

## NATIONAL ROADS AUTHORITY

### JOB DESCRIPTION

**Job Title:** Land Surveyor (Roads)  
**Grade L:** \$ 49,800 - \$ 66,984  
**Section:** Engineering

**Post Holder:**  
**Reports to:** Senior Engineer

#### 1. JOB PURPOSE

The Land Surveyor assists with the design and implementation of roads projects, including new roads, road widening, intersection improvements, and road rehabilitation projects. The postholder will be responsible for road engineering surveys by making exact measurements and providing relevant survey data for shape, contour, gradation, elevation, or dimensioning of land or land features essential to road design and construction; this includes carrying out surveying procedures such as -, reconnaissance surveys, topographic surveys, and highway engineering surveys (including site-level control)

#### 2. DIMENSIONS

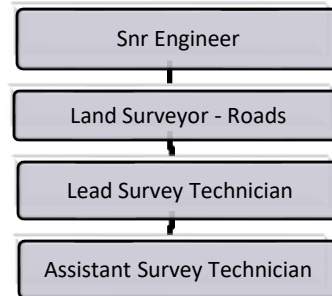
Capital projects for road construction scheduled for the financial year 2022/23 are expected to be between CI\$12 and CI\$15M.

Routine road maintenance during the year is estimated to cost between CI\$2 and CI\$4M.

#### 3. PRINCIPAL ACCOUNTABILITIES

1. Direct, supervise or conduct highway engineering survey work inclusive of map surveys, location surveys, road staking, alignment establishment, performing as built surveys, locating boundary markers, and utilizing GPS data collection,
2. Prepare and maintain sketches, maps, reports, and descriptions of surveys undertaken in order to describe, certify, and assume liability for work performed,
3. Verify the accuracy of survey data, including measurements and calculations conducted at survey sites
4. Search legal records, survey records, and land registers and historical Cadastral data in order to obtain information about property boundaries in areas surveyed
5. Coordinate findings with the engineers, clients, and others concerned with the projects
6. Establish control points (horizontal and vertical) for use in making maps, using GPS, scanners and traditional surveying instrumentation
7. Determine coordinates (X,Y,Z) of important features and boundaries in survey areas
8. Analyze, manage and display data using geographic information systems (GIS) and computer-aided design and drafting (CAD)

#### 4. ORGANIZATIONAL CHART



#### 5. BACKGROUND INFORMATION

The National Roads Authority (NRA) is the Statutory Authority responsible for planning, design, construction and maintenance of all Government roads, car parks and any other projects that may be assigned. In this regard, the major responsibilities include planning, design, budgeting, construction, maintenance and cost efficiency of these projects.

#### 6. KNOWLEDGE, EXPERIENCE AND SKILLS

- BSc in Geomatics or Land Surveying with a working knowledge of ESRI ArcGIS or other GIS software.
- A full working knowledge of Trimble GPS land surveying equipment and Trimble Business Center processing software.
- Ability to use CAD programs such as AutoCAD Civil 3D or similar programs to produce plans in accordance with NRA specifications.
- Minimum three (3) years of practical work experience in the role of cadastral surveying under the Torrens System
- Licensed as a land surveyor within the Cayman Islands (or capability to readily obtain a license) and the ability/commitment to retain licensure is preferred. A member of the Royal Institute of Chartered Surveyors (Geomatics division) would be a benefit.
- Knowledge of legislation pertaining to surveying, highways, and property - specifically the Roads Act, the Land Surveyors Act, the Land Registry Act, the Planning Act and supporting Regulations
- Knowledge of ministry policies and procedures, professional surveying standards and knowledge of related fields (e.g. civil engineering, drainage) pertaining to the design and construction of road facilities
- Ability to be licensed or have a drone operator's license within the Cayman Island's is an asset. Knowledge of drone operation and image gathering and processing to produce 3D results images for use in CAD programs is advantageous.
- Demonstrated ability to be methodical, and to prioritize tasks effectively with a successful track record of meeting deadlines.
- Ability to continually improve performance; to be approachable, supportive and demonstrate integrity, fairness and high personal and professional standards.
- Maintains a professional approach and presents a positive image to colleagues and others.
- Ability to write reports and make presentations to provide expert advice and interpretation to senior management, surveying industry and stakeholders, authorize discretionary solutions and prepare technical briefs.
- Shares knowledge and contributes to a positive team spirit.

- Possession of analytical thinking skills.
- Experience gained within, engineering or construction sectors would be beneficial

## **7. ASSIGNMENT AND PLANNING OF WORK**

Work is distributed by various managers based on project needs. Assignments will generally come from the Assistant Director of TPU, Works Manager, Senior Project Manager and/or Senior Engineer.

The post holder will be required to program their work in order to meet project timelines.

## **8. SUPERVISION OF OTHERS**

The post holder will supervise a small survey team that is responsible for road surveying, boundary reinstatements, inspections and cataloguing of all NRA's road and roadside facilities such as drains, wells, signs, curbstones etc. for asset management purposes.

A close technical working relationship with the Transportation Planning Unit, project management team, and engineering design team is required for work continuity purposes.

## **9. OTHER WORKING RELATIONSHIPS**

The post holder works closely with various line managers and project teams to perform necessary surveys for road and road-related projects.

The post holder will also liaise with other agencies such as the Lands and Survey Department, private land surveyors, architects and engineers. Legal survey documents and plans will need to be submitted to the Lands and Survey Department for Quality Assurance and authentication.

## **10. DECISION MAKING AUTHORITY AND CONTROLS**

The post holder oversees a survey team, using specialized equipment to carry out road surveys, create maps, and/or provide surveying required for the design and construction of roads and road-related features.

The post holder takes direction from others based on the survey needs of roads and related projects however the post holder shall be able to clearly define work scope and degree of direct control and personal supervision, clearly define how it was exercised, and demonstrate that they were responsible within that capacity for the work that they sealed, signed and dated.

## **11. PROBLEM / KEY FEATURES**

The job holder's role is both field and office related requiring the ability to carry out high quality work in both situations.

Sometimes work is in areas of dense bush, far from recognized roads or tracts and where conditions underfoot may consist of mud, swamp, sharp rock and holes.

When not on site, the post holder will be responsible for updating equipment and vehicle records and for their maintenance, adjustment and care.

**12. WORKING CONDITIONS**

Working environment is both outdoors and occasionally in inclement weather, and indoors in an office setting. The post holder may be exposed to dust, hot temperature, traffic, confined spaces and open trenches. Travel to various remote locations to supervise crews and conduct inspections and meetings is likely.

Protective clothing may be required at times.

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**Job Description approved by:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Job Holder:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
(Print Name in Capital)

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_