



PAPUA NEW GUINEA PUBLIC SERVICE



Form OD2.7

## JOB DESCRIPTION

### 1. IDENTIFICATION

<b>AGENCY:</b> <i>Works &amp; Highways</i>	<b>SYS. POSN. NO:</b>	<b>REF. NO:</b> 60ESS01
<b>WING:</b> <i>Network Planning, Design &amp; Standards</i>	<b>DESIGNATION/CLASSIFICATION:</b> <i>First Assistant Secretary - Engineering Services &amp; Standards</i> <span style="float: right;">Grade 18</span>	
<b>DIVISION:</b> <i>Engineering Services &amp; Standards</i>	<b>LOCAL DESIGNATION:</b> <i>First Assistant Secretary - Engineering Services &amp; Standards</i>	
<b>BRANCH:</b> <i>Office of the First Assistant Secretary - Engineering Services &amp; Standards</i>	<b>REPORTING TO:</b> <i>Executive Director - Network Planning, Design and Standards</i>	<b>SYS. POS. NO:</b> Grade 19
<b>SECTION:</b> -	<b>LOCATION:</b> <i>Headquarter - Boroko</i>	<b>REF. NO:</b> 60NPDS01

### HISTORY OF POSITION

FILE REF.	DATE OF VARIATION	DETAILS
111 - -60 - A00	10/12/2021	Re-no, Re-design

### 2. PURPOSE

Reporting to the Executive Director, Network Planning Design & Standards Wing, the position provides high level strategic leadership in developing, reviewing and monitoring best practice contemporary road and bridge designs in line with engineering standards in order for the DOWH to meet strategic National Road Network Strategy (NRNS), Connect-PNG Strategy as well as objectives stated in its Corporate Plan.

This position is strategically established to provide LEADERSHIP, coordination and management administratively for the number of offices that are answerable to this level of authority and technically for performance requirements in terms of the key activities or projects/programs that are aimed at the development and improvement of transport infrastructure (Capital Works and Road Maintenance programs) that are to be implemented throughout the country and as per the mandate of DOW.

### 3. DIMENSIONS

The Engineering & Standards Division constitutes a core mandate of the Department to ensure that the PNG Road network is strategically managed. As such, the dimensions of this position is broad impacting on the whole of Department's strategies, programs and policies. As such this position is to support the Executive Director to assess the network strategy and planning submissions and documents in respect to design dept, consistency and to advise the Secretary accordingly It also provides leadership and direction to branch heads and staff.

This office is supported by an approved administrative structure that is resourced to ensure functionality across the DOW internally and externally where the envisaged road network improvement is a priority.

### 4. PRINCIPLE ACCOUNTABILITIES

The expected outcomes which this position is accountable for is as follows;

- Prioritized road safety
- Realistic road safety planning and adequate funding
- Maintaining technological advantage (research and technological advancement)

- Updated standards for road engineering
- Environmental safeguards
- Successful investigations, testing, analysis and design of best options for maintenance, rehabilitation and upgrading of roads and construction of new roads
- Design needs for the annual works programs identified in a timely manner
- Determined scope of work
- Roads and Bridges designs prepared
- Costing of road and bridge design
- Work plans prepared for scoped projects
- Quality assurance of work plans and designs

## **5. MAJOR DUTIES**

- 5.1 Develop realistic work plans for the Division and develop new technical standards and policies.
- 5.2 Ensure effective implementation of the planned activities for which the outcomes are accounted for (in section 04) above.
- 5.3 Conduct regular Divisional meetings to be fully briefed of the Branch's activities as well as to pass on departmental directives as issued by the executive.
- 5.4 Monitor performances of each branch within the division to ensure set targets are accomplished.

### **I. Road Safety Engineering & Planning**

- Develop Road Safety Audit Policy and undertake road safety audit inspections across the entire road network.
- All new road and bridge design works must comply with Road Safety Design Standards.
- Develop Road Safety Audit and Inspection Plan and develop cost estimate and seek budgetary support to implement the plan on the entire road network.
- Plan and undertake road safety awareness programs in consultation with Road Traffic Authority (RTA), Police (Traffic Division), and Provincial Administrations.

### **II. Research and Technological Advancement**

- Undertake research and develop new roads, bridges, and building infrastructure technologies to current world practice.
- Work in consultation and collaboration with National Research Institute (NRI), Private Companies, and Department of Higher Education, Research, Science and Technology (DHERST) in undertaking joint research and development of new emerging technologies in the construction industry.
- Acquire and apply new design software and engineering software for engineering works.

### **III. Develop new and update existing Standards and Specifications**

- Develop new Technical Standards, Policies and
- Revise existing standards to current world best practice.

### **IV. Engineering Investigation and Design of New Infrastructure**

- Develop Annual Design Work Plan in accordance with approved Annual Works Program and Annual Budget and implement the plan.
- Undertake engineering investigations such as Hydrology, Hydraulics, Geotechnical, Geology, Design new infrastructure such as bridges, roads and buildings.

- Based on the engineering investigations and designs, develop scope of works and cost estimates for the planned works. Support Provincial and District Administration in undertaking Feasibility Studies and Design of Rural Infrastructure.
- Review of designs in accordance to Standards and provide approval for implementation.

#### V. Material Testing and Road Construction Quality Assurance & Compliance

- Accredite all Regional and Provincial Laboratories in compliance to NISIT, PNGLAS, and ISO 9001 standards.
- Establish new Provincial Laboratories and purchase new equipment and install them.
- Develop Road Construction Audit Policy and carry out quality assurance and compliance audits on all construction activities.

#### VI. Environmental Safeguards, Social Safeguards and Climate Change

- Develop Environment and Social Safeguards Policy and Implementation Plan and ensure all construction projects comply with the safeguards standards.
- Develop Climate Resilient Infrastructure Policy in collaboration with Climate Change Development Authority (CCDA) and ensure all road and building infrastructure are climate resilient and meet the United Nations Sustainable Development Goals (UN SDGs).
- Undertake Social Impact Assessment (SIA) and Environmental Impact Assessment (EIA) on all new projects.
- Develop Quarry Pit and Gravel Pit Management and Closure Program

#### VII. Engineering Survey and Land Management

Develop Land Acquisition Database and undertake Road Corridor Boundary Survey for Total Road Network. Manage land compensation issues and review all new engineering survey plans and ensure it complies with DoW Standard Survey Instructions and DoW Surveyors Manual.

## 6. NATURE AND SCOPE

The position is within the senior management level of the organization and reports directly to the Executive Director – Network Planning, Design & Standards.

### 6.1 Working relationship

Who	Why
<b>Internal</b>	
<b>Secretary</b>	Advise Secretary on Technical and Compliance matters
<b>Executive Director (NPD&amp;S)</b>	Providing timely reports and advice consistent with the role and responsibilities of the position
<b>Senior Managers / Managers / Project/Program Coordinators</b>	Coordinate, plan and implement Annual Work Plans and Annual Budget and donor funded projects
<b>External</b>	
<b>NISIT &amp; NRI</b>	Collaborate and undertake joint engineering research and develop technical policies and standards
<b>Relevant government</b>	Coordinate with relevant Government Agencies like

Who	Why
<b>institutions/organizations</b>	RTA, CCDA, DoT, DHERST, NCDC, and DLPP and regulate Road Act, Building Act and Physical Planning Act accordingly.
<b>Development partners, external stakeholders, various partners</b>	Coordinate, plan and implement development programs and undertake capacity development programs.
<b><i>International Road Federations, IEPNG, FIDIC, ARRB, and other relevant international and national engineering institutions</i></b>	Ensure all engineering works undertaken in country are upgraded to world's best practice and standards. Membership subscription to IRF, FIDIC, ARRB, ASSHTO, etc., and participate in international programs.

## 6.2 Working environment

The position is located at Department of Works, Headquarters in Port Moresby and this is a statutory, specialist and technical position that focuses on coordinating, managing and implementing government policies, plans on Roads, Bridges and Buildings Standard of Papua New Guinea.

## 6.3 Reporting arrangements

### (a) Reporting Line

**Secretary/Executive Director (Network Planning, Design & Standards)**

### (b) Direct Reports

**Manager (Highway Engineering)**

**Manager (Material Science & Technology)**

**Manager (Survey & Lands)**

**Manager (Environment and Social Safeguards)**

### (c) Indirect Reports

**Senior Managers**

**Managers**

**Project/Program Coordinators (Donor Projects)**

## 6.4 Budget & Expenditure

**Budget:** In accordance with approved annual budget appropriation

**Financial Delegation:** In accordance with current instrument of (S32) financial delegation

## 7. CONSTRAINTS FRAMEWORK AND BOUNDARIES

### ▪ Rules/procedures

This function is guided by the following;

National Government's overarching Policies and Strategies and specific enacting legislations affecting DOW's functions and responsibilities and further strengthened by DOW's internal directions, policies and strategies apart from the Public Service Management Act 1995, PSGO and

public Finance & Management Acts and Financial Instructions, and procedures manuals and the Departmental Policies and the development partners and stakeholders

- **Decision**

Decisions taken shall be in line with the stated rules and procedures and within the Department of Works' planning framework, polices and procedures framework and department strategic directions, guided by the world's best practice, upholding standards and practice, professionalism and applying ethical and value-based thoughts taking into account equitable decision irrespective of gender and the disadvantaged.

- **Recommendations**

All recommendations made should be in line with the stated rules and procedures and within the Department of Works' planning framework, policies and procedures framework and departments strategic directions.

## **8. CHALLENGES**

### **Internal Challenges**

- A lot of effort is required to develop all relevant and required policies to affect the design programs, plans and related technical requirements to meet standards (worlds) and best practice.
- Staff turn-over (Due to the current organizational restructure)

### **Overall DOW Challenge**

- **Technological advancement**
- **Sustainable training programs**

## **9. QUALIFICATIONS, EXPERIENCES AND SKILLS**

### **(a) Qualifications**

- An appropriate Masters University Degree with major studies in Civil Engineering specializing in Structural Engineering and/or Materials Engineering is preferable.
- Must be a Professional Engineer and currently registered Financial Member of the Institute of Engineers PNG Inc. (IEPNG)
- Other Post-graduate Educational Qualifications in Project Management, Public Administration, Road Administration and Trainings as may be relevant are acceptable.
- Must have more than Ten (10) years of work experience in the construction industry with policy and program development and specific design work experience.

**(b) Knowledge**

- Clear understanding of the Private Sector and Business environment in PNG relating to the Road Transport Sector.
- Conversant with the PNG Road Network and associated issues
- Familiar with the DOW Road Specifications
- Familiar with the DOW Building Act 1971
- Knowledgeable on procurement procedures and new initiatives such as Public Private Partnerships and Road Construction, Rehabilitation and Short- and Long-Term Maintenance Contracts with respect to Road Network Management.
- Intellectual ability to coordinate and implement the range of activities within the DOW Corporate Plan.

**(c) Skills**

- Demonstrate high administrative skills including communicating skills in both writing and oral.

**(d) Work Experience**

- The occupant must have minimum of fifteen years (15) years post-graduate experience working as a Registered Engineer.
- **Core competencies required to be effective in the role:**

Capability	Level
Strategic Management & Leadership Practice	Highly advanced
Effective Communication	Highly advanced
Knowledge of Strategic Issues in Building & Road Construction & Industry. Understand Building & Roads Infrastructure issues and Regulatory functions.	Highly advanced
Knowledge of Whole of Government Planning Framework	Highly advanced
Business Acumen	Highly advanced
Personal Effectiveness & Relationships	Highly advanced