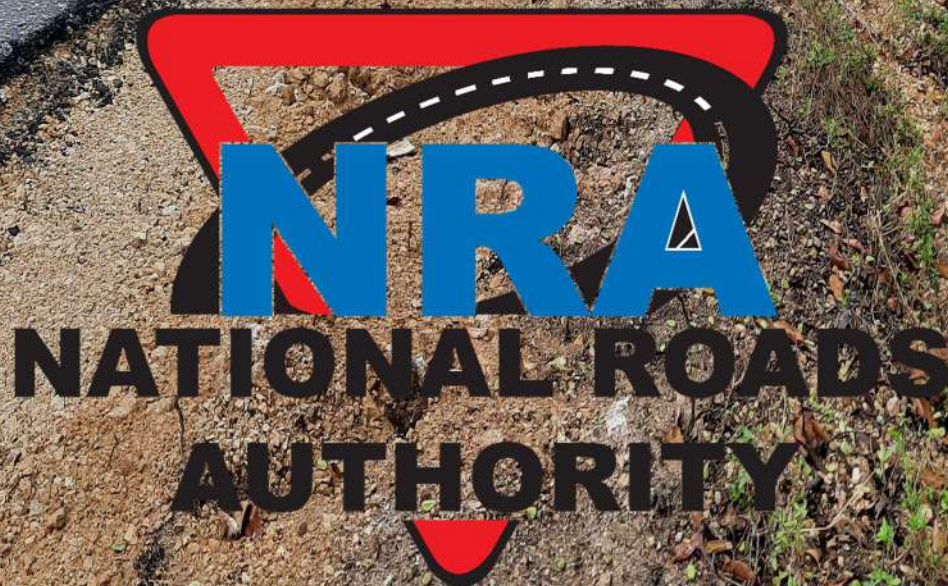




STRATEGIC OPERATIONS PLAN 2022 – 2024



NATIONAL ROADS AUTHORITY 370 North Sound Road, Grand Cayman





Foreword

Message from the Managing Director



I am pleased to present the three-year Strategic Plan for the National Roads Authority (NRA). This plan, which covers the period 2022-2024, is the result of a collaborative effort involving staff at all levels of the Authority, and will serve to guide the NRA's strategic priorities over the next three years.

The NRA since its formal inception on July 1, 2004 has made significant contributions to the overall economic stability of the country by continuing to build and maintain quality roads that provide access and mobility to the people of the Cayman Islands.

In preparing for the next three years, we have reviewed our strategy to ensure alignment with the expectations of our parent Ministry, the PACT Government's Strategic Policy Statement 2022-2024, and the needs of the people of the Cayman Islands.

The NRA Strategic Operations Plan 2022-2024 is structured by our core business areas: Maintain, Manage Trips, Build and Enable. Everything we do contributes to our core business. This helps us allocate our operations budget derived directly from the Road Fund to the highest priorities to keep us focused on achieving our vision. Improving the travel time and ride quality of road users is a key focus area for us. We intend to focus more acutely on customer satisfaction by optimizing the experience of their daily travel on the road network.

The Strategic Plan is a high-level snapshot of our objectives, goals and targets for the period 2022-2024. I look forward to working with my colleagues and stakeholder partners to deliver these commitments for our citizens.

The goals and objectives of this three-year plan are for a refined Authority that is successful in delivering on its mandate of being good stewards of the public road network and in turn playing a major part in the social and economic success of these Islands.

It is my sincere hope that the increased funding and stakeholder cooperation that is required during the implementation phase of this three-year strategic plan will be realized in order to create a public road network that is not only well maintained but is safer and provides greater access and mobility to people, goods, and services.

Edward Howard
Managing Director



PREFACE

The Strategic Plan 2022–2024 for the National Roads Authority (NRA) is designed to achieve the broad outcome goal of building a modern, smart road infrastructure for the island of Grand Cayman. It is intended to further the NRA's mission to provide a sustainable, safe and efficient transportation network.

Development of this plan is largely guided by the Board of Directors. It focuses heavily on the identification of stakeholders, their key requirements and the manner in which the Authority can best deliver on those needs.

The Plan articulates the priorities, resource requirements, strategic issues, partnerships, timelines and tactics that will be necessary to meet the needs of our customers and stakeholders over the next three years.

This plan outlines various goals and objectives involving staffing, routine maintenance, lighting, rehabilitation, expansion and upgrading of our road network.

Routine service operations, street lighting and general signage and road marking operations will continue to be funded from the annual Road Fund allocation. Major road works including new primary arterials and rehabilitation of existing primary arterials will be funded by the Cabinet as executive assets.

As the economy grows, so does the aspiration for a higher quality of life. Citizens desire connections to more places as well as the ability to get there faster and in more comfort. However, with only 76 square miles, land is a scarce resource on Grand Cayman which means we also have limited options in building bypass roads around or outside of congested areas. Planning (Land-use) and roads are inter-related therefore growth management

strategies must be developed jointly to ensure that future generation can enjoy land-use and roads infrastructure that are mutually supportive.

A lasting solution that makes the best use of all transport modes is important for the long-term health and prosperity of our economy.

The plan outlines a future with increasing investments in the efficient management of the road network asset as a key driver for economic growth, especially with the uncertainty of the economy due to the impacts of the global pandemic.

Finally, the goals and objectives of the Ministry responsible for infrastructure (i.e. Ministry, PAHI) are operationalized in the NRA's strategic operations plan (2022-2024) that is aimed at fulfilling the NRA's mission of a developed, well maintained public road network to a standard where all motorized and non-motorized road users can reach every area of Grand Cayman in an adequate, safe, reliable, efficient and economic manner. This three-year strategic operations plan articulates the strategic issues, road programmes, and resource requirements for road construction, maintenance and rehabilitation over the planned period.

Equally important are other national plans such as the Department of Planning's new development plan called 'Plan Cayman', the National Tourism Plan, and the Department of Environment's various conservation plans. These plans taken together provide the opportunity for a nexus approach that involves an integrated assessment of current and future infrastructure, tourism, and environmental goals and trends.



Contents

| | |
|--|-----|
| Foreword..... | ii |
| PREFACE | iii |
| Abbreviations and Acronyms..... | 3 |
| Statement by the Minister for Planning, Agriculture, Housing and Infrastructure (PAHI) | 4 |
| Foreword by Chairman, National Roads Authority..... | 5 |
| 2022-2024 Strategic Plan at a Glance | 6 |
| Executive Summary..... | 7 |
| Introduction | 8 |
| Background | 8 |
| Our Board..... | 8 |
| Vision, Mission and Core Values | 8 |
| Situational Analysis | 9 |
| Physical Capital measures..... | 9 |
| Human Capital measures..... | 9 |
| Pavement Condition | 10 |
| Road User (travel) Analysis | 12 |
| Stakeholder Analysis..... | 14 |
| General Public:..... | 14 |
| The Government: | 14 |
| Private Sector Development Partners: | 15 |
| The National Roads Authority:..... | 15 |
| Strategic Analysis (SWOT) | 18 |
| Strengths..... | 18 |
| Weaknesses | 18 |
| Opportunities..... | 19 |
| Threats | 20 |
| Balanced Scorecard..... | 22 |
| Grand Strategy | 23 |
| Grand Strategy Map..... | 23 |



| | |
|--|-----------|
| Planned major asset Improvements over the next 5 years | 24 |
| Consistent Maintenance – a key strategic priority | 27 |
| Resources required: | 28 |
| Goals and Strategies | 29 |
| Goal 1. Improve network Efficiency..... | 29 |
| Goal 2. Facilitate Economic Development..... | 31 |
| Goal 3. Enhance Road User Safety..... | 32 |
| Goal 4. Improve Road User Satisfaction | 34 |
| Goal 5. Develop skilled and motivated workforce..... | 36 |
| Goal 6. Acquire modern efficient equipment..... | 38 |
| Goal 7. Secure stable consistent funding..... | 39 |
| Goal 8. Improve Governance | 40 |
| Financial Projections | 41 |
| Summary..... | 41 |
| The Road Fund | 41 |
| Capital Works Program | 42 |
| Sale of Outputs to Central Government | 42 |
| Financial Position | 42 |
| Forecasted Expenditures | 42 |
| Forecast Operating Statement..... | 43 |
| CAPITAL WORKS (EA 36 & EA 148) EXPENDITURE ESTIMATES..... | 46 |
| Team | 48 |
| Critical Success Factors | 48 |
| Implementation process..... | 49 |
| Assumptions and Risks..... | 50 |
| Key performance indicators..... | 51 |
| Monitoring and evaluation | 52 |
| APPENDIX 1- Key Major Projects (2022 – 2024) Profile | 53 |
| APPENDIX 2- MICROPASER 5-Yr PCI Forecast (main roads) | 57 |
| APPENDIX 3 – DISTRICT ROADS PROGRAMME (EA 36) | 61 |
| APPENDIX 3 – FLEET PROCUREMENT PLAN..... | 65 |



Abbreviations and Acronyms

| | |
|----------|--|
| NRA | National Roads Authority |
| SPS | Strategic Policy Statement |
| PCI | Pavement Condition Index |
| PLAHI | Planning, Lands, Agriculture, Housing & Infrastructure (Ministry of) |
| AASHTO | American association of State Highway and Transportation Officials |
| iRAP | International Road Assessment Program |
| PTU | Public Transportation Unit |
| CPA | Central Planning Authority |
| S.W.O.T. | Strengths, Weaknesses, opportunities and Threats. |
| PPP | Public Private Partnerships |
| OSHA | Occupational Safety and Health Administration |
| PMS | Pavement Management System |
| PMFA | Public Management & Finance Act |
| ERM | Enterprise Risk Management |
| ESO | Economics & Statistics Office |
| GDP | Gross Domestic Product |
| TOR | Terms of Reference |



Statement by the Minister for Planning, Agriculture, Housing and Infrastructure (PAHI)



I am pleased to endorse the 3-year Strategic Plan for the National Roads Authority (NRA) covering the period January 2022 to December, 2024.

As the Minister responsible for roads I will do my utmost endeavour to ensure that the NRA is afforded the financial and technical resources needed to accomplish the goals of its strategic plan. Let me also assure you that the key outcome goal for this PACT-led administration is the construction of a modern, smart infrastructure. The importance of this outcome is further emphasized in the 2022-24 Strategic Policy Statement (SPS) which demonstrates a firm commitment of the PACT

Government to increasing public road network capacity for road users in the eastern districts, as well as to developing innovative solutions to decreasing travel demand and improving road safety for all road users.

Economic growth and the continued development of our Country is heavily dependent on our ability to continue to provide a safe and efficient transportation infrastructure. A congested road network can easily result in the loss of tens of millions annually through losses in productivity, increased fuel consumption and increased wear and tear on vehicles.

A central focus of my administration will be the implementation of an eight (8) mile extension of the East-West Arterial from Hirst Road to Frank Sound. This roadway expansion promises significant benefits to Grand Cayman such as vastly improved travel times for travelers to the eastern districts, and creates a highly disaster resilient 'central highway' alternative to existing low-lying coastal roads. In addition to these benefits the East-West Arterial opens up land for development on the interior; provides improved access and mobility, and serves as the main conveyance of future utilities expansion (electricity, water, fibre, central sewer and drainage). Other activities such as the George Town Revitalization Project, the West Bay Roads Complete Street Project, the Airport Connector Road, and improvements to lane capacity on Linford Pierson Highway are all intricately linked to other sectors of the local economy including tourism and commerce.

My Government is committed to ensuring the success of the National Roads Authority by not only providing sufficient levels of capital funding over the next five (5) years but by also removing the cap on the NRA's operations budget allowing the Authority to bolster its personnel, plant and equipment, and training resources. With this commitment, the National Roads Authority can be assured of the Government's continued partnership and support for the goals and objectives outlined in this 2022-2024 Strategic Plan.

Hon. Johann Ebanks, MP
Minister for Planning, Agriculture, Housing, & Infrastructure



Foreword by Chairman, National Roads Authority

On behalf of the Board of Directors, I would like to congratulate the management and staff of the NRA for the development of this 2022-2024 Strategic Operations Plan.

I would also like to recognize and thank the Hon. Minister for his support of this plan which will guide the policies and actions of the Authority over the upcoming 3-year period.



This Strategic Plan outlines a number of goals and objectives in furtherance of our mission to promote sustainable transport and land development in the Cayman Islands through a safe and efficient network of roads. It is a customer focused document with the goals and objectives of the Authority aligned with the priorities and needs of all stakeholders.

The Board fully endorses and subscribes to the goals and objectives set out in this plan, we believe it will provide value for money while delivering on the desired outcomes of the Government and the general public.

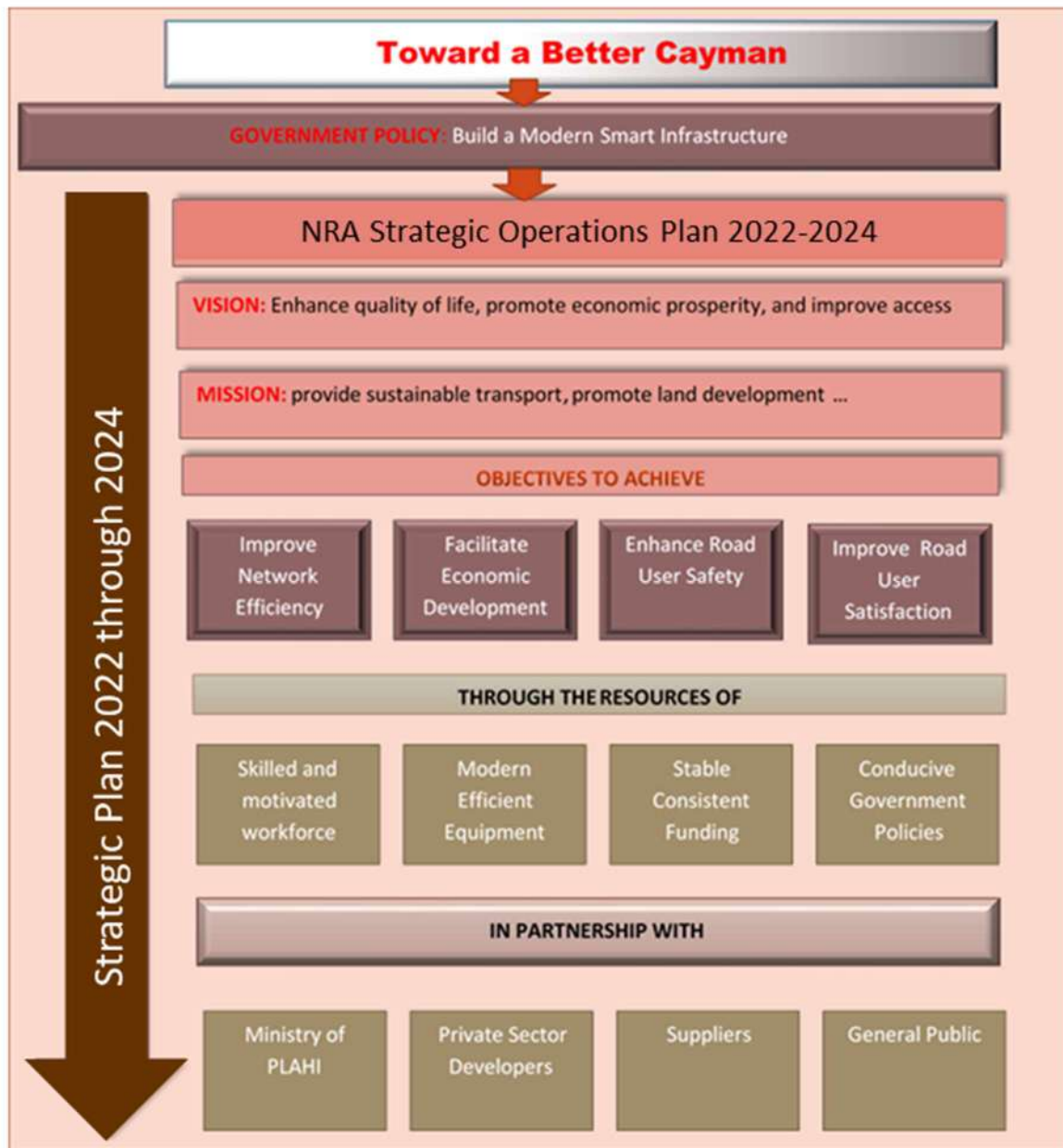
As a Board, we will continue to provide the oversight, policies, and guidance that will afford the best opportunity for success. We will also continue to lobby for the necessary resources to build the required institutional capacity for successful implementation of this plan.

In return, the Board expects management's full commitment to performance, accountability, fairness, transparency and integrity. It is the effective participation of all employees that makes strategy happen; the plan therefore requires ownership at all levels with a commitment to excellence in customer service.

The NRA plays a significant role in the economic, social and physical development of our Country. It is a responsibility to be embraced with pride and I look forward to the continued support and participation of all staff members in the successful delivery of the goals and objectives set forth in this plan.

Alric Lindsay
Chairman, National Roads Authority

2022-2024 Strategic Plan at a Glance





Executive Summary

Grand Cayman presently has approximately 324 lane-miles of road supporting almost 38,000 registered vehicles on a daily basis.

Only 12% of the Grand Cayman road network is comprised of multilane divided highways. This has placed significant demand on the road infrastructure to maintain the efficient movement of people, goods and services. Investments in the management, maintenance and expansion of the road network has historically not been sufficient to cope with travel demand. As a result, the network has experienced significant issues with congestion particularly during the 7am-9am and 4pm-6pm peak periods.

Efficient traffic flow is vital to our economic and personal well-being, and the goal is to improve journeys and allow users to drive at consistent speeds and enjoy predictable travel on our roads. Continued under-investment is no longer a realistic option; as our population grows and our roads age further, they will increasingly fail to meet the social and economic aspirations we have as a country.

This Strategic Plan 2022-2024 outlines how we can grasp the opportunity to transform both our roads and the experience of driving on them, whilst also addressing strategic imperatives such as economic growth. It sets out our vision for enhancing the quality of life for residents and visitors, promoting economic prosperity and improving access.

Achieving these aspirations will require sound planning and strategic action. This means targeting improved levels of performance in the short term that will put us on course to deliver the network Caymanians deserve.

The plan focuses on four key areas to achieve the desired outcomes over the next three years. These are: Improvements in network efficiency, facilitation of economic development,

enhancements to road user safety and improvements in road user satisfaction.

Certainty of adequate funding, modern efficient equipment, a skilled and motivated workforce, the ability to plan for the long-term and the opportunity to drive increased efficiency will give the NRA the tools needed to bring lasting improvements to the network and take the Authority into the future.

To ensure the road infrastructure positively impacts growth, we must address congestion and delay on the network. The NRA will therefore work collectively with the Government and private developers to help unlock opportunities for growth, including the expansion and modernization of our ports, the revitalization of George Town, improvements in connectivity from the airport to our key tourism areas, and major commercial expansion projects such as hotels, schools and other developments.

The Authority will adopt a customer focused approach which includes consideration of both motorised and non-motorised users of the road network. The safety and access of pedestrians is paramount; that means, continued focus will be placed on the creation of pedestrian friendly facilities, bicycle lanes, and improved lighting to these facilities.

Providing that there are no limited financial constraints we will continue to work with all stakeholders in a collaborative manner to ensure the road network is developed in a way that it sustains growth, creates economic opportunities, improves the lives of our citizens, promotes access, and, ultimately, helps to achieve our individual and countrywide goals.



Introduction

Background

The National Roads Authority (NRA) was created on 1 July 2004 by the National Roads Authority Law (2004). The current legislation is the National Roads Authority Act (2016 Revision). NRA was created to administer, manage, control, develop and maintain the Islands' public roads and related facilities, such as signals, storm water facilities, roadway lighting, and roadway directional signage.

The Authority is governed by a Board of Directors composed of eleven members representing the public and private sectors. The Board defines the overall policy of the Authority and sets the general conditions for its operations. The Minister with oversight responsibility for the Authority, may, after consultation, give general and lawful directions regarding policy to the board.

Our Board

| Member | Position |
|----------------------------------|-----------------------|
| Alric Lindsay | Chair |
| L. Stanley Panton | Deputy Chair |
| Chief Officer or Designate | Director (ex-officio) |
| Anna Peccarino | Director |
| Financial Secretary or Designate | Director (ex-officio) |
| Kelvin Dixon | Director |
| Barry Martinez | Director |
| Troy Whittaker | Director |
| Heidi Hunte-Webster | Director |
| Paul Andrew Bodden Jr (Andy) | Director |
| Alfred Dane Walton | Director |

Vision, Mission and Core Values

Our Vision, Mission, and Values guide our decision making and behaviours when working with customers, colleagues, stakeholders and partners. Our Strategic plan was developed from these doctrines and they serve as our beacon in the execution of our work.

Vision

To enhance the quality of life, promote economic prosperity, and improve access and mobility for all stakeholders in the Cayman Islands through customer focus, efficiency, effectiveness, impact and reputation

Mission

To provide sustainable transport and promote land development in the Cayman Islands for all stakeholders while having regard to the delivery of the roads element of the national development plan

Purpose

Enabling safe and efficient road transport journeys throughout Grand Cayman

Values

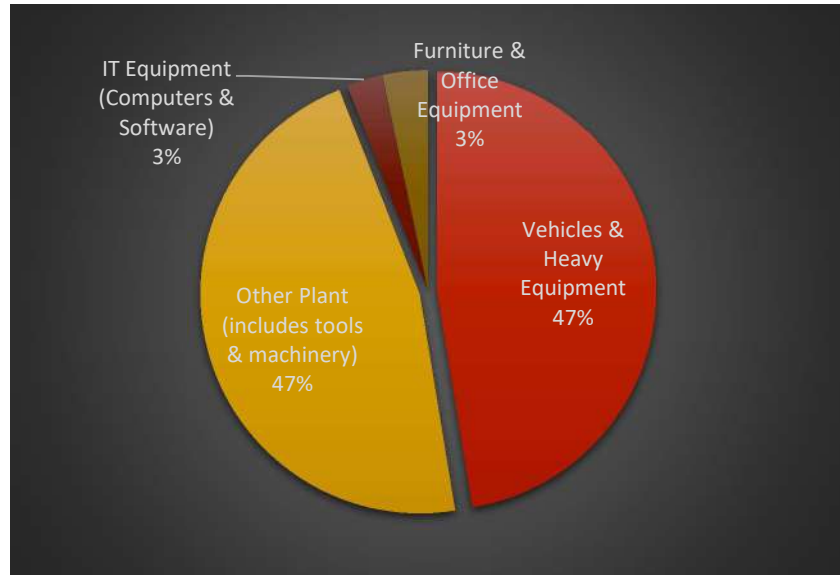
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|--------------------------|---|
| Customer focus | Our customers come first and are therefore the central focus of all our goals and activities |
| Employees | We believe that our colleagues within the organization are our most valuable assets. Through them our vision and mission will be accomplished |
| Solutions & Innovation | We strive to deliver sustainable and innovative solutions in order to provide the people of the Cayman Islands with a well maintained network of public roads |
| Teamwork & Collaboration | As partners and colleagues within and outside our organization, we value each other and are committed to working together to achieve common goals |
| Safety | We prioritise road safety for the community and our customers |



Situational Analysis

Physical Capital measures

The Authority currently tracks approximately 300 individual assets and maintains an asset register of all plant property and equipment with both historical values and depreciation schedules. Plant property and equipment include motor vehicles, heavy equipment, tools and machinery, as well as furniture, IT equipment and software. At 30th December 2020, NRA property plant and equipment had a net book value of approximately \$2.6M. Vehicles and heavy equipment represented 47% of total property plant and equipment value. This was followed by 46% for tools and machinery; 4% in IT Equipment, and 3% in furniture and office equipment. The Authority does not own property and currently leases space at the Public Works Compound inclusive of approximately 3,500 sq ft office space and approximately 1.0 acre for field operations.



Human Capital measures

The Authority in 2020 employed 82 full time staff members with an additional contingent of between 15 to 20 temporary hires. Temporary hires consist mainly of additional labourers required to supplement work demands from capital projects. The NRA staffing complement is over 90% male and less than 10% female. Six percent of staff members are educated to a graduate level, a further six percent hold undergraduate degrees, and 87% are educated to a high school diploma level. Seventy (79) percent of all full-time employees have been with the Authority for more than 10 years, with 45% having a tenure of 20 years or more. Average annual take home pay for NRA employees is approximately \$42,500. The average employee age is 42 years, and average tenure is 14 years. Approximately 19% of NRA personnel costs are attributed to healthcare (CINICO) and the average annual health care premium in 2020 is approximately \$13,000. As of December 2021, there are 11 key vacancies at the

Staff Establishment and Current Staffing at the NRA

| Position | Established | Vacancy |
|-----------------------------------|-------------|-------------|
| Managing Director | 1 | |
| Deputy Managing Director | | 2 |
| Managers | 5 | |
| Superintendents | 3 | |
| Accounting support staff | 2 | 1 |
| Administrative support staff | 3 | |
| Communications Officer | | 1 |
| Transportation/Traffic Specialist | | 2 |
| Transportation Planner | 1 | |
| Plans Examiner/Reviewer | | 1 |
| Design Engineer | 1 | 1 |
| Stormwater Engineer | | 1 |
| Lead Surveyor (licensed) | | 1 |
| Project Managers | 1 | 2 |
| Safety Officer | | 1 |
| Field Supervisors | 3 | |
| Engineering Technician | 3 | |
| Signs & Lines Technician | 9 | |
| Fleet Management Staff | 5 | |
| Foreman | 8 | |
| Heavy Equipment/Machine Operators | 29 | |
| Labourers | 8 | |
| Total | 82 | 13 |
| Temporary labourers | 15-20 | when needed |

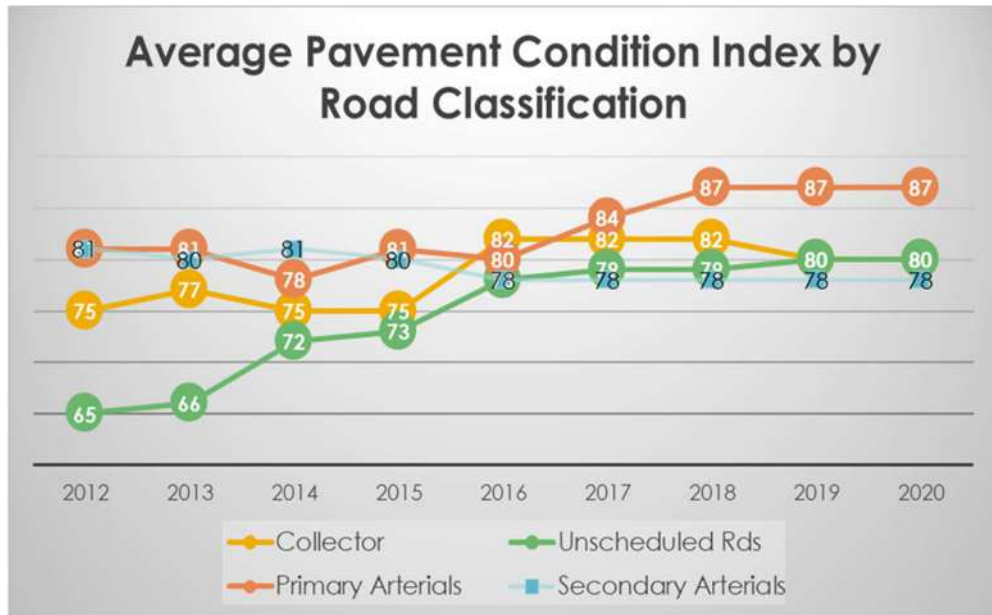


NRA which in total represents approximately \$1.2M in personnel costs. Added to this is another \$450K per annum for training and development and cost of living adjustment (COLA) payments to employees over the 3-year period.

Pavement Condition

The present road network on Grand Cayman is approximately 324 lane-miles spanning 17 constituencies. NRA operates and maintains a pavement management system that monitors empirical pavement surface condition data and prescribes maintenance strategies to pavements of varying classifications in the Grand Cayman road network. Primary

arterials are the main roads which carry the majority of traffic throughout the island and as such are prescribed a higher maintenance protocol. At the end of FY 2020 all pavement types on Grand Cayman showed an overall 'good' to 'very good' condition. The goal for primary



and secondary pavements is that of an average PCI of no less than 80. NRA is proud to have been able to make significant improvements in the pavement condition index (PCI) of all classes of roads on Grand Cayman. Subdivision roads in particular have gone from an unsatisfactory PCI level of 65 in 2012 to an average PCI of 80 in 2020. This is contributed largely to successive Governments placing more emphasis on upgrading the roads in older subdivisions either through more frequent spray n chip surfacing or in some cases implementation of hot mix asphalt surfacing. In addition to road surface improvements greater emphasis has been placed on improvement of storm drain facilities on roadways which contributes greatly to the longevity of the road surface.

As of 2020 roughly 324 lane-miles of roads on Grand Cayman have surface types as follows:

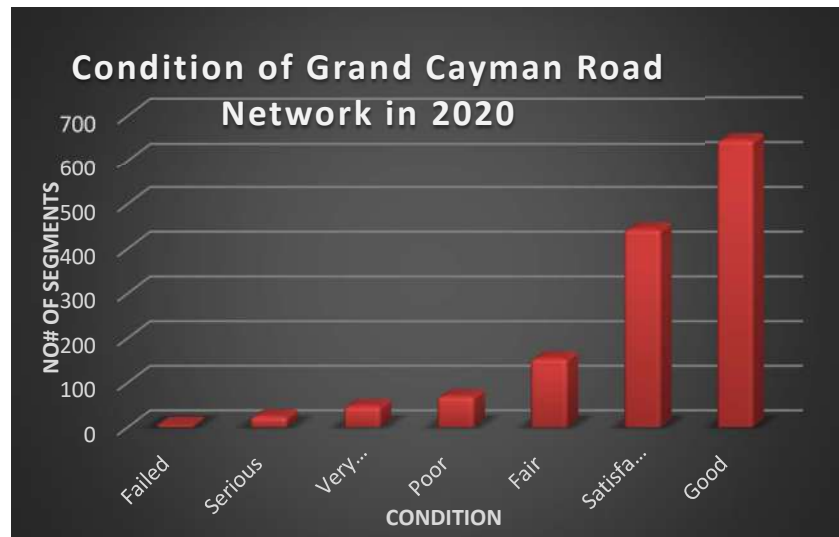
- 196 lane miles of roads have hot mix asphalt surfacing
- 126 lane miles of roads have spray n chip surfacing
- <2 miles of roads are unsurfaced

Maintain a “very good” PCI rating

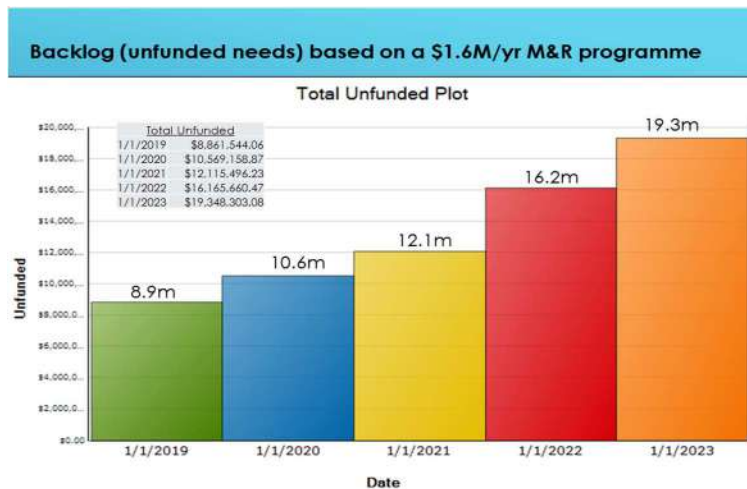
As of December 31, 2020, the NRA's pavement management system Micropaver[®] shows that Grand Cayman has an overall healthy stock of roads. In 2020 approximately 42% of the road network had 'good' to 'very good' PCI ratings followed by an additional 26% with a 'satisfactory' rating.



The pavement management system demonstrates that in order for the NRA to maintain Grand Cayman's subdivision roads at a preferred average PCI of 80 and above for the next 5 years there needs to be a minimum annual investment of \$4.1M. By contrast Government expenditure on subdivision roads (aka district roads) in 2018 was approximately \$1.6M, followed by \$2.9M in 2019, and \$800K in 2020 (due to COVID restrictions).



Micropaver® analysis shows that a moderate \$1.6M annual funding programme for district roads yields a \$19M unfunded needs backlog in just 5 years, and results in a significant overall drop in PCI from 78 to 68. Using the current spray n chip repair strategy. An annual M&R programme of approximately \$4M for district roads over the next 5 years serves to maintain the PCI for district roads at or above an 80 average.



NRA is however seeking to develop alternative repair strategies such as thin-asphalt and possibly asphalt using recycled asphalt products (RAP). The cost and performance of these two strategies is not yet known. A thin asphalt repair strategy would require the use of more costly fine aggregates and must be installed on a well-graded and compacted road base given that the thin asphalt provides very little structural stability. Milled asphalt from major pavement rehabilitation projects can be repurposed as part of new asphalt mix designs that can be utilized on low volume roads. The issue however is that there is insufficient amount of milled asphalt available locally for it to be considered as a viable repair alternative.



Road User (travel) Analysis

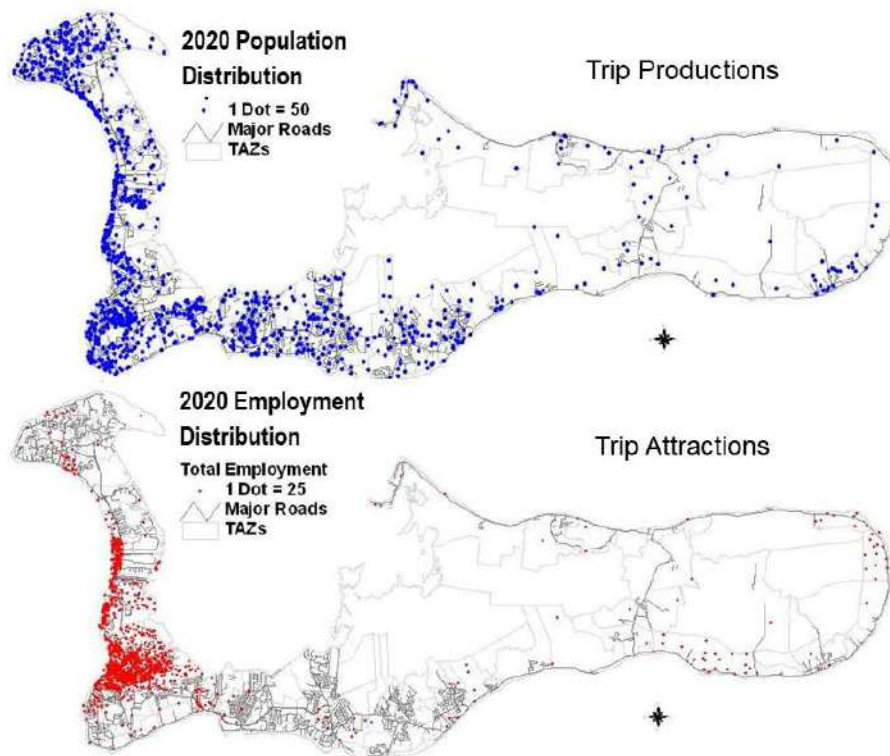
Where people live greatly influences their transportation needs and behaviours. Transportation planning is a discipline that involves the evaluation, assessment, design and siting of the countries transport facilities (i.e roads, public transport, and other road related services). With the recent implementation of its computerized travel demand and traffic analysis modeling software the NRA is in good position to:

- Substantiate the current and future planning initiatives being proposed by the new national development plan (Plan Cayman TM)
- Assess the merit of future road network proposals, including those long-term corridor proposals developed and gazetted under Section 26 of the Roads Act;
- Assess macro and microscopic traffic impacts
- Guide policy and investment decisions on roads and road related infrastructure

George Town land use development continues to be the greatest driver of economic growth; this is expected to continue for the foreseeable future with potential major expansion projects for both the air and sea ports, and increased commercial and hotel-tourist investments at Camana Bay and along the Seven Mile Beach corridor. Planned major investments in health services and medical research facilities on Esterley Tibbetts Highway as well as Government's own efforts to revitalize central business district (CBD) in George Town further indicate that the GT-Central, GT-North, and West Bay South constituencies will continue to be major determinants on travel patterns and on origin-destination trips for the foreseeable future.

The Economic and Statistics Office (ESO) estimated population for Grand Cayman at the end of 2021 is approximately 69,000. George Town and West Bay account for 74% of Grand Cayman's population whilst Bodden Town (inclusive of Savannah and Newlands) accounts for 21%. Bodden Town continues to be the fastest growing district for residential with a population growth rate of

5.6% per annum. With economic growth occurring on the western end of the Island and the residential population growing fastest towards the east of Red Bay, an increasing number of road users will continue to



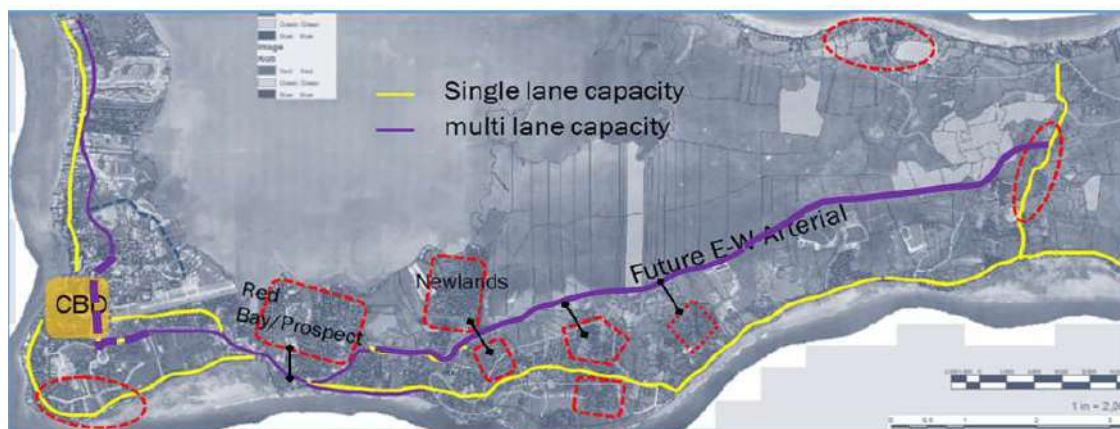
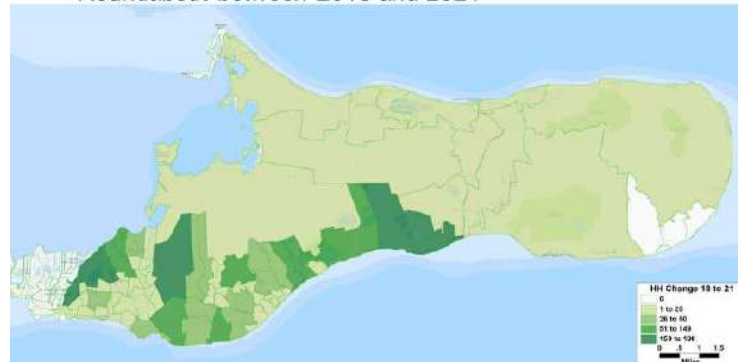
be forced to traverse areas of the network that are currently experiencing the highest levels of congestion. The map of trip production versus trip attractions shows clearly that trip attractions (i.e. mainly employment centres) are most prominent in the CBD, the industrial park, and along ETH & West Bay Roads. The land-use development graphic below depicts areas where approximately 2,000 new households were added east of the Prospect constituency between 2018 and 2021. The growing traffic congestion problem at the eastern parts of Grand Cayman is due in large part to the fact that:

- 1) there is not enough highway lane capacity to facilitate the increasing travel demand brought on by *home-work-home* weekday travel, and
- 2) there are not enough trip attractions (i.e. employment centres) east of Grand Harbour to significantly reduce the need for 26% of the population to travel from the eastern districts along a constrained road network to the employment centres located in the George Town, Camana Bay, etc.

Traffic congestion adversely impacts quality of life and the economic productivity of the country and thus the NRA wholeheartedly embraces the Government's focus on resolving this issue which if left unchecked threatens the economic viability of the country in many ways. The NRA are strong advocates for a multi-pronged approach to addressing this problem. These in short include solutions such as congestion management; transportation modeling and traffic analysis; better land-use planning; transportation infrastructure financing (including PPPs); investment in multi-modal transport (including public buses); investment in road safety, and stronger regulatory framework. The NRA plays a role in all of these strategies but none more-so than ensuring the development of lane capacity and intersection improvements that are needed to allow the safe and efficient movement of people, goods and services throughout the island both now and for decades to come.

LAND USE DEVELOPMENT

- ~2000 additional households to the east of Tomlinson Roundabout between 2018 and 2021



2026 target: build and expand approximately 5 lane miles of new primary arterial by 2026.



Stakeholder Analysis

Development of the Strategic Plan took into account the strategic priorities of the following four main stakeholders:

General Public: The General Public consists of citizens, visitors and local businesses. These groups are interested in the safe and efficient use of the road network. They require a high quality, aesthetically pleasing network with sufficient interconnectivity to get to their various points of interest in the shortest period of time. In delivering this outcome, appropriate care must be taken to respect the environment, and maximize value for money. In delivering these outcomes, the NRA will:

- Aim to achieve an average PCI rating of at least 80, i.e. “very good” on all primary, secondary and collector roads;
- Increase network capacity on primary and secondary arterials to reduce travel times during peak hours. **Major emphasis will be placed on the expansion of The East-West Arterial, Linford Pierson Highway, and Airport Connector road projects.**
- Perform lighting, friction testing, and general safety audits of the network;
- Make greater provisions for the safety of pedestrians and other vulnerable road users;
- Create greater interconnectivity in strategic areas such as the central business district, the Walkers Road schools area, and the North Sound and industrial park areas;
- Improve the aesthetics of the network through signs and lines and improved roadside vegetation management; and

- Expand the network with due regard to environmental stewardship practices, procedures and policies.

The Government: The Government represents the people and is therefore interested in citizens’ overall well-being from a macro level. As a service-based economy, the Government is interested in the efficient movement of its residents and visitors to increase productivity and economic growth.

The road network is the Government’s single largest asset with an estimated net book value of some \$800 million as at December 2021. The road network drives economic activity; every item consumed in the local community traveled across the network at some point. It enables new housing and commercial developments and attracts investment to areas it unlocks.

Worldhighways.com notes that road infrastructure is the most important of all public assets. The public road network provides access to employment, social, health, and education services. The public road network also acts as the main conveyance for public utilities such as electricity, telecommunications, water, sewer, and drainage.

Effective maintenance is therefore essential to preserving and enhancing the benefits of the public road asset. The World Bank recommends that annual maintenance funding should be approximately 1.75% to 2.5% of the asset’s value to keep roads to an acceptable standard. That would equate to \$14m p.a. to maintain at a ‘fair’ level and \$20m p.a. to maintain at a ‘good’ level based on the PCI range.

As a 100% shareholder, the Government must also be heavily invested in an efficient NRA that is responsive to policy; promotes good governance; facilitates timely and effective maintenance, and is



adequately equipped to provide an appropriate response in the event of disasters.

To achieve the interests of the Government, the NRA will:

- Work to expand the network in strategic areas in accordance with Government policy;
- Advise the Government on all threats to the public road network and provide effective plans and strategies for ensuring a sustainable road network.
- Prepare and present a road hierarchy and asset management schemes for the Grand Cayman road network;
- Promote value for money through efficient procurement policies, increased worker productivity and innovation;
- Update the disaster response strategy and ensure annual refresher training for disaster response personnel.

To facilitate our private sector partners, the NRA will:

- Design the road network with due regard for future land use;
- Provide relevant expertise and advise for private sector led initiatives to add capacity to the network;
- Provide project management & Q/A services during construction; and
- Be approachable to discuss future development initiatives and their potential impact on the network.
- Be supportive of mobility and access concerns
- Work with private sector interests in promoting congestion relief strategies such as: e-commerce, employee flex time and work-from-home, park-n-ride, hybrid learning, and decentralization of commercial zoning and major employment centres.

Private Sector Development

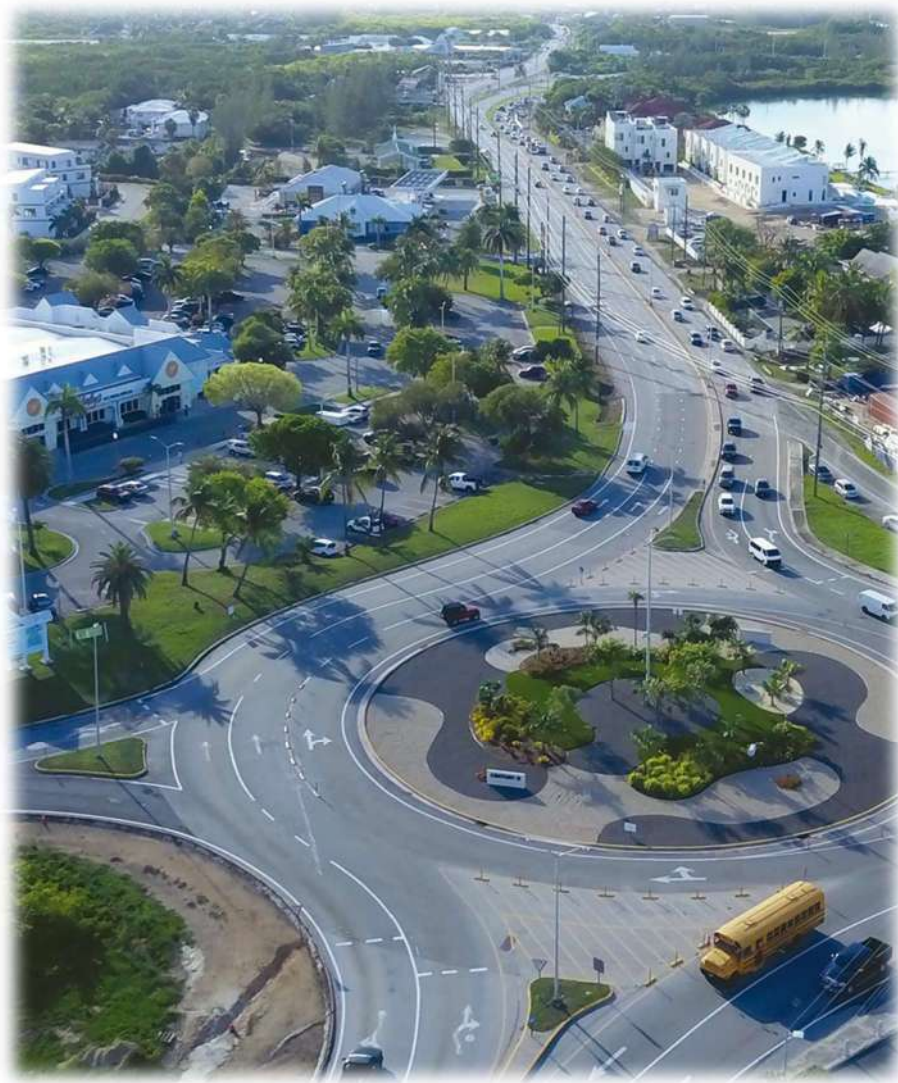
Partners: Private Sector Development Partners have played a key role in the expansion of the road network over the past decade. With limited Government investment and continued economic growth, it is expected that private sector developers will continue to play an important role in adding capacity to the network. From a stakeholder perspective, Developers are interested in ensuring adequate access to future customers of their development projects. They also want to ensure that network expansion is cost effective and that the NRA will provide the necessary expertise and guidance in engineering, design and quality control matters. Communication is key among developers as they would like to ensure open communication in the planning and execution of future road works which may have impacts on planned area developments.

The National Roads Authority:

As stewards of the road network, the National Roads Authority are a key stakeholder whose desire is to achieve a high road user satisfaction rating, stable and predictable road funding, a safe and pleasant working environment for staff, and access to modern equipment and technology to drive efficiency and innovation. To achieve these goals, the NRA will:

- Measure user satisfaction through increased engagement with the public;
- Plan future road programmes in a consultative manner;
- Seek commitments from the Government for the funding of future road development and maintenance programmes;

- Prepare proposals to amend the National Roads Authority Act and the Roads Act where necessary and also draft recommendations for accompanying regulations for implementation;
- Invest in more training and apprenticeship programmes for both technical and non-technical employees;
- Invest in modern machinery and equipment;
- Measure worker satisfaction through surveys and implement programs to foster a positive working environment;
- Invest more in staff safety training including traffic work zone safety practices;
- Promote a culture of learning and general awareness of various roles at the NRA through investments in lunch-and-learn programmes
- Enhance the manpower and capabilities of the Transportation Unit and promote greater utilization of NRA's macro and micro Travel demand modelling and traffic analysis computer programs
- Increase media communications and promotion of NRA plans and activities.





Stakeholder Analysis Summary

| Area of Interest | What is Desired | | Reason | Strategies to Deliver |
|-------------------------------------|--|--|--|--|
| General Public | <ul style="list-style-type: none">• Safety and Efficiency of the Road Network• Quality of network• Commuting time• Connectivity• Value for money• environment | <ul style="list-style-type: none">• Safe Roads• Efficient Travel• Ability to access network efficiently• High Quality roads• Interconnectivity between points of interest• Lower taxes• Less noise, greater aesthetics, minimal destruction to natural environment, less pollution | <ul style="list-style-type: none">• Reduce accidents• Reduce travel time• Improve productivity• Reduce vehicle operating costs• Improve quality of life• Reduce cost of living• Gain access | Goal 1 Goal 3 Goal 4 |
| Government | <ul style="list-style-type: none">• Economic Growth• Efficiency of Organization• Policy Delivery• Good governance• Disaster response Management | <ul style="list-style-type: none">• Network where residents and visitors can move efficiently and commerce is facilitated• Well maintained road assets• Achieving value for money• Adherence to policies, procedures and laws• Capacity for effective and efficient disaster response | <ul style="list-style-type: none">• Improve visitor experience and citizen productivity• Maximize returns for taxpayer• Maintain law and order• Keep citizens safe | Goal 2 Goal 5 Goal 6 Goal 8 |
| Private Sector Development Partners | <ul style="list-style-type: none">• Accessibility• Cost• Partnership• Design• Location | <ul style="list-style-type: none">• Ability for customers to access investment projects• Lower cost infrastructure• Assistance with cost, engineering and design• Designs conducive to development projects• Road location that is conducive to future development opportunities | <ul style="list-style-type: none">• To improve attractiveness of investment to customers• To make projects financially viable• To ensure compliance and project viability• To ensure proper access and alignment• To maximize investment value | Goal 1 Goal 2 Goal 5 |
| National Roads Authority | <ul style="list-style-type: none">• Road user satisfaction• Stable and predictable funding• Conducive Legislative Framework• Adequate Resources• Safety | <ul style="list-style-type: none">• High approval rating among users• Ring fenced funding for future maintenance and development• Modern legislative framework to enable required actions• Modern equipment and highly qualified staff• A safe and pleasant working environment | <ul style="list-style-type: none">• To enable effective planning• To update laws and regulations to account for changes in operating environment• To be innovate, efficient and serve our customers better• We owe it to our employees | Goal 4 Goal 5 Goal 6 Goal 7 Goal 8 |



Strategic Analysis (SWOT)

We will seek to leverage our strengths, improve our weaknesses, exploit our opportunities; and minimize our threats.

Strengths: As a service-based entity,

our greatest strengths are in our people. Forty-five (45) percent of our employees have been with the Authority for 20 or more years, this represents a tremendous amount of organizational memory, commitment experience and training.

With a 2020 average pavement condition index of 78, we will leverage our **past gains in road improvements** to achieve our stated target of an average minimum PCI grade of 80 and above on all classification of roads within 3 years. The NRA presently **enjoys goodwill**, both with the public and the Ministry. This will be a key factor when seeking cooperation and understanding for necessary traffic interruptions due to necessary road expansions, repairs and upgrades.

In 2016, the Government amended the NRA Act to provide **\$10 million in annual recurrent funding** to

via the Road Fund. The amendment (Section 19) unfortunately also included a cap on that \$10m. The removal of the cap and allowance of a significantly greater portion of the Road Fund revenue is now paramount as the NRA is no longer able to provide adequate routine maintenance services or staff the Authority sufficiently beyond 2021. Despite operational funding woes the NRA has a good governance structure under the effective stewardship of the Minister of

Infrastructure and the Board of Directors. The NRA also has a sound financial management framework and consistently receives clean audit opinions from the Office of the Auditor General.

Weaknesses:

The Authority has made significant strides in modernizing its plant and equipment however with the Government's forecast of a robust Capital

Roads Improvement Programme there will be the need for further investment in more road construction heavy equipment and machinery.

Another current weakness lies in the lack of key management and technical staff resources. The NRA has operated in earnest over the past three years with no deputy managing director. The Authority has also (due to the limitations of its operating budget) not had the benefit of key in-house staff resources such as a traffic engineer, stormwater specialist, project manager, design engineer and communications officer.

Strengths

- Highly dedicated and experienced staff
- Relatively good existing infrastructure
- Partially stable funding source
- Organization goodwill
- High staff commitment

Weaknesses

- Outdated Legislation
- Aged Equipment & Technology
- Inadequate long term planning
- Insufficient resource to address existing road issues
- Lack of specialist skills in certain areas
- Lack of road and associated asset data

Threats

- Monopoly in material supply market
- Uncertain political environment
- Landowner litigation
- Inadequate funding
- Natural disasters
- Reduced autonomy

Opportunities

- Support from the Minister/Ministry
- Willing private sector partners
- Funds to invest in plant & equipment
- Willingness to embrace longer term planning
- Country Infrastructure growth phase
- Demand for road to support other infrastructure projects



The **NRA Act has not had a significant review or revision since it was first enacted in July 2004**. The Act was meant to be complemented by regulations, however, these were never developed. Consequently, the legislative framework under which the Authority operates requires update and revision. The Authority through its Board of Directors has spent considerable time and effort over the past 3 years in developing recommended amendments and in 2020 also prepared a request to the Ministry of infrastructure for the commencement of drafting instructions to Office of Legal Drafting.

Under the current structure, investment in major capital works remains at the prerogative of the Government of the day. The NRA through its Board of Directors makes recommendations to the Minister and by extension the Cabinet however it is Cabinet that decides on which capital improvement projects are to be funded and at what funding levels. The uncertainty of funding for major capital road projects, changes in Government policy, and in an austere environment, the Authority is limited in its ability to adequately forecast and fund **long-term major roads projects**. Consequently, the Authority's approach to the expansion of the road network has sometimes lacked the level of strategic context required and has led to piecemeal improvements which may sometimes give the appearance that the Authority and or Government is not doing enough, or not making the right improvements in the right areas.

Growth in the population and their proximity to the central areas of commerce and economic activity has created additional demands on the existing road infrastructure. Network capacity has therefore become a major issue in recent years, with parts of the network becoming increasingly congested. It is important that we continue to address this to ensure that the network sustains, instead of constrains economic growth. This

scenario creates the need for accelerated investment in the network to meaningfully address the various capacity issues. **Such funding has not always been consistent throughout the last decade** due to a number of factors however there is renewed optimism in recent years as traffic and congestion was indeed one of the most hotly debated issues in the 2021 general elections.

While the NRA enjoys a committed and hardworking workforce, there are specific skill gaps in areas such as project management, supervisory management, and tertiary level training. **Only 13% of our staff has received tertiary level education**, and very few of our supervisors and managers have been exposed to supervisory management, leadership, coaching and mentoring training opportunities. This situation can create issues for succession planning and limit the Authority's ability to innovate and sustain positive employee morale. Further investment in our human capital will be necessary to address this situation.

Opportunities: The Authority presently enjoys the **support of its Board and Minister** as a key policy instrument to deliver on several Government initiatives and policy priorities. This creates a great opportunity (at least in the next 4 years) to improve the quality and capacity of the network in key areas.

The Authority also recognises the potential for private sector investment opportunities in providing improvements to the road network. In recent years we have seen local private financiers step up to partner with the Government in developing segments of both primary arterials and collector roads. There is continued optimism that more private sector interests will come forward and partner with Government in developing not just major road projects but perhaps public transportation initiatives and area revitalization or street enhancement projects as well.



The approval of this strategic plan will signal the willingness of key stakeholders to **embrace longer term planning** for the care and management of the road network. This will be a key opportunity as the country goes through a careful assessment of **infrastructure growth**. Traffic congestion management, sustainable land-use, stormwater management and environmental stewardship are all key issues with which the people of the Cayman Islands have to contend.

Threats: A growing concern for the NRA is the lack of competition in two sectors where it is most dependent, 1) Asphalt Paving, and 2) Aggregate fill materials. Since 2015 there has been a monopoly on hot mix asphalt paving in Grand Cayman. The NRA has been forced to utilise sole-source procurement since that time. Prices of asphalt continue to rise and there is little incentive by the sole source provider to change to the use of more modern paving methods such as performance grade asphalts (aka superpave®), or recycled asphalt pavement (RAP).

The NRA has a heavy reliance on local quarrying for road building materials because the cost of importing higher quality road building fill material is significantly more expensive due to added costs such as licensing fees, import duties, and transport of such heavy and bulky materials. Future supply of local quarry materials is limited which could translate to significant increases in the costs of road projects in the medium to long term future. Given that the island is relatively flat, most of the fill materials are mined from beneath the surface of artificial lakes. The quality of these materials continues to be marginally adequate for road building, and material properties vary between quarries.

Overall, **monopolies in key road building sectors** limits the quality of roads as well as the ability of the Authority to force competitive pricing.

Significant changes in Government can come potentially every four years. While the Authority is apolitical, **changes in the political environment** could result in changes to Government's policy priorities with resultant significant changes to the medium-term strategic plans of the Authority.

Litigation from landowners due to compensation or other disputes could significantly delay or alter network investment programmes. The Roads Act is outdated and presents several challenges when it comes to the process of compulsory acquisition of land needed for new road development. There are also serious challenges with forty-plus year-old public road declarations and surveys that have not been properly registered such that they present major challenges for the NRA today in terms of road widening and boundary adjustments. Authority's current strategy is to adopt a public consultation process for complex matters, however this still remains a significant threat as the general public are not so understanding or forgiving when it comes to land being lost.

Lack of proper road planning and land-use planning has led to the current congestion woes being experienced on the Island. The issue is not that successive Governments did not develop long range road and land-use plans, but rather that many of them were never implemented or only partially implemented. As the development boom continued across the island varying compromises were made in future roads infrastructure, land-use zoning, and environmental protection.

Inadequate funding is a significant threat to future network investments. Over the years, funding allocation has never been adequate to cover the growing operations and maintenance costs of an expanding but also aging network of roads. Whilst the Government has committed \$10 million in annual funding, additional resources will be necessary for material network expansion and upgrades. The threat of hurricanes and other



natural disasters are always a serious concern and yet year to year the NRA has no budget provisions to adequately perform pre-disaster or post-disaster maintenance and recovery. Road drainage in particular has historically lacked adequate funding. The NRA has not had access to funds necessary to install adequate storm drain systems (particularly in older pre-existing neighbourhoods) and it has had to rely hand-in-glove on the Government for emergency funding to mount post-disaster responses.

Changes to the autonomy of the NRA will significantly impact future network plans.

If the Authority's core mandate is changed to one where it becomes an oversight body, this will lead to a monopoly in the local market for road construction and maintenance activities. Based on past experience, this would likely result in increased costs for goods and services, reduced value for money and reduced capacity for the Government to provide an effective and reliable response to natural disasters and other calamities.

Inadequate capacity of the road design and engineering industry. The local industry remains without adequate capacity in terms of qualified and experienced engineers and technicians for road design, supervision and implementation of road infrastructure projects. The NRA being also limited in these areas often has to utilize overseas design firms for its major roadworks. Other technical limitations include the lack of any stormwater engineering or traffic engineering professionals on island.

Inadequate support services and participation from statutory undertakers. Lack-luster response of some statutory undertakers (i.e. licensed public utility providers of electricity, water, telecoms, sewer) continues to have a major impact on the NRA's ability to deliver planned major road improvements in a preferable timeframe. The statutory undertakers are often very slow in

relocation of existing services, as well as slow in the implementation of new services at new roads under construction. Most of the Government's recent road projects have been severely delayed on account of slow responses of some and sometimes all of the utility service providers.

Price Escalations. External economic forces are always a threat to the performance targets of planned work. Price escalations in 2020 and 2021 on raw materials such as lumber, bitumen, and steel are a clear indicator of unstable macro-economic conditions.

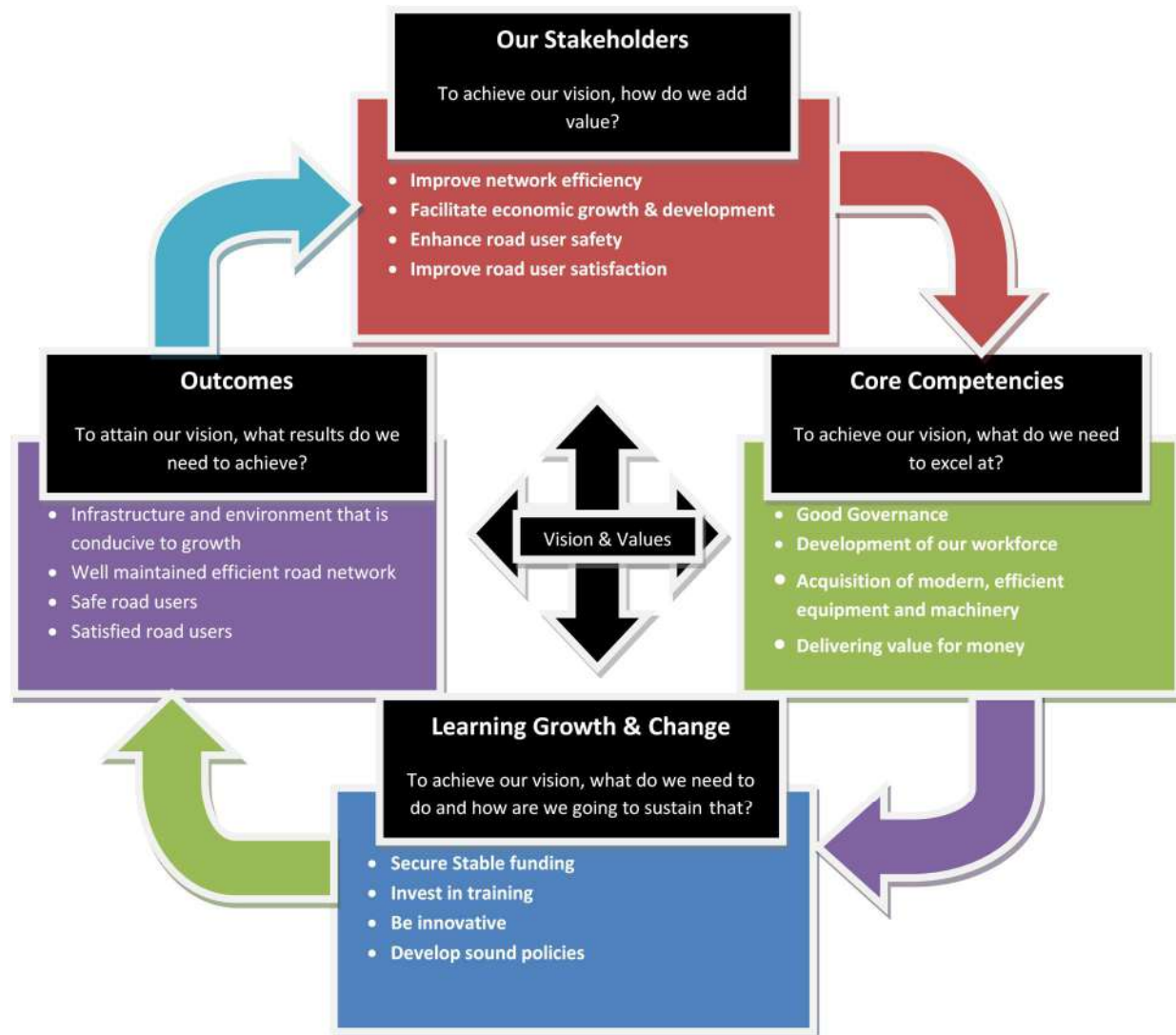
If the **global pandemic** continues through 2022 and 2023 it threatens to bring major challenges to the NRA's ability to achieve planned targets. The challenges include the threat of future lockdowns, and other restrictions, the change of pace for NRA workers and subcontractors, travel restrictions, and the ability to protect staff on-site, as well as manage supply chain interruptions.

Climate change. The NRA recognizes that climate is changing and this is increasing the risk of damage to the road infrastructure. Sea level rise and warming of the planet's oceans signal potential dangers for the Grand Cayman such as beach erosion, overtopping of canals during 'king tide' events, stronger hurricanes, and fewer but more intense rainstorms. The existing road network faces potential high cost of repair of damages caused by climate change. The absence of a comprehensive stormwater management system for Grand Cayman is leading to increasing experiences with short but severe flooding in low-lying areas with existing drain-well systems proving to be insufficient to cope with surface runoff.



Balanced Scorecard

Our balanced scorecard shows the alignment of our strategic initiatives with the vision and values of the Authority. It illustrates a measurement framework to improve organizational performance by concentrating on what matters, aligning the work our staff perform on a day to day basis with strategy, and focusing on the drivers of future performance.





Grand Strategy

The development of the Grand Strategy is informed by stakeholder analysis and the mission and vision of the Authority. It includes efforts to improve the overall quality of the network, facilitate economic development, enhance value for money, improve road safety and user satisfaction, increase private sector participation, improve governance, and develop human and physical capital assets.

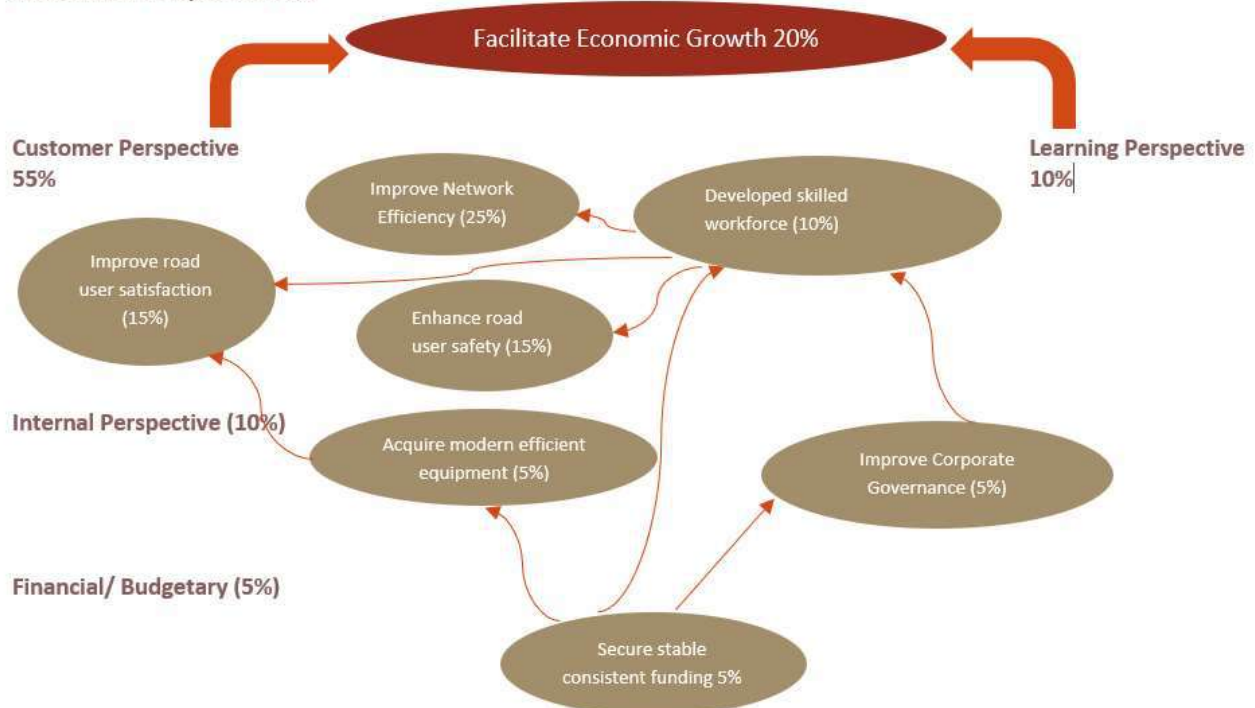
The weighting assigned to each strategy is meant to clearly prioritize elements of the three-year strategic operations plan and to guide the implementation of programmes and policies.

Grand Strategies

- | | | |
|----|---|-----|
| 1. | Improve Network Efficiency | 25% |
| 2. | Facilitate Economic Development | 20% |
| 3. | Enhance road user safety | 15% |
| 4. | Improve road user satisfaction | 15% |
| 5. | Develop skilled and motivated workforce | 10% |
| 6. | Acquire modern efficient equipment | 5% |
| 7. | Secure stable consistent funding | 5% |
| 8. | Improve Corporate Governance | 5% |

Grand Strategy Map

Stakeholder Perspective 20%





Planned major asset Improvements over the next 3 years

NRA's traffic data collection programme indicates that the roadway the Lions Centre and Selkirk Drive remains the most congested roadway segment on Grand Cayman with slightly over 40,000 vehicle trips per average weekday. The two major roundabouts at Grand Harbour Development and Kings Sports Centre rank as the 4th and 5th busiest intersections on Grand Cayman behind the Butterfield Roundabout, CNB Roundabout and traffic signal on North Sound Road.

A major segment of the primary arterial network between Bobby Thompson Way and Grand Harbour remains with constrained lane capacity. Road improvements are being proposed in the area of the Linford Pierson Highway which will provide more lane capacity for motorists travelling to and from the Eastern Districts. The traffic statistics for the Hurley Merren Blvd and Crewe Road segments are in direct correlation with elections office, and planning department statistics which show that residential growth is occurring at a faster pace in the areas east of Red Bay and Prospect. The Savannah and Newlands areas in particular have seen the most residential growth making them the fastest growing constituencies.

NRA shares Government's goal of providing congestion relief on roadway segments and at intersections that are critical to the effective movement of people, goods, and services; and particularly for residents during their daily home-work-home commute.

The NRA knows full well that we cannot build our way out of congestion. There is a limit to the amount of roads infrastructure as well as vehicular traffic this tiny island can accommodate before we adversely affect other key sectors such as tourism and the natural environment.

To this end the NRA, under the leadership of its Board of Directors, is in the process of developing a long-term road plan for Grand Cayman that will also be validated through proposed computerized travel demand and traffic operations models. These models allow the NRA to run 'what if' scenarios and test sustainability of the road network for both the short and long term. The models can run growth scenarios as far out as 30+ years. The results of these scenarios will help Government make sound policy decisions regarding ground transportation on these islands that will most likely include some or all of the following strategies:

- Continued major investment in road improvements;
- Investment in public transportation;
- Limitation of used car imports;
- Promotion of other forms of motorized and non-motorized transport;
- Promotion of employee flex time and working from home (particularly in a COVID age);
- Promotion of e-business and e-government

Proposed Major Capital Roads Projects for 2022 through 2024 is given in the table below. Of key importance are 1) Phase 2 of the Linford Pierson Highway Expansion between Agnes Way and Bobby Thompson Signal, and 2) The extension of the East-West Arterial from Hirst Road to Look-Out Gardens in Bodden Town. Completion of the Linford Pierson roadway widening project to four (4) lanes is expected to bring much needed relief for commuters to and from the eastern districts; especially during the heavy peak periods. Travel delays for some motorists east of Bodden Town central have been reported as being well in excess of one (1) hour during the AM peak period of the regular school term.



The addition of over 2 miles of new travel lane capacity, coupled with other intersection improvements in George Town is expected to drastically reduce traffic congestion and travel times for residents in the eastern districts. Other notable improvements to the road network serving the eastern districts include a planned expansion of parts of Hurley Merren Blvd and Crewe Road (by Lions Centre) from 4-lane capacity to 6-lane capacity.

Forecasted Capital Road Asset Improvements
National Roads Authority of the Cayman Islands
3 Year Annual Programme 2022- 2024

| | Project Name | 2022 | 2023 | 2024 |
|--------------------------|--|------|------|------|
| Road Safety Improvements | Bicycle Lane (HMA) at West Bay Road - Salt Creek RAB to West Bay Fire Station | | | |
| | Bicycle Sharrow Markings on Eastern Avenue | | | |
| | Guardrail Installation on Linford Pierson Hwy by Equestrian Centre | | | |
| | Guardrail Installation on Rex Crighton Blvd (east bound lane) | | | |
| | Guardrail Installation on Shamrock Road on bend near Tuckerman Lane | | | |
| | Guardrail Installation on Seaview Road by Blowholes & Lovers Wall | | | |
| | Guardrail Installation on Linford Pierson Hwy by Equestrian Centre | | | |
| | Lighted Pedestrian Crossings on Eastern Avenue by Kirk Market | | | |
| | Lighted Pedestrian Crossing at Butterfield Roundabout by Arch Automotive | | | |
| | Lighted Pedestrian Crossing on Godfrey Nixon Way by Paddington Place | | | |
| | Lighted Pedestrian Crossing on Owen Roberts Drive by Customs HQ | | | |
| | Lighted Pedestrian Crossing South Sound Road by Jetty | | | |
| | Lighted school crossing at East End Primary | | | |
| | Frank Sound Road and Seaview Road Intersection - additional turn lanes, signage and markings | | | |
| | Road Shoulder Improvements along Seaview Road | | | |
| | Road Shoulder Improvements at Queens Highway | | | |
| | Road Shoulder Improvements at Lower Valley & Pedro area | | | |
| | Island-Wide LED Roadway Lighting Improvement Program | | | |

Planned Road Safety Improvements

Forecasted Capital Road Asset Improvements
National Roads Authority of the Cayman Islands
3 Year Annual Programme 2022- 2024

| | Project Name | 2022 | 2023 | 2024 |
|-------------------|---|------|------|------|
| Primary Arterials | Airport Connector Road - ETH to Sparky Drive | | | |
| | Airport Connector Road - North Sound Road to 19E 40 - Burkes PPP | | | |
| | Linford Pierson Hwy - Widening adjacent to Equestrian Centre & along Bobby Thompson Way | | | |
| | Linford Pierson Hwy Extension - Outpost to Olympic Way | | | |
| | East-West Arterial Road - Hirst Road to Woodland Drive Area | | | |
| | East-West Arterial Road - Woodland Area to Lookout Road | | | |
| | East-West Arterial Road - Extension to Frank Sound Road | | | |
| | Godfrey Nixon Extension to North Church Street | | | |
| | Shamrock Road & Hurley Merren Blvd 6 lane widening (westbound) | | | |
| | Crewe Road 6 lane widening by Lions Centre (eastbound) | | | |
| | Shamrock Road & Crewe Road 6 lane widening by First Baptist (westbound) | | | |
| | CUC Roundabout & Kings Bypass | | | |

Planned Primary Arterial Projects



Forecasted Capital Road Asset Improvements
National Roads Authority of the Cayman Islands
3 Year Annual Programme 2022- 2024

| | Project Name | 2022 | 2023 | 2024 |
|---------------------|--|------|------|------|
| Secondary Arterials | Esterley Tibbetts Highway - Coralstone Roundabout leg extensions to WB Road and Snug Harbour | | | |
| | Walkers Road Widening - Academy Way to South Sound Road | | | |
| | Mcfield Lane - Widening and road surface upgrades | | | |
| | Anton Bodden Road - Extension to Rankins Jerk Stand | | | |
| | Willie Farrington - Reverend Blackman Connector | | | |
| | Olympic Way Connector - Olympic Way to Academy Way thru JGHS Campus | | | |
| | Eclipse Drive - Surface & Drainage Upgrades | | | |
| | Red Bay & Prospect Service Road | | | |
| | Commerical Avenue | | | |
| | Road to Fairbanks Prison & C.E.C - (part of South Sound Bypass) | | | |
| | Agnes Way Southward Extension (600ft) - Rankins PPP | | | |

Planned Secondary Arterial Projects

Forecasted Capital Road Asset Improvements
National Roads Authority of the Cayman Islands
3 Year Annual Programme 2022- 2024

| Project Name | 2022 | 2023 | 2024 |
|--|------|------|------|
| Beach Bay Road HMA resurfacing (bottom half) | | | |
| Northward Road (Shamrock Road intersection to HM Prison) | | | |
| Hirst Road (Countryside to Marine base) | | | |
| Godfrey Nixon Way (Eastern Avenue to Butterfield RAB) | | | |
| Portland Road | | | |
| Marina Drive | | | |
| Prospect Drive | | | |
| Seaview Road (East End) | | | |
| Seaview Road (Health Clinic to Knot St) | | | |
| Seaview Road (Knot St to Skipwith Link) | | | |
| Frank Sound Road HMA Resurfacing | | | |
| Water Cay Road - Island Houses to Finger Cay Road | | | |
| Sand Pointe Road - Cayman Kai Area | | | |
| Hutland Road Northside | | | |
| High Rock Drive - Seaview Road to KP's Quarry Entrance | | | |
| High Rock Drive - KP's to Long Term Mental Health Facility | | | |
| West Bay Road - Eastern Avenue to Helen Drive | | | |
| West Bay Road - Pizza Hut to Helen Drive southbound lane | | | |
| West Bay Road - Safehaven Road to Public Beach | | | |
| Eastern Avenue - Shedden Rd to Godfrey Nixon Way | | | |
| Eastern Avenue - Godfrey Nixon Way to North Church Street | | | |
| South Church Street - Boilers Rd to Denham Thompson Way | | | |
| South Church Street - Denham Thompson Way to Walkers Road | | | |
| Walkers Road - Boilers Road to Denham Thompson Way | | | |
| Walkers Road - Denham Thompson Way to South Sound Road | | | |
| South Sound Road/Walkers Road Intersection to Rugby Club | | | |
| South Sound Road - Rugby Club to Old Crewe Road | | | |
| Shamrock Road - Woodland Drive to Will T Drive | | | |
| Shamrock Road - Will T Drive to Manse Road | | | |
| Shamrock Road - Northward Rd to Manse Road | | | |

Planned Hot Mix Asphalt Rehabilitation Programme (Main Roads)



Consistent Maintenance – a key strategic priority

As the strategy map shows, 75% of our efforts will go toward improving the user experience on the road network. NRA is encouraged by the Government's commitment to facilitating major roads expansion projects such as the East-West Arterial and the Airport Connector Road. Our success in delivering the strategic outcomes outlined is largely dependent on Government's support of this strategic plan.

Effective maintenance of the existing road network is also vitally important. The NRA currently maintains approx. 324 lane-miles of road, with that number increasing as more new roads are added to the network both in the area of 1) subdivision roads (public, unscheduled and collector), and 2) major highways (primary and secondary). Core maintenance activities include;

- Roads Resurfacing (mill & pave or overlays);
- Subdivision roads upgrade (spray n chip);
- Roadside grass verge cutting;
- Road shoulder maintenance;
- New drainwell installations & maintenance;
- Pothole patching;
- Guardrails (safety barrier) installation;
- Signals maintenance;
- Lighted Pedestrian crossing Installation;
- Signs & roadway lines/markings installation and maintenance;
- Mechanical roadway sweeping;
- Speed humps & tables installation;
- Street lights Installation (public roads and subdivisions)

Poorly maintained roads constrain mobility, raise vehicle operating costs, contribute to

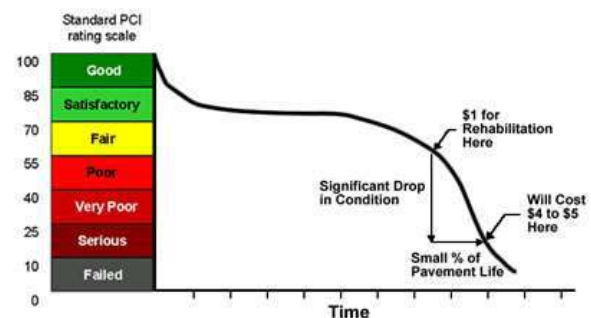
increased accident rates and can stifle economic growth.

Unfortunately, the importance of road maintenance to the local economy is not often reflected in the level of annual budgetary funding afforded to this key activity.

What is preventative maintenance?

Preventative maintenance is primarily geared at preserving the road asset as opposed to upgrading it or adding capacity. This entails activities to preserve pavements, drainage facilities, shoulders, medians, signs, lines and other road assets as near as possible to as new conditions.

A pavement management system involves preventative maintenance measures applied to the road surface before the critical failure point is reached.



The critical PCI on most pavements is 70. Asphalt roads typically require some form of preventative maintenance around 8 to 10 years of life. Preventative maintenance performed around this time will usually prolong the life of the pavement by 5 to 7 years. If no preventative maintenance is performed then the pavement passes the critical repair point and complete failure occurs more rapidly. Once pavement condition drops below "very poor" conditions the cost to rehab is 4 to 5 times more than the cost of preventative maintenance.



The Importance of regular maintenance:

With a net book value of some \$800 million as at 31st December 2021, the road network is the highest valued asset owned by the Cayman Islands Government. For the benefits and value provided by this asset to be maintained, maintenance of the network must entail a strategically planned and adequately funded maintenance program.

The case for the NRA staying ahead of the curve on maintenance costs is justified in the following ways:

1. Poorly maintained roads increase costs not just to the Government but also to the road user through added wear and tear on vehicles, decreased travel times, and increased fuel consumption
2. Deferring maintenance makes fixes drastically more expensive later;
3. It is easier to allocate money for roads maintenance more efficiently than it is for new construction projects. Maintenance funding gets spread around to all constituencies rather than to prioritized major areas as is typically the case with new construction.
4. Maintaining roads to a high standard increases property values

Without regular maintenance, the quality of the network could rapidly deteriorate, leading to congestion, higher future maintenance cost, or large-scale reconstruction efforts costing several times more than regular maintenance. This means the asset loses value, road user satisfaction decreases as the network becomes more difficult to navigate while safety reduces.

Resources required: The goals and strategies outlined in this plan seeks to provide the NRA with the workforce, equipment and funding required to properly maintain the road asset. Our success in these efforts will markedly improve our ability to deliver the desired outcomes for our customers and other key stakeholders.





Goals and Strategies

Goal 1. Improve network Efficiency

Greater efficiency will be pursued through improvements to the network that add greater access and mobility. Interconnectivity of streets and neighbourhoods and a clearly defined road hierarchy are important in making public transport and services such as garbage collection, food delivery, package delivery, etc more efficient and attractive.

| Objectives | How | Performance Measures | Targets |
|---|--|---|--|
| 1.1. Increase existing network capacity | <ul style="list-style-type: none"> Build added lane capacity on major roadways where necessary Review speed limits and implement changes where appropriate | <ul style="list-style-type: none"> Miles of additional lanes added Intersection improvements | <ul style="list-style-type: none"> Extend the EW Arterial to Lookout Gardens by Dec 2024 Widen Bobby Thompson way to 6 lanes by Dec. 2023 Widen Linford Pierson Hwy by Equestrian Centre to 4 & 6 lanes by Dec 2023 |
| 1.2. More efficient road design | <ul style="list-style-type: none"> Amend NRA Act & Roads Act to allow for regulations and/or guidelines on road design standards | <ul style="list-style-type: none"> Development of NRA operations manual Approval of NRA Law/Roads Law amendments | <ul style="list-style-type: none"> Development of subdivision road standards by March 2023 |
| 1.3. Ensure strategic access and departure to and from major roadways | <ul style="list-style-type: none"> Formalize access management plan for primary arterials Construct additional medians to reduce vehicle crossings Build in right and left hand turn lanes, accel/decel lanes where possible | <ul style="list-style-type: none"> Approval and adoption of access management plan Linear feet of additional medians built | <ul style="list-style-type: none"> Access management plan/guidelines for primary arterials to be completed and approved by Dec 2022 Turn lane upgrades to Frank Sound and Seaview Road intersection by Dec 2022 New major Intersection at Hirst Road and Rex Crighton Blvd by June 2023 |
| 1.4. Measure performance of road network | <ul style="list-style-type: none"> Measure and assess travel speeds and travel times on the network Measure and assess link through volumes and volume/capacity ratios on roads with higher classification within the network Measure and assess delay (travel delay and intersection delay) parameters at key intersections and links throughout the network | <ul style="list-style-type: none"> Traffic data collection programme conducted Measure and assess road surface characteristics Measure and assess ride quality | <ul style="list-style-type: none"> Annual pavement condition surveys completed and catalogued in micropaver database Annual pavement friction testing on select link road and intersections Annual traffic data collection programme Traffic Impact Assessments or Traffic reports for select intersections or PADs Produce the Grand Cayman future roadway congestion heat map and update annually using PTV traffic software. |
| 1.5. Increase interconnectivity | <ul style="list-style-type: none"> Gazette new link road systems within neighbourhoods Work with Department of Planning to implement policy on interconnectivity between neighbouring developments | <ul style="list-style-type: none"> Miles of additional connecting roads | <ul style="list-style-type: none"> Savannah-Newlands Collector (by Woodland) road constructed by Dec 2022 Extend Olympic Way from Truman Bodden Complex to Academy Way by Dec 2024 Connector for Willie Farrington to Reverend |



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|--|---|--|---|---|
| | | | | <div>Blackman drive by Dec. 2024 (dependent on West Bay RCIPS Station relocate)</div> <ul style="list-style-type: none">• Connector for Elgin Avenue to Eastern Avenue by 1st Qtr 2025• Godfrey Nixon extension to North Church St. by Dec. 2023• High participation in ongoing Plan Cayman committee meetings |
| <div>1.6. Develop strategies to reduce travel demand on existing road arteries</div> | <ul style="list-style-type: none">• Construct bypass and alternative routes• Provide planning guidance for walkable communities and interconnected subdivisions• Work with local media and other interest groups to promote flex-time, work from home, and other strategies.• Work with Govt and private sector entities to review and implement used car import legislation | <ul style="list-style-type: none">• Number of media campaigns held• Number of initiatives made with joint stakeholders in promoting alternative modes of transport• Greater participation in national development plan efforts | <ul style="list-style-type: none">• Quarterly meetings with Ministry of Education to review schools busing routes and catchment areas; understand causes and effects of school start times, locations and busing policies on AM peak hour traffic• Work with local media and private interest groups annually to educate road users on road traffic issues | |
| <div>1.7. Alternative strategies to reduce peak period congestion</div> | <ul style="list-style-type: none">• Work with Chamber of Commerce and other interest groups to educate and inform public on congestion management strategies• Work with employers to promote flexi-time, hybrid learning, etc• Outreach programmes promoting green transportation alternatives | <ul style="list-style-type: none">• Number of strategy meetings held and policies developed• Number of outreach programs | <ul style="list-style-type: none">• Promote strategies such as flex-time, work-from-home, park n ride, hybrid learning through media campaigns and collaborative efforts with local advocacy groups. | |



Goal 2. Facilitate Economic Development

Medium term economic forecasts from the Ministry of Finance are that the domestic economy is expected to recover beginning with a growth of 1.2 percent in 2021. Economic activity is expected to accelerate further by 4.7 percent in 2022 and an average of 2.9 percent per year between 2023 and 2025. With tourism uncertain due to the global pandemic, the economic recovery is to be led by the construction sector with both private sector and government sector projects offering major contributions.

The multiplier effect of the growth in the construction sector is expected to boost activities

in some auxiliary sectors such as electricity/water, telecoms, and wholesale/retail.

With the objectives and measures outlined below, the NRA will do its part to facilitate economic development through road infrastructure provisions that facilitate workers to jobs, students to schools, sick to the hospital, tourists to activities and so on.

| Objectives | How | Performance Measures | Targets |
|---|--|--|---|
| 2.1. Support major public infrastructure projects | <ul style="list-style-type: none"> Secure/lobby for adequate and sustainable sources of funding for major works Consult with steering groups for Port, Airport and George Town redevelopment Provide studies and infrastructure designs to facilitate projects | <ul style="list-style-type: none"> Transportation/traffic modeling Strict adherence to procurement laws and regulations Road corridor plans and designs Public-private stakeholder consultations on land-use and transportation issues | <ul style="list-style-type: none"> Semi-annual participation in economic forums, real-estate and land development forums 100% reliance on the macro and micro traffic models to justify selection of projects. Road corridor plans and studies developed on sound transportation principles |
| 2.2. Enhance climate resiliency of the core network | <ul style="list-style-type: none"> Identify flood prone areas Identify natural disaster road risks Sensitize all stakeholders on the climate impacts on the road network Work more closely with the Environmental Assessment Board (EAB) to consider environmental impacts of projects | <ul style="list-style-type: none"> Stormwater management plan Disaster management plan – emergency routes, evacuation zones etc | <ul style="list-style-type: none"> Develop a climate resilient EW-Arterial from Hirst to Lookout Gardens by Dec 2025 Establish minimum road height levels required for new roads to ensure they remain above flood stages by January 2023 Develop SWM strategies and countermeasures for existing public roads to control inland flooding from rainstorms and/or storm surge. Procure consultant for comprehensive review of SWM issues by June 2022 Develop a steering committee to work with EAB in overseeing the development of an Environmental Impact Study for the EW Arterial to Frank Sound – select EIA consultant by March 2022 |



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| 2.3. Reduce lost productivity | <ul style="list-style-type: none">• Reduce commute times for residents in the eastern and western districts• Increase access and mobility throughout the Island | <ul style="list-style-type: none">• Reduction in time for travel from various points• Number of additional road connection points• Level of provision and usability of non-motorised transport | <ul style="list-style-type: none">• Minimum 25% reduction in peak hour travel times on congested roadways by 2024• Peak hour level of service 'D' or better on Linford Pierson Hwy and Hurley Merren Blvd by 2024 | |
| 2.4. Improve the experience of Tourists and visitors using the network | <ul style="list-style-type: none">• Improve connectivity from the airport to Seven Mile Beach• Improve signage (directional and regulatory) along the roadways | <ul style="list-style-type: none">• Reduce speed limits around local tourist attractions to 25 mph and enhance signage and pedestrian crossing systems• Improve signage throughout the Island• Improve pedestrian and biking facilities allowing visitors a safe and friendly walking and biking experience | <ul style="list-style-type: none">• Make West Bay Road more accessible and safe to NMT's (bicycles, scooters, segways, skateboards, etc) by adding dedicated bicycle lanes along the entire West Bay Road corridor; improve lighting and add more crosswalks by December 2023• Signage audit and review of signage standards by Dec 2023• Improvement of wayfinding signage to facilitate better movement of tourists throughout Grand Cayman• Develop in conjunction with the Department of Tourism a social media programme that provides road user information and rules of the road for visitors by Dec 2023 | |

Goal 3. Enhance Road User Safety

The NRA plays a pivotal role in road user safety in the Cayman Islands. The 2021-2032 National Roads Safety Strategy is intently focused on the three E's (Engineering, Education, Enforcement) of road safety aimed at making Cayman's roads safer. The NRA's main area of the 3E's initiative is engineering however, there are small points of intersection with providing road safety education, and with enforcement of laws; particularly roadway standards and encroachments.

| Objectives | How | Performance Measures | Targets |
|--|--|--|---|
| 3.1. Reduce number of accidents attributable to road factors | <ul style="list-style-type: none"> Redesign adverse camber roundabouts (where necessary) to enhance safety Gather collision statistics from RCIPS and review for implementation of potential engineering countermeasures Improve overall road surface ride quality Review iRAP safety audit and make appropriate recommendations Reduce or eliminate roadside hazards | <ul style="list-style-type: none"> Intersection and lane improvements based on RCIPS collision data PCI network rating Safety audit reviewed and report prepared Implementation of iRAP 2014 report recommendations Number of hazards identified and actioned | <ul style="list-style-type: none"> All major roundabouts retrofitted to include lane discipline markings by Dec 2022 Achieve PCI rating of at least 80 on all primary and secondary road surfaces (subject to funding availability) 90% implementation of iRAP safety countermeasures implemented by December 2024 |

| | | | |
|---|---|---|--|
| 3.2. Improve safety and usability for non motorized transport (i.e. pedestrians, bicycles, scooters, etc) | <ul style="list-style-type: none"> Construct dedicated bike lanes where space and resources permit Build additional sidewalks in high pedestrian traffic areas Improve lighting on busy roadways Improve road shoulders in rural areas Install new pedestrian crossings | <ul style="list-style-type: none"> Miles of dedicated bike lane on the network length of sidewalk constructed Number of areas with improved lighting Miles of road shoulders improved Number of additional pedestrian crossings | <ul style="list-style-type: none"> Improve capacity for bicycle and pedestrians over 20 miles of arterial and collector roads by 2024 Remove encroachments on all primary arterials by Dec 2023 Remove encroachments on all secondary arterials by Dec 2024 Implement annual road shoulder improvement programme with the following targets: Frank Sound (2022); Seaview Rd (2022) Queens Highway (2023/4) Addition of at least 15 new pedestrian crossings on Grand Cayman by Dec 2024 |
| 3.3. Improve education among road users | <ul style="list-style-type: none"> Media adverts Working with the licensing department to enhance drivers' education program for road testing Partnerships with the RCIPS and road safety advocacy groups to promote safe driving | <ul style="list-style-type: none"> Number of road user education campaigns Recommendations for revisions to road code handbooks Adoption of national Road Safety Strategy Number of meetings attended for Traffic Management Panel (TMP) | <ul style="list-style-type: none"> Annual review of the Road Code and revisions Re-instate Annual road safety conference workshop in 2023 Promote the development of a road safety advisory council Review and make necessary amendments to the National Road Safety Strategy by Dec 2024 |
| 3.4. Improve road design standards and practices | <ul style="list-style-type: none"> Adopt AASHTO road geometric design standards and specifications Adopt UK model for road safety audits Strengthen strategic linkages with overseas consulting engineers and road agencies in other countries in order to enhance capacity to plan, design and manage projects. | <ul style="list-style-type: none"> Road performance audits Improvements in road designs implemented Work more closely with the Dept of Planning to 1) ensure that project designs do not primarily rely on the road network as the primary drainage tool | <ul style="list-style-type: none"> Prepare terms of reference for road safety audits July 2023 Complete training of key technical staff on UK based road safety audits and formally adopt methodology by March 2023 Key personnel to complete annual training in IRF Safer Roads by Design workshops by Dec 2022 |
| 3.5. Road Safety in residential neighborhoods | <ul style="list-style-type: none"> Collaborative efforts with residents, RCIP community officers to address neighbourhood road safety concerns | <ul style="list-style-type: none"> Number of traffic calming measures (i.e. speed humps) Street lighting Street name signs Speed limit signs | <ul style="list-style-type: none"> 80% implementation of <u>approved</u> traffic calming measures annually |



Goal 4. Improve Road User Satisfaction

The satisfaction of network users is an important measure of both the NRA's performance and the quality of the network. It can also serve to highlight areas where greater attention or investment is needed. Satisfaction levels also reflect expectations. Users have a right to expect a high performing network; this creates increased demand for better performance,

while encouraging the NRA to improve on existing satisfaction levels.

A safe and highly efficient road network is important to our economic wellbeing as a country, and our personal wellbeing as individuals and families. We therefore want to improve the experience on the network and allow users to drive at consistent speeds and enjoy predictable travel on our roads.

| | How | Performance Measures | Targets |
|--|--|---|---|
| 4.1. Reduce network congestion | <ul style="list-style-type: none"> Build additional lane capacity Encourage car pooling Encourage public transport use Improved road designs | <ul style="list-style-type: none"> Miles of additional lanes added media campaigns promoting the use of public transport, carpooling, etc Reduction in average travel times | <ul style="list-style-type: none"> Construct 5 lane-miles of new primary arterial roadway by Dec 2024 Improve travel capacity on at least 5 miles of existing arterial roads by 2024 Annual collaborative efforts with advocacy groups for promoting the use of alternative car-free modes of transport Improve geometry and lane capacity at the following major intersections by 2024: Hirst/Rex Crighton Blvd junction, CUC RAB, Bobby Thompson RAB |
| 4.2. Improve aesthetics of the network | <ul style="list-style-type: none"> Clearly visible signs and lines Landscaping of medians Maintenance of road shoulders Appropriate lighting | <ul style="list-style-type: none"> Signs and lines condition audit Customer satisfaction surveys Number of miles of roadway routinely maintained High standard of street lighting | <ul style="list-style-type: none"> 80% or better rating on signs and lines condition audit Expand road sweeping to include at least once monthly sweeps of outlying areas such as ETH, Hurley Merren Blvd Increase font size and reflectivity on all street name signs on or intersecting with a primary or secondary arterial by Dec 2023 100% of all primary and secondary arterials to have raised pavement markers (RPM) on centerline and/or edge-lines to provide added guidance for motorists in inclement weather and low light conditions by Dec 2024 Expand road shoulder verge cutting and trimming programme to include full time dedicated machines and crewmen for all districts Work with CUC to ensure 90% functioning of all street lights and establish standards for streetlight repair with CUC |
| 4.3. Improve road surface quality on the network | <ul style="list-style-type: none"> Repair failing road network Perform regular road condition audits Ensure appropriate design for road surface mix | <ul style="list-style-type: none"> Miles of road repaired or rehabilitated Routine PCI surveys NRA standards for road surface mixes | <ul style="list-style-type: none"> PCI survey of 1/2 of Grand Cayman road network performed annually Road network kept at an average PCI of 80 or above (subject to funding) Implement planned hot mix asphalt rehabilitation programme for 2022 thru 2024 (subject to funding) |



| Objectives | How | Performance Measures | Targets |
|--|--|---|---|
| 4.4. Cut and Trim vegetation along the network | <ul style="list-style-type: none"> Deploying bush personnel and equipment to maintain road shoulders Develop brush cutting schedule for all roads Ensure functioning of equipment for maintenance | <ul style="list-style-type: none"> Number of miles cut Revisions to brush cutting schedule Percentage availability of equipment | <ul style="list-style-type: none"> 90% of bush cutting sorties carried out on schedule Bush cutting schedule revised based on changes in network Equipment maintained and functioning 95% of the year |
| 4.5. Increase availability of the network | <ul style="list-style-type: none"> Reduce road closures due to NRA maintenance work Reduce closures due to maintenance by Statutory Undertakers Perform maintenance work during off peak seasons and off peak hours | <ul style="list-style-type: none"> Number of unscheduled road closures, percentage of time road closures extend beyond period planned Number of unscheduled roadway interventions by statutory undertakers Percentage of maintenance work carried out during annual summer break | <ul style="list-style-type: none"> Hold monthly meetings with statutory undertakers to review and agree on the implementation of scheduled road utilities work Perform 90% of striping and signage installation works on major arterials at night and/or during weekend off-peak hours Publish planned roadworks and/or full or partial road closures at least 24 hours in advance |
| 4.6. Improved customer focus | <ul style="list-style-type: none"> Develop customer service charter and action plan Conduct customer satisfaction surveys Promote customer complaint numbers Improve communication with our customers | <ul style="list-style-type: none"> Completion of customer charter and plan Completion of satisfaction survey Number of signs erected and media placements Press releases ahead of all major network intervention efforts | <ul style="list-style-type: none"> Implement Customer service charter by August 2022 Customer satisfaction surveys to be conducted at least once annually 100% compliance with Freedom of Information (FOI) legislation at all times Procure services of media consultant to help development communications strategy re: NRA projects, plans and practices by April 2022 Review and update social media page and sites weekly Build capacity for full-time communications officer by July 2022 |



Goal 5. Develop skilled and motivated workforce

As a service-based Authority, the NRA is highly dependent on the skills, knowledge and experience of our human capital asset. To develop a skilled and motivated workforce, it is important for the NRA to be an exemplary employer across the entire spectrum of staff.

Staff are happiest when they feel appreciated and valued. Our development policies must therefore include efforts to ensure fair compensation, effective performance management, and an open

management culture that encourages the sharing of ideas, dialogue and engagement.

We will continue to place workplace safety at the forefront of the Authority, invest in training, instill a culture of lifelong learning, and be fair and compassionate while also promoting a culture of pride and ownership at all levels of the Authority.

Whilst the NRA currently performs well in employee retention with nearly 80% of staff having a tenure of 10 years or more, it is an area where complacency can never be allowed. We will therefore continually invest in our people as the catalyst for positive change, growth and innovation within the Authority.

| Objectives | How | Performance Measures | Targets |
|---|--|---|---|
| 5.1. Improve worker safety standards | <ul style="list-style-type: none"> Improve standards for work zone safety Provide appropriate gears and equipment | <ul style="list-style-type: none"> Implementation of relevant standards Areas identified and implemented Number of sessions conducted Staff safety inspection results | <ul style="list-style-type: none"> Work zone safety and vehicle operator safety training to be conducted quarterly Random staff safety inspection to yield 90% or above compliance with standards |
| 5.2. Improve competence levels in strategic areas | <ul style="list-style-type: none"> Support certification training Support tertiary education efforts Provide coaching and mentoring | <ul style="list-style-type: none"> Number of staff undertaking certification courses Number of staff support opportunities offered Number of mentoring programs developed | <ul style="list-style-type: none"> All technical and supervisory staff to undertake relevant levels of project management training by March 2023 Further Education support opportunities to be offered to minimum 5% of staff Employee internship program to be implemented by September 2022 |
| 5.3. Foster a culture of training and lifelong learning | <ul style="list-style-type: none"> Promote succession planning Effective performance management Enable exposure to new technology and working practices Staff awards/recognition programmes Train supervisory and management staff in basic HR Mgt Provide supervisory and management training to existing managers. | <ul style="list-style-type: none"> Succession plan developed Performance agreements and appraisals Staff incentive programmes | <ul style="list-style-type: none"> Succession plan to be developed by September 2022 100% of staff with performance agreement within 60 days of fiscal year end Implement staff mentoring policy by July 2022 Establish quarterly lunch n learn programme by September 2022 Provide a human resources management plan to NRA Board by September 2022 |



| Objectives | How | Performance Measures | Targets |
|---|---|---|--|
| 5.4. A fair, caring and compassionate employer | <ul style="list-style-type: none">Ensuring fair compensation practicesBe an equal opportunity employerEncourage staff well-ness programsProvide staff with access to counselling support servicesCreate and maintain an internal social committee | <ul style="list-style-type: none">Compensation reviewsStaff access to Employee Assistance Programmesocial committee activenessstaff wellness programmes | <ul style="list-style-type: none">Equal opportunity hiring policySubscription to the Employee Assistance ProgrammeSocial committee activities report twice annually |
| 5.5. Instill pride, performance and ownership at all levels | <ul style="list-style-type: none">Staff recognition programmesOpen managementStaff communicationHost monthly management meetingHost organizational wide meetingsProvide high quality office facilities and infrastructureProvide conducive work environment | <ul style="list-style-type: none">Opportunities to be recognized for good workInclusion of front-line staff in management decision makingStaff satisfaction surveyNumber of monthly management meetingsNumber of organizational wide meetingsImproved visibility communications and employee collaboration | <ul style="list-style-type: none">Policy for staff assessment and recognitionOpen participative management framework80% or higher score for communication on staff satisfaction surveys |
| 5.6. Attract and retain adequately qualified HR Capital | <ul style="list-style-type: none">Build capacity for required expertise to meet the goals and targets of the NRA operational planIdentify staffing gaps in various specialized areas | <ul style="list-style-type: none">Staffing levels vs workloadRecruitment of human resources required for the planning, design, construction, maintenance and rehabilitation of public roads | <ul style="list-style-type: none">Recruit traffic engineer by December 2022Recruit stormwater engineer by August 2023Recruit Deputy managing director by December 2022Recruit Deputy Chief Finance Officer by September 2022Recruit senior project manager by September 2022 |



Goal 6. Acquire modern efficient equipment

The ownership and operations of our equipment and vehicles fleet has a significant impact on our operations. In addition to acquiring modern equipment the NRA's focus shall also be on ensuring effective fleet management in order to support our business objectives in a cost-effective manner.

Through a rigorous evaluation and assessment strategy, we will seek to replace aging, failure prone and high maintenance equipment and vehicles in a systematic manner over the next 3 years. Going forward, we will develop an asset replacement policy and increase the annual depreciation fund to ensure that future funds will be available to replace equipment assets as they come to the end of their useful lives.

| Objectives | How | Performance Measures | Targets |
|--|---|--|---|
| 6.1. Evaluate condition of existing equipment | <ul style="list-style-type: none"> Visual and mechanical inspection Assess optimum useful life assumptions Assess annual cost of repair and maintenance Prepare equipment fleet status report Prepare fleet utilization reports that signal which vehicles and equipment are under-utilized or are not necessary | <ul style="list-style-type: none"> Completion of inspection report Preparation of optimum useful life reports Preparation of fleet utilization report | <ul style="list-style-type: none"> Annual visual and mechanical inspection reports by Dec of each year Revised useful life report by Dec each year Maintenance cost report by Dec each year Comprehensive fleet status report by 1st Qtr each year |
| 6.2. Assess fitness for purpose against strategy (Demand Analysis) | <ul style="list-style-type: none"> Evaluate existing equipment suitability against future organizational needs Research new technologies that could markedly Improve efficiency | <ul style="list-style-type: none"> Suitability and demand analysis report of NRA fleet over the next 5 years | <ul style="list-style-type: none"> Report on new equipment technology and any change in construction and maintenance strategies by 1st Qtr each year |
| 6.3. Fleet Acquisition Plan | <ul style="list-style-type: none"> Develop fleet acquisition plan Board review and approval of fleet replacement plan and policy | <ul style="list-style-type: none"> Completion of plan Board approval | <ul style="list-style-type: none"> Submit phased fleet acquisition plan (2022-2024) by March 2022 Board review and approval of fleet acquisition plan by March 2022 |
| 6.4. Reduce annual maintenance cost | <ul style="list-style-type: none"> Decommission high maintenance equipment; Procurement policy for acquisition of light vehicles Procurement policy for acquisition of Good Used (i.e. late model/low mileage) heavy equipment Standardization of equipment Continued training of operators and maintenance crew | <ul style="list-style-type: none"> Decommission report and acceptance by Board PPC acceptance of NRA procurement policy | <ul style="list-style-type: none"> Annual decommission report and used equipment auction reports 100% adherence to approved equipment procurement policy |



Goal 7. Secure stable consistent funding

Effective asset stewardship, through monitoring and management, is vital to the successful operation and maintenance of the road network. It helps to identify problems and potential solutions before failures occur.

Whilst effective maintenance programmes have been underfunded in recent years, the road asset still remains in fair condition with an average PCI rating of 78. The NRA will continue current asset valuation exercises and harness new technology to improve data collection techniques to provide a more meaningful data and analysis.

The introduction of preventative maintenance strategies is a strategic goal over the next three years. Currently hot mix asphalt pavements are allowed to fail past their critical repair point leading

to high pavement rehabilitation costs which include necessary milling of old deteriorated pavement and full replacement of new asphalt at higher than original placement costs.

Adequate, secure and stable funding will enable the NRA to move away from the current spray n chip (surface treatment) policy and adopt thin asphalt pavement strategy for subdivision roads coupled with preventative maintenance strategies such as micro-surfacing on major arterials. Continued underinvestment is no longer a realistic option – as our roads age and our population grows, our network will increasingly fail to meet the social and economic aspirations of the Cayman Islands. It is therefore imperative that the NRA is afforded stable and consistent funding over the medium to long-term in order to continue supporting Government's efforts to build a smart modern infrastructure while growing the economy.

| Objectives | How | Performance Measures | Targets |
|--|---|---|--|
| 7.1. Ensure adequate provisions for road network needs in overall government plans | <ul style="list-style-type: none"> Create linkages and alignment with internal strategic planning and Government's strategic policy statement Seek endorsement for NRA's strategic plans Identify interlinks with planned road programs and other Government initiatives | <ul style="list-style-type: none"> Submission of strategic operations plan for approval by Minister/Cabinet | <ul style="list-style-type: none"> Strategic operations plan to be submitted and approved by June 2022 |
| 7.2. Secure sufficient funding to properly manage network | <ul style="list-style-type: none"> Seek Government's commitment to future road work programmes Properly cost future road intervention programmes Present fully argued business cases for budget requests | <ul style="list-style-type: none"> Ownership Agreements Operations Budget Capital Projects planned expenditure Number of business cases | <ul style="list-style-type: none"> Ministry approval of annual work plans that align with the Government's strategic policy statement (SPS) Cost estimates prepared for major works and district roads programme 100% compliance with PPC business case requirements for planned projects |
| 7.3. Evaluate road user funding schemes | <ul style="list-style-type: none"> Research funding schemes in similar jurisdictions Prepare business case for Cayman context Seek Cabinet's approval for relevant changes | <ul style="list-style-type: none"> Number of reports prepared | <ul style="list-style-type: none"> Advise Board and Minister on road user charges and road impact fee alternatives periodically |



Goal 8. Improve Governance

How the Authority is managed and governed is a key success factor for this strategic plan. As the Authority further matures, so too will our governance and management frameworks. Over the period of this strategic plan, the NRA will undergo efforts to enhance our financial management capabilities, develop an enterprise risk management framework and create policies

and procedures which are conducive to good governance.

These efforts will improve our efficiency by ensuring consistency in our approach, adequate information for decision making, and effective future planning. It will also help to improve communication, provide a standard by which actions will be assessed and ensure we remain compliant with all relevant legislation.

| Objectives | How | Performance Measures | Targets |
|--|---|---|---|
| 8.1. Practice Sound Financial Management | <ul style="list-style-type: none"> Comply with the PMFA Prepare quarterly financial management reports and presentations Preparation of business cases for expenditures above a certain threshold Revamp fixed assets register and inventory management Invest in modern financial accounting system | <ul style="list-style-type: none"> Audit opinion Report Business Case new accounting system | <ul style="list-style-type: none"> Annual unqualified Audit Opinion and favorable audit reports Full financial performance reports presented to the Board quarterly 100% compliance with procurement laws and regulations Source and implement modernized computer-based accounting system by June 2022 |
| 8.2. Comply with all Acts and internal policies and controls | <ul style="list-style-type: none"> Staff training and familiarity with financial laws policies and procedures Staff trained by CFO on all relevant internal finance related policies and controls | <ul style="list-style-type: none"> Number of breaches of law Stockpile management Credit card policy Vehicle usage policy ICT policy | <ul style="list-style-type: none"> No breaches of the law 100% compliance with NRA internal policies and controls |
| 8.3. Develop policies and procedures framework | <ul style="list-style-type: none"> Complete personnel manual Complete operations manual Complete vehicle use policy Complete media communications policy | <ul style="list-style-type: none"> Personnel manual Operations manual Vehicle use policy Communications policy Safety policy | <ul style="list-style-type: none"> Manuals and policies to be reviewed/completed by Dec 2022 |
| 8.4. Implement enterprise risk management (ERM) | <ul style="list-style-type: none"> Complete enterprise wide risk assessment Train managers on ERM Monitor compliance to ERM | <ul style="list-style-type: none"> ERM framework | <ul style="list-style-type: none"> ERM Framework developed by Dec 2022 |
| 8.5. Review relevant legislation and policy guidelines | <ul style="list-style-type: none"> Establish Board subcmte to review the Roads Act and NRA Act Establish law review Cmte with Legal Drafting Develop draft Bills | <ul style="list-style-type: none"> Proposed amendments accepted by Minister/Cabinet | <ul style="list-style-type: none"> Section 19 Roads Act amended by 3rd Qtr 2022 Roads Act (Revision) by Dec 2024 NRA Act (Revision) by Dec 2024 |



Financial Projections

Summary

The Financial Projections show a fiscally prudent NRA which maintains a minimum 90 day cash on hand reserve while investing in modern equipment, improving the road network

and building staff capacity. The projections also show tangible contributions to the Authority's post retirement pension scheme, as well as the post-retirement health liability fund.

Timely agreement for future funding will be critical in providing the ability to plan for the long-term and the opportunity to drive increased efficiency.

The Road Fund



In 2015, the National Roads Authority Act was amended to provide direct funding to the Authority using two direct revenue streams, specifically, payments collected from customs duties on gasoline and diesel, and fees collected by the Licensing Department for motor vehicle drivers' licences.

The amendment (Roads Act - Section 19(1)) provided for up to \$10 million in annual payments to the Authority via the Road Fund ("the fund"). Proceeds from the fund are used to cover the Authority's annual operating costs which also includes routine maintenance activities on public roads.

Since 2016 the NRA has operated with a capped operations budget of \$10M per annum. The restriction:

1. Limits the potential of the NRA to address increasing maintenance costs;
2. Limits the ability of the NRA to contend with rising raw materials costs;
3. Results in an increase of unfunded maintenance projects (backlog);
4. Prevents NRA from addressing key man-power vacancies;
5. Restricts NRA's ability to adequately address long term liabilities such as post-retirement healthcare, and past-service pension;
6. Prevents the NRA from achieving desired levels of vehicle and equipment assets;
7. Restricts the NRA's ability to build its own office accommodations and general use compound.



For this strategic plan to be successful the present \$10M cap on revenue generated by the road fund must be removed to allow the NRA to receive increased funding for its operations over the period 2022-2024. Since the cap the NRA has been forced to reduce its full-time staff levels from some 130+ employees down to 82 full time employees. The Authority currently operates with vacancies at key areas such as senior management, engineering design, planning and traffic, finance, and others. Personnel costs for these vacant posts amount to approximately \$1M per year.

Capital Works Program

Strategic Planning Estimates indicate that the Government will invest an average \$15 million per annum or \$75 million over the three-year plan period to build additional capacity on the road network through its capital works programme. This we hope will be augmented by an additional forecasted \$14M annual average allocation from the Road Fund for NRA operations and maintenance.

Combined capital and operations investments over the period covered by this strategic plan (2022-2024) are forecasted at around \$145 million.

Sale of Outputs to Central Government

Approximately 10% of the current \$10M annual amount provided by the Road Fund is pass-through cost paid by the NRA for street lighting. Another 20% of the Road Fund revenue goes to payment of post-retirement health and pension benefit schemes the Authority inherited from workers who transitioned from the Central Government as employees in 2004.

When the administrative, management and other overheads are considered, actually funds available to spend on core road network maintenance activities become significantly limited. To achieve Government's objectives with regards to road

maintenance the Ministry will have to continue with funding of district roads maintenance as a capital improvement (executive asset) as part of the Government's normal budgeting process.

Financial Position

The NRA's strategic plan imagines a stable financial position for the Authority going forward provided that operational revenue is increased as planned. Key features include total assets of over \$6 million, and an improving net-worth position as it works to offset the long-term pension and post-retirement health liabilities. Over the forecast period, \$2.0 million will further invest in modern equipment, vehicles, and also establish a fund for land and accommodations to be used for a permanent future home for the NRA.

Forecasted Expenditures

Success of this plan relies heavily on funding estimates being recognized as planned. Successive Governments have shown strong commitment to funding of new capital works in the last 10 years however funding for maintenance activities (which fall within the NRA's operations budget) has not been adequate due in part to the NRA's need to offset cost increases in raw materials, personnel costs, etc.

The maintenance purchasing component of the \$10M received from the Road Fund has diminished so significantly that it now threatens the ability of the NRA to provide consistently good maintenance service levels for routine maintenance of stormwater drains, road sweeping, road markings and signage, and roadside vegetation management. With the majority of the \$10M going directly to increasing personal emolument costs (salaries, pension and health) there is less money available for the hiring of maintenance subcontractors, and purchase of materials (bitumen, fill materials, sign making material, etc).



Forecast Operating Statement

SCENARIO 1 - Status Quo, Operations Budget at \$10M annually

NATIONAL ROADS AUTHORITY
Comparative Statement of Financial Performance \$10M
For the Fiscal periods 2022 to 2024
(expressed in Cayman Islands Dollars)

| | Budget FY 2022 | Budget FY 2023 | Budget FY 2024 |
|--|--------------------|--------------------|--------------------|
| Revenue | | | |
| Roads Maintenance Services | 9,500,000 | 9,500,000 | 9,500,000 |
| Road Construction Services | - | - | - |
| Storm Water Management | 500,000 | 500,000 | 500,000 |
| Road Development Services | - | - | - |
| Explosives management | - | - | - |
| Sales of Services Interdepartmental/Others | 300,000 | 300,000 | 300,000 |
| Interest revenue & other | 8,400 | 8,400 | 8,400 |
| Total revenue | 10,308,400 | 10,308,400 | 10,308,400 |
| Cost of Sales | | | |
| Labour | 2,634,839 | 2,634,839 | 2,766,581 |
| Hired equipment | - | - | - |
| Materials | 205,714 | 205,714 | 216,000 |
| Subcontractors | 205,714 | 205,714 | 216,000 |
| Total Cost of Sales | 3,046,267 | 3,046,267 | 3,198,580 |
| Gross Profit | 7,262,133 | 7,262,133 | 7,109,820 |
| General & Admin. Exp. | | | |
| Staff costs | 4,566,826 | 4,566,826 | 4,795,167 |
| Expenses and supplies | 30,286 | 31,800 | 33,390 |
| Motor vehicles expenses | 645,429 | 667,755 | 701,143 |
| Street lighting | 1,200,000 | 1,300,000 | 1,365,000 |
| Utilities | 33,623 | 35,304 | 37,070 |
| Telephone | 60,134 | 63,140 | 66,297 |
| Advertising | 27,232 | 28,594 | 30,023 |
| Professional fees | 57,097 | 59,952 | 62,950 |
| Office rental-PWD | 49,380 | 51,849 | 54,441 |
| Computer maintenance & fees | 182,569 | 191,697 | 201,282 |
| Repairs & maintenance | 1,290 | 1,355 | 1,423 |
| Depreciation - vehicles | 204,029 | 200,545 | 168,107 |
| Depreciation - furniture & fittings | 13,311 | 13,041 | 12,888 |
| Depreciation - computer hardware | 12,630 | 2,670 | 2,434 |
| Depreciation - computer software | 8,356 | 8,356 | 8,356 |
| Depreciation - office equipment | 1,509 | 1,509 | 407 |
| Depreciation - other equipment | 298,941 | 266,026 | 203,781 |
| Depreciation - leasehold improvements | - | - | - |
| Doubtful debt expense | - | - | - |
| Insurance - property & liability | 15,343 | 15,784 | 16,573 |
| Bank charges and interest | 8,400 | 8,400 | 8,820 |
| Total Expenses | 7,416,385 | 7,514,603 | 7,769,552 |
| Other Expenses | | | |
| Post-Employment Health Care | 3,067,000 | 3,067,000 | 3,067,000 |
| Net Surplus (Loss) for the period | (3,221,252) | (3,319,470) | (3,726,732) |

SCENARIO 2 - Operations Budget increased \$14-\$15M annually over the Plan period

NATIONAL ROADS AUTHORITY
Comparative Statement of Financial Performance
For the Fiscal periods 2022 to 2024
(expressed in Cayman Islands Dollars)

| | Budget FY 2022 | Budget FY 2023 | Budget FY 2024 |
|--|--------------------|--------------------|--------------------|
| Revenue | | | |
| Roads Maintenance Services | 12,125,000 | 12,600,000 | 12,905,000 |
| Road Construction Services | 0 | 0 | 0 |
| Storm Water Management | 1,200,000 | 1,260,000 | 1,325,000 |
| Road Development Services | 600,000 | 700,000 | 700,000 |
| Explosives management | 75,000 | 75,000 | 100,000 |
| Sales of Services Interdepartmental/Others | 300,000 | 300,000 | 300,000 |
| Interest revenue & other | 8,400 | 8,400 | 6,000 |
| Total revenue | 14,308,400 | 14,943,400 | 15,336,000 |
| Cost of Sales | | | |
| Labour | 3,134,839 | 3,134,839 | 2,766,581 |
| Hired equipment | 0 | 0 | 0 |
| Materials | 1,180,714 | 1,239,750 | 1,301,737 |
| Subcontractors | 1,205,714 | 1,266,000 | 1,329,300 |
| Total Cost of Sales | 5,521,267 | 5,640,588 | 5,397,618 |
| Gross Profit | 8,787,133 | 9,302,812 | 9,938,382 |
| General & Admin. Exp. | | | |
| Staff costs | 5,766,826 | 6,055,167 | 6,357,926 |
| Expenses and supplies | 30,286 | 31,800 | 33,390 |
| Motor vehicles expenses | 779,585 | 667,755 | 701,143 |
| Street lighting | 1,200,000 | 1,300,000 | 1,365,000 |
| Utilities | 33,623 | 35,304 | 37,070 |
| Telephone | 60,134 | 63,140 | 66,297 |
| Advertising | 50,000 | 60,000 | 60,000 |
| Professional fees | 57,097 | 59,952 | 62,950 |
| Office Maintenance-PWD | 49,380 | 51,849 | 54,441 |
| Computer maintenance & fees | 182,569 | 191,697 | 201,282 |
| Repairs & maintenance | 31,282 | 1,355 | 1,423 |
| Depreciation - vehicles | 204,029 | 200,545 | 168,107 |
| Depreciation - furniture & fittings | 13,311 | 13,041 | 12,888 |
| Depreciation - computer hardware | 12,630 | 2,670 | 2,434 |
| Depreciation - computer software | 8,356 | 8,356 | 8,356 |
| Depreciation - office equipment | 1,509 | 1,509 | 407 |
| Depreciation - other equipment | 298,941 | 266,026 | 203,781 |
| Depreciation - leasehold improvements | | | 0 |
| Doubtful debt expense | | | 0 |
| Insurance - property & liability | 15,343 | 15,784 | 16,573 |
| Bank charges and interest | 15,000 | 15,750 | 16,538 |
| Total Expenses | 8,809,901 | 9,041,701 | 9,370,005 |
| Other Expenses | | | |
| Post-Retirement Health Care | 3,067,000 | 3,067,000 | 3,067,000 |
| Net Surplus (Loss) for the period | (3,089,768) | (2,805,889) | (2,498,622) |



OPERATIONS (ROAD FUND) EXPENDITURE ESTIMATES

| | | | | |
|---|-----------------------------------|---|----------------------|----------------------|
| NRA 5: Planning and Development of New Public Roads | | | | |
| SP# | Description in Service Agreement: | Provision of medium to long term plans for road development in keeping with Government's efforts to develop a long-term transportation plan and to identify and seek approval for funding of projects necessary for improving the public road network. | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$250,000 | \$400,000 | \$450,000 |
| | SUBTOTAL | | | |
| NRA 6: Minor District Works | | | | |
| SP# | Description in Service Agreement: | Materials, labour, and equipment for construction plus project management services for minor works and enhancements such as sidewalks, bicycle lanes, curb adjustments, IRAP safety countermeasures, etc | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$0 | \$775,000 | \$1,150,000 |
| | SUBTOTAL | | | \$1,170,000 |
| NRA 7: Training and Development | | | | |
| SP# | Description in Service Agreement: | Provision of further education support opportunities, internships, regular internal training and certification, supervisory management, coaching and mentoring programmes | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$0 | \$300,000 | \$300,000 |
| | SUBTOTAL | | | \$300,000 |
| NRA 8: Stormwater Maintenance (e.g. storm drains & culverts) | | | | |
| SP# | Description in Service Agreement: | Routine programmed maintenance activities for storm drainage systems - wells, culverts, swales, etc | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$700,000 | \$1,200,000 | \$1,260,000 |
| | SUBTOTAL | | | \$1,325,000 |
| NRA 9: Maintenance of Roads - Grand Cayman | | | | |
| SP# | Description in Service Agreement: | Materials, labour, and equipment for construction plus project management services related to the general maintenance and upkeep of public roadways. | | |
| | | The road network consists of: 14 miles of arterial roads, 108 miles of collector roads, 80 miles of public residential roads, and 122 miles of | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$6,000,000 | \$7,200,000 | \$7,300,000 |
| | SUBTOTAL | | | \$7,400,000 |
| NRA 10: Street Lighting - Grand Cayman | | | | |
| SP# | Description in Service Agreement: | Management of Government Street Lighting Program | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$1,100,000 | \$1,200,000 | \$1,300,000 |
| | SUBTOTAL | | | \$1,365,000 |
| NRA 11: Roads Asset Management Programmes, Traffic Signal & electronic signs maintenance | | | | |
| SP# | Description in Service Agreement: | Asset Management Unit: Survey Audits & Inspections. Testing & Lab Equipment and Services. PCI Surveys, Streetview Surveys, Friction Testing, Signs Asset Inspection & Inventory. Traffic signals maintenance, maintenance of electronic signal systems, speed check signs, electronic school zone signs, lighted crosswalks, metered traffic signals, etc | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$100,000 | \$300,000 | \$300,000 |
| | SUBTOTAL | | | \$300,000 |
| NRA 12: Emergency/Disaster Recovery Activities | | | | |
| SP# | Description in Service Agreement: | Traffic signals maintenance, maintenance of electronic signals systems, speed check signs, electronic school zones signs, lighted crosswalks signs, metering signals | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$0 | \$500,000 | \$700,000 |
| | SUBTOTAL | | | \$800,000 |
| NRA 13: Explosives and Blasting Management | | | | |
| SP# | Description in Service Agreement: | Provision of emergency services including initial clearance, drainage/flood response to storms, replacement of street furniture (eg. Damaged or lost signs, signals, poles, etc) | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$50,000 | \$75,000 | \$75,000 |
| | SUBTOTAL | | | \$100,000 |
| NRA 14: Building & Accommodations Development Fund | | | | |
| SP# | Description in Service Agreement: | NRA Office Accommodations & Compound Development | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$0 | \$500,000 | \$500,000 |
| | SUBTOTAL | | | \$500,000 |
| NRA 15: Provision for Other Costs | | | | |
| SP# | Description in Service Agreement: | Business Development & Investment | | |
| | | Budgeted 2021 | Forecast 2022 | Forecast 2023 |
| | | | | Forecast 2024 |
| | Road Fund Revenue (RFR): | \$1,800,000 | \$2,000,000 | \$2,200,000 |
| | SUBTOTAL | | | \$2,300,000 |
| | Grand Total Outputs | \$10,000,000 | \$14,450,000 | \$15,535,000 |
| | | | | \$16,010,000 |



CAPITAL WORKS (EA 36 & EA 148) EXPENDITURE ESTIMATES

The NRA performs capital improvements for the Cabinet via two main executive asset outputs.

1. **EA 36 – Miscellaneous Road Improvements** consists primarily of the following category of road works:

- Subdivision roads (hot mix asphalt or spray n chip surface)
- Road shoulder improvements
- Guardrail installations
- New drain-well & catch basin installations
- Traffic calming of neighbourhoods (speed humps, tables, etc)
- School zones, lighted pedestrian crossings, electronic signs, etc

| Capital Projects: EA-36: Misc Road Upgrades | | | |
|--|-------------|-------------|-------------|
| | 2022 | 2023 | 2024 |
| New Guardrail Installations (all constituencies) | \$300,000 | \$300,000 | \$400,000 |
| New Drainwell & Catch Basins (all constituencies) | \$150,000 | \$150,000 | \$300,000 |
| District Roads Upgrades Programme (all constituencies) timed rehabilitation of local subdivision access roads including collector roads | \$2,000,000 | \$2,000,000 | \$3,000,000 |
| Road shoulder upgrades (all constituencies) | \$400,000 | \$400,000 | \$500,000 |
| Traffic Calming/School Zones/Crosswalks/speed humps | \$150,000 | \$150,000 | \$150,000 |
| EA 36 TOTAL CAPITAL BUDGET: | \$3,000,000 | \$3,000,000 | \$4,350,000 |

2. **EA 148 – Major Road Works** refers to the development of new road construction projects mostly for the primary & secondary arterial roads. They consist of new road expansions into virgin territory, lane widening of existing main roads, hot mix rehabilitation of primary arterials, and construction or upgrade of major intersections. Budget forecasts for the 2022-2024 include three major new projects necessary to increase highway capacity, decrease travel times during peak congestion periods, and provide added access and mobility to motorists. These key projects are:

- a) Linford Pierson Highway – Phase II (~\$6.5M) which involves an expansion of the current 2 lane section of LPH and Bobby Thompson Way (vicinity of the Equestrian Centre) to a 3+3 lane system with central median
- b) Airport Connector Road (ETH to Sparky Drive) (\$8M) – provides a new primary arterial roadway connection from the roundabout by the landfill inland to Sparky Drive. Future phases of the ACR will involve an extension from Sparky Drive to the long-term carpark at Owen Roberts International Airport.
- c) East-West Arterial (Hirst to Lookout Gardens) (\$24M) – Provides an additional 2.5 miles of new arterial roadway with the potential future expansion to 6 travel lanes. This segment of roadway will provide quicker more accessible links for residential neighbourhoods in the BT, Savannah and Newlands constituencies. Future expansion of the EW Arterial will also facilitate safer, and more efficient journeys for all neighbourhoods east of Savannah.

| EA 148 - Major Road Projects Timeline (2022 - 2024) | | | |
|--|---------------------|---------------------|---------------------|
| Project / Description | 2022 | 2023 | 2024 |
| Cayman Kai Roads (Northside) | | | |
| Finger Cay, Sand Point Rd, Water Cay Rd | \$1,000,000 | | |
| Frank Sound/Seaview Road Intersection Upgrade | | | |
| add westbound turning lane, eastbound dedicated left, splitter islands | \$300,000 | | |
| North Side Road/Old Robin Road Intersection Upgrade | | | |
| upgrade intersection vertical/horizontal profile and sightlines | | \$400,000 | |
| East-West Arterial Hirst to Woodland Dr | | | |
| Hydrological Analysis | \$20,000 | | |
| main road construction including bow-tie roundabout | \$1,500,000 | \$1,500,000 | |
| Shamrock Road Connector including rbt at Agricola Drive | | \$1,000,000 | |
| East-West Arterial Woodland Dr to Lookout Area | | | |
| Environmental Impact Assessment [EIA] | \$250,000 | \$200,000 | |
| Segment B - mainroad construction to Northward | | \$7,000,000 | |
| construction of Northward Connector | | | |
| Segment C - mainroad construction to Lookout Gardens | | | \$7,000,000 |
| Rex Crighton Blvd - lane expansion | | | |
| 2nd lane expansion Poindexter RAB to Hirst Rd - eastbound | \$300,000 | | |
| 2nd lane expansion Poindexter RAB to Hirst Rd - westbound | | \$300,000 | |
| Shamrock Rd and Hurley Merren Blvd 6 lane Widening | | | |
| segment B - Grand Harbour Rbt to red Bay Roundabout | \$1,500,000 | | |
| segment A - CUC Roundabout to Grand Harbour Roundabout | \$1,000,000 | \$1,000,000 | |
| Kings Connector & CUC Roundabout Upgrades | | | |
| CUC Roundabout Upgrade and Service Road Construction | \$1,500,000 | \$500,000 | |
| Kings Parking Lot design and re-construction | \$450,000 | | |
| Edgewater Way road and drainage upgrades | \$200,000 | | |
| Linford Pierson Hwy Phase I - widening | | | |
| 3rd lane expansion Agnes RAB to CUC RAB (by Kings) - eastbound | | | \$350,000 |
| 3rd lane expansion CUC RAB (by Kings) to Agnes RAB - westbound | | \$350,000 | |
| Linford Pierson Hwy Phase II | | | |
| Segment A - Agnes Roundabout to BBT Roundabout | \$2,000,000 | | |
| Segment B - BBT Roundabout to BBT Traffic Signal | \$2,000,000 | | |
| Segment C - BBT Roundabout to Outpost Street | | | \$2,000,000 |
| BBT Roundabout | \$1,000,000 | \$500,000 | |
| Godfrey Nixon Extension | | | |
| Segment A - North Church St to Diaz Lane | \$400,000 | | |
| Segment B - Diaz Lane to Grescott Ln | | \$600,000 | |
| Segment C - Grescott Ln to Eastern Avenue | | \$400,000 | |
| Eastern Avenue/Godfrey Nixon Way Traffic Signal Upgrades | | \$300,000 | |
| Airport Connector Road | | | |
| Road Access to 19E 40 700 ft section of ACR - BURKES PPP | \$400,000 | | |
| CM Services Contract with DECCO | \$300,000 | | |
| Base Fill Construction | | \$1,500,000 | \$1,500,000 |
| Geotechnical Services | \$100,000 | | |
| Culvert Installation | | \$1,300,000 | |
| HMA Paving | | \$350,000 | \$350,000 |
| West Bay Road Complete Streets | | | |
| Mill n Pave - WB Road Safehaven Drive to Governors House | \$500,000 | | |
| Mill n Pave - WB Road Governors House to Public Beach | | \$500,000 | |
| Mill n Pave - WB Road Wharf Restaurant to Pizza Hut | | \$600,000 | |
| Concrete Works - WB Road Wharf Restaurant to Lawrence Blvd | | \$300,000 | |
| Street Print & bike green lanes - WB Road Wharf Rest to Lawrence Blvd | | \$200,000 | |
| EVR Overhead Gantry Truss | | | |
| truss manufacture | \$200,000 | | |
| truss installation (2 locations) | | \$400,000 | |
| Commercial Avenue Reconstruction | | | |
| drainage, concrete works, paving upgrades | \$200,000 | | |
| Eclipse Drive | | | |
| PPP Construction Project - drains, concrete works, paving | \$225,000 | | |
| Agnes Way - South leg - Rankins PPP | | | |
| drains, concrete works, paving | | \$450,000 | |
| Road to Fairbanks Prison & CEC - C.E.C. PPP | | | |
| basefill, drains, concrete works, paving | \$600,000 | \$500,000 | |
| Mcfield Lane | | | |
| drains, concrete works, paving | \$450,000 | | |
| Eastern Avenue - Complete Streets Redesign | | | |
| drains, concrete works, paving | | | \$1,500,000 |
| Esterley Tibbetts Hwy 6 lane widening (Butterfield to ACR) | | | |
| 3rd lane expansion Butterfield RAB to ACR - northbound | | \$250,000 | |
| 3rd lane expansion ACR to Butterfield RAB - southbound | | \$250,000 | |
| Academy Way/Olympic Way Connector thru John Grey HS | | | |
| drains, concrete works, paving | | | \$1,000,000 |
| LPH/Elgin Ave/Shedden Rd North-South Arterial | | | |
| drains, concrete works, paving | | | \$2,000,000 |
| HOT MIX ASPHALT REHABILITATION PROGRAMME | \$1,000,000 | \$2,000,000 | \$2,000,000 |
| EA 148 ESTIMATED TOTALS | \$18,895,000 | \$24,150,000 | \$19,200,000 |



Team

The Managing Director will be tasked with responsibility for the implementation of this plan. He will be assisted by a management team consisting of a Deputy Managing Director, Chief Human Resources Officer, and Chief Financial Officer.

The senior management team will be supported by a team of engineers, transportation planners, and managers. At end of the 3-year period, the NRA is expected to have adequately addressed staff vacancies and be able to deliver the goals and objectives of this plan.

Critical Success Factors

The NRA is depending on the following as critical factors for the successful implementation of the strategic plan. They represent conditions and factors which are essential to the achievement of the stated outcomes.





Implementation process

Implementation of this Strategic Plan will begin by educating the various stakeholders of its contents and its importance to the future of our transportation infrastructure. Key stakeholders include the Cabinet, the Ministry of Finance, and private sector partners and key suppliers.

The NRA's Board of Directors will sign a performance agreement with the Authority's Managing Director on an annual basis. That performance agreement will include goals and objectives for that year that align with the goals and objectives of this strategic plan.

The NRA will be mindful to the objectives set out in the government's strategic policy statement 2022-2024 however, appreciating that some activities may need to be realigned from time to time to be consistent with long term goals.





Assumptions and Risks

The table below shows key assumptions and risks identified by the NRA in the strategic planning process.

| Assumptions | Risks | Assessment of Risks |
|--|---|--|
| NRA operations budget cap (Section 19 NRA Act) will be removed and the Authority will have a starting operating budget of at least \$14M in 2022 | <ul style="list-style-type: none"> Changes in legislation to remove dedicated road fund revenue No changes in legislation to remove \$10M cap on the Roads Fund | <ul style="list-style-type: none"> MEDIUM RISK, the Minister of Infrastructure has affirmed his commitment to having the Road Fund revenue restriction removed in 2022. A lack of commitment to increasing the Road Fund revenue retards the NRA's ability to staff adequately and also to deliver high level of road maintenance services |
| Significant Increases in Raw Materials costs | <ul style="list-style-type: none"> Global forces impact prices on oil, lumber, steel Increased cost of doing business Global supply chain problems | <ul style="list-style-type: none"> HIGH RISK, The lingering effects of the COVID 19 pandemic may continue to impact global supply chains and continue to drive up prices on oil, lumber, steel, etc. |
| Availability of quality aggregate and other materials in the local market | <ul style="list-style-type: none"> Fill material of the required quality not available in the local market Inability of sole provider to produce asphalt demand | <ul style="list-style-type: none"> HIGH RISK, local quarries are limited, and quarry yield from greater depths may not produce appropriate quality fill materials leaving the Govt to source materials from overseas at increased costs A monopoly exists with asphalt supply on the island which could mean higher prices for the consumer and less incentive on the part of the asphalt supplier to be efficient or maintain high quality standards. |
| Investment in modern equipment | <ul style="list-style-type: none"> Central Govt may refuse equity investments in fleet Asset replacement fund may be utilized for other purposes | <ul style="list-style-type: none"> LOW RISK, The PACT Government has given its commitment to ensuring that the NRA is afforded the vehicle and equipment assets needed to deliver a successful works programme. The NRA Board endorses the strategic plan and is committed to providing oversight. |
| No major disasters | <ul style="list-style-type: none"> Hurricanes Earthquakes tsunami | <ul style="list-style-type: none"> MEDIUM RISK, The Cayman Islands is susceptible to both hurricanes and earthquakes however major natural disasters are difficult to predict at any level |
| Government does not prioritize congestion management or transportation infrastructure improvements | <ul style="list-style-type: none"> There is a change in infrastructure priorities by Govt Capital budget outlay is cut due to significant events | <ul style="list-style-type: none"> LOW RISK, Congestion relief and the need to provide citizens with proper road infrastructure spans political divides |
| Adherence to the strategic operations plan | <ul style="list-style-type: none"> Ad hoc approach to road planning and management Lack of funding | <ul style="list-style-type: none"> MEDIUM, Funding is a concern. The purpose of a strategic plan is to mitigate ad-hoc road management. |
| Stable organization | <ul style="list-style-type: none"> change in status from a statutory authority | <ul style="list-style-type: none"> LOW RISK, The Authority's return to core Govt is often debated however there are no significant reasons or concerns why a change in the Authority's status should occur in the short term |



Key performance indicators

In order to assess performance, we've set a number of Key Performance Indicators for the Authority. These will be augmented by a framework that shows a more detailed view of the performance of the NRA and the road network we manage. Our goal is to improve existing measures and develop new ones for future strategic planning.

Our success will be measured by our ability to:

- ✚ **Improve network efficiency** by increasing network capacity, improving designs, better access management, reducing load factors and reducing peak congestions;
- ✚ **Facilitate economic development** by supporting major project, reducing lost productivity from time spent in traffic and improving the experience of tourists and visitors;
- ✚ **Enhance road user safety** by reducing road accidents caused by road factors, improving safety for cyclists and pedestrians, improving drainage time for water settling on roadways and by making driving in neighborhoods safer;
- ✚ **Improve road user satisfaction** by reducing network congestions, improving the aesthetics and quality of the road network, better maintaining our medians and road shoulders, and improving our customer focus;
- ✚ **Develop our workforce** by improving our worker safety standards, training, and the continued development of a positive workplace culture;
- ✚ **Acquire modern and efficient equipment** by investing in modern, innovative, efficient technology;
- ✚ **Secure stable consistent funding** by demonstrating value of good road network to the Country and seeking support from our stakeholders; and
- ✚ **Improve Governance** putting in place relevant governance structures, developing policies and procedures, complying with all Acts and effectively managing risks.

Assessments against or Vision, Mission, Goals and Objectives will be carried out using the following criterion.

| Strategy level | Corresponding Indicators | Monitoring and Evaluation |
|----------------------|--------------------------|--------------------------------------|
| Vision | Impact Indicators | ✓ Baseline assessment in year 1 |
| | | ✓ Survey assessment at end of year 3 |
| Mission | Outcome Indicators | ✓ Baseline assessment in year 1 |
| | | ✓ Survey assessment in year 3 |
| Goals and Objectives | Output Indicators | ✓ Staff performance agreements |
| | | ✓ Quarterly progress reports |
| | | ✓ Annual Reports |



Monitoring and evaluation

Each strategic goal outlined in this plan is supported by specific objectives, methods, performance measures and targets. These will be key components in the monitoring and evaluation of the plan execution.

To enable effective monitoring evaluation, the plan ensured that the measures outlined to achieve the various objectives were specific, measurable, achievable, results focused and where possible, time specific (SMART).



To promote accountability and instill discipline, these measures should form part of the staff performance agreement discussed in the implementation process. The monitoring and evaluation method will therefore be synonymous with staff annual performance evaluation.

Linking the successful execution of agreed strategy to the individual performance of each staff will promote a healthy level of ownership throughout the Authority and assist in the overall education process.



| What | Indicator | How we measure |
|--|---|---|
| <input type="checkbox"/> Quality of Network | <input type="checkbox"/> Pavement condition index | <input type="checkbox"/> Condition Audit |
| <input type="checkbox"/> Efficiency of Network | <input type="checkbox"/> Average speed at peak times | <input type="checkbox"/> Performance Audit |
| <input type="checkbox"/> Safety of Network | <input type="checkbox"/> Accidents due to road conditions | <input type="checkbox"/> Police accident reports |
| <input type="checkbox"/> User Satisfaction | <input type="checkbox"/> Feedback rating | <input type="checkbox"/> Road user surveys |
| <input type="checkbox"/> Financial Management | <input type="checkbox"/> Financial Health | <input type="checkbox"/> Audit reports |
| <input type="checkbox"/> Good Governance | <input type="checkbox"/> Compliance | <input type="checkbox"/> Governance audit and no evidence to the contrary |



APPENDIX 1- Key Major Projects (2022 – 2024) Profile

| Project Name/Description | |
|---|---|
| <p>East West Arterial (Hirst to LookOut Gardens) - a 2.5 mile extension of the EW Arterial from Hirst Road eastward to the back of Woodland Drive. The road has the capacity for 6 lanes on full buildout but will include only 2 lanes initially with a wide central grass median for future expansion. Cost ~\$14M</p> | <ul style="list-style-type: none">• EWA Extension to Lookout Gardens  |
| <p>Hirst Road-Rex Crighton Blvd Roundabout – This major new intersection forms part of the EW expansion. Cost ~ \$1.5M (excluding land acquisition costs)</p> |  |



| | |
|---|---|
| <p>Shamrock Road and Hurley Merren Blvd widening – expansion of the existing primary arterial between Kings Sports Centre and Chrissie Tomlinson Roundabout from 4 lanes to 6 lanes ~\$8M</p> |  |
| <p>Kings Connector & CUC Roundabout Upgrades</p> <p>Cost ~\$3M</p> <p>Modification of the current dual lane roundabout to a larger higher capacity bow-tie design roundabout that also facilitates a new service road extension through the part of the parking lot of Kings Sports Centre to connect with Edgewater Drive by Grand Harbour Development.</p> |  |



Linford Pierson Highway Phase II
Cost ~\$6.5M

The final phase of widening for the Linford Pierson Highway in the vicinity of the equestrian centre. LPH is to be widened to a 3+3 lane highway with central median and linked with Bobby Thompson Way via a large modern 3-lane roundabout. Bobby Thompson way will also be widened to a 3+3 lane road with central median.

- LPH Extension to Outpost Street



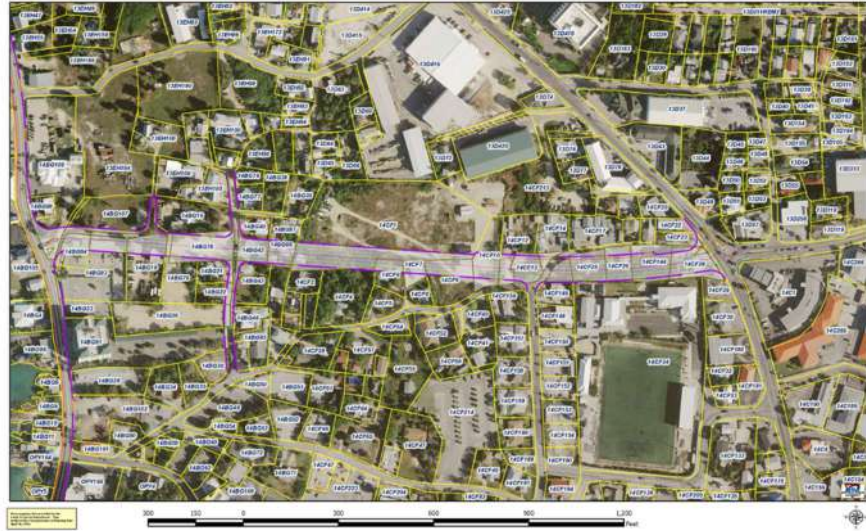
Airport Connector Road – phase 1
includes a new road linking Esterley Tibbetts Highway to Sparky Drive adjacent to the GT Landfill

Cost ~ \$8M



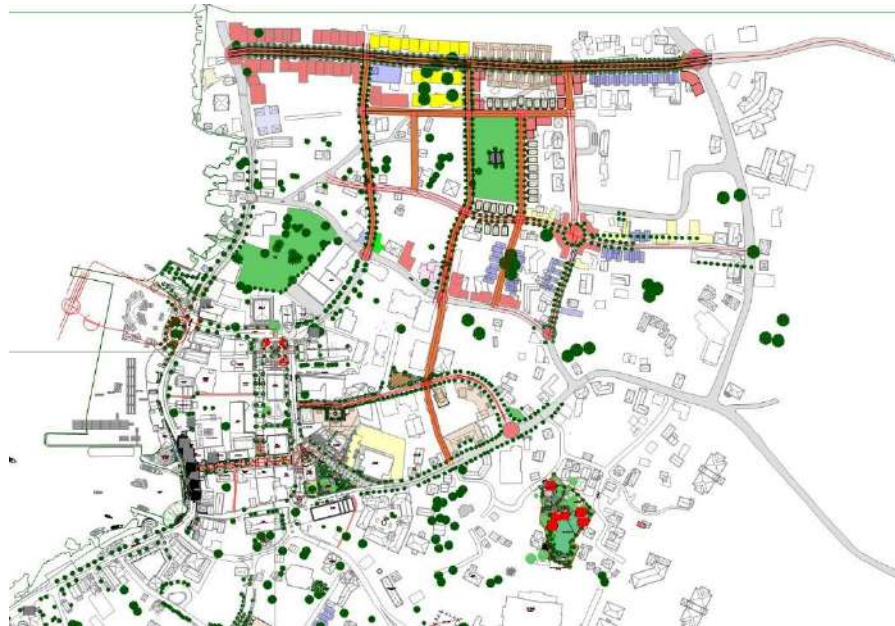


Godfrey Nixon Extension – new roadway link from Eastern Avenue to North Church Street through the Rock Hole Community. This project also forms part of the GT Revitalization effort and will feature complete street and green design elements
Cost ~\$5M



Godfrey Nixon Way – GT Revitalization Master Concept

Godfrey Nixon way forms the northern limits of the proposed GT Revitalization project which is a long term planning effort to rejuvenate the CBD using proven urban planning principles and techniques.





APPENDIX 2- MICROPAVER 5-Yr PCI Forecast (main roads)

| BranchName | Surface | From | To | 2022 | 2023 | 2024 | 2025 | 2026 |
|----------------------------|---------|----------------------------|----------------------------|-------|-------|-------|-------|-------|
| AGNES WAY | AC | LYNDHURST AVE. | LINFORD PIERSON HWY. | 93.15 | 89.25 | 85.43 | 81.71 | 78.10 |
| AIRPORT POST OFFICE (MINI) | AC | DORCY DRIVE | OWEN ROBERTS DRIVE | 72.40 | 69.13 | 65.99 | 62.99 | 60.14 |
| ALBERT PANTON ST | AC | FORT ST. | CARDINALL AVE. | 89.86 | 86.03 | 82.30 | 78.67 | 75.16 |
| ANTHONY DR | ST | TEMPLETON ST | WILLIAMS DR | 89.29 | 85.12 | 80.79 | 76.32 | 71.79 |
| ANTON BODDEN DR | AC | CONDOR RD | VERNEICE BODDEN DR | 84.22 | 80.54 | 76.97 | 73.51 | 70.19 |
| ANTON BODDEN DR | AC | HARVEY STEPHENSON DR | BODDEN TOWN RD | 92.45 | 88.56 | 84.76 | 81.06 | 77.47 |
| APOLLO LINK | AC | EAST BLVD. | WINDSOR PARK RD. | 66.42 | 63.40 | 60.54 | 57.81 | 55.25 |
| ASPIRATION DR | AC | ACADEMY WAY | 1,186 FT N. OF ACADEMY WAY | 47.97 | 46.06 | 44.29 | 42.66 | 41.18 |
| ASPIRATION DR | ST | 1,186 FT N. OF ACADEMY WAY | LIGUINEA CIR. | 82.82 | 78.41 | 73.91 | 69.36 | 64.82 |
| BAMBOO ST | AC | MARINA DR. | PATRICKS AVE. | 98.53 | 95.08 | 91.30 | 87.23 | 82.98 |
| BANKERS RD | ST | BIRCH TREE HILL RD. | E END | 78.92 | 74.43 | 69.89 | 65.34 | 60.85 |
| BODDEN RD | AC | NORTH CHURCH ST. | EASTERN AVE. | 33.57 | 32.88 | 32.22 | 31.58 | 30.94 |
| BOILERS RD | AC | SOUTH CHURCH ST. | WALKERS RD. | 85.01 | 81.31 | 77.72 | 74.23 | 70.89 |
| BOLTINS AVE | ST | TOWN HALL RD. | TOWN HALL RD. | 92.80 | 88.85 | 84.67 | 80.30 | 75.83 |
| BONNEVILLE DR | AC | BATABANO RD. | 861 FT E. OF BATABANO RD. | 64.68 | 61.75 | 58.97 | 56.33 | 53.85 |
| BONNEVILLE DR | ST | 861 FT E. OF BATABANO RD. | GLADE DR. | 68.68 | 64.15 | 59.68 | 55.29 | 51.04 |
| BORDER DR | ST | OUTPOST ST. | OAK MILL ST. | 93.13 | 89.20 | 85.03 | 80.68 | 76.22 |
| CANAL POINT DR | AC | WEST BAY RD | ESTERLEY TIBBETTS HWY | 87.91 | 84.13 | 80.45 | 76.88 | 73.43 |
| CARDINAL AVE | AC | HARBOUR DR | MAIN ST. | 69.80 | 65.26 | 60.77 | 56.35 | 52.07 |
| CLAUDE HILL RD | AC | ELGIN AVE. | SMITH RD | 85.00 | 81.30 | 77.71 | 74.22 | 70.88 |
| CONDOR RD | AC | ANTON BODDEN DR. | START of ST | 91.47 | 87.43 | 83.18 | 78.77 | 74.27 |
| CONDOR RD | ST | START of ST | SHAMROCK RD. | 93.53 | 89.63 | 85.48 | 81.15 | 76.70 |
| DENHAM THOMPSON WAY | AC | S. CHURCH ST. | WALKERS RD. | 57.44 | 54.90 | 52.51 | 50.27 | 48.19 |
| DORCY DR | AC | SHEDDEN RD. | OWEN ROBERTS DR. | 68.50 | 65.39 | 62.43 | 59.60 | 56.94 |
| DR ROYS DR | AC | EDWARD ST. | SHEDDEN RD | 71.56 | 68.32 | 65.21 | 62.25 | 59.44 |
| EASTLAND DR | AC | SEA VIEW RD. | JOHN MCLEAN DR | 89.61 | 85.79 | 82.06 | 78.44 | 74.94 |
| EASTLAND DR | ST | JOHN MCLEAN DR | END | 89.49 | 85.34 | 81.01 | 76.55 | 72.02 |
| ELGIN AVE | AC | THOMAS RUSSELL AVE. | SHEDDEN RD. | 89.98 | 86.15 | 82.41 | 78.78 | 75.27 |
| ELGIN AVE RAB | AC | ELGIN AVE | HOSPITAL RD | 94.84 | 90.90 | 87.05 | 83.29 | 79.63 |
| ELGIN AVE RBC MINI RAB | AC | ELGIN AVE | LOUISE LL WAY | 89.95 | 86.12 | 82.38 | 78.75 | 75.24 |
| ELIZABETH ST | ST | WEST CHURCH RD. | WILL. FARR | 80.21 | 75.75 | 71.22 | 66.66 | 62.15 |
| FAIRBANKS RD | AC | ASPIRATION DR. | FERN CL | 33.64 | 32.95 | 32.29 | 31.65 | 31.01 |
| FARM RD | AC | JOHN MCLEAN DR. | 221 FARM RD | 87.62 | 83.85 | 80.18 | 76.61 | 73.18 |
| FARM RD | ST | 221 FARM RD | WATER AUTHORITY | 93.67 | 89.78 | 85.65 | 81.32 | 76.87 |
| FARM RD | ST | WATER AUTHORITY | HIGH ROCK RD | 57.85 | 53.52 | 49.33 | 45.31 | 41.49 |
| FARRELL RD | ST | RACKLEY RD. | END | 79.34 | 74.85 | 70.31 | 65.76 | 61.26 |
| FERN CIR | AC | BOBBY THOMPSON WAY | FAIRBANKS RD. | 93.06 | 89.16 | 85.35 | 81.63 | 78.03 |
| FERN CIR | ST | BOBBY THOMPSON WAY | FAIRBANKS RD. | 70.28 | 65.74 | 61.24 | 56.81 | 52.51 |
| FINCH DR | ST | BIRCH TREE HILL RD. | FOUNTAIN RD | 92.85 | 88.90 | 84.71 | 80.35 | 75.88 |
| FURTHER RD | ST | NORTH SIDE RD. | END | 93.83 | 89.95 | 85.83 | 81.50 | 77.06 |
| GODFREY NIXON WAY | AC | BUTTERFIELD RNDABOUT | DMS | 86.20 | 82.46 | 78.83 | 75.31 | 71.92 |
| GORING AVE | AC | SOUTH CHURCH ST. | WALKERS RD. | 64.45 | 61.53 | 58.76 | 56.13 | 53.67 |
| HARVEY STEPHENSON DR | ST | ANTON BODDEN DR. | END | 93.54 | 89.64 | 85.50 | 81.16 | 76.71 |
| HICKORY DR | ST | PROSPECT DR. | HOLLY DR. | 89.10 | 84.93 | 80.58 | 76.11 | 71.58 |
| HIGH ROCK DR | ST | SEA VIEW RD. | START OF AC | 59.81 | 55.42 | 51.17 | 47.06 | 43.16 |
| HIGH ROCK DR | AC | START OF AC | START OF PCC | 47.62 | 45.74 | 43.99 | 42.39 | 40.93 |
| HIGH ROCK DR | PCC | START OF PCC | START OF ST | 29.49 | 28.07 | 26.66 | 25.23 | 23.82 |
| HIGH ROCK DR | ST | START OF ST | START OF AC | 55.44 | 51.19 | 47.09 | 43.17 | 39.48 |
| HIGH ROCK DR | AC | START OF AC | END | 40.50 | 39.21 | 38.03 | 36.97 | 36.00 |
| HOLLY DR | ST | PROSPECT DR. | MORNINGSIDE DR. | 62.09 | 57.65 | 53.33 | 49.14 | 45.13 |
| HOSPITAL RD | AC | ELGIN AVE. | WALKERS RD. | 80.51 | 76.94 | 73.49 | 70.17 | 66.99 |
| HUTLAND RD | AC | RUM PT. DR. | HOUSE #199 | 61.43 | 58.67 | 56.06 | 53.59 | 51.28 |
| HUTLAND RD | ST | HOUSE #199 | END | 30.32 | 27.60 | 25.15 | 22.97 | 21.08 |

Main Road segments in red require maintenance or full rehab over the next 5 years.



NATIONAL ROADS AUTHORITY STRATEGIC OPERATIONS PLAN 2022 – 2024

| | | | | | | | | |
|----------------------|----|-----------------------------|-----------------------------|-------|-------|-------|-------|-------|
| JADE DR | AC | CAPT REG PARSONS | West of CHING CHING LN | 92.90 | 88.95 | 84.77 | 80.41 | 75.95 |
| JADE DR | ST | West of CHING CHING LN | CRYSTAL VALLEY CRES. | 94.65 | 94.04 | 93.43 | 92.82 | 92.20 |
| JOHN MCLEAN DR | AC | EASTLAND DR. | AUSTIN CONOLLY DR. | 92.59 | 88.70 | 84.90 | 81.19 | 77.60 |
| JOHN MCLEAN DR | ST | EASTLAND DR | END | 84.40 | 82.74 | 81.08 | 79.41 | 77.75 |
| LANCELOT DR | AC | SHAMROCK RD | 86FT NORTH of SHAMROCK RD | 82.93 | 81.31 | 79.69 | 78.07 | 76.45 |
| LANCELOT DR | ST | 86FT North of SHAMROCK RD. | N. END | 39.25 | 35.81 | 32.61 | 29.67 | 27.01 |
| LAWRENCE BLVD | AC | CAMANA BAY ROUNDABOUT | WEST BAY RD | 89.08 | 85.27 | 81.56 | 77.95 | 74.47 |
| LEEWARD DR | AC | SOUTHWARD DR. | END | 87.40 | 83.64 | 79.97 | 76.41 | 72.99 |
| LIME TREE BAY AVE | AC | WEST BAY RD. | ESTERLY | 85.68 | 81.96 | 78.35 | 74.84 | 71.47 |
| LINCOLN DR | AC | SEYMOUR RD. | END | 76.80 | 73.36 | 70.05 | 66.86 | 63.82 |
| LOUISE LLEWELLYN WAY | AC | ELGIN AVE | GORING AVE. | 83.09 | 79.44 | 75.91 | 72.49 | 69.21 |
| LYNDHURST AVE | AC | CREWE RD. | CRUSADER WAY | 65.56 | 62.58 | 59.76 | 57.08 | 54.55 |
| LYNDHURST AVE | AC | CRUSADER WAY | END | 73.97 | 70.64 | 67.43 | 64.37 | 61.45 |
| MANGO TURN | AC | THERESA DR. | SHORT LN | 88.03 | 84.25 | 80.57 | 76.99 | 73.54 |
| MARINA DR | AC | SHAMROCK RD. | ALMOND AVE | 85.30 | 81.59 | 77.99 | 74.49 | 71.14 |
| MARINA DR | AC | ALMOND AVE | END | 83.12 | 79.47 | 75.94 | 72.52 | 69.24 |
| MARY ST | AC | NORTH CHURCH ST. | SHEDDEN RD. | 67.38 | 64.32 | 61.41 | 58.63 | 56.02 |
| MEADOW AVE | ST | UP THE HILL RD. | MT PLEASANT | 78.14 | 73.64 | 69.10 | 64.55 | 60.07 |
| MELMAC AVE | AC | SOUTH CHURCH ST. | WALKERS RD. | 66.36 | 63.35 | 60.48 | 57.76 | 55.20 |
| NORTHWARD RD | AC | SHAMROCK RD. | END | 70.64 | 67.44 | 64.38 | 61.46 | 58.69 |
| OAK MILL ST | ST | ANTHONY DR. | BORDER DR. | 93.19 | 89.26 | 85.10 | 80.75 | 76.29 |
| OLYMPIC WAY | AC | UCCI | WALKERS RD | 93.48 | 90.48 | 87.48 | 84.48 | 81.48 |
| PARKERS (MINI) | AC | NORTH SOUND ROAD | DORCY DRIVE | 68.48 | 65.37 | 62.40 | 59.58 | 56.92 |
| PARTY LN | ST | MARINA DR. | MARINA DR. | 76.25 | 71.73 | 67.18 | 62.65 | 58.21 |
| PATRICKS AVE | ST | POINDEXTER RD. | #136 PATRICKS AVE | 51.43 | 47.32 | 43.41 | 39.69 | 36.21 |
| PEDRO CASTLE RD | AC | SHAMROCK RD. | PEDRO ST JAMES | 77.45 | 73.99 | 70.65 | 67.44 | 64.38 |
| PENINSULA AVE | ST | ESTERLEY TIBBETTS HWY. | END | 44.84 | 41.05 | 37.48 | 34.15 | 31.09 |
| POINDEXTER RD | ST | SHAMROCK RD. | 1,223 FT N. OF SHAMROCK RD. | 78.31 | 73.81 | 69.27 | 64.72 | 60.24 |
| POINDEXTER RD | AC | 1,223 FT W. OF SHAMROCK RD. | 1,922 FT N. OF SHAMROCK RD. | 75.37 | 71.98 | 68.73 | 65.60 | 62.62 |
| POINDEXTER RD | ST | 1,922 FT W. OF SHAMROCK RD. | 2,449 FT N. OF SHAMROCK RD. | 89.10 | 84.93 | 80.58 | 76.11 | 71.58 |
| POINDEXTER RD | AC | 2,449 FT N. OF SHAMROCK RD. | 4,459 FT N. OF SHAMROCK RD. | 56.51 | 54.02 | 51.69 | 49.50 | 47.48 |
| POINDEXTER RD | ST | 4,459 FT N. OF SHAMROCK RD. | DEVON RD. | 80.42 | 75.95 | 71.42 | 66.87 | 62.35 |
| PORTLAND RD | AC | DORCY DR. | NORTH SOUND RD. | 60.49 | 57.77 | 55.21 | 52.80 | 50.54 |
| POWELL SMITH RD | ST | REV BLACKMAN RD. | TOWN HALL DR. | 71.33 | 66.78 | 62.27 | 57.82 | 53.49 |
| PROSPECT DR | ST | SHAMROCK RD. | HOLLY DR | 93.27 | 89.35 | 85.19 | 80.85 | 76.39 |
| PROSPECT DR | ST | HOLLY DR | END | 89.10 | 84.93 | 80.58 | 76.11 | 71.58 |
| RACKLEY BLVD | AC | HIRST RD. | SOUTHWARD DR. | 86.26 | 81.97 | 77.54 | 73.01 | 68.47 |
| RAVEN AVE | AC | CHIME ST. | END OF AC | 59.74 | 57.07 | 54.55 | 52.17 | 49.96 |
| RAVEN AVE | ST | END OF AC | END | 76.31 | 71.79 | 67.24 | 62.72 | 58.27 |
| SAFEHAVEN DR | AC | ESTERLEY TIBBETS HWY | SAFEHAVEN DR main | 94.92 | 94.78 | 94.64 | 94.50 | 94.36 |
| SAFEHAVEN DR | AC | SAFEHAVEN DR main | ESTERLEY TIBBETS HWY | 94.92 | 94.78 | 94.64 | 94.50 | 94.36 |
| SEA SPRAY DR | ST | BEACH BAY RD | W END | 87.91 | 83.69 | 79.30 | 74.81 | 70.27 |
| SELKIRK DR | AC | SHAMROCK RD. | LORDS WAY | 98.51 | 95.06 | 91.27 | 87.21 | 82.95 |
| SELKIRK DR | AC | LORDS WAY | END | 98.51 | 95.06 | 91.27 | 87.21 | 82.95 |
| SEYMOUR DR | AC | NORTH SOUND RD | BARNES DR | 96.74 | 92.77 | 88.88 | 85.06 | 81.36 |
| SEYMOUR DR | AC | BARNES DR | N END | 55.92 | 53.47 | 51.17 | 49.02 | 47.03 |
| SKIPWITH LINK | AC | SEA VIEW RD | N END | 93.58 | 89.67 | 85.85 | 82.11 | 78.49 |
| SMITH RD RAB | AC | SMITH RD | ANTHONY DR | 87.91 | 84.13 | 80.46 | 76.88 | 73.44 |
| SOUND WAY | AC | SHEDDEN RD. | NORTH SOUND RD. | 52.20 | 49.99 | 47.92 | 46.01 | 44.24 |
| SOUTHWARD DR | AC | WINDWARD RD. | W END | 87.96 | 84.18 | 80.50 | 76.92 | 73.47 |
| SPARKYS DR | AC | N. SOUND RD. | N END | 87.45 | 83.69 | 80.02 | 76.46 | 73.03 |
| SPOTTS NEWLANDS RD | AC | SHAMROCK RD. | CHIME ST. | 91.25 | 87.39 | 83.62 | 79.95 | 76.40 |
| SUNNYFIELD RD | ST | QUEENS HWY | E END | 90.57 | 86.48 | 82.19 | 77.75 | 73.25 |
| TROPICAL GARDENS RD | AC | CREWE RD | SORREL DR | 70.46 | 67.26 | 64.21 | 61.29 | 58.53 |
| UP THE HILL RD | ST | BONNEVILLE DR. | N END | 81.20 | 76.75 | 72.23 | 67.67 | 63.15 |
| VERNEICE BODDEN DR | AC | ANTON BODDEN DR. | HARVEY STEPHENSON DR | 92.43 | 88.55 | 84.75 | 81.05 | 77.46 |
| WAHOO CL | ST | NORTH CHURCH ST. | E END | 89.13 | 84.96 | 80.62 | 76.14 | 71.62 |
| WALKERS RD | AC | HOSPITAL RD. | ROWLEY RISE | 60.29 | 57.58 | 55.03 | 52.63 | 50.39 |
| WALKERS RD | AC | ROWLEY RISE | SOUTH CHURCH ST | 67.45 | 64.38 | 61.47 | 58.69 | 56.08 |
| WILL T DR | ST | SHAMROCK RD. | END | 90.10 | 85.98 | 81.68 | 77.23 | 72.71 |
| WILLIAMS DR | AC | MANGO TURN | ANDY DR. | 88.06 | 84.27 | 80.59 | 77.01 | 73.56 |
| WILLIE FARRINGTON DR | AC | W. BAY RD. | BATABANO RD. | 72.81 | 69.52 | 66.37 | 63.35 | 60.48 |
| WINDSOR PARK RD | AC | WALKERS RD. | MANGO TURN | 47.01 | 45.17 | 43.47 | 41.91 | 40.49 |
| WINDWARD RD | AC | SOUTHWARD DR. | N END | 87.96 | 84.18 | 80.50 | 76.92 | 73.47 |



NATIONAL ROADS AUTHORITY STRATEGIC OPERATIONS PLAN 2022 – 2024

| | | | | | | | | |
|-------------------------------|----|----------------------------|----------------------------|-------|-------|-------|-------|-------|
| AGNES RAB | AC | LINFORD PIERSON HWY | AGNES WAY | 91.06 | 88.06 | 85.06 | 82.06 | 79.06 |
| AIRPORT CONNECTOR RAB | AC | ESTERLEY TIBBITTS HWY | MINERVA DR | 91.16 | 88.17 | 85.17 | 82.16 | 79.16 |
| ALAMO RAB | AC | LINFORD PIERSON HWY | ALAMO WAY | 91.07 | 88.07 | 85.07 | 82.06 | 79.07 |
| BOBBY THOMPSON WAY | AC | SMITH RD. | FERN CIRCLE | 80.27 | 76.71 | 73.27 | 69.96 | 66.78 |
| BOBBY THOMPSON WAY (MINI) | AC | BOBBY THOMPSON WAY | LINFORD PIERSON HIGHWAY | 80.15 | 76.60 | 73.16 | 69.85 | 66.68 |
| BUTTERFIELD RAB | AC | GODFREY NIXON WAY | NORTH SOUND ROAD | 78.37 | 74.87 | 71.50 | 68.25 | 65.15 |
| CAMANA BAY RAB | AC | ESTERLEY TIBBITTS HIGHWAY | LAWRENCE BLVD | 89.99 | 86.16 | 82.42 | 78.79 | 75.28 |
| CHIME ST RAB | AC | EAST WEST ARTERIAL | REX CRIGHTON BLVD | 84.01 | 80.34 | 76.78 | 73.33 | 70.02 |
| CORAL STONE (ISLAND HERITAGE) | AC | ESTERLEY TIBBITTS HIGHWAY | CANAL POINT DRIVE | 92.92 | 89.03 | 85.22 | 81.50 | 77.90 |
| CREWE RD | AC | GRAND HARBOUR RAB | TROPICAL GARDENS RD | 69.00 | 66.86 | 64.72 | 62.58 | 60.44 |
| EDUCATION (CNB) RAB | AC | HULDAH AVENUE | ELGIN AVENUE | 88.97 | 85.17 | 81.46 | 77.85 | 74.37 |
| ELGIN AVE | AC | CNB RAB | MANGO TREE RAB | 93.42 | 90.43 | 87.43 | 84.42 | 81.42 |
| ELGIN AVE | AC | MANGO TREE RAB | CNB RAB | 93.42 | 90.43 | 87.43 | 84.42 | 81.42 |
| ESTERLEY TIBBITTS HIGHWAY | AC | GOVERNORS ROUNDABOUT | YACHT CLUB ROUNDABOUT | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| ESTERLEY TIBBITTS HIGHWAY | AC | YACHT CLUB ROUNDABOUT | GOVERNORS ROUNDABOUT | 85.92 | 82.19 | 78.57 | 75.05 | 71.68 |
| ESTERLEY TIBBITTS HIGHWAY | AC | YACHT CLUB ROUNDABOUT | REV BLACKMAN ROUNDABOUT | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| ESTERLEY TIBBITTS HIGHWAY | AC | REV BLACKMAN ROUNDABOUT | YACHT CLUB ROUNDABOUT | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| ESTERLEY TIBBITTS HIGHWAY | AC | REV BLACKMAN ROUNDABOUT | BATABANO | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| ESTERLEY TIBBITTS HIGHWAY | AC | BATABANO | REV BLACKMAN ROUNDABOUT | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| ESTERLEY TIBBITTS HIGHWAY | AC | REV BLACKMAN ROUNDABOUT | WILLIE FARRINGTON | 89.87 | 86.04 | 82.31 | 78.67 | 75.17 |
| ESTERLEY TIBBITTS HIGHWAY | AC | BUTTERFIELD ROUNDABOUT | AIRPORT CONNECTOR RAB | 89.99 | 86.16 | 82.42 | 78.79 | 75.28 |
| ESTERLEY TIBBITTS HIGHWAY | AC | AIRPORT CONNECTOR RAB | BUTTERFIELD ROUNDABOUT | 91.16 | 88.17 | 85.17 | 82.16 | 79.16 |
| ESTERLEY TIBBITTS HIGHWAY | AC | CAMANA BAY RAB | AIRPORT CONNECTOR RAB | 92.97 | 89.08 | 85.27 | 81.55 | 77.95 |
| ESTERLEY TIBBITTS HIGHWAY | AC | AIRPORT CONNECTOR RAB | CAMANA BAY RAB | 89.99 | 86.16 | 82.42 | 78.79 | 75.28 |
| ESTERLEY TIBBITTS HIGHWAY | AC | GALLERIA ROUNDABOUT | ISLAND HERITAGE ROUNDABOUT | 84.08 | 80.40 | 76.84 | 73.38 | 70.07 |
| ESTERLEY TIBBITTS HIGHWAY | AC | ISLAND HERITAGE ROUNDABOUT | GALLERIA ROUNDABOUT | 89.01 | 85.21 | 81.50 | 77.89 | 74.41 |
| ESTERLEY TIBBITTS HIGHWAY | AC | ISLAND HERITAGE ROUNDABOUT | LIME TREE BAY ROUNDABOUT | 89.01 | 85.21 | 81.50 | 77.89 | 74.41 |
| ESTERLEY TIBBITTS HIGHWAY | AC | LIME TREE BAY ROUNDABOUT | ISLAND HERITAGE ROUNDABOUT | 85.06 | 81.36 | 77.76 | 74.28 | 70.93 |
| ESTERLEY TIBBITTS HIGHWAY | AC | LIME TREE BAY ROUNDABOUT | GOVERNORS ROUNDABOUT | 85.92 | 82.19 | 78.57 | 75.05 | 71.68 |
| ESTERLEY TIBBITTS HIGHWAY | AC | GOVERNORS ROUNDABOUT | LIME TREE BAY ROUNDABOUT | 83.94 | 80.27 | 76.71 | 73.26 | 69.95 |
| GOVERNORS RAB | AC | ESTERLEY TIBBITTS HIGHWAY | WEST BAY ROAD | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| GRAND HARBOUR RAB | AC | CREWE ROAD | SHAMROCK ROAD | 89.84 | 86.01 | 82.28 | 78.65 | 75.14 |
| HULDAH AVE | AC | THOMAS RUSSELL RAB | SMITH RD | 74.94 | 71.57 | 68.33 | 65.22 | 62.26 |
| HURLEY MERREN BLVD | AC | DILBERTS PLAZA | TOMLINSON RAB | 82.34 | 78.71 | 75.20 | 71.81 | 68.56 |
| HURLEY MERREN BLVD | AC | TOMLINSON RAB | DILBERTS PLAZA | 93.22 | 89.32 | 85.51 | 81.78 | 78.17 |
| LANTERN POINT RAB | AC | EAST WEST ARTERIAL | SHAMROCK ROAD | 98.11 | 94.12 | 90.20 | 86.36 | 82.62 |
| LIME TREE BAY RAB | AC | ESTERLEY TIBBITTS HIGHWAY | LIME TREE BAY AVENUE | 86.65 | 82.90 | 79.26 | 75.73 | 72.32 |
| LINFORD PIERSON HWY | AC | SILVER OAKS RAB | ALAMO RAB | 93.15 | 89.25 | 85.43 | 81.71 | 78.10 |
| LINFORD PIERSON HWY | AC | ALAMO RAB | SILVER OAKS RAB | 94.89 | 94.64 | 94.40 | 94.16 | 93.91 |
| LINFORD PIERSON HWY | AC | ALAMO RAB | AGNES RAB | 94.89 | 94.64 | 94.40 | 94.16 | 93.91 |
| LINFORD PIERSON HWY | AC | AGNES RAB | ALAMO RAB | 94.89 | 94.64 | 94.40 | 94.16 | 93.91 |
| LINFORD PIERSON HWY | AC | AGNES RAB | BOBBY THOMPSON WAY | 40.68 | 37.85 | 35.03 | 32.20 | 29.38 |
| MORRISON RAB | AC | CREWE RD | PRINTER WAY | 93.42 | 90.43 | 87.43 | 84.42 | 81.42 |
| NORTH SOUND RD | AC | BUTTERFIELD RAB | END | 75.91 | 72.50 | 69.22 | 66.07 | 63.07 |
| NORTH SOUND RD | AC | BUTTERFIELD RAB | JACQUES SCOTT SIGNAL | 95.60 | 91.65 | 87.79 | 84.00 | 80.32 |
| NORTH SOUND RD | AC | JACQUES SCOTT SIGNAL | BUTTERFIELD RAB | 95.60 | 91.65 | 87.79 | 84.00 | 80.32 |
| NORTH SOUND RD | AC | JACQUES SCOTT SIGNAL | SOUND WAY | 95.60 | 91.65 | 87.79 | 84.00 | 80.32 |
| POINDEXTER RAB | AC | EAST WEST ARTERIAL | POINDEXTER AVENUE | 89.84 | 86.01 | 82.28 | 78.65 | 75.14 |
| RED BAY RAB | AC | EAST WEST ARTERIAL | SHAMROCK ROAD | 89.84 | 86.01 | 82.28 | 78.65 | 75.14 |
| REV BLACKMAN RAB | AC | ESTERLEY TIBBITTS HIGHWAY | ESTERLEY TIBBITTS HIGHWAY | 89.55 | 85.73 | 82.01 | 78.39 | 74.89 |
| REX CRIGHTON BLVD | AC | TOMLINSON RAB | POINDEXTER RD | 90.82 | 86.97 | 83.21 | 79.55 | 76.01 |
| REX CRIGHTON BLVD | AC | POINDEXTER RD | HIRST RD | 91.32 | 87.46 | 83.70 | 80.02 | 76.47 |
| SHAMROCK RD | AC | DMS RAB | DILBERTS PLAZA | 92.14 | 88.27 | 84.48 | 80.78 | 77.20 |
| SHEDDEN RD | AC | HARBOUR DR. | CREWE RD. | 85.00 | 81.30 | 77.71 | 74.22 | 70.88 |
| THOMAS RUSSELL AVE | AC | THOMAS RUSSELL RAB | SHEDDEN RD | 95.95 | 92.00 | 88.12 | 84.33 | 80.64 |
| YACHT CLUB RAB | AC | ESTERLEY TIBBITTS HIGHWAY | YATCH DRIVE | 89.55 | 85.73 | 82.01 | 78.39 | 74.89 |
| ANDRESEN RD | ST | COONCH POINT RD. | TOPSAIL ST. | 67.67 | 63.15 | 58.69 | 54.32 | 50.11 |
| AUSTIN CONOLLY DR | AC | QUEENS HWY. | JOHN MCLEAN DR. | 82.67 | 79.03 | 75.51 | 72.11 | 68.85 |
| BATABANO RD | AC | WILLIE FARRINGTON DR. | E END | 86.57 | 82.82 | 79.18 | 75.65 | 72.25 |
| BIRCH TREE HILL RD | ST | REV BLACKMAN | HERITAGE PARK | 92.85 | 88.90 | 84.71 | 80.35 | 75.88 |
| BIRCH TREE HILL RD | AC | HERITAGE PARK | ANDRESEN RD. | 87.38 | 83.61 | 79.95 | 76.39 | 72.97 |
| BOATSWAIN BAY RD | AC | WATERCOURSE RD. | FOUNTAIN RD | 89.53 | 85.71 | 81.99 | 78.37 | 74.87 |
| BODDEN TOWN RD | AC | Police Station | Moon Bay | 60.37 | 57.66 | 55.11 | 52.70 | 50.45 |
| BODDEN TOWN RD | AC | Moon Bay | Midland Acres | 93.50 | 89.60 | 85.78 | 82.04 | 78.43 |
| BODDEN TOWN RD | AC | Midland Acres | Breakers | 90.52 | 86.68 | 82.93 | 79.28 | 75.75 |
| BODDEN TOWN RD | AC | Breakers | Breakers | 98.47 | 94.48 | 90.55 | 86.70 | 82.95 |
| BODDEN TOWN RD | AC | Breakers | Frank Sound | 91.52 | 87.65 | 83.88 | 80.20 | 76.64 |



NATIONAL ROADS AUTHORITY STRATEGIC OPERATIONS PLAN 2022 – 2024

| | | | | | | | | |
|--------------------------|----|---------------------------------|---------------------------------|-------|-------|-------|-------|-------|
| CAPT REGINALD PARSONS DR | AC | MOUNT PLEASANT RD. | CONCH POINT RD. | 78.04 | 74.55 | 71.20 | 67.96 | 64.88 |
| CONCH POINT RD | AC | ANDRESEN RD. | POWERY RD | 89.34 | 85.53 | 81.81 | 78.19 | 74.70 |
| CONCH POINT RD | AC | POWERY RD | END | 92.83 | 88.94 | 85.14 | 81.42 | 77.82 |
| CREWE RD | AC | DORCY DR. | MANGO TREE RAB | 93.15 | 89.25 | 85.43 | 81.71 | 78.10 |
| CREWE RD | AC | MANGO TREE RAB | DORCY DR | 93.60 | 90.60 | 87.60 | 84.59 | 81.60 |
| CREWE RD | AC | MANGO TREE RAB | LARKSPUR WAY | 81.37 | 80.03 | 78.69 | 77.35 | 76.01 |
| CREWE RD | AC | MANGO TREE RAB | HOUSE #294 | 92.76 | 92.24 | 91.71 | 91.19 | 90.67 |
| CREWE RD | AC | LARKSPUR WAY | NAVIS CL | 79.31 | 75.78 | 72.37 | 69.09 | 65.96 |
| CREWE RD | AC | NAVIS CL | TROPICAL GARDENS RD | 93.07 | 91.10 | 89.13 | 87.15 | 85.17 |
| DAVID FOSTER DR | AC | OLD JOES WAY | NORTH SOUND RD | 88.54 | 86.64 | 84.73 | 82.82 | 80.91 |
| DUMP ROAD (MINI) | AC | SEYMOUR DRIVE | NORTH SOUND ROAD | 80.25 | 76.69 | 73.25 | 69.94 | 66.76 |
| EASTERN AVE | AC | SHEDDEN RD. | NORTH CHURCH ST. | 47.59 | 45.71 | 43.97 | 42.36 | 40.90 |
| FORT ST | AC | MARY ST | NORTH CHURCH ST | 60.24 | 57.53 | 54.99 | 52.59 | 50.34 |
| FOUNTAIN RD | AC | HELL RD. | END | 89.53 | 85.71 | 81.99 | 78.37 | 74.87 |
| FRANK SOUND RD | AC | BODDEN TOWN RD | OLD ROBIN RD | 62.38 | 59.56 | 56.90 | 54.38 | 52.02 |
| GALLERIA (MINI) | AC | WEST BAY ROAD | GALLERIA PLAZA | 72.62 | 69.34 | 66.19 | 63.18 | 60.32 |
| HELL RD | AC | REV BLACKMAN RD. | WATERCOURSE RD. | 80.78 | 77.20 | 73.75 | 70.41 | 67.22 |
| HIRST RD | AC | SHAMROCK RD. | END | 60.82 | 58.08 | 55.50 | 53.07 | 50.80 |
| MAIN ST | AC | EDWARD ST. | SHEDDEN RD. | 89.86 | 86.03 | 82.30 | 78.67 | 75.16 |
| MOUNT PLEASANT RD | AC | WEST CHURCH ST. | PARKVIEW CRES. | 48.04 | 46.12 | 44.35 | 42.71 | 41.22 |
| NAPA (MINI) | AC | CREWE ROAD | SHEDDEN ROAD | 93.16 | 89.26 | 85.45 | 81.72 | 78.11 |
| NORTH CHURCH ST | AC | EASTERN AVE. | MARY ST | 81.70 | 78.09 | 74.60 | 71.23 | 68.01 |
| NORTH SIDE RD | AC | OLD ROBIN RD. | HUTLAND RD. | 88.27 | 84.48 | 80.79 | 77.21 | 73.75 |
| NORTH WEST POINT RD | AC | TOWN HALL RD. | #979 BOATSWAIN BAY RD | 74.09 | 70.75 | 67.54 | 64.47 | 61.55 |
| OLD CREWE RD | AC | KINGS ROUNDABOUT | 270 FT OLD CREWE RD | 89.19 | 85.38 | 81.67 | 78.06 | 74.57 |
| OLD CREWE RD | ST | 270 FT OLD CREWE RD. | SOUTH SOUND RD. | 85.98 | 81.67 | 77.24 | 72.71 | 68.16 |
| OLD ROBIN RD | AC | FRANK SOUND RD. | QUEENS HWY. | 87.51 | 83.74 | 80.07 | 76.51 | 73.08 |
| QUEENS HWY | AC | OLD ROBIN RD. | AUSTIN CONOLLY DR. | 86.53 | 82.79 | 79.15 | 75.62 | 72.22 |
| REV BLACKMAN RD | AC | TOWN HALL RD. | W. CHURCH | 78.88 | 75.36 | 71.97 | 68.71 | 65.59 |
| RUM POINT DR | AC | HUTLAND RD. | OTTO'S AVE | 89.39 | 85.58 | 81.86 | 78.24 | 74.75 |
| RUM POINT DR | AC | OTTO'S AVE | WATER CAY RD | 90.37 | 86.53 | 82.79 | 79.14 | 75.62 |
| SEA VIEW RD | AC | FRANK SOUND RD. | 23,226 FT E. OF FRANK SOUND RD. | 74.76 | 71.39 | 68.16 | 65.06 | 62.11 |
| SEA VIEW RD | AC | 23,226 FT E. OF FRANK SOUND RD. | 25,047 FT E. OF FRANK SOUND RD. | 86.54 | 82.80 | 79.16 | 75.63 | 72.23 |
| SEA VIEW RD | AC | 25,047 FT E. OF FRANK SOUND RD. | JOHN MCLEAN DR. | 60.00 | 57.31 | 54.77 | 52.39 | 50.16 |
| SEAFEARERS WAY | AC | MARY ST. | FORT ST | 82.58 | 81.79 | 81.00 | 80.20 | 79.41 |
| SEAFEARERS WAY | AC | FORT ST. | CARDINALL AVE. | 94.75 | 90.82 | 86.97 | 83.20 | 79.55 |
| SEAFEARERS WAY | AC | CARDINALL AVE | BOILERS RD | 98.41 | 95.41 | 92.41 | 89.40 | 86.41 |
| SHAMROCK DR | AC | SELKIRK DR | ON THE RUN (GS) RED BAY | 93.14 | 89.24 | 85.42 | 81.70 | 78.10 |
| SHAMROCK RD | AC | HIRST RD | WHISTLING WAY | 75.48 | 72.09 | 68.83 | 65.69 | 62.71 |
| SHAMROCK RD | AC | HIRST RD | WILL T DR | 64.68 | 61.75 | 58.96 | 56.33 | 53.85 |
| SHAMROCK RD | AC | WILL T DR | BODDEN TOWN RD | 79.42 | 75.89 | 72.48 | 69.20 | 66.06 |
| SHAMROCK RD | AC | MARINA DR | CTMH ROUNDABOUT | 93.14 | 89.24 | 85.42 | 81.70 | 78.10 |
| SHAMROCK RD | AC | CTMH ROUNDABOUT | ADMIRALS AVE | 94.13 | 90.21 | 86.37 | 82.62 | 78.99 |
| SHAMROCK RD | AC | ADMIRALS AVE | ON THE RUN (GS) RED BAY | 83.24 | 79.59 | 76.05 | 72.63 | 69.34 |
| SHAMROCK RD | AC | CTMH ROUNDABOUT | SPOTTS NEWLANDS RD | 98.10 | 94.11 | 90.19 | 86.35 | 82.61 |
| SHAMROCK RD | AC | SPOTTS NEWLANDS RD | CTMH ROUNDABOUT | 98.10 | 94.11 | 90.19 | 86.35 | 82.61 |
| SHAMROCK RD | AC | SPOTTS NEWLANDS RD | WHISTLING WAY | 68.60 | 65.49 | 62.52 | 59.69 | 57.01 |
| SHAMROCK RD | AC | WHISTLING WAY | HIRST RD | 88.32 | 84.53 | 80.84 | 77.25 | 73.80 |
| SMITH RD | AC | HOSPITAL RD. | BOBBY THOMPSON INTERSECTION | 92.92 | 89.03 | 85.22 | 81.50 | 77.90 |
| SOUTH CHURCH ST | AC | WALKERS RD. | BOILERS RD. | 75.37 | 71.98 | 68.73 | 65.60 | 62.62 |
| SOUTH SOUND RD | AC | WALKERS RD. | 9547 FT E. OF WALKER RD. | 56.77 | 54.26 | 51.92 | 49.71 | 47.67 |
| SOUTH SOUND RD | AC | 9547 FT E. OF WALKERS RD. | 11,047 FT E. OF WALKERS RD. | 89.98 | 86.15 | 82.41 | 78.78 | 75.27 |
| SOUTH SOUND RD | AC | 11,047 FT E. OF WALKERS RD. | SHAMROCK RD. | 70.68 | 67.47 | 64.41 | 61.48 | 58.72 |
| STADIUM DR | ST | REV BLACKMAN RD. | BIRCH TREE HILL RD. | 88.31 | 84.10 | 79.73 | 75.24 | 70.70 |
| TOWN HALL RAB | AC | TOWN HALL RD | HELL RD | 87.54 | 83.77 | 80.10 | 76.54 | 73.10 |
| TOWN HALL RD | AC | NORTHWEST POINT RD | HELL RD. | 86.57 | 82.82 | 79.18 | 75.65 | 72.25 |
| WATERCOURSE RD | AC | NW PT RD | BOATSWAIN BAY RD. | 88.52 | 84.72 | 81.03 | 77.44 | 73.97 |
| WEST BAY RD | AC | EASTERN AVE. | LAWRENCE BLVD | 61.60 | 58.83 | 56.20 | 53.73 | 51.41 |
| WEST BAY RD | AC | SAFEHAVEN DR | GOVERNORS RAB | 56.46 | 53.98 | 51.65 | 49.47 | 47.44 |
| WEST BAY RD | AC | YACHT DR | #1883 WEST BAY RD | 87.19 | 86.61 | 86.03 | 85.45 | 84.86 |
| WEST BAY RD | AC | #1883 WEST BAY RD | YACHT DR | 92.53 | 92.19 | 91.85 | 91.51 | 91.17 |
| WEST BAY RD | AC | #1883 WEST BAY RD | CEMETERY RD | 79.88 | 76.33 | 72.90 | 69.60 | 66.44 |
| WEST BAY RD | AC | CEMETERY RD | W. CHURCH ST. | 76.04 | 72.63 | 69.35 | 66.19 | 63.19 |
| WEST CHURCH ST | AC | W BAY RD. | MT PLEASANT RD. | 64.52 | 61.60 | 58.83 | 56.20 | 53.73 |



APPENDIX 3 – SUGGESTED DISTRICT ROADS PROGRAMME (EA 36)

District roads (subdivision access roads) listed below are suggested maintenance priorities derived from the NRA's pavement management database. Funding for these projects is approved in Parliament as executive assets. Constituency members are afforded the opportunity to review the list and provide final input on the priority scheduling of these projects.

| Year | BranchName | Surface | Section Length | Section Width | PCI | Constituency |
|------|---------------------|---------|----------------|---------------|-----|--------------|
| 2022 | PESETA DR | ST | 1,027 | 18 | 63 | BTE |
| 2022 | NOEL DR | ST | 600 | 24 | 54 | BTE |
| 2022 | PASTURE DR | ST | 700 | 24 | 60 | BTE |
| 2022 | SCHOOL HOUSE LN | ST | 1,000 | 15 | 63 | BTE |
| 2022 | GOLDSMITH ST | ST | 1,000 | 24 | 40 | BTE |
| 2022 | MAGPIE CL | ST | 250 | 15 | 45 | BTE |
| 2022 | SAFFRON CL | ST | 600 | 24 | 56 | BTE |
| 2022 | WORDSWORTH ST | ST | 900 | 26 | 53 | BTE |
| 2022 | NETTY LEVY CT | ST | 128 | 15 | 61 | BTE |
| 2022 | SILVERDALE CL | ST | 331 | 20 | 61 | BTW |
| 2022 | TEAKWOOD CL | ST | 302 | 24 | 61 | BTW |
| 2022 | TRUMBACH DR | ST | 653 | 14 | 61 | BTW |
| 2022 | DOMINICA DR | ST | 938 | 26 | 64 | BTW |
| 2022 | AUNT SHANNYS RD | ST | 800 | 24 | 62 | BTW |
| 2022 | HUDSON DR | ST | 370 | 24 | 67 | BTW |
| 2022 | LEMON RD | ST | 800 | 24 | 43 | BTW |
| 2022 | PAULEACH RD | ST | 1,300 | 28 | 64 | BTW |
| 2022 | TIMBERLAND CL | ST | 800 | 30 | 68 | BTW |
| 2022 | SUMMERWOOD CL | ST | 300 | 20 | 63 | BTW |
| 2022 | MIDWAY CL | ST | 1,063 | 20 | 64 | BTW |
| 2022 | SCHOOL RD | HMA | 1,162 | 26 | 49 | GTC |
| 2022 | TAKOMA CL | ST | 200 | 15 | 55 | GTC |
| 2022 | ORCHARD LN | ST | 300 | 20 | 65 | GTC |
| 2022 | BOWIE CL | ST | 200 | 20 | 61 | GTC |
| 2022 | ALCAN LN | ST | 270 | 24 | 63 | GTC |
| 2022 | TROPICAL GARDENS RD | HMA | 2,100 | 24 | 55 | GTC |
| 2022 | STAFFORD LN | ST | 400 | 12 | 61 | GTC |
| 2022 | PALMDALE AVE | ST | 3,200 | 24 | 61 | GTC |
| 2022 | OLD RED GATE RD | ST | 420 | 20 | 7 | GTC |
| 2022 | MCFIELD LN | ST | 450 | 20 | 35 | GTC |
| 2022 | RANDYKE WAY | HMA | 1,414 | 24 | 66 | GTE |
| 2022 | ROSE LN | ST | 280 | 20 | 63 | GTE |
| 2022 | GLENMONT CL | ST | 650 | 15 | 60 | GTE |
| 2022 | RANKIN DR | HMA | 1,070 | 24 | 68 | GTE |
| 2022 | EDGEWATER WAY | HMA | 1,752 | 24 | 67 | GTE |
| 2022 | ARTHURS WAY | ST | 380 | 15 | 42 | GTN |
| 2022 | BRINKLEY DR | ST | 350 | 15 | 65 | GTN |
| 2022 | LUNA LN | ST | 200 | 15 | 33 | GTN |
| 2022 | ROSEHALL LN | PCC | 200 | 15 | 59 | GTN |
| 2022 | WHITEHALL GDNS | PCC | 600 | 20 | 35 | GTN |
| 2022 | PALM HEIGHTS DR | HMA | 380 | 24 | 30 | GTN |
| 2022 | SHADOW LN | ST | 450 | 15 | 62 | GTN |
| 2022 | WASHINGTON RD | HMA | 653 | 24 | 66 | GTN |
| 2022 | BRINKLEY DR | ST | 351 | 12 | 62 | GTN |
| 2022 | ALLIE B DR | HMA | 1,283 | 24 | 66 | GTN |
| 2022 | BRUSHY AVE | HMA | 942 | 24 | 65 | GTN |
| 2022 | MAYFAIR CL | ST | 200 | 20 | 64 | GTS |
| 2022 | FAIRFAX WAY | ST | 400 | 30 | 60 | GTS |
| 2022 | COEMER DR | ST | 1,135 | 30 | 67 | GTS |



NATIONAL ROADS AUTHORITY STRATEGIC OPERATIONS PLAN 2022 – 2024

| Year | BranchName | Surface | Section Length | Section Width | PCI | Constituency |
|------|----------------------|---------|----------------|---------------|-----|--------------|
| 2022 | FURTHER RD | ST | 300 | 30 | 55 | NORTHSIDE |
| 2022 | UNION ST | ST | 1,100 | 24 | 60 | NORTHSIDE |
| 2022 | EAGLE ST | ST | 1,000 | 24 | 60 | NORTHSIDE |
| 2022 | CONSTANTINE | ST | 600 | 24 | 60 | NORTHSIDE |
| 2022 | GRANT ST | ST | 450 | 24 | 60 | NORTHSIDE |
| 2022 | WATER CAY RD | ST | 5,200 | 24 | 52 | NORTHSIDE |
| 2022 | FINGER CAY RD | ST | 1,100 | 24 | 50 | NORTHSIDE |
| 2022 | SANDPOINT RD | ST | 2,400 | 24 | 50 | NORTHSIDE |
| 2022 | MASTIC RD | ST | 2,119 | 26 | 63 | NORTHSIDE |
| 2022 | KNOT ST | ST | 750 | 20 | 53 | EAST END |
| 2022 | HIGH ROCK DR | HMA | 10,000 | 26 | 63 | EAST END |
| 2022 | WELCOME (FARM ROAD) | GR | 1,800 | 24 | 34 | EAST END |
| 2022 | LAKEPORT ST | ST | 500 | 24 | 60 | NEWLANDS |
| 2022 | BRENDA ST | ST | 400 | 24 | 60 | NEWLANDS |
| 2022 | TENFOOT CL | ST | 436 | 24 | 61 | NEWLANDS |
| 2022 | FLEET AVE | ST | 843 | 30 | 61 | NEWLANDS |
| 2022 | GREEN ST | ST | 436 | 28 | 61 | NEWLANDS |
| 2022 | HAZEL ST | ST | 413 | 26 | 61 | NEWLANDS |
| 2022 | JACKIE ST | ST | 417 | 28 | 61 | NEWLANDS |
| 2022 | MERVIN ST | ST | 433 | 30 | 61 | NEWLANDS |
| 2022 | RANCH RD | ST | 800 | 20 | 47 | SAVANNAH |
| 2022 | CHIME ST | ST | 950 | 24 | 62 | SAVANNAH |
| 2022 | TUCKERMAN LN | ST | 1,273 | 24 | 38 | SAVANNAH |
| 2022 | TROPHY CRESC | ST | 1,500 | 24 | 66 | RED BAY |
| 2022 | DOGWOOD ST | ST | 400 | 24 | 60 | PROSPECT |
| 2022 | MIDSUMMER DR | ST | 400 | 24 | 60 | PROSPECT |
| 2022 | CAPT JOE & OSBERT RD | ST | 2,000 | 24 | 59 | WBC |
| 2022 | APPLE BLOSSOM GDNS | ST | 1,700 | 24 | 49 | WBC |
| 2022 | BOXELDER ST | ST | 250 | 15 | 28 | WBC |
| 2022 | CLINKER CL | ST | 260 | 15 | 63 | WBC |
| 2022 | GLADE DR | ST | 1,700 | 24 | 62 | WBC |
| 2022 | HETTIES LN | ST | 700 | 15 | 53 | WBC |
| 2022 | JUPITER LINK | ST | 260 | 20 | 63 | WBC |
| 2022 | MERCURY CL | ST | 270 | 15 | 63 | WBC |
| 2022 | VIBE LN | ST | 1,000 | 15 | 56 | WBC |
| 2022 | SONNY POWERYS DR | ST | 580 | 30 | 58 | WBN |
| 2022 | THISTLE LN | ST | 1,100 | 20 | 45 | WBN |
| 2022 | LENDERS CL | ST | 680 | 15 | 37 | WBN |
| 2022 | TURTLE CRESC | ST | 1,400 | 15 | 46 | WBN |
| 2022 | DUXIES LN | ST | 853 | 15 | 62 | WBN |
| 2022 | NICKEL LN | ST | 656 | 15 | 64 | WBN |
| 2022 | CAPT CHARLIE RD | ST | 230 | 15 | 42 | WBS |
| 2022 | CHESTNUT DR | ST | 550 | 15 | 63 | WBS |
| 2022 | VIOLET LN | ST | 300 | 15 | 28 | WBS |
| 2022 | CRESCENT CL | ST | 670 | 30 | 62 | WBW |
| 2022 | EVANS CL | ST | 200 | 15 | 63 | WBW |
| 2022 | SKY WAY | ST | 300 | 24 | 44 | WBW |
| 2022 | THIRD AVE | ST | 250 | 15 | 51 | WBW |
| 2022 | TULIP CL | ST | 160 | 15 | 33 | WBW |
| 2022 | DELACREE CT | ST | 150 | 15 | 63 | WBW |
| 2022 | MISS DAISY LN | ST | 1,000 | 15 | 47 | WBW |
| 2022 | EDLIN AND GARNELL DR | ST | 397 | 14 | 60 | WBW |
| 2022 | GLIDDEN LN | ST | 1,145 | 24 | 62 | WBW |
| 2022 | SWALLOW RD | ST | 300.00 | 15.00 | 65 | WBW |
| 2022 | RENNIE EBANKS RD | ST | 450.00 | 15.00 | 20 | WBW |



NATIONAL ROADS AUTHORITY STRATEGIC OPERATIONS PLAN 2022 – 2024

| Year | BranchName | Surface | Section Length | Section Width | PCI | Constituency |
|------|----------------------|---------|----------------|---------------|-----|--------------|
| 2023 | WILDE ST | ST | 561 | 24 | 54 | BTE |
| 2023 | ABIU CL | GR | 425 | 16 | 60 | BTE |
| 2023 | JOHN CARTER DR | HMA | 1,010 | 24 | 61 | BTE |
| 2023 | KIPLING ST | HMA | 1,302 | 24 | 59 | BTE |
| 2023 | LAKE DESTINY DR | GR | 1,258 | 28 | 59 | BTE |
| 2023 | MIJALL RD | ST | 1,450 | 24 | 65 | BTE |
| 2023 | PUFFIN CL | ST | 449 | 28 | 64 | BTW |
| 2023 | ROSELYN CL | ST | 515 | 30 | 53 | BTW |
| 2023 | SHIRLEY TOWBIS LN | ST | 804 | 26 | 65 | BTW |
| 2023 | CLEARVIEW DR | ST | 732 | 24 | 65 | BTW |
| 2023 | LOCUST LN | ST | 351 | 24 | 65 | BTW |
| 2023 | PAULEACH RD | ST | 1,342 | 28 | 54 | BTW |
| 2023 | BLUHILL DR | ST | 384 | 14 | 61 | EAST END |
| 2023 | BROADLEAF CL | HMA | 781 | 24 | 58 | EAST END |
| 2023 | ALAMO DR | ST | 730 | 30 | 53 | GTC |
| 2023 | SOMERSET DR | ST | 213 | 16 | 63 | GTC |
| 2023 | TROPICANA CRES | ST | 2,507 | 24 | 67 | GTC |
| 2023 | WILTSHIRE DR | ST | 289 | 18 | 54 | GTC |
| 2023 | INDUSTRIAL WAY | HMA | 1,713 | 26 | 67 | GTC |
| 2023 | CRUSADER WAY | ST | 617 | 20 | 63 | GTE |
| 2023 | ROSEHALL LN | PCC | 190 | 14 | 58 | GTN |
| 2023 | WATLERS DR | ST | 1,450 | 22 | 64 | GTN |
| 2023 | EUPHRATES CL | ST | 128 | 12 | 52 | GTN |
| 2023 | GRACKLE RD | AC | 531 | 24 | 68 | GTN |
| 2023 | BARNES DR | HMA | 1,227 | 30 | 69 | GTN |
| 2023 | EAST BLVD | HMA | 863 | 20 | 59 | GTS |
| 2023 | COLUMBUS CL | ST | 456 | 28 | 54 | GTW |
| 2023 | ASHRIDGE RD | HMA | 410 | 20 | 68 | GTW |
| 2023 | MIDDLE RD | ST | 856 | 20 | 65 | GTW |
| 2023 | NEWPORT AVE | ST | 1,457 | 30 | 54 | GTW |
| 2023 | CUNNINGHAM ST | ST | 427 | 30 | 55 | NEWLANDS |
| 2023 | FOYE ST | ST | 410 | 26 | 53 | NEWLANDS |
| 2023 | GREGORY ST | ST | 495 | 30 | 53 | NEWLANDS |
| 2023 | KITTY LN | ST | 1,070 | 24 | 64 | NEWLANDS |
| 2023 | TRIDELPHIA WAY | HMA | 436 | 24 | 58 | NEWLANDS |
| 2023 | BRENDA ST | ST | 449 | 28 | 55 | NEWLANDS |
| 2023 | SAILORS WAY | ST | 574 | 30 | 54 | NORTHSIDE |
| 2023 | WATERGATE ST | ST | 417 | 24 | 64 | NORTHSIDE |
| 2023 | BOUNTY CL | ST | 472 | 30 | 65 | NORTHSIDE |
| 2023 | CAYMANITE AVE | ST | 705 | 26 | 53 | NORTHSIDE |
| 2023 | CLIFFROCK DR | ST | 804 | 26 | 53 | NORTHSIDE |
| 2023 | GALLEON CL | ST | 322 | 30 | 54 | NORTHSIDE |
| 2023 | DEVON RD | ST | 1,178 | 26 | 56 | PROSPECT |
| 2023 | BUENA VISTA DR | HMA | 948 | 22 | 53 | SAVANNAH |
| 2023 | WEST LN | ST | 1,493 | 20 | 55 | SAVANNAH |
| 2023 | HOMESTEAD CRES | ST | 1,463 | 26 | 56 | SAVANNAH |
| 2023 | SCHOLARS DR | HMA | 1,549 | 24 | 70 | WBC |
| 2023 | CINDER LN | ST | 617 | 18 | 65 | WBC |
| 2023 | COMET CL | ST | 171 | 14 | 56 | WBC |
| 2023 | LEONA LN | ST | 820 | 14 | 62 | WBC |
| 2023 | LYNNETTE CRES | HMA | 502 | 24 | 69 | WBC |
| 2023 | ORRETT CL | ST | 236 | 22 | 65 | WBC |
| 2023 | SAND HOLE RD | ST | 843 | 16 | 64 | WBN |
| 2023 | TURTLE CRES | ST | 482 | 12 | 56 | WBN |
| 2023 | VIXVILLE DR | ST | 269 | 13 | 56 | WBN |
| 2023 | VULGUNNERS DR | ST | 883 | 24 | 54 | WBN |
| 2023 | LIZETTE LN | GR | 584 | 20 | 60 | WBN |
| 2023 | MARY MOLLIE HYDES RD | ST | 725 | 16 | 55 | WBS |
| 2023 | TULIP CL | ST | 164 | 14 | 56 | WBW |
| 2023 | ZACHARIAS RD | ST | 249 | 22 | 56 | WBW |
| 2023 | CRESCENT CL | ST | 663 | 30 | 53 | WBW |
| 2023 | EVANS CL | ST | 213 | 12 | 56 | WBW |



| Year | BranchName | Surface | Section Length | Section Width | PCI | Constituency |
|------|-----------------|---------|----------------|---------------|-----|--------------|
| 2024 | SITWELL RD | ST | 2,119 | 28.00 | 64 | BTE |
| 2024 | BRACKEN CL | ST | 236 | 20.00 | 64 | BTE |
| 2024 | MIMOSA LN | ST | 837 | 22.00 | 64 | BTE |
| 2024 | ANGLE RIDGE DR | HMA | 850 | 24.00 | 69 | BTW |
| 2024 | ANTIGUA DR | ST | 220 | 24.00 | 62 | BTW |
| 2024 | RYAN RD | ST | 869 | 16.00 | 65 | GTC |
| 2024 | CORNWALL LN | ST | 203 | 16.00 | 62 | GTC |
| 2024 | HALPINE RD | GR | 233 | 14.00 | 56 | GTC |
| 2024 | OWEN ROBERTS DR | HMA | 2,300 | 30.00 | 64 | GTC |
| 2024 | BLUE LAGOON DR | GR | 521 | 24.00 | 55 | GTN |
| 2024 | BRONZE RD | ST | 492 | 24.00 | 57 | GTN |
| 2024 | CYPROS RD | HMA | 686 | 24.00 | 69 | GTN |
| 2024 | GREENWOOD DR | HMA | 1,072 | 24.00 | 54 | GTN |
| 2024 | HOWARD ST | HMA | 492 | 24.00 | 68 | GTN |
| 2024 | HINDS WAY | HMA | 1,745 | 24.00 | 68 | GTS |
| 2024 | HOLMES TURN | HMA | 449 | 20.00 | 68 | GTS |
| 2024 | TUREN LINK | ST | 276 | 26.00 | 61 | GTW |
| 2024 | GLEN EDEN RD | ST | 446 | 26.00 | 62 | GTW |
| 2024 | MEMORIAL AVE | HMA | 958 | 26.00 | 64 | GTW |
| 2024 | MERRENDAL DR | HMA | 225 | 24.00 | 68 | GTW |
| 2024 | ROYAL CL | HMA | 190 | 24.00 | 67 | NEWLANDS |
| 2024 | COCOPLUM LN | HMA | 430 | 24.00 | 55 | NEWLANDS |
| 2024 | COLESVILLE WAY | HMA | 410 | 24.00 | 67 | NEWLANDS |
| 2024 | ARLENE AVE | HMA | 1,352 | 24.00 | 69 | NEWLANDS |
| 2024 | MONTROSE WAY | HMA | 463 | 24.00 | 67 | NEWLANDS |
| 2024 | CASCADE DR | HMA | 1,243 | 24.00 | 69 | PROSPECT |
| 2024 | LAKESIDE DR | HMA | 2,195 | 24.00 | 67 | RED BAY |
| 2024 | LOCH LOMOND WAY | ST | 561 | 24.00 | 62 | RED BAY |
| 2024 | CHARITY LN | ST | 804 | 20.00 | 62 | SAVANNAH |
| 2024 | MEADOWLARK RD | ST | 180 | 24.00 | 64 | SAVANNAH |
| 2024 | CLINKER CL | ST | 266 | 10.00 | 48 | WBC |
| 2024 | ADONIS DR | HMA | 1,083 | 24.00 | 68 | WBC |
| 2024 | PARKVIEW CRES | ST | 1,096 | 26.00 | 63 | WBC |
| 2024 | TURTLE CRES | GR | 574 | 12.00 | 49 | WBN |
| 2024 | HILLARD DR | HMA | 991 | 24.00 | 69 | WBS |
| 2024 | MORGANS LN | ST | 502 | 16.00 | 63 | WBS |
| 2024 | VELMA BANKS DR | HMA | 1,417 | 24.00 | 68 | WBW |
| 2024 | FOURTH AVE | GR | 129 | 18.00 | 54 | WBW |



APPENDIX 3 – FLEET PROCUREMENT PLAN

| Fleet Acquisitions Tranche "C3" to December 2021 - June 2022 | | | |
|---|--|------------------|---------------------|
| 1 | Large Loader 36,000 Class EROPS 2018 CAT938M EROPS GP Bucket | NRA-L4 | \$130,000.00 |
| 1 | Large Single Drum Compactor 2021 Hamm 311 OROPS w/15 hrs | NRA-R7 | \$85,000.00 |
| 1 | Medium Loader 19-22K Class, EROPS 2019 CAT 918M EROPS GP Bucket | ADDITION | \$130,000.00 |
| 1 | Tracked-Type Tractor 2019 CAT D6K XL | NRA-D3 | \$175,000.00 |
| 1 | Compact Rubber Tracked Excavator 2018 Yanmar VI080 w/Enclosed Cab & Thumb | NRA-D1 | \$80,000.00 |
| 1 | 3-Wheel self-Propelled Broom 2021 Broce BW260 Enclosed Cab | ADDITION | \$35,000.00 |
| 1 | Small Water Truck / 33K GVW, Class 7 | NRA-606 | \$100,000.00 |
| | | Est Total | \$735,000.00 |
| | | | |

| QTY. | Description | Equipment being Replaced | ESTIMATED KYD Amount |
|---|---|--------------------------|----------------------|
| 2023 Proposed Fleet Acquisitions Tranche "D" | | | |
| 1 | Grader enclosed Cab, 12 ft Blade, Scarifier | NRA-G4 | \$250,000 |
| 1 | Vacuum Truck with Tipping Body & Compressor, 66k GVW, Class 8 | NRA-538 | \$250,000 |
| 1 | Large Compressor 400 cfm | NRA-CT6 | \$50,000 |
| 1 | Tractor Head, 58k GVW, Class 8, 18 Speed | NRA-602 | \$110,000 |
| 2 | Zero Turn Mowers, 52 inch | NRA-BC2S, NRA-BC3S | \$15,000 |
| 2 | Crew Cab, 10k GVW, F250/350 Class 3 | NRA-609, NRA-610 | \$90,000 |
| 1 | Crew Cab, 19k GVW, F550 Class 5 | NRA-611 | \$60,000 |
| 4 | Crew Cab, 6k GVW, Colorado/Hilux Class 1 | NRA-534, 586, 607 & 608 | \$90,000 |
| 3 | Mobile Variable Message Sign Board, Wanco Sign Trailer Class | NRA-ST10, ST11 & ST12 | \$48,000 |
| 1 | Vacuum Truck with Tipping Body, 66k, Class 8 | Addition | \$250,000 |
| 2 | Dewatering Pumps, 6 inch, Diesel, Trailer, | Addition | \$70,000 |
| | | | \$1,283,000 |
| | | | |



| QTY. | Description | Equipment being Replaced | ESTIMATED KYD Amount |
|---|--|--------------------------|----------------------|
| 2024 Proposed Fleet Acquisitions Tranche "E" | | | |
| 1 | Full -sized Crawler Excavator, 40-45 Ton Class, with Hydraulic Thumb, 72" HD (3c.y. straight edge)and 54" SD (2c.y. teeth and side protectors) buckets | NRA-E4 | \$275,000 |
| 1 | Compact Tracked Loader, Enclosed Cab, Side Door, Hi Flow Hydraulics | NRA-L9 | \$70,000 |
| 1 | Loader Backhoe, Enclosed Cab, 16k Class | NRA-10 | \$70,000 |
| 1 | Small Hatchback vehicle | NRA-619 | \$18,000 |
| 3 | Crew Cab, 19k GVW, F550 Class 5 | NRA-613, 614 & 615 | \$180,000 |
| 1 | Low Boy Trailer, 100k GVW, Air Ride, Detachable Goose Neck | NRA-FT5 | \$100,000 |
| 1 | Vacuum Truck with Tipping Body, 66k, Class 8 | Addition | \$250,000 |
| | | | \$963,000 |
| | | | |





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