Term</th>
<th>Long Term</th>
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<tr>
<td><strong>1: Promote economic development</strong>&lt;br&gt;<strong>[CHAPTER 4]</strong></td>
<td>1.1: Small local business development</td>
<td>1:Market Place improvement and expansion</td>
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<td><strong>2: Land use planning, zoning and urban design</strong></td>
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<td>2.2: /Industrial areas</td>
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<td><strong>CHAPTER 3</strong></td>
<td>2.3: Neighbourhood sub-centres</td>
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<td></td>
<td>2.5: Architectural guidelines</td>
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<td></td>
<td>2.6: Environmentally sensitive areas protection</td>
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<td></td>
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<tr>
<td>3: Preservation of historic architecture</td>
<td><strong>CHAPTER 4</strong></td>
<td>Covered in Program 2.5</td>
<td>X</td>
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<td>4: Improve infrastructure</td>
<td>4.1: Street Improvement</td>
<td>1: Intersections</td>
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<td>2: Priority streets</td>
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<td>3: Town-wide/collector streets</td>
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<td>4: Flood mitigation and resilience</td>
<td>4: LiDAR Survey</td>
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<td></td>
<td>5: Drainage upgrading</td>
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<td>6: Main arteries and collectors</td>
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<td>7: Feasibility Study</td>
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<td>8: Feasibility Study</td>
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<td>5: Improve public transportation</td>
<td>5.1: Improvement of transportation facilities</td>
<td>1: Bus parking area upgrading</td>
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<td><strong>CHAPTER 4</strong></td>
<td>6.1: Open space provision and upgrading</td>
<td>1: Central Park</td>
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<td>2: Philip Alvarez Park</td>
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<td>3: Nature Park</td>
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<td>4: San Lorenzo Park</td>
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<td>5: Playground: Sandy Field Park</td>
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<td>6: New playground</td>
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<td>8: Provide sport and recreation opportunities</td>
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<td>9: Social and cultural development</td>
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<td>10: Municipal Finance and Administration</td>
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</tbody>
</table>

Page 70
5.2.1 Short-term Programs and Projects
These will typically be single stand-alone projects that are relatively straightforward to develop and manage, have numerous strengths and opportunities and few or no weaknesses and threats. Only municipal approval is required for their implementation. The following short-term projects should be considered for implementation within 12 months:

- Review and assessment of existing programmes and projects to ensure that they are aligned with the MDP;
- Assess the technical and financial scope of proposed projects to ensure that they can be undertaken with available internal and/or external resources;
- Build partnerships with communities and businesses that will benefit from the proposed projects that and identify conditions for participation including: enhanced tax collections; community maintenance agreements or direct cost sharing contributions.

Priority short-term projects in Orange Walk include:

- Upgrading of intersections (Program 4.1);
- Flood mitigation and climate change resilience (Program 4.2); Apply for the GOB funding to advance the development of a flood mitigation and resilience programme; secure the support of the Mayors’ Association;
- Open Space Improvements (Program 6.1);
- Guadalupe Street Catalyst Project (see below).

5.2.2 Medium-term Programs and Projects
In addition to building managerial experience in the implementation of short-term programmes and projects, the Orange Walk Town Council will need enhance its ability to generate revenues through the improved collection of local taxes and fees during the first year of the MDP. Concurrently, it will prepare a Medium-term action plan for future interventions. Medium-term projects should be generally considered as having a three-year timeframe; they may also be a part of a larger multi-stage intervention have longer lead-in times, and require pre-feasibility studies and partnerships with funders and government.

The priority for implementing medium-term projects will be updated on an annual basis (see street and drainage improvements as outlined in Chapter 4 and the annual MDP updating and budgeting process outlined below). Examples of medium-term programmes in Orange Walk Town include:

- **Downtown Improvement Scheme for Guadalupe Street** (Programme 2.4) – Form a planning committee; secure design resources for area planning and design; and coordinate with Local or Central Building Authority (LBA/CBA) and Land Utilisation Authority (LUA).
- **Expansion of main roads and utilities** (Programme 4.3) – Identify and improve strategic ‘collector’ roads to facilitate development and circulation in Zones 2 and 3. First step: demarcation of rights-of-way with boundary markers.
- **LiDAR Survey** (Programme 4.2) – Prepare LiDAR Survey; The most effective and cost-efficient way to address the drainage issues faced by Orange Walk is by preparing a comprehensive drainage plan. To do so a critical piece of information is required –elevations.
To effectively gather such data, a LiDAR (Light Detection And Ranging) study will be conducted.

- **Growth Zones** (Programme 2.1) – Establish a working group with the neighbouring village councils to identify opportunities for a complementary land use planning strategy between the Town Council and the Village Councils.

- **Planning and Design Tool and Regulations to guide development.** Various programmes have been identified under the policy for Land Use Planning and Design Regulations Programs 2.1 to 2.6. Review each program and identify launching activity; for example:
  - **Industrial Areas** (Programme 2.2) – Establish a planning committee and secure funding for pre-feasibility study on proposed commercial and industrial development area.
  - **Neighbourhood sub-centres** (Programme 2.3) – Organize a competition to design improvements to the four neighbourhoods commercial sub-centres to make them efficient and attractive community-friendly assets.
  - **Environmental Protection** (Programme 2.6) – Secure assistance from local and national NGOs (such as the Belize Audubon Society or Programme for Belize) to develop guidelines and enforceable regulations to guide and manage development on the banks of the New River.

- **Upgrading the bus parking area** (Program 5.1)

### 5.2.3 Long-term Programs and Projects

Longer-term projects will typically require more than three years to implement. The town’s project management strategy will include multiple projects with overlapping staging; the packaging of different funding sources and partnerships; and a likely need for pre-feasibility studies and environmental assessments. Long-term projects may include activities that depend on improved municipal planning and management as well as further social, economic and environmental improvements. Examples of longer-term programmes that Orange Walk will pursue include:

- **Building improvement incentives for property owners** – The town, in association with the Mayor’s Association and with assistance from the Ministry of Local Government, explore the potential use of fiscal or licensing incentives to encourage property owners to improve the condition of their buildings and lots.
- **Extending roads and utilities to expansion zones** (Program 4.3)
- **Environmental improvements** – Extension of the sewerage network to unserviced areas (Program 4.4).
- **Sport and recreation and cultural facilities.**

### 5.3 Financing Local Development

*This section articulates MDP’s financial planning goals in terms of internal and external funding.*

Orange Walk Town is committed to increasing its level of locally generated revenue and leveraging external funding to finance the delivery of delivery of high quality services to its residents and businesses.
As part of the BMDP, there has been a considerable effort to enhance local revenue generation through updated property evaluations and higher collection rates. These increased revenues will enable municipalities to provide better services and pay for badly needed capital investments. Orange Walk has done an above-average job of collecting property taxes and arrears compared to other towns, but still has a large arrears balance that can be reduced.

The link between the quality of public services and local tax collection is critical since there is a direct relationship between the willingness of residents and businesses to pay their taxes and a sense that they are receiving ‘value for money’. Tangible demonstrations of service improvement can have a profound impact on tax collections.

Orange Walk will raise internal funds through partnerships with residents and businesses. For example, a public-private partnership can be created to undertake physical improvements in a distinct geographic area: a zone, a neighbourhood, a street, or the downtown core area. Key priorities are agreed upon with residents and/or businesses and specific interventions defined, such as cleaning up of vacant lots, improvements to the roads, drainage and sidewalks; community facilities and open space; renovation of facades; or social housing.

In such a partnership the participants identify the complementary roles of the municipality, businesses, property owners and residents, key priorities, and for each priority a list of specific interventions and how they will be financed. The contribution of the private sector should be voluntary or negotiated in an open process and can take several forms, for example: privately raised funds, sweat equity, a one-time tax assessment, or a multi-year phased increase in the area’s property tax. Once the nature of the interventions and their financing has been agreed among the partners, these funds should be set aside in an account separate from the municipal budget.

The catalyst project currently under development as part of BMDP is an example of this sort of partnership. Once the town has gained experience from these initiatives and executed a successful public-private partnership, the model can be institutionalized as a municipal program.

The Orange Walk MDP provides an overall vision and plan for the municipality within which these partnerships operate. Seeing that the partnership projects are an integral part of a comprehensive plan gives external funders confidence that the projects will succeed. Also, external funders have their own funding criteria, and the municipality can draw on the different chapters in the MDP to develop a rationale for a funding request. For example, if a local foundation has made a programmatic commitment to climate change adaptation, drainage projects or programs that involve a series of projects could be drawn from the MDP and presented with a funding application. Having programmes and projects specified as part of an overall plan enables the municipality to respond quickly to time-sensitive or unanticipated funding opportunities, such as a fiscal year-end supplemental allocation of central government funding for road improvements.

Finally, a program of planned projects will be used as fundraising tool when appealing to audiences with particular interests, such as the Belizean diaspora in the United States. Descriptions of specific projects will form part of a targeted appeal for donations from individuals and groups with familial or historical ties to Orange Walk.
In the short to medium term, grants from international development organizations and local charitable institutions will represent an important source of funding for Orange Walk.

Among international development organizations the Inter-American Development Bank (IADB) may be an important if indirect source of funding for Orange Walk projects. In Belize the IADB makes loans only to the national government. Municipalities can access loan funds only by submitting project funding requests through the appropriate channel, i.e. their annual requests to the Ministry of Local Government. However, municipalities can tailor their projects to fit IADB lending priorities. For example, IADB’s Country Strategy 2013-17 calls for an increase in overnight tourism, particularly in less popular destinations like Punta Gorda and Orange Walk. As part of its annual budget request to central government, Orange Walk can select projects from its MDP that meet IADB criteria and highlight IADB priorities.

The Caribbean Local Economic Development Program (CARILED) may also be a source of grant support for some Orange Walk MDP projects. Currently CARILED supports projects only in San Ignacio-Santa Elena and Belmopan. However, in 2014 it intends to begin work with two additional municipalities that have yet to be selected. Orange Walk can apply now for inclusion in CARILED’s program so that the town will be eligible for project funding in subsequent years.

In the medium to long term, debt financing via bank borrowing or issuance of municipal bonds may become an option for Orange Walk. Currently only Belize City and Belmopan have the legal authority to issue municipal bonds, and all municipalities in Belize are limited in their capacity to borrow funds by the need for central government approval and sovereign guarantee. Municipalities have had bad experiences with short-term bank borrowing in the form of overdrafts, which carry high interest rates and expensive fees. However, discussions with local bankers indicate that less expensive financing is available in the form of term loans or revolving lines of credit, and that rates in the 7-9% range are feasible in today’s market. Repayment of these credits would be secured by dedicated revenue streams, either from a specific tax or fee, a central government subvention, or a revenue-generating project such as a bus station. For example, Belize City has a loan from Atlantic Bank that is secured by drivers’ license fees collected online.

Debt financing also requires a more sophisticated and longer term budgeting process that demonstrates to lenders and markets that future revenue flows will be forthcoming, not only to repay loans but to pay for recurring expenses as well. Local bankers say they have excess liquidity and are eager to get into the municipal market, but at the same time are aware of municipalities’ deficiency in this area. They also are concerned that municipal officials often lack a grasp of financial planning and structuring that impedes their ability to understand and manage large development projects.

Orange Walk can consider negotiating a seasonal line of credit secured by anticipated tax collections in order to smooth cash flow through the year. Most tax revenue is collected by the town in the fall months, as does the annual central government subvention. Municipalities currently cut back on activities such as road repair during the summer months because they lack the cash to pay salaries and purchase materials. A line of credit would enable municipalities to maintain level operations throughout the year, resulting in better services and more economical procurement. The line would be fully paid down in the fall when tax revenues and central government transfers arrive.

Although the implementation of the Orange Walk MDP will initially depend primarily on internal funding sources, it is anticipated that the municipality will become able to tap external sources as it gains
more experience and autonomy in municipal management. Orange Walk will explore opportunities for longer-term low-interest borrowing opportunities for municipal improvements based on well-defined projects and sound cost-recovery principles to repay the loans.

**Internal Funding:**

1. **Revenue enhancement**: Orange Walk will continue its revenue enhancing activities, including updating the valuation of properties and better collection of property and other taxes to generate funds for both operations and maintenance and capital investments.
2. **Arrears collection**: Orange Walk will establish procedures to pursue and collect tax arrears from residents.
3. **Partnerships**: Orange Walk will seek partnerships with other communities and businesses to undertake infrastructure improvements, the maintenance of open spaces and drainage and other improvements.
4. **Asset management**: Orange Walk will implement an asset management program to use existing municipal assets to leverage development initiatives.
5. **Private sponsorship**: Orange Walk will encourage and facilitate local private sponsorship of projects of public interest, such as parks and gardens

**External Funding**

1. **Borrowing**: Orange Walk will assess the implications of external borrowing to finance projects that have the potential to increase its economic competitiveness, increase revenues, reduce service costs, or increase the residents’ overall quality of life.
2. **Municipal Bonds**: Municipal bonds can be a cost-effective alternative to bank borrowing, as demonstrated by the recent experience of Belize City. Orange Walk will cooperate with other towns to lobby Government to extend authority to issue bonds to municipalities besides Belize City and Belmopan.
3. **Central Government**: Orange Walk will continue to seek external funding sources to support and undertake programmes and projects identified in the MDP, including leveraging Central Government funding (budget subvention for staff support and additional grants and loans for capital works). The town will use its inventory of planned projects in the MDP to respond rapidly to funding opportunities as they arise.
4. **Development Agencies and NGOs**: Orange Walk will actively consult with development agencies, charitable institutions, and other NGOs to find funding for MDP projects in their areas of interest. Specifically, the town will pursue funding in 2014 from CARILED for projects contained in the MDP, and explore opportunities for IADB funding through central government.

5.3.1 Coordinating Capital Improvement Investments

This section proposes to use the MDP as a strategic plan to coordinate capital improvement investments that are linked to the annual budget cycle. While the normal Belize budget preparation cycle for municipalities begins in June/July, it is suggested that the budget preparation cycle begin earlier to provide additional time to involve citizens, the business community, local institutions, and external stakeholders in the identification of projects to be undertaken.
The development and approval of the Municipal Development Plan by the Orange Walk Town Council is the basis for financial investment planning and the coordination of investments from internal and external sources. The establishment of a longer-term (three-year) capital investment planning process should be considered. In the interim the Town Council commits to using the MDP and the annual budget process to promote forward planning that will:

- Establish formal mechanisms for decision-making and citizen engagement as part of an annual budget process that allows elected Council members to effectively manage and guide internal and external resources to support municipal policies and priorities;
- Coordinate and leverage local and external funds to support municipal development policies and projects to improve services delivery. This includes having in place an inventory of desirable projects that support the MDP and that can be readably implemented when internal and external funding becomes available.
- Link management decisions and the financing of community services to longer-term strategic planning through an annual review of the Municipal Development Plan.

The following calendar is proposed for the preparation of the annual budget.

**Preparation—Annual Municipal Update (February/March)**

During this two-month period Orange Walk Town will appoint a coordinating unit/team to prepare an annual municipal report that will be presented in town forums and the full Council. The annual report will summarize key activities accomplishments and constraints during the past year and the status of the budget.

**Output:** Annual Municipal Report

**MDP Strategy Review (April-May)**

The review of the achievements of the past year’s MDP policies and projects offers the municipality the opportunity to prepare an annual update of the Municipal Development Plan with particular reference to the implementation status of programs and projects identified in the plan and activities to be undertaken in the next year. As part of the review, Orange Walk will involve the area representatives and concerned government agencies whose responsibilities and decisions impact on the MDP and its implementation.

A key output of the Strategy Review will be an assessment of new opportunities and potential impacts of existing and new government programs on the objectives of the MDP and the identification of new activities for the coming year and their incorporation in the municipal budget. The MDP Strategy review will be presented to the full council, town forums and neighbouring jurisdictions. This combination of community meetings, inter-departmental reviews and discussions with central government agencies and regulators offer an opportunity to identify potential projects and funding for the next budget cycle.

**Output:** MDP Strategy Updates/Town and Neighbourhood Forums
Budget Preparation (Mid-April-June)

- Review assumptions on revenue collection, central transfers and external funding.
- Assess financial condition and potential for previous trends to continue, including central transfers and property tax collection rate and other fees.
- Identify balance of funding available for capital improvements after meeting recurrent cost projections.
- Identify priorities for capital improvements and the packaging of community infrastructure upgrades that can be done in cooperation with communities and businesses in a partnership program.
- Link infrastructure programme categories to zones identified in Chapter 3.
- Solicit and confirm project requests from all municipal departments, stakeholders, community organizations and businesses.
- Select projects based on agreed criteria or SWOT analysis and prepare capital budget as part of annual budget. Identify capital investments that are funded and implemented directly by central government or external funders.

Prepare final budget for Council (July/August)

Prepare final budget for submittal to the Town Council and forward to Ministry of Local Government.

Prepare Technical Projects (October/November/December)

Upon submittal of budget to Ministry of Finance begin revising capital budget based on available funding and additional efforts undertaken to raise funds. Begin preparing technical documents and undertake consultations with communities for priority projects that have possibility of funding.

Implementation of new projects (January onwards)

Begin implementing projects based on available funding. Final budget adjustments to be made based on approval of Government budget in March/April.

5.4 Monitoring and Revising the Municipal Development Plan

The annual review of MDP programs and projects is a critical step in the revision of the MDP every three years to assess the effectiveness of policies and land use proposals will benefit from the selection of key indicators.

The Town Council, through its LPWG, will review and update the Municipal Development Plan on an annual basis as part of the annual budgeting process noted above. The Council also commits to a formal review and revision of the MDP within three years of its publication. The revision will allow the Council to make necessary adjustments to long-term planning considerations.

Plan monitoring and evaluation

Orange Walk, in consultation and with support from central government departments will monitor key indicators to measure progress and outcomes of the municipal development plans and the process associated with managing the plan. These indicators are noted in Annex 2. A system of recording, saving, and accessing the evaluations of the MDP at different stages should be in place before monitoring and evaluation begin.
5.5 Coordination with GOB agencies and departments

The implementation and effectiveness of the MDP will require strong coordination between the municipal government and central government agencies responsible for economic, environmental and social policies. MDP programmes and projects that will require coordination with central government agencies should be clearly identified.

The Municipal Development Plan will initially function as a non-statutory strategic document regarding Orange Walk Town’s future development. Cooperation with central government agencies and departments responsible for land use and sub-division approvals and the programming of the location and type of infrastructure provision including roads and utility networks will be critical to the successful implementation of the MDP. Key issues for the Town that relate to its proposals include:

- Designation and protection of environmentally sensitive areas along the River Bank and the two savannahs and the Pico de Agua water system – Ministry of Forestry, Fisheries, & Sustainable Development; Ministry of Natural Resources & Agriculture; Ministry of Tourism & Culture; national and local NGOs;
- Architectural design and land-use guidelines to applicable to the construction of new buildings, the maintenance of historic buildings. Building densities in downtown improvement areas – Local and Central Building Authority; Ministry of Housing and Urban Development; Architects and Engineers associations;
- Sub-division and utility standards for future development in Zone 3 and Sector plans, with suitable locations for open spaces and social infrastructure – Land Utilization Authority; Ministry of Natural Resources & Agriculture; Public Utilities Commission; Ministry of Education, Youth & Sports;
- Designation of future right of ways – Ministry of Works & Transport;
- Building improvement incentives for property owners – Ministry of Labour & Local Government; Local and Central Building Authority;
- Relocation of the bus terminal – Ministry of Works & Transport; Ministry of Natural Resources & Agriculture
- Feasibility study for Solid Waste Disposal – The Ministry of Natural Resources and the Environment and the Solid Waste Management Authority

5.6 Catalyst project

As part of the MDP implementation a catalyst project has been identified that can create a momentum for the implementation of the overall MDP. Criteria for selecting this first catalyst project include addressing priorities and immediate needs and that the project can be implemented within 6 to 12 months and has strong support from the community.

As a catalyst project the Orange Walk LPWG proposes to partner with the Guadalupe Street Improvement Project Committee (GSIP) to achieve a complete upgrading of their street. Guadalupe Street is a heavily travelled street that runs between two main arteries: at its northern end is San Antonio Street, a primary east-west route, and at its southern end is the Northern (Phillip Goldson) Highway, the principal north-south route. In addition to cars and trucks, it is part of the main route for buses accessing the main terminal in the town, and a popular route for children walking and biking to school. Structures along the street include about 15 active businesses and more than 20 homes. Upgrading the street will:
- Draw more customers to local businesses
- Raise property values
- Improve safety for walkers and bikers, especially school children
- Improve drainage
- Provide a model for upgrading of other streets in Orange Walk and other towns
- Improve traffic management

The project is an example of a municipality taking advantage of a private initiative to achieve a planning objective. The GSIP has taken responsibility for raising all the funds needed to finance the project. The municipality has agreed to contribute certain municipal revenues derived from Guadalupe Street: property taxes, including any collected arrears from back years; and trade and liquor license fees. These funds have been sequestered in a bank account to preserve them for use on the project.

This project can be considered a public-private partnership (PPP) because the private sector in the form of GSIP and Town Council will cooperate in its planning, execution and funding. It will serve as a model for replication with other businesses and landowners on other streets.
ANNEX 1: PLANNING INDICATORS AND DEVELOPMENT STANDARDS
DESCRIPTION OF PLANNING INDICATORS AND RECOMMENDATIONS

Building form
The control of the built-up form is one of the basic aspects of urban regulations. It can be used to encourage or discourage certain uses, depending on the planning objectives. In our case, there are two fundamental objectives that are intended to be met through the proposed indicators:

- Densification of the urban fabric: bring in more activity, buildings, and a higher population to the same space.
- Creating attractive streets for pedestrians and for supporting economic activities, creating continuous facades and favoring a variety of uses.

01. Maximum number of floors
This indicates the maximum number of floors that may be built (excluding basements). It can be complemented with regulation on the maximum height of the facade:

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<tr>
<th>Floors</th>
<th>Height</th>
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<tr>
<td>3</td>
<td>10 meters</td>
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<td>2</td>
<td>7 meters</td>
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The objective of this indicator is to promote an increase in building density as few constructions reach even three floors today. This can also avoid the construction of tall buildings that would alter the current urban landscape.

02. Minimum housing density
One can only influence the density in a large area of land through an area-based development plan. The recommended density of 6 houses per acre refers to the total area that will be urbanized. Thus, once streets and other non-residential spaces are excluded, the resulting density would increase to 10-12 housing units per acre. The objective here is to increase housing densities, avoid excessive land consumption, reduce the cost of extending infrastructure services, and creating the potential for the provision of public transportation services in the future.

03. Minimum lot size
This indicates the minimum size of lots where buildings are allowed. This indicator recommends lots smaller than the norm in Belize (about 400 m2). This lot size works in rural areas but in urban environments it leads to low building density, and high costs of urbanization and maintenance. Reducing the minimum size could encourage the subdivision of existing lots and thus lead to a higher densification of the urban fabric.

04. Floor-to-area Ratio (FAR)
FAR indicates the number of square meters that can be built per square meter of lot area. A built-up area is defined as an area that is covered and enclosed around its perimeter. The proposed FARs are maximum values and are much higher than the existing situation on the ground. The intention here is to provide owners with an incentive to build to the maximum capacity and thus make a more efficient use of the land.
05. Minimum FAR in new development areas (as a total of the area)
It indicates the minimum FAR that must be attained in newly urbanized areas of sector 3. This requires an area-based Development Plan that allocates the FAR across the various uses. The minimum FAR refers to the entire development area. Once streets and public spaces are excluded the FAR per lot will be higher. The objective is to ensure a minimum built-up density.

06. Street front setbacks
It is the maximum distance between the building and the front of the lot. Contrary to the National Guidelines which require a setback, the proposed indicator aims to avoid excessive setbacks and parking in front of the lots, particularly in the Downtown, Sector 1 and along main axes. This will encourage that a continuous street structure with buildings on both sides can be formed, which is good for walking and for supporting business activities. Beyond main axes in Sectors 2 and 3, it would not be necessary to define setbacks as the intention is to concentrate activity along the main axes.

07. Maximum building depth
Indicates the depth of the lot that can be built measured from the street boundary. This requirement is only possible when the maximum setback has been set, as is the case of Downtown, Sector 1, and along the main axes. The objective is to limit the depth of buildings, especially above the ground floor, and ensuring that the interior rooms have sufficient light and ventilation. On the ground floor, the maximum depth can be greater, so that large spaces can be built for accommodating economic activities. The maximum depth limitation would also prevent the subdivision of land into very narrow lots. The maximum building depth ensures that the interior of the blocks remains free of constructions and thus it allows for yards to be created.

08. Maximum height of the ground floor
Indicates the maximum height of the ground floor measured from the ground to the bottom of the ceiling. This standard is set to avoid that the more favorable conditions governing ground floors (greater maximum depth) can be applied to the entire structure.

09. Maximum lot coverage
Indicates the maximum percentage of a lot that can be occupied by a building -- the rest of the lot would be required to remain free of enclosed buildings. This intends to limit the building footprints and to maintain the presence of vegetation.

10. Maximum block length
It indicates the maximum street length that can exist without intersecting perpendicular streets. The objective is to avoid long block fronts that discourage foot traffic. A denser street network favors accessibility over short distances and promotes pedestrian uses. In new developments in Sector 3 the configuration of the street network can be planned. In the rest of the sectors where street are already in place, additional streets should be opened when this indicator is not met. The recommended standard is quite flexible so that most of the existing blocks are in compliance.
Land Uses
The regulation of land uses must be as flexible as possible in order to achieve a diverse urban fabric and avoid unnecessary separation of urban functions. However, there is little room to regulate land uses in areas that are already urbanized or urbanizing. The recommended standards are intended to address the issue within area-based development plans in Sector 3; they can also support and encourage the emergence of economic activities in central areas and along the main axes of Sector 2.

11. Maximum distance to commercial uses
It indicates the maximum distance that can exist between any residential area and any commercial uses in an area-based development plan. The objective is to ensure that residential areas are located within walking distance from commercial areas (approximately 7 minutes walking or 500 m radius).

12. Floor area dedicated to retail/commercial
It indicates the minimum area that must be designated for commercial activities in an area-based development plan. The area is given as a percentage of the total area occupied by private lots (thus it excludes streets and public spaces). The objective is to ensure a minimum provision of commercial uses within the new developments in Sector 3.

13. Space reserved for economic activities
This indicator requires that the ground floor of three storey buildings is designated for some type of economic activity (i.e. stores, warehouses, offices). By allowing the construction of an additional floor the objective here is to provide an incentive to establish economic uses on the ground floors.

14. Recommended concentration of economic activities
It indicates that there must be at least 10 linear meters of buildings with some type of economic use for every 100 linear meters of street. This requirement can only be planned in new developments of sector 3. The goal of this indicator is to ensure commercial activities along the main axes, encourage foot traffic and an active use of public space.

Public Space
Public space must be designed as a place of social interaction that brings residents together and that limits an excessive presence of private vehicles.

15. On-street tree density
In the Downtown, Sector 1 and all areas within 50 meters from a main axis, it is recommended that 1 tree is planted for every 8 meters of road. Depending on the tree species, mainly the size and width the distance in between trees can vary. The objective of this indicator is the provision of continuous shade areas that can encourage pedestrian traffic.

16. Maximum space dedicated for motorized vehicles
The maximum percentage of street area designated for motor vehicles (including parking) is recommended at 60% on main axes, and 80% everywhere else. This indicator is linked to the
improvement of public space as it allows for the provision of sidewalks and trees (trees cannot be planted on narrow sidewalks) and enhances walkability, urban form and quality of life.

17. Minimum sidewalk width
On main axes, the minimum recommended sidewalk width is 2.5 meters, so enough room is left for 2-way pedestrian traffic and tree planning, as well as for the provision of urban furniture (lamposts, benches, garbage bins, etc.). While it would be preferred that this is reserved on both sides of the streets, at least one of the two sidewalks on main axes must be at least 2.5 meters wide. Everywhere else, a minimum width of 1 meter is recommended to ensure some degree of pedestrian safety.

18. Minimum street width
In new development areas, indicator recommends a minimum of 12 meters for the main axes and 7 meters for the remaining streets. The 12 meter minimum width allows for different street sections that in line with the previous recommendations, including: two 2.5 m wide sidewalks, bike lane, on-street parking, and one traffic lane; or one 2.5 m wide sidewalk, bike lane, two traffic lanes, and a 1m wide sidewalk on the other side of the street.

In the case of secondary streets where a minimum width of 7 meters is recommended, streets could be designed to combine both vehicular and foot traffic; alternatively, both uses could be separated by two sidewalks with a lane for cars in the middle.

In any case, the recommended widths allow for a proper proportion (1 and below) measured in building height-to-street width ratio. This proportion affects the ultimate comfort and sunlight exposure of the street, as well as the balance between public space and buildings. In the case of the main axes, a 12 meter street width and a maximum building height of 3 floors result in a height-to-width ratio of less than 1. On secondary streets, 7 meter street width and a maximum building height of 2 floors result in a ratio of less than 1. This relationship is usually not a problem in low-density areas, but it is an important parameter.

19. Provision of open public space for gathering (parks, squares, plazas)
In the case of new developments, it is recommended to reserve a minimum of 2 m2 of land per resident for open public space (parks, squares, plazas, etc). As societies become more individualistic, cohesion and community belonging are enhanced when neighborhoods have adequate public open spaces for gathering and social interaction.

20. Street lighting
It is not possible to set specific standards for street lighting, as this depends in on many factors: total number of hours of daylight, level of cloudiness, paving materials, landscape, etc. Thus, three levels of lighting (high, medium and low) have been set to provide some comparative criteria among the different sectors, namely:

- Highest level, on all streets in Downtown and Sector 1. A high level of night-time illumination will enhance safety of pedestrians and cyclists.
- Medium level, on main axes of Sectors 2 and 3. Being less dense, a medium level of illumination will ensure road safety (night-time visibility of pedestrians and cyclists), as higher vehicular speeds can be expected in these sectors as compared to the central areas.
- Minimum level, in inner areas of Sectors 2 and 3 to guarantee a minimum level of lighting and ensure safety.

Streets must be lit so that they may be used by pedestrians and cyclists.

**Green areas**

21. **Tree density**

This indicates the minimum amount of trees that should be planted in green areas. In a tropical climate such as Belize, the creation of open public spaces should always go together with the provision of shading areas to encourage their daytime use. While this indicator provides a minimum standard for tree planting, it can be altered in accordance with the use of species appropriate to the Belizean climate.

22. **Paving materials in open spaces / permeability of soils**

This indicator applies to all areas that are free of buildings except for streets. Thus, it affects all open space both in public and private lots. The recommended percentage refers to the total space that is not built-up, not to the total lot area. This is intended to ensure the conservation of natural soil that favor vegetation and that improve overall drainage in the rainy season.

**Non-motorized mobility**

Non-motorized mobility (sustainable mobility) contributes to a healthier lifestyle of urban dwellers, improves air quality, reduces the consumption of resources, and improves social cohesion by turning public space into a space community interaction. Towns and cities must be planned for pedestrians. Basic daily amenities should be within walking distance from residential areas and the use of bicycles should be encouraged and supported by integrating it in the design of public spaces.

Mobility is intimately related to urban form. In sprawling or expanding urban areas it is impossible to promote sustainable models of mobility as these depend on mixed-uses and higher urban densities.

23. **Bike lanes provision**

Main axes compound the structural circulation networks in an urban area so it is important that they incorporate bike lanes that allow bikes to be an efficient transportation alternative. Also, as traffic speed tends to be higher on main axes and roads, the provision of dedicated lanes permits bikes to circulate more safely. On secondary streets, some coexistence of both cars and bikes may take place.

24. **Width of bike lane**

The minimum bike lane width is 1.5 meters, enough so that two bicycles can pass at moderate speed. However, a 2 meter width is permitted so that two bikes can pass at high speed.
25. Provision of parking spaces for bikes in commercial uses
At least a parking space for bikes should be provided for every 50m² of constructed commercial uses. Parking spaces could be either outside or inside the buildings but should always be easily accessible from the street.

26. Provision of parking spaces for bikes in public facilities
At least a parking space for bikes should be provided for every 100m² of constructed public facilities. Parking spaces could be either outside or inside buildings but should always be easily accessible from the street.

27. Distance of basic public facilities
In urban areas it is possible to walk at 4 km/hour so that traveling 1 km takes approximately 15 minutes. To encourage pedestrian mobility, it is recommended that all residential areas in sector 3 are located within a 15 minute walk from basic public facilities.

28. Distance to shuttle stops / bike lane network
In urban areas traveling 300 meters by foot takes approximately 5 minutes. In order to promote sustainable mobility and make public transportation viable, bike lanes and shuttle stops must be no further than a 300 meter radius from residential areas.

29. Distance to open public space for gathering
The provision of neighborhood-level public space within a 10 minutes radius from residential areas can encourage the active use of public spaces as places for gathering and social interaction.

Basic public facilities
In new developments, it is necessary to set aside minimum amounts of space for the provision of basic amenities that can serve the needs of the future residents. In the case of Belizean urban areas, basic facilities include education, health, and sport facilities. Religious and cultural facilities require less space and thus can be more easily accommodated into the urban fabric once it has been built up.

30. Education facilities
As education centers occupy much space sufficient areas must be reserved for these uses in new developments. A standard 2 m² per capita is proposed. In order to come up with population estimates the number of homes planned in the new area must be taken into account as well as the average household size.

31. Health
Health clinics or medical offices do not require as much space as schools. This indicator aims to establish well-connected health facilities that are accessible to large shares of the residents.
32. Sports
Sport facilities take up large amounts of space and therefore it is important to set aside areas for them in new developments. In any case, it is recommended that they are contiguous with education facilities so that facilities can be shared and the services improved.
ANNEX 2: MDP MONITORING INDICATORS
<table>
<thead>
<tr>
<th>MDP Implementation Indicators</th>
<th>Benchmarks/Goals</th>
<th>Progress Report</th>
<th>Associated Score</th>
</tr>
</thead>
</table>
| **I. MDP – Outreach and Adoption** | | | Poor = 0  
Good = 1  
Excellent = 2 |
| **i. Number of Public Meetings held about MDP** | | | |
| a. Stakeholder meetings | 0 mtgs. = Poor  
1-2 mtgs. = Good  
>2 mtgs. = Excellent | | |
| b. Neighborhood meetings | 0-2/6 mtgs. = Poor  
3-4/6 mtgs. = Good  
5-6/6 mtgs. = Excellent | | |
| c. Town meetings | 0 mtgs. = Poor  
1-2 mtgs. = Good  
>2 mtgs. = Excellent | | |
| **ii. Plan adopted by Council Resolution** | Not adopted = Poor  
Adopted = Good | | |
| **II. MDP – Plan Management** | | | |
| i. Inter-Departmental Strategy team appointed | No = Poor  
Yes = Good | | |
| a. Number of meetings held | 0 mtgs. = Poor  
1-2 mtgs. = Good  
>2 mtgs. = Excellent | | |
| ii. Utility Coordination Committee appointed | No = Poor  
Yes = Good | | |
| a. Number of meetings held | 0 mtgs. = Poor  
1-2 mtgs. = Good  
>2 mtgs. = Excellent | | |
| iii. Improved capacity of Municipal Staff | | | |
| a. Urban Planning and Building Inspection | No improvement = Poor  
Improvement = Good | | |
| b. Infrastructure Planning and Investments | No improvement = Poor  
Improvement = Good | | |
| c. Community Outreach | No improvement = Poor  
Improvement = Good | | |
| d. Financial Planning | No improvement = Poor  
Improvement = Good | | |
| e. Revenue Enhancement | No improvement = Poor  
Improvement = Good | | |
**f. GIS and MIS**

| No improvement = Poor | Improvement = Good |

### III. MDP - Revision and Coordination

#### i. Review of MDP

<table>
<thead>
<tr>
<th>Annual Municipal Update</th>
<th>No Update = Poor</th>
<th>Annual Update = Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual MDP Strategy Review</td>
<td>No Review = Poor</td>
<td>Annual Review = Good</td>
</tr>
<tr>
<td>Budget Prepared</td>
<td>No Budget Prepared = Poor</td>
<td>Budget Prepared = Good</td>
</tr>
</tbody>
</table>

#### ii. Number of Sessions held with GOB representatives

| 0 sessions = Poor | 1-2 sessions = Good | >2 sessions = Excellent |

### IV. Project Implementation and Financing

#### i. % progress on each short term project

(choose three priority projects)

<table>
<thead>
<tr>
<th>ORANGE WALK Catalyst Project:</th>
<th>0-65% progress = Poor</th>
<th>66- 95% progress = Good</th>
<th>&gt;95% progress = Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORANGE WALK Project 2:</td>
<td>0-65% progress = Poor</td>
<td>66- 95% progress = Good</td>
<td>&gt;95% progress = Excellent</td>
</tr>
<tr>
<td>ORANGE WALK Project 3:</td>
<td>0-65% progress = Poor</td>
<td>66- 95% progress = Good</td>
<td>&gt;95% progress = Excellent</td>
</tr>
</tbody>
</table>

#### ii. % progress on each medium/long term project

(choose three priority projects)

<table>
<thead>
<tr>
<th>ORANGE WALK Project 1:</th>
<th>0-25% progress = Poor</th>
<th>26- 50% progress = Good</th>
<th>&gt;51% progress = Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORANGE WALK Project 2:</td>
<td>0-25% progress = Poor</td>
<td>26- 50% progress = Good</td>
<td>&gt;51% progress = Excellent</td>
</tr>
</tbody>
</table>
c. **ORANGE WALK Project 3:**

<table>
<thead>
<tr>
<th>Progress</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25%</td>
<td>Poor</td>
</tr>
<tr>
<td>26-50%</td>
<td>Good</td>
</tr>
<tr>
<td>&gt;51%</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

iii. % increase in funding for capital projects

a. **Internal**

<table>
<thead>
<tr>
<th>Increase</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25%</td>
<td>Poor</td>
</tr>
<tr>
<td>26-50%</td>
<td>Good</td>
</tr>
<tr>
<td>&gt;51%</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

b. **External**

<table>
<thead>
<tr>
<th>Increase</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25%</td>
<td>Poor</td>
</tr>
<tr>
<td>26-50%</td>
<td>Good</td>
</tr>
<tr>
<td>&gt;51%</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

TOTAL POINTS

<table>
<thead>
<tr>
<th>Score rating</th>
<th>Total Points</th>
<th>Percentage score (<em>/100%</em>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below Average</td>
<td>0-23</td>
<td>&lt; 60%</td>
</tr>
<tr>
<td>On Track</td>
<td>24-30</td>
<td>60% - 75%</td>
</tr>
<tr>
<td>Excellent</td>
<td>31-40</td>
<td>&gt; 75%</td>
</tr>
</tbody>
</table>
ANNEX 3: PUBLIC OUTREACH STRATEGY
As stipulated by the Belize Municipal Development Plan Operations Manual, citizen participation must be incorporated into the Municipal Development Plans, which require “formal adoption of a Municipal Growth Plan by the Town or city council after conducting a series of prior public meetings”. Additionally, the Terms of Reference for the LPWGs specifies that they should “provide the means for the participation of major public, private and voluntary sector stakeholders in the drafting of the MDP, and facilitate comprehensive consultation of the general public on the draft MDP.” This section proposes a three-step strategy for engaging citizens with the LPWGs.

Orange Walk’s ability to effectively engage with citizens in the planning process is critical to the successful implementation of the MDP. Many proposed projects and implementation strategies require partnerships between citizens, the business community, and elected officials: garnering citizen buy-in will be crucial to these projects’ success. Furthermore, this engagement will promote the principles of good governance, including public participation, transparency and accountability, as well as ensure more effective implementation of the Plan.

Orange Walk is adopting outreach strategies to stimulate resident interest and actively engage them in participating in municipal development. These strategies will ensure that residents perceive the planning process as inclusive, dynamic and continuous such that a planning culture is fostered, achieved, and sustained.

A three-phase approach to public outreach has been adopted to inform and engage municipal residents in the planning process. These phases are: (i) Formalization of the Local Planning Working Group and Informal Consultations; (ii) MDP Dissemination; and (iii) Formal Adoption of the MDP. These phases are elaborated below.

**Figure 30: Phasing of Public Outreach Strategies in Municipalities**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Strategies Utilized</th>
</tr>
</thead>
</table>
| 1. **Formalization of the LPWG and Informal Consultations** | In this preliminary planning period, the membership of the LPWG is formalized, consisting of 5 civil society members who represent various sectors of their community. In the planning process, they are the first level of citizen engagement. | • The LPWG members participate and share their knowledge, experiences, ideas, and vision in planning sessions.  
• LPWG members conduct informal consultations which include phone calls and brief interviews with other knowledgeable citizens. |
| **Timeline** | **Chapters 1, 2 and 3 of the MDP are drafted.** | **Phase 1 strategies remain active.**  
**Public Displays**: the draft MDP documents, slide presentation, maps and pictures are on public display in town hall, public library, churches, schools etc., as well as incorporated into the Orange Walk Town website and social media platforms. |
| 2. **MDP Dissemination** | In this intermediate planning period, the LPWG prepares the draft Chapters 1, 2 and 3. The content of those chapters as well as information about the planning process is disseminated to the wider citizenry for feedback. | **Phase 1 strategies remain active.**  
**Public Displays**: the draft MDP documents, slide presentation, maps and pictures are on public display in town hall, public library, churches, schools etc., as well as incorporated into the Orange Walk Town website and social media platforms. |
### 3. Formal MDP Adoption Phase

**Timeline**

**Revision of draft MDPs**
In this final planning period, the LPWG prepares the draft Chapters 1 to 5 of the MDP. Citizens should be aware of the planning process and should have been providing feedback on the initial chapters. Further public consultation will occur, with an eye towards formally adopting the MDP at an open town meeting.

- **Public Meetings:** Presentations on the draft content of the MDP will be given in the open council meetings and town meetings.
- Phase 2 strategies remain active.
- **Stakeholder Meetings:** Small group meetings with key stakeholders in the municipality, such as area representatives, large business owners, and NGOs, will be held.
- **Community Meetings:** Held with communities to discuss specific projects in their vicinity.
- **Public Meetings:** Open town meetings where MDP can be transparently considered and eventually adopted.