

PRNDP

Provincial Road Network Development Plan

Province of Bohol

SECOND EDITION | MARCH 2011



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Third Draft

LGU AUTHORIZATION



Republic of the Philippines
PROVINCE OF BOHOL
City of Tagbilaran

RECORDS OFFICER

DATE: 3/28/11

OFFICE OF THE SANGGUNIANG PANLALAWIGAN

EXCERPT FROM THE RECORD OF PROCEEDINGS OF THE REGULAR SESSION OF THE SANGGUNIANG PANLALAWIGAN OF BOHOL HELD AT THE SENATOR BENIGNO S. AQUINO, JR. SESSION HALL, NEW CAPITOL COMPLEX, TAGBILARAN CITY, ON MARCH 23, 2011.

PRESENT:

Hon. Concepcion O. Lim, M.D.	Prov'l. Vice Governor
Hon. Dionisio D. Balite, Ph.D.	Senior Member
	Presiding Officer
Hon. Josephine Socorro C. Jumamoy	Member
Hon. Cesar Tomas M. Lopez, M.D.	Member
Hon. Bienvenido C. Molina, Jr., M.D.	Member
Hon. Gerardo C. Garcia	Member
Hon. Abeleon R. Damalerio	Member
Hon. Venzencio B. Arcamo	Member
Hon. Brigido Z. Imboy	Member
Hon. Romulo G. Cepedoza, D.M.D.	Member
Hon. Ramonito A. Torrefranca.	Member, PCL
Hon. Crispina A. Vergara	Member, ABC
Hon. Doxson T. Asoy	Member, SK

ABSENT:

Hon. Godofreda O. Tirol, Ph.D.	Member
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RESOLUTION NO. 2011-109

APPROVING AND ADOPTING THE PROVINCIAL ROADS NETWORK DEVELOPMENT PLAN (PRNDP).

(Motion en Masse)

"WHEREAS, a road network is a vital component in the progress of a province;

"WHEREAS, a good road network would be a magnet for business and investors;

"WHEREAS, a road network plan would facilitate the efficient and judicious disposition, maintenance and construction of roads within the province;

"WHEREFORE, be it resolved, as it is hereby resolved by the Sangguniang Panlalawigan of Bohol in session duly assembled –

To approve and adopt the Provincial Roads Network Development Plan (PRNDP);

"RESOLVED FURTHER, that a copies of this resolution be provided to the Provincial Governor, and all concerned, for their information, guidance and appropriate action;

Sangguniang Panlalawigan of Bohol
Resolution No. 2011-109



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"APPROVED".

I hereby certify to the correctness of the above-quoted Resolution.



BONIFACIO M. QUIROG, JR.
SF Secretary

ATTESTED:



Atty. DIONISIO D. BALITE, Ph.D.
Senior Board Member
Presiding Officer

EXECUTIVE SUMMARY

The Bohol Provincial Road Network Development Plan (PRNDP) is an integrated five-year (2011-2015) plan for the sustainable development and management of roads in the province. It is a component of the Provincial Roads Management Facility (PRMF) of the Australian Agency for International Development (AusAID) in partnership with the Department of the Interior and Local Government (DILG) which seeks institutional reforms and governance with the road sector as an entry point.

The PRNDP supports the efforts of provincial governments to increase economic activities and improve public access to infrastructure and services by prioritising road development activities over a rolling five-year period through a participatory process, involving various community stakeholders from the private and business sectors, national government agencies as well as key provincial government departments and offices. It targets rehabilitation and sustainable maintenance of provincial roads on an annual basis and is supported by multi-year budgeting and expenditure management, underpinned by a capacity building program to improve skills, processes and systems in road development and management.

It is anchored on the objectives of the Provincial Development Physical Framework Plan (PDPFP); the goals and objectives of the PRMF; the Provincial Road Sector Planning and Management Review (PRSPMR) which identifies gaps in capacity for the Provincial Government to sustain maintenance and rehabilitation of roads; the condition of the existing road network; current road development activities at the national and local levels, including those supported by official development assistance; and available funds.

The PRNDP is updated annually to check on its progress against targets and emerging concerns. The updating activity also develops systematic, repeatable and transparent selection processes for prioritising road investment.

This second edition features road development accomplishments in 2010, a provincial roads situationer, road development priorities for 2011-2015, and strategies for road development and capacity building to manage road assets through financial management, human resource development, and information and environmental management. Sections on gender equality and social inclusion as well as on community engagement in road management have been added.

The PRNDP updating process took about 10 months and included a series of data gathering and consultations involving various stakeholders. Technical and administrative personnel from various Provincial Government offices provided data, maps and writing inputs. Starting this edition, the PRNDP is approved by the Provincial Governor, the Sangguniang Panlalawigan (SP), and the Provincial Development Council (PDC).

Accomplishments in 2010

The PRNDP, first prepared in 2010, enabled the Provincial Government to focus resources and efforts on a core of roads and highlight transparency and stakeholder participation in

identifying, managing and maintaining roads considered essential to the province's development.

After one year, the Provincial Government reported gains in road service delivery, capacity development, and institutional improvement, including the rehabilitation of 21.11 km of roads with PRMF-AusAID funding, rehabilitation of another 35.7 km, and upgrading of another 20.13 km from the 20% Development Fund. It also generated more income for the province, increased the budget for the road sector by 6.55%, and set up a Special Road Fund. Capacity development activities also enhanced employees' skills in planning, service delivery and management, information technology services, fiscal management, internal control, and monitoring and evaluation of road development processes and mechanisms.

PRNDP also facilitated the improvement of institutional systems and processes within the Provincial Government, particularly reforms at the PEO, creation of the Provincial Internal Audit Office (PIAO) and the Provincial Monitoring and Evaluation System (ProMES), utilisation of information technology systems, installation of additional procurement measures by the Bids and Awards Committee (BAC), and assessment of the environmental impacts of road and infrastructure projects in the current review of the Bohol Environment Code (BEC).

Road Network Physical Development Strategy

The vision for provincial roads, defined by a group of stakeholders, is anchored on the provincial vision of Bohol as a prime eco-cultural tourism destination and a strong, balanced agro-industrial province. The Provincial Government envisions roads to be durable and safe and managed by a competent bureaucracy with increased citizen involvement. Good roads are seen as a means to achieve economic and social development for Boholanos.

The strategic road development objective of the province is to optimise the mobility pattern of people and goods from poor communities to urban areas, to increase economic growth, and improve access to public infrastructure and services. Investments on road infrastructure shall be long-term using a forward-looking management approach focusing on appropriate and timely maintenance to minimise restoration cost. These multi-year road network development strategies include annual road inventories, participatory road planning, investment programming, budgeting and public expenditure management, internal control, monitoring and evaluation, community and private sector participation, and continuous human resource and capacity development for better road management, as identified in the second round of the PRSPMR.

As resources are limited, selecting a network of core roads will enable the Provincial Government to focus its planning efforts and delivery services on these prioritised roads.

The selection of the core road network is informed by the PDPFP, the provincial spatial development strategy, location of growth centres and directions such as special economic zones and planned major infrastructure projects, and existing access infrastructure supporting the province's development strategy. Road selection is also guided by the core principles of transparency, stakeholder participation, and relevance to provincial goals.

The road development strategy also considers population concentration and accessibility of households to social services like schools, hospitals, health centres and institutions, and economic centres such as markets and commercial areas. Roads to and from these activity centres are expected to have high traffic volumes and would thus entail more maintenance activities and corresponding costs.

This year's road prioritisation criteria are the same as the previous year's PRNDP--Access and Connectivity, Road Condition, Traffic Volume, Population and Settlements, Poverty and Peace and Order Condition, and Environmental Considerations--with a slightly heavier 25 per cent to Access and Connectivity and 15 per cent for each of the other elements.

With these criteria and using an updated road condition survey and network inventory as well as thematic maps indicating road connectivity and existing infrastructures, socio-economic and environmental considerations, the road stakeholders selected 76 core roads spread out in the four management units to form the core network for the next five years.

Asset Management and Capacity Development

The Provincial Government is pursuing the sustainable maintenance of provincial roads as well as upgrading and rehabilitation of those requiring special attention, rather than developing new sections. Part of the road management strategy is the maintenance of the whole stretch of roads to ensure greater impact rather than working on specific patches.

The five core strategies for road and asset management include sustained stakeholder participation, cost-effective road management systems, increased user engagement in the management and maintenance of roads, convergence of national and local government offices in addressing road network development concerns, and asset care for more productive and longer useful life.

Service delivery modes are in the form of Maintenance by Administration (MBA), Maintenance by Contract (MBC), or Maintenance through Memorandum of Agreement (MOA) with the LGU. Some MBC variants have been identified such as the cluster or area-based approach, or the multi-year budgets and contracts. In all road maintenance strategy options, the local communities will participate as local labour hired by the contractor or the LGU. The preferred service delivery mode is through contracting out as it is more cost-efficient.

The development of financial, human, information and physical resources is also critical to road service delivery. Enhancements in these areas are addressed in the human resource interventions identified in the Human Resource Management and Development Plan, which considers the regular updating of the road condition survey and network inventory; consultative road planning and prioritisation using stakeholder-agreed selection criteria; investment programming with careful planning for revenues and allocations; budgeting and public expenditure management; strengthening of the monitoring and evaluation and internal control systems with private sector and community participation, including monitoring of environmental impacts, gender equality and social inclusion, and community engagement; and continuous human resource and capacity development of service providers.

Investment for 2011-2015

To sustainably finance road development, the Provincial Government is programming road investments by estimating costs for the rehabilitation and maintenance of core roads as well as capacity building activities for the next five years, and forecasting internal and external fund sources. It is likewise strategising increases in local revenues for its Special Road Fund. Outside funds are expected from the SLRF, PRMF-AusAID, the Philippine Ports Authority, and Congress.

As PRMF phases out its assistance in 2015, the Provincial Government is expected to ensure more locally generated funds and to increasingly promote MBC to optimise resources and productivity.

About P984 million will be required in the next five years for core road services, 33% of which will be provided by PRMF-AusAID. The estimated P1.6 billion from internal and external sources will be able to address this need, with some amount left over for non-core roads.

For capacity development, about P60 million is needed, 8% of which is projected to come from PRMF-AusAID. Provincial government employee associations, such as the provincial employees' league, the woman employees' association, and the employees' cooperative, are also putting in their substantive share for staff development initiatives including organisational streamlining, personnel training, human resource systems development, other capacity development activities, and health and wellness.

Evaluating and Reporting on Performance

Monitoring, evaluating and reporting on the implementation of the PRNDP are crucial to assess the effectiveness and usability of the PRNDP. M&E activities for the PRNDP are conducted within the framework and structure of the Provincial Project Monitoring and Evaluation System (ProMES) and works on the logical framework established within the Plan. Such activities determine whether desired outputs and outcomes are achieved within the covered timeframe. Involved offices and stakeholders also have to identify mechanisms and practices that need to be continued or enhanced.

More details on the province's socio-economic and environmental characteristics, roads inventory, road condition and traffic surveys are contained in the annexures. The road development prioritisation process and results, and the monitoring and evaluation strategy are also discussed in the annexures, as well as the Philippine government's Guidelines on Gender and Development (GAD) for Project Development, Implementation, Monitoring and Evaluation, particularly for the infrastructure sector.

Acronyms

AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
AOs	Administrative Officers
AusAID	Australian Agency for International Development
BAC	Bids and Awards Committee
BCCI	Bohol Chamber of Commerce, Inc.
BCRIP	Bohol Circumferential Road Improvement Projects
BEC	Bohol Environment Code
BEMO	Bohol Environment Management Office
BICTU	Bohol Information and Communication Technology Unit
DA	Department of Agriculture
DENR	Department of Environment and Natural Resources
DILG	Department of the Interior and Local Government
DOTC	Department of Transportation and Communications
DPWH	Department of Public Works and Highways
E-Budget	Electronic Budget
ECC	Environmental Compliance Certificate
ELA	Executive-Legislative Agenda
ELFC	Expanded Local Finance Committee
EMP	Environmental Management Plan
E-NGAS	Electronic New Government Accounting System
E-TRACS	Enhanced Tax Revenue and Assessment and Collection System
FMIS	Financial Management Information System
GAD	Gender and Development
GIS	Geographic Information System
GPS	Global Positioning System
HRMD	Human Resources Management and Development
HRMDO	Human Resource Management and Development Office
ICD	Internal Control Division
IRA	Internal Revenue Allotment
IT	Information Technology
LFC	Local Finance Committee
LGUs	Local Government Units
LIR	Loay Interior Road
LTO	Land Transportation Office
M&E	Monitoring and Evaluation
MBA	Maintenance by Administration
MBC	Maintenance by Contract
MEB	Management Executive Board
MLGUs	Municipal Local Government Units
MOA	Memorandum of Agreement
MTOs	Municipal Treasurer's Offices

MVUC	Motor Vehicle User's Charge
NCRFW	National Commission on the Role of Filipino Women
NEDA	National Economic Development Authority
NGICS	National Guidelines on Internal Control Systems
NGOs	Non-Governmental Organizations
NIPAS	National Integrated Protected Areas System
NSO	National Statistics Office
OPV	Office of the Provincial Veterinarian, 3
OTOP	One-Town-One-Product, 24
PAccO	Provincial Accountant's Office
PAO	Provincial Agriculture Office
PBO	Provincial Budget Office
PBP	President's Bridge Program
PDC	Provincial Development Council
PDPFP	Provincial Development and Physical Framework Plan
PEISS	Philippine Environmental Impact Statement System
PEO	Provincial Treasurer's Office
PGBh	Provincial Government of Bohol
PhilGEPS	Philippine Government Electronic Procurement System
PHO	Provincial Health Office
PIAO	Provincial Internal Audit Office
PIR	Panglao Island Road
PMEC	Provincial Monitoring and Evaluation Committee
PMMO	Provincial Motor Pool Office
PMUs	Project Management Units
PPA	Philippine Ports Authority
PPDO	Provincial Planning and Development Office
PRMF	Provincial Roads Management Facility
PRNDP	Provincial Road Network Development Plan
ProMES	Provincial Monitoring and Evaluation System
PRSPMR	Provincial Road Sector Planning and Management Review
PWDs	Persons with Disability
R.A.	Republic Act
SFMP	Strategic Financial Management Plan
SLRF	Special Local Road Fund
SMUs	Sectoral Monitoring Units
SP	Sangguniang Panlalawigan
TER	Tagbilaran Eastern Road
TNR	Tagbilaran Northern Road

I. INTRODUCTION

Context and Rationale

The Bohol Provincial Road Network Development Plan (PRNDP) is an integrated five-year (2011-2015) plan for the sustainable development and management of road networks in the province. It is a component of the Provincial Roads Management Facility (PRMF), an initiative of the Australian Agency for International Development (AusAID) in partnership with the Department of the Interior and Local Government (DILG) which seeks institutional reforms and governance with the road sector as an entry point.

The PRNDP is a planning tool that supports the efforts of provincial governments to increase economic activities and improve public access to infrastructure and services. A sustainable development of the road network is facilitated by prioritising road development activities over a rolling five-year period through a participatory process, involving various community stakeholders from the private and business sectors, national government agencies as well as key provincial government departments and offices. It targets rehabilitation and sustainable maintenance of provincial roads on an annual basis and is supported by multi-year budgeting and expenditure management, underpinned by a capacity building program to improve skills, processes and systems in road development and management.

Every year, the PRNDP is updated to assess performance of the previous year's Plan and to update data on road conditions, the core road network and investment priorities as basis for strategic action and budgeting. It is also to reflect capacity development priorities for the next five years. By having a PRNDP, the Provincial Government is in a better position to sustain and improve the existing road network through investment planning and budgeting, systems improvement, human resource development, and involvement of communities who are affected as the roads' hosts and end-users.

The PRNDP review and updating process also develops systematic, repeatable and transparent selection processes for prioritising road investment that involves stakeholder and community consultation. Further, it institutionalises road rehabilitation and maintenance as a critical service of the Provincial Government so that the road network is maintained in optimal condition to bring socioeconomic benefits to its constituents.

The PRNDP is anchored on the following:

- The objectives of the Provincial Development Physical Framework Plan (PDPFP) which sets out the strategic directions for development within the Province. The PRNDP will support the attainment of the goals and objectives in the PDPFP by developing the road transport network according to Provincial development priorities.
- The goals and objectives of the PRMF which aim to increase local economic activity and improve public access to infrastructure and services.
- The Provincial Road Sector Planning and Management Review (PRSPMR) which identifies gaps in capacity for the Provincial Government to support and underpin

the requirements of sustaining a road network development program, including maintenance and rehabilitation. This examines planning, budgeting, skills, systems, linkages and services required to perform the necessary functions.

- The current condition and performance of the road network and road development activities occurring at the national and local levels, including those being developed with the assistance of other donors (also included as part of the PRSPMR).
- The available funds for new road works, road rehabilitation and road maintenance, including bridge construction and supporting infrastructure.

This second edition—developed by the same provincial government, civil society, national agency and private sector stakeholders as in the first edition—covers road development priorities for 2011-2015 but focuses more on the Strategies for Provincial Road Development and for Developing Capacity to Manage Road Assets through financial management, human resource management and development, and information and environmental management. This edition now also includes strategies on gender equality and social inclusion as well as on community engagement in road management.

The profile of the planning area is now in a section on Endowments and Development Challenges but has been shortened, focusing on land use and transport infrastructure, traffic characteristics and an updated assessment of the province's road network. A more detailed profile of the province's social, economic and environmental characteristics and the corresponding maps are contained in Annexures 1 and 4, while data on roads inventory, condition and traffic surveys are listed in Annexures 2 and 3. Annexure 5 describes the road development prioritisation process and results while Annexure 6 provides a copy of the National Economic Development Authority (NEDA) and the National Commission on the Role of Filipino Women (NCRFW, now the Philippine Commission on Women)'s Harmonized Guidelines on Gender and Development (GAD) for Project Development, Implementation, Monitoring and Evaluation (2007), particularly for the infrastructure sector.

The section on the province's road investment program together with the monitoring and evaluation (M&E) plan remains. M&E details and forms are included in Annexure 7.

In sum, the PRNDP contains the following:

- Identified provincial road work priorities consistent with and in support of the PDPFP;
- A process for the selection and prioritisation of provincial road investment that is systematic, repeatable, transparent and inclusive. It describes the selection criteria and considers issues such as accessibility to services, contribution to economic activity, environmental protection, building social capital, peace and conflict issues and gender equity;
- An updated roads inventory that details road condition, including sections and specifications for rehabilitation, upgrading and maintenance;
- Identified capital works required to underpin the provincial road network, including but not limited to, bridges, slope protection, drainage, road safety, disability access, etc.

- A revenue and expenditure plan over the five-year life of the plan. The PRNDP will identify funding sources for each activity in the plan;
- Identified service delivery mechanisms and procurement requirements to implement the plan;
- A framework for monitoring and evaluation of the implementation of the plan on an annual basis, including a review of previous activities and priorities carried forward;
- A capacity development program addressing organisational issues, human resource development, systems and processes, in order for the Provincial Government to implement the plan efficiently and effectively.

Starting this edition, the PRNDP is approved not only by the Provincial Governor but also by the Sangguniang Panlalawigan (SP) and the Provincial Development Council (PDC).

Formulating the PRNDP

The PRNDP updating process involved a series of activities from data gathering and preparation up to the approval by the SP and the PDC, all of which took about 10 months. It involved a host of stakeholders including the Provincial Government of Bohol (PGBh) composed of technical and administrative personnel from the Provincial Planning and Development Office (PPDO), Provincial Engineer's Office (PEO), Provincial Treasurer's Office (PTO), Provincial Assessor's Office (PAssO), Provincial Accountant's Office (PAccO), Provincial Internal Audit Office (PIAO), Provincial Budget Office (PBO), Bids and Awards Committee (BAC), Bohol ICT Unit (BICTU), Bohol Environment Management Office (BEMO), Human Resource Management and Development Office (HRMDO), Office of the Provincial Social Welfare and Development (OPSWD), Provincial Agriculture Office (PAO), Office of the Provincial Veterinarian (OPV), the Provincial Monitoring and Evaluation Committee (PMEC), and the PRMF provincial office.

During the stakeholders' consultations, representatives from national government agencies, local government units, civil society, and the private sector participated in determining the criteria for road selection and prioritisation, as well as in the actual selection. The heads of all Provincial Government offices (Management Executive Board [MEB]), representatives of private road development contractors and the local business community, as well as non-government organisations were also consulted on the Plan.

Stages	Stage 1 Data Collection	Stage 2 Road Selection and Prioritisation	Stage 3 Drafting Preliminary Drafting	Stage 4 Stakeholder Consultations	Stage 5 Revision	Stage 6 Review and Approval	Stage 7 Finalisation and Implemen- tation	Stage 8 Monitoring and Evaluation
Timelines	Jul. 2010 to Jan. 2011 (7 months)	Feb. 15-17, 2011 (3 days)	Feb. 23 – Mar 7 (2 weeks)	Mar. 7, Mar. 11 (2 days)	Mar. 11-15 (5 days)	Mar. 15 (1 day)	Mar. 16- Apr. 30 (1 ½ months) May 1-	May 1, 2011 – Mar. 31, 2012
Drivers and Stakeholders	PPDO, PEO PTO, PAssO, PAccO, PBO, PIAO, BAC, BICTU, HRMDO, BEMO	PPDO, PEO PTO, PAssO, PAccO, PBO, PIAO, BAC, BICTU, HRMDO, BEMO	PPDO, PEO PTO, PAssO, PAccO, PBO, PIAO, BAC, BICTU, HRMDO, BEMO, OPSWD, PAO, OPV	PEO, PPDO Bohol Chamber of Commerce Bohol NGOs	PEO PDC Infra- structure Committee Prov'l Dept. Heads (MEB)	PEO, PPDO Sangguniang Panlalawigan Provincial Development Council	PPDO, PEO PTO, PAssO, PAccO, PBO, PIAO, BAC, BICTU, HRMDO, BEMO, OPSWD, PAO, OPV	PPDO, PMEC and SMUs
Process	Road Inventory Road Condition Survey Traffic Survey Review of PRSPMR1 Map generation	Workshops: • Criteria Setting • Core Road Selection • Invest Programming	Drafting of document sections by office	PowerPoint Presentations	Revision of section drafts by office, as needed Additional data gathering	PowerPoint Presentation	Final revision of document Dissemination of copies of the Plan Implementati on of strategies per office	On-site M&E Document audit Financial internal audit processes
Outputs	Straight-Line Diagram of Road Condition Data AADT Estimate per Road Section Maps	Road selection criteria List of core roads Road investment program	Section Drafts	Endorsement by BCCI, NGOs	Pre-Final Draft	SP and PDC Resolutions Approving the PRNDP	Final PRNDP	M&E Reports

Table 1. The Bohol Provincial Road Development Planning Process

II. ASSESSMENT OF THE PRNDP 2010

The formulation and implementation of the first Provincial Road Network Development Plan (PRNDP) of the Province of Bohol in 2010 has advanced the province to greater heights in roads sector planning and management. Through the PRNDP, more emphasis was given on transparency and stakeholder participation in road prioritisation and selection as well as in the management and maintenance of roads that are considered essential and supportive to the attainment of the overall development goals of Bohol. The PRNDP also laid out relevant strategies that are responsive to the realisation of its vision of having sustainable and safe roads for Bohol that are managed by capable bureaucracy and citizenry. These multi-year strategies encompass road prioritisation and selection, road and asset management, capacity development, and service delivery. With all the strategies identified and committed by all stakeholders, road network planning and management is now grounded on field data with clear integrated approaches of achieving socio-economic development of Bohol.

The Provincial Government of Bohol, together with its partners for development, has achieved much in 2010 following the multi-year strategies identified in the PRNDP. These achievements can be classified into road service delivery/physical accomplishments, capacity development, and systems/institutional improvement.

Road Service Delivery and Physical Works

The Provincial Engineer's Office (PEO) has accomplished notable road upgrading, rehabilitation and maintenance projects that are supportive of the development of Bohol. Along with its other accomplishments for roads development throughout the province, the PEO has achieved the following projects under the PRNDP prioritisation for Year 1: rehabilitation of three road sections spanning 21.11 km with PRMF-AusAID funding of P80.3 million, rehabilitation of another 8 roads (35.695 km) and upgrading of another 13 roads (20.127 km) from the 20% Development Fund. (See Annexure 10 for a detailed listing of road works.)

Revenue Generation

The Provincial Government continues to exert efforts to increase its revenues to augment funds for road services. In 2010, an increase in local revenues by 35.60% (P39.353 million) was noted. This was brought about by the collection of real property taxes, fees from hospitals, interest from deposits and other local revenues. The increase in local revenues can be used to support road sector development through the Special Road Fund, as an initial sustainability fund for road management.

Meanwhile, an increase of 6.55% was noted in 2010 on the total appropriation for the road sector/infrastructure compared to the 2009 figures. A total of P188.135 million was appropriated for infrastructure, representing 16.43% of the total provincial budget.

Capacity Development

The PRNDP has also set the Capacity Development strategies that enhance the capabilities of Provincial Government employees for the performance of mandated functions particularly those supporting road development processes and mechanisms on planning, service delivery and management, information technology services, fiscal management, internal control, and monitoring and evaluation. For 2010, several capacity development activities were undertaken that involved personnel from various related offices and agencies.

- For the PEO, trainings were provided on Road Inventory, Construction Supervision, Contract Management, Soil and Material Testing, Monitoring and Evaluation System/Reporting System, and Roads and Drainage Design. Personnel enhancement initiatives were also conducted through the training on Risk Management and Internal Control, Environmental Management, Construction Safety and Health, AutoCAD for Civil 3D, GPS/GIS Application, and Detailed Engineering Design. These trainings were geared towards strengthening the workforce of the PEO to deliver, manage, supervise, and improve road and local construction industry services. These interventions have facilitated the PEO's conduct of design, engineering investigation and surveys of roads and associated works within national standards with consideration for environmental and gender equality concerns.

To improve community participation in road projects, initiatives were undertaken for Social Preparation and Community Organizing. These have been helpful in the generation of information on the history and situation of provincial roads as well as in the promotion of community cooperation on the roles of communities in road rehabilitation and management.

- Employees of the newly established Bohol Information, Communication and Technology Unit (BICTU) of the Provincial Government underwent several capacity building training that enhanced the unit's performance in Information System Development and Management. Among the initiatives conducted which are aligned with the PRNDP strategies were training for Microsoft Administration, Linux Administration and PostgreSQL Administration. Hands-on training were also provided for MS Net Web Programming Using ASP.net and VB.net, ArcGIS Desktop Training, Enhanced Tax Revenue and Assessment and Collection System (E-TRACS) Administration, GIS Validation, and Quantum GIS.
- To improve the procurement processes of the Provincial Government in support of cost-effective and efficient road management system, the Bids and Awards Committee (BAC) undertook a training on Procurement System, particularly on transactions covered under the General Procurement Reform Act or R.A. 9184. Furthermore, an orientation on the National Guidelines on Internal Control Systems (NGICS) was conducted to understand the risk management and internal control measures in the public sector. This was spearheaded by the Internal Audit Office and the Provincial Accountant's Office. A Risk Assessment Workshop was also conducted

to appreciate the value and importance of risk management in government operations.

- For Human Resource and Development services, a number of activities were undertaken. A Human Resource Management and Development System Planning Workshop were conducted to understand HR development and HR systems requirements for local government employees. This was followed by an HRMD Systems Cascading and Manualization.
- To formalise the alignment of the executive development priorities and the legislative measures required to achieve Bohol's development path, an Executive-Legislative Agenda (ELA) was formulated. The ELA working team was organized and orientation sessions were subsequently conducted to capacitate members on the ELA preparation process as well as on the plan-budget linkage mechanisms.
- For Monitoring and Evaluation, capacity building training was conducted for the establishment and operation of a Monitoring and Evaluation System for the Province of Bohol. This system is necessary to put in place a mechanism to track outcomes and impacts of development projects. Participants of this training were capacitated on M&E tools and techniques and were able to formulate M&E action plans. The capacity building initiative was instrumental in the formulation and adoption of the Provincial Monitoring and Evaluation System (ProMES).

Institutional Reforms

The implementation of the PRNDP also facilitated the improvement of institutional systems and processes within the Provincial Government, particularly the following:

- *Reforms at the Provincial Engineer's Office.* Through the newly-acquired technical capacities of personnel, the PEO formulated and implemented its manual of operations, re-activated its Internal Control Division (ICD), Monitoring and Evaluation Section, and IT Section for a more effective delivery of services. The M&E system has installed the use of monitoring forms and materials testing. The PEO is also more capable now of conducting topographical surveys and geotechnical studies. Technical and equipment support were provided through PRMF.
- *Creation of the Provincial Internal Audit Office.* The PIAO is designed to improve internal control and enhance fiscal management. The PIAO has already prepared an Operations Manual, an Audit Plan and Risk Assessment Matrices. The activities conducted by the office led to the greater understanding of risk management and internal control measures in the provincial institution. Risk assessment and strategies were also formulated for six other provincial offices, namely, PPDO, PBO, BAC, PTO, PAccO, and PEO.
- *Installation of the Provincial Monitoring and Evaluation System (ProMES).* To improve PGBh's monitoring and evaluation mechanism, the ProMES was established through Executive Order No. 25 of 2010. The system is designed to monitor and evaluate the implementation of programs, projects and activities, taking into consideration the output, outcome and impact of interventions. The system includes a feedback mechanism involving all provincial offices involved in project

implementation to facilitate decision-making and to address concerns in project implementation, as well as to identify best practices for replication. The ProMES not only includes projects under the 20% Development Fund but also all development initiatives of the Provincial Government, including special programs like the PRMF. (See Annexure 7 for a detailed description of the ProMES).

- *Utilisation of Information Technology (IT).* Another salient systems improvement undertaken by the Provincial Government that supports the implementation of the PRNDP is the utilization of IT-based processes that enhance information generation, learning and sharing. The creation of the Bohol Information and Communication Technology Unit (BICTU) is a significant step in formalizing and supporting the IT structure and initiatives within the bureaucracy. The unit is set to implement an Information System Plan to establish the framework for IT-based processes that will link not just offices of the Provincial Government but also with other local government units. The BICTU has already initiated the installation of the Provincial Capitol Network Backbone that links, synchronizes and expedites data transfer and sharing. Currently, there are already 15 offices that are connected to the network backbone.

The Provincial Government has also utilised Geographic Information System (GIS) for the preparation and generation of maps for planning, taxation, agriculture development, and disaster preparedness. In fact, GIS was used as a tool for the conduct of road sector planning. With the cooperation of several offices, a GIS database for roads accounting for the 164 provincial road segments and their attributes was established. GIS technology is also being used by the Provincial Planning and Development Office for land use planning, demographic characterization and facilities mapping.

Several other notable IT-based systems being implemented within the Provincial Government are designed to improve fiscal administration. The Provincial Accountant's Office has been using the Electronic New Government Accounting System (E-NGAS) for automated financial recording to improve the timely provision of financial information to help decision-making. On the other hand, the Enhanced Tax Revenue Assessment and Collection System (E-TRACS) facilitated the recording and collection of taxes, fees and charges of the Provincial Treasurer's Offices. It is also being piloted in five municipalities (Balilihan, Loon, Talibon, Dimiao and Valencia) focusing on real property taxes, business permits and licensing.

The Provincial Budget Office is also operating the E-Budget System, which is a helpful tool in electronically controlling and managing provincial appropriations, allotment and obligations. It is also used for financial monitoring of office budgets.

Through the BICTU, the Financial Management Information System (FMIS) is being utilised by finance offices to enhance the process of preparation, generation and tracking of financial reports. This has improved the timely generation of financial reports such as disbursement per cash advance, reports on checks issued, among others.

- Simultaneously, to support the strategy of controlling operational expenses and managing a cost-effective service delivery system, the Bids and Awards Committee

(BAC) has initiated measures to improve the procurement process of the Province. It has adopted practices that fast-track procurement processes and advertise bids at the Philippine Government Electronic Procurement System (PhilGEPS) and Provincial Government website for better transparency and competitive bidding. An initiative is also underway for the formulation of a price index for all common and usual procurement requirements of Provincial Government offices. For road projects, strategic modes of service delivery arrangements are being studied that emphasize cost-efficiency, work quality and transparency.

- In terms of the Environmental Management and Protection, issues and concerns on environmental impact particularly from road and infrastructure projects are being highlighted in the current review of the Bohol Environment Code (BEC). This will ensure the policies and management mechanisms for environmental protection and risk mitigation for road and infrastructure projects are being embodied in the Code. Meanwhile, the Bohol Environment Management Office (BEMO) has developed a scheme for monitoring and maximising revenue from extraction tax. Quarry sites are being verified and quarry permits are approved only when all necessary requisites are complied. Periodic consultation with contractors and quarry permittees are also being undertaken to discuss concerns on road projects as well as to address issues relating to protecting and managing the environment.

Third Draft

III. ENDOWMENTS AND DEVELOPMENT CHALLENGES

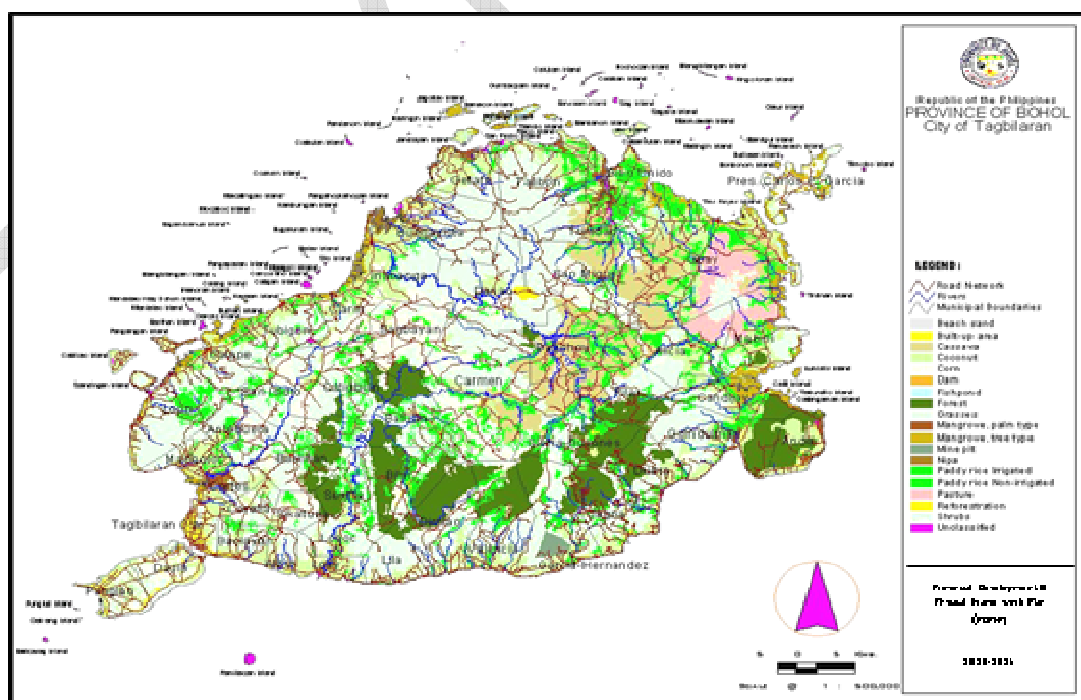
Land Use and Transport Infrastructure

The Province of Bohol has five major land uses—agricultural land, grassland/shrubland, woodland, wetland, and miscellaneous land that include built-up areas, reservoirs and mine sites (see Map 1, Land Use and Vegetation).

Almost 67% of its total land is devoted to agriculture. Forestland, on the other hand, accounts for about 25%. The remaining portion of land is allotted for built-up areas, industrial and tourism sites, roads and easements, and other support public services like housing, landfill, parks and plazas. While Bohol is predominantly an agricultural province with most of its rural areas engaged in crop cultivation, particularly rice, corn and coconut, the use of its land has become multi-faceted and complex with the development of new industries such as tourism, small-scale manufacturing, housing and settlements, and support infrastructures.

Land Use Category	Area (Hectares)	%
Agricultural	273,950	66.56
Forestland	101,271	24.61
Built-Up	21,882	5.32
Roads/Bridges	4,612	1.12
Tourism	3,663	0.89
Industrial	2,672	0.65
Easement	1,916	0.47
Mining	1,138	0.28
Parks/Plaza	196	0.05
Cemetery	115	0.03
Housing	69	0.02
Landfill	102	0.02
TOTAL	411,586	100%

Table 2. Land Use



Map 1. Land Use and Vegetation

Bohol's development has been anchored on two economic drivers: eco-cultural tourism and agricultural-based economic activities. The growth of the tourism industry in Bohol has been sustaining with the continued influx of local and foreign tourists. Tourism sites, products and services have evolved to cater to the different demands of tourists on recreation, wellness, leisure, adventure, restaurants and accommodation facilities. Investors and service providers have seen the industry's promising conditions and its potentials for further development.

Agriculture, on the other hand, remains to be the major economic catalyst that provides most of the Boholanos with livelihood and daily subsistence. With the goal of being an agro-industrialised province, Bohol has developed several infrastructures such as irrigation systems, farm to market roads, ports and agricultural zones. The development of small-scale agriculture, home-based industries that are mostly of the micro and cottage types, also plays a great contribution.

Traffic Characteristics

With increased economic activity, Bohol's population and motorised vehicles have also multiplied over the past years. This has caused the increase in traffic volume in various points of the province where tourism and agricultural industries abound.

More than 60,000 registered vehicles ply Bohol's roads. An increase in the number of motor vehicles registered in the province in the last few years implies greater traffic volume on these roads though variations are observed in different road segments. The availability and affordability of these vehicles complements the presence of an integrated road network that facilitates better movement of people and transport of goods and services within the province. The increase in the registered number of vehicles from 2007-2010 is detailed in Annexure 3.

Bohol's road network spanning 5,948 kilometres with 8,869.88 linear meters of bridges spread out in an area of 411,586 hectares connects the 47 municipalities and the capital city of Tagbilaran. A list of major provincial roads and their significance to social and economic development is found in Annexure 2.

To determine the number, movements and classifications of roadway vehicles at a given location, traffic volume counts were conducted by PEO personnel on predetermined dates that fall on busy (market day) and non-busy days (non-market day). The figures collected were used to determine the Average Daily Traffic (ADT) to classify segments into *low*, *medium* and *high* in road importance.

Roads with low traffic volumes are travelled infrequently and offer minimal connectivity to other municipalities and major facilities. Not many trucks and buses pass through these roads since only a few properties exist with light commercial activity, hence, they are considered less significant. Roads with high traffic volumes reveal the existence of industrial centres and major facilities in the area. With the regular passage of motorbikes, cars, trucks, buses and public vehicles that transport people and a variety of goods, these roads are deemed very essential in bringing the province to a higher level of development.

The towns of Ubay and Talibon in the northeast and Tubigon in the northwest are considered secondary urban hubs known for their bustling commercial activities. The evident rise in population in these areas suggests an increase in the number of circulating motor vehicles. Similarly, Tagbilaran’s neighbouring municipalities, namely Panglao, Dausi, Corella and Baclayon, popular for their tourism and agricultural development, have also registered high traffic volumes.

Passenger traffic in Bohol is quite heavy, with an average of 11,012 passengers per day. This has significant implications on road use as connectivity as passengers from the ports of entry need transport services to their points of destination. More than 60 per cent of the passenger volume is tourists that travel through the tourism destinations making use of the following routes: Tagbilaran-Carmen-Panglao, Tagbilaran-Panglao, Tubigon-Sagbayan-Carmen, and Tagbilaran-Loboc. A few of the frequented routes from visitors from Mindanao make use of Jagna-Carmen-Panglao routes.

Based on the traffic count conducted by the PEO last year, of Bohol’s 164 road sections managed by the Provincial Government, 51 (31 per cent) are considered highly important, 73 (45 per cent) are medium, and 40 (24 per cent) are considered of lesser importance. The busiest sections are in highly commercial areas like in the ports of Jagna, Tubigon and Talibon, and in tourism areas like Panglao.

Mgt Unit	Number of Roads			
	Low	Medium	High	Total
I	14	16	11	41
II	9	13	12	34
III	10	16	13	39
IV	7	28	15	50
Total	40	73	51	164
%	24%	45%	31%	100%

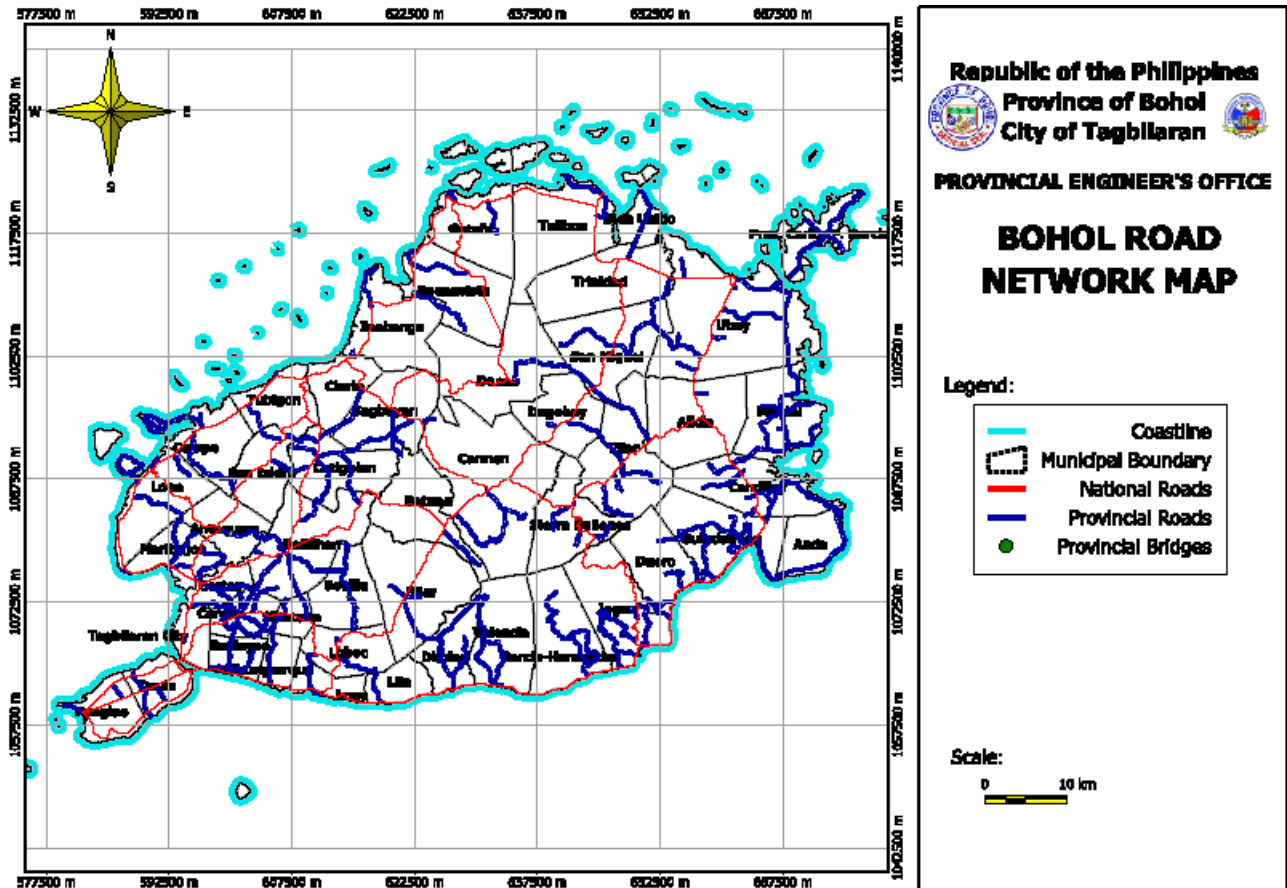
Table 3. Traffic Characteristics

A listing of road traffic counts and the corresponding map and road importance classification are contained in Annexure 3.

Road Network Assessment

The road network in the province (*see Map 2*) consists of the circumferential road along the coastline and in the interior that connects the interior municipalities. The Tagbilaran Eastern Road (TER) connects Tagbilaran to Ubay via Jagna while the Tagbilaran Northern Road (TNR) completes the loop from Ubay to Tagbilaran via the northern town of Tubigon.

The Loay Interior Road (LIR) to Trinidad and the (Junction Dat-an) Carmen-Sierra Bullones-Pilar-Alicia roads cut across central Bohol through the interior towns. As part of the nautical highways development, repair and improvement of the Tubigon-Sagbayan-Carmen-Sierra Bullones-Jagna Port to Port is on-going. This road, which connects the northern town of Tubigon to the eastern town of Jagna, traverses through the interior municipalities passing through Carmen.



Map 2. Provincial Road Network

The island municipality of Pres. Carlos P. Garcia is crisscrossed by a network of inland roads, in which the major ones lead to the feeder ports that connect the municipality to the mainland. On the other hand, the Panglao Island Road (PIR) connects the island to the capital city of Tagbilaran. These major distribution road networks of the province are expected to promote the eco-cultural tourism and agro-industrial development.

To update the provincial road network data, issues and investments, a Road Inventory was conducted from July to November 2010 to come up with a roads database. The updating included road names and properties such as surface type and corresponding length and width. The inventory provided the basis for deciding which road segments are in urgent need of rehabilitation, upgrading or maintenance.

Bohol's road network has a total road length of 5,948 kilometres. Almost 12 per cent are classified as national roads, managed by the Department of Public Works and

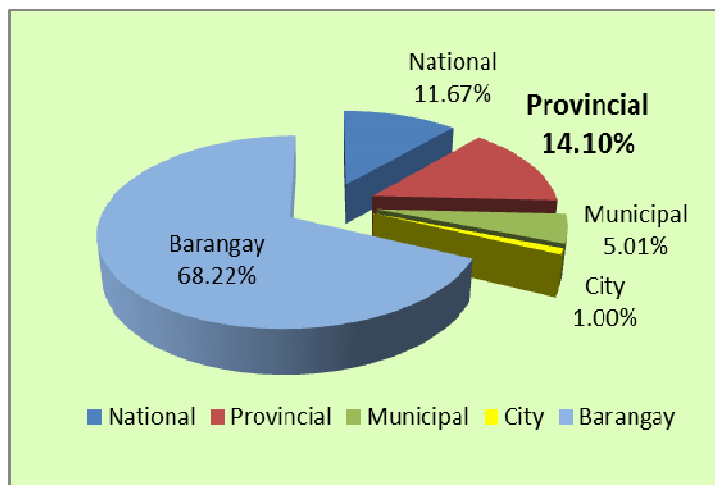


Figure 1. Road Classification by Administration

Highways (DPWH); 14 per cent or 833.77 kilometres are provincial roads, managed by the Provincial Government; 5 per cent are municipal roads, managed by the municipal governments, 1 per cent are city roads managed by the city government, and a large chunk are barangay roads, comprising 68 per cent or more than half of the entire road network of the province. The total road length of the province increases yearly at an average rate of 3.4 per cent.

The provincial roads are the mandate of the Provincial Government administered by the PEO. These roads are divided into four Project Management Units (PMUs) for supervision in the rehabilitation and maintenance activities, as shown in Map 3.



Map 3. Provincial Road Management Areas

In terms of road pavement type, most of the provincial roads are gravel roads. The entire road network is composed of 20% concrete, 3% asphalt, and almost 77% gravel, as shown in Table 4. **Road Classification by Pavement Type**

Management Unit	No. of Road Sections	Type of Pavement			Total Road Length (km)
		Paved		Unpaved	
		Concrete	Asphalt	Gravel	
I	41	39.326	8.714	149.518	197.558
II	34	36.184	8.436	152.970	197.590
III	39	45.013	7.276	162.137	214.426
IV	50	46.891	3.177	174.127	224.195
Totals	164	167.415	27.603	638.752	833.770
%		20%	3%	77%	100%

Table 4. Road Classification by Pavement Type

The PEO is also maintaining 86 provincial bridges with a combined length of 8,869.88 linear meters. Eighteen bridges are made of steel (21 per cent of total), 24 are concrete (28 per cent), 24 are bailey (28 per cent) and 20 are made of timber (23 per cent). A total of 44 bridges (51 per cent) are still timber and bailey bridges due to insufficient funds for upgrading these since available funds are strongly concentrated on road investment. These bridges are also divided into four groups in the project management areas (*see Table 5*).

Management Unit	Municipalities
I	11 municipalities and 1 city: Panglao, Dauis, Cortes, Maribojoc, Antequera, Loon, Calape, Tubigon, San Isidro, Catigbian, Ballihhan, and Tagbilaran City
II	14 municipalities: Baclayon, Corella, Sikatuna, Albuquerque, Loboc, Sevilla, Loay, Lila, Bilar, Dimiao, Batuan, Carmen, Valencia, and Garcia-Hernandez
III	13 municipalities: Clarin, Sagbayan, Inabanga, Buenavista, Danao, Getafe, Talibon, Bien Unido, Trinidad, Ubay, San Miguel, Dagohoy, Carlos P. Garcia
IV	9 municipalities: Sierra Bullones, Jagna, Duero, Pilar, Guindulman, Anda, Candijay, Alicia, Mabini

Table 5. Area Coverage of Project Management Units

The Provincial Access Infrastructure

Bohol, an island in Central Visayas, is accessible from Manila by air and from Cebu and Mindanao by sea. With tourism playing an active role in the province’s growing economy, infrastructure development has physically transformed Bohol in recent years.

There are two airports in the province, the Tagbilaran City Airport and the Ubay Feeder Port. Only the Tagbilaran City airport, however, handles commercial and passenger traffic with direct flights to and from Manila through a number of commercial carriers, making the province easily accessible to large numbers of tourists and investors.

Bohol’s seaports are evenly distributed in strategic locations. The base port is in Tagbilaran, southwest of the island province, with a tourist pier that serves fast boats and cargo ships to and from Manila, Cebu, Cagayan de Oro, Dumaguete, Dipolog, Iligan, Larena, Plaridel and Ozamiz City.

Eight smaller ports support vessels that ply the Cebu and northern Mindanao routes. The port of Tubigon in the northwest—the busiest among the smaller ports—offers more than ten daily round trips between Cebu and Bohol. The Catagbacan Port in Loon provides roll-on roll-off (ro-ro) services connecting Cebu and Bohol for those who travel with their land vehicles. The port of Jagna in the southeast offers docking facilities for vessels from Cagayan, Nasipit, and Camiguin (with ro-ro) in Mindanao. The other ports are in Clarin, Buenavista, Getafe, Talibon, and Ubay all in the north, which serve passengers and cargoes to and from Cebu and the islets surrounding mainland Bohol.

The road network is well-defined facilitating entry to all municipalities and barangays, at the same time, providing convenient travel to industrial centres and major facilities.

In Tagbilaran, the Integrated Bus Terminal is the hub for buses and vans-for-hire that transport people and goods to any point in the island-province. A number of smaller

terminals are spread out in the business districts of the city while each of the 47 municipalities also maintains bus terminals located in the main commercial areas near municipal public markets.



Map 4. Transport and Access

The flow of passengers to and from the province is influenced greatly by tourism-related activities. An increasing trend was reported for both air and sea transport passengers as well as the number of flights and ship calls from 2009-2010. Table 6 summarises the passenger traffic for 2009 and 2010, for both air and sea ports.

Mode	Incoming Passengers		Flights/Ship Calls	
	2009	2010	2009	2010
Air Transport	284,403	298,969	2,239	2,332
Sea Transport	3,472,690	3,797,715	18,468	23,004

Table 6. Passenger Traffic for Air and Sea Transport

Land transport facilities also crisscross the province with major highways recently upgraded. The Bohol Circumferential Road Projects, provided upgraded national highways around the province, allowing faster and easier transport of goods and people along the coastal areas where the major access points of the province are located. Upgrades are also on-going on the roads to access the interior towns, and to major tourist destinations of the province. The circumferential provincial roads of Panglao Island were also upgraded to national highways, allowing better access to the province's tourism estate.

Road Condition

The PEO rated the roads’ overall condition based on the general condition and extent and severity of distress. It classified roads into the following:

- *Good* -- those needing no improvement
- *Fair* -- those needing just routine maintenance or spot grading
- *Poor* -- those requiring significant grading to improve drainage, repair ruts and potholes, and improve road condition, and
- *Bad* -- those needing reconstruction to provide improved access, repair severe distress, and improve road to good condition.

The rating table used is found in Annexure 2.

Of the 164 roads managed by the Provincial Government, 97 or more than half are considered fair, while 39 (24 per cent) are considered good, and 28 (17 per cent) are rated poor. No roads were considered bad or needing major repair work.

Mgt Unit	Poor	Fair	Good	Total
I	11	14	16	41
II	5	21	8	34
III	4	23	12	39
IV	8	39	3	50
Total	28	97	39	164
%	17%	59%	24%	100%

Table 7. Provincial Roads according to Condition

Road Investments

The Bohol Circumferential Road Improvement Projects (BCRIP) I and II have made possible the upgrading of primary roads with financial assistance from the Japan Bank for International Cooperation (JBIC). The DPWH and PEO are implementing repair and maintenance of all of Bohol’s highways that promote the eco-cultural tourism and agro-industrial development of the province.

The Australian Government Aid Program through PRMF aims to increase economic growth and improve access to public infrastructure and services in the province. It provides capacity building assistance in financial, operational, planning and management of roads, while its Road Network Rehabilitation and Maintenance seek to rehabilitate and maintain provincial roads.

Strengthening the core road network requires budget allocations for upgrading, rehabilitation and maintenance. Major road sections have been identified in every PEO management unit for the period 2011-2015 that may entail upgrading to be funded by the 20% Development Fund or rehabilitation and maintenance with budget allocations from the General Fund and PRMF. Internal fund sources, as well as external financing were accessed to undertake routine and periodic maintenance of roads through contracting out.

In the last five years (2006-2010), at least P714.38 million was spent for road maintenance and rehabilitation, 79 per cent or P546.71 million of which was sourced internally, i.e., from

the General Fund and 20% Development Fund. Almost P150 million or 21 per cent came from external sources such as the national government through the DPWH’s Special Local Road Fund (SLRF) and Department of the Interior and Local Government’s President’s Bridge Program (PBP), the Philippine Ports Authority (PPA), and the Department of Agriculture (DA), as well as official development assistance through PRMF (P80.3 million in 2010).

At least 1,189.42 kilometers have been upgraded (concreting or asphaltting), maintained or developed. The different management units conducted routine and periodic repair and maintenance of provincial roads despite damages caused by continuous heavy rains and outdated equipment. Table 8 shows the annual breakdown in the province’s road investments.

Under R.A. 8754 enacted in 2000, the SLRF, which receives 5 per cent of the Motor Vehicle User’s Charge (MVUC) collection of the Land Transportation Office (LTO), shall be apportioned to provincial and city governments in accordance with the vehicle population and size of the road network under their respective jurisdictions, and shall be used exclusively for maintenance of local roads, traffic management and road safety devices. Bohol also had its share of the SLRF which from 2006 to 2010 amounted to P39.33 million.

Fund Source	2006	2007	2008	2009	2010	Total	%
Internal	82.65	105.6	130.78	119.33	126.35	564.71	79%
External	21.42	16.15	6.78	18.2	87.12	149.67	21%
Totals	104.07	121.75	137.56	137.53	213.47	714.38	100%
%	15%	17%	19%	19%	30%	100%	

Table 8. Provincial Road Investments, 2006-2010

Road Development Issues

In the Stakeholders’ Consultation Workshop held in February 2010, issues and concerns that hinder the effective functioning of the PEO in road service delivery were identified. These remain current and include the following:

1. Accessibility and Road Maintenance

- *More people mean more and better roads.* The drive for eco-cultural tourism and agriculture development in the province has attracted more visitors to Bohol and increased economic activities in rural areas. However, these have also increased the volume of traffic on Bohol’s roads necessitating a better planned and more frequent maintenance of its road network.
- *Better roads mean bigger traffic volume.* Road condition affects accessibility to economic centers, social facilities such as schools and health centers, and public service institutions. The better the road condition, the more frequently it is used, but the heavier the traffic volume, the more the road needs maintenance. Thus road planning and management have to be carefully thought out.

2. Balance Between Road Development and Environmental Protection

- *Protection Land Use.* Certain portions of the province’s land area are restricted by law from productive use. These areas fall under the category of protection

land, identified as the portion of land and water set aside by reason of their unique physical and biological significance and managed to enhance biological diversity. They are to be protected against destructive human exploitation. Bohol has a total of 75,766 hectares of protected land. All development within these areas shall follow the provisions and regulations under the National Integrated Protected Areas System (NIPAS) Law or Republic Act 7586. Road access problems may arise in the promotion and protection of Bohol's water sources, wildlife resources, ecologically and scientifically significant natural areas, outstanding scenic views and sites, historic areas, sites, structures and objects and cultural areas, and parks and recreation. The same constraints may ensue in the pursuit of preserving and improving potential recreational and other open spaces in both rural and urban environments with the establishment of the continuity of scenic views, buffer areas, wildlife and natural habitat and associated natural environments.

- *Environmental Quality.* The province has retained an overall high-quality natural environment, yet the impact of human activities on the environment has upset the natural ecological balances and the high aesthetic quality of the province in the past, and poses the threat of future deterioration. The increasing demands of urban development such as increased road works may significantly alter the ecological balance, be detrimental to human health, or compromise the beauty and tranquility of the natural environment.
- *Disaster Risks and Hazards.* Bohol as an island province is vulnerable to various hazards resulting from natural and human-made disasters such as flooding, rain-induced landslides, earthquake, storm surges, liquefaction, fire, air and water pollution and contaminated land. Inappropriate location and design of developments such as road works can aggravate exposure and impact of hazards including climate change like sea-level rise and storm surges, among others. Land movements affecting roads have already been observed in the municipalities of Loay and San Miguel.

3. Road Prioritisation

- Political concerns and biases affect the prioritisation of road development
- Absence of community/stakeholders' participation

Both of these concerns are now being addressed with a more participatory process of road selection that uses objective criteria and that values transparency and adherence to provincial goals and strategies particularly those outlined in the PDPFP.

4. Funding

- Insufficient funds to sustainably maintain provincial roads
- Insufficient number of field personnel

The insufficiency of funds is being addressed by more proactive and strategic approaches to local revenue generation.

5. Asset Management

These are the concerns related to managing the Provincial Government's road assets:

- Lack of proper monitoring and supervision of road rehabilitation and maintenance activities

- Poor maintenance of some roads due to poor condition of some roads leading to the target sites
- Inadequate road equipment and outmoded service vehicles
- Lack of equipment/tools for maintenance activities such as grass cutters, plate compactors
- Lack of personal protective tools
- Lack of road safety fixtures/ devices
- Installation of water pipes by local government units and other community-based service providers that do not follow PEO guidelines. Inappropriately laid out pipelines along provincial roads hamper PEO's road development projects.

6. Road Design

- Road right of way problems
- Substandard roadway/carriageway due to limited width of some existing roads
- Deficiencies of newly asphalted roads noted due to substandard base materials
- Line canals/ditches not properly defined (some sections have no line canals)
- Insufficient cross drainage
- Lack of slope protection work and guardrails
- Side slope/cut sections not properly attained
- Lack of road warning signage

7. Other Issues

Issues and concerns that have hindered the effective functioning of the PEO as the PGBh's arm for road service delivery were identified by PEO engineers. These included (1) limited documentation on the official declaration/legislation of provincial roads, (2) lack of accurate kilometre posts, (3) roads due for re-classification to municipal, provincial or national roads, (4) roads due for renaming or merging, (5) lack of road safety features, (6) scarcity of materials for road and bridge development, and (7) errors in the use of the Global Positioning System (GPS).

- *Limited documentation on the official declaration/legislation of provincial roads.* At present, there are only four roads officially declared as provincial roads out of the 164 sections considered to be administered by the Provincial Government. These are:
 - a. Poblacion (Talibon) – San Francisco Road
 - b. Poblacion (Talibon) – San Isidro Road
 - c. Jct. (Jagna – Sierra Bullones) – Malbog – Calabacita Road
 - d. Road to Pres. Carlos P. Garcia Memorial Park, Tagbilaran City.

Although the other 160 roads have been considered province-administered due to common usage and long-term official practice (included in the work plan and budget of the PEO for decades already), official declaration is necessary as basis for funding allocation hereon and to settle legal issues such as road right of way concerns.

- *Absence of accurate kilometre posts.* Ninety-nine per cent of provincial roads do not have kilometre posts, while those which do have markers are based on dated data and are not considered valid anymore since most roads have already changed their features. Kilometre markings are necessary for planners, engineers

and road users to determine location for road and bridge works, travel itineraries, and even site of vehicular accidents.

- *Re-classification of roads.* About 33 roads spanning an aggregate of 15.843 kilometres are proposed to be downloaded to municipal governments to reduce the total length of roads the Provincial Government has to maintain, freeing up limited resources to sections that are in dire need of maintenance or rehabilitation. These downloadable roads are best delegated to the MLGUs as these are very short and are already well developed, thus easy to maintain and will not eat up much of their resources. The list of roads for re-classification is included in Annexure 11.

On the other hand, 13 road sections with a total road length of 94.805 kilometres currently administered by either barangay LGUs or the Provincial Government are either to be converted to provincial roads or added to the barangay sections, while 16 provincial roads covering a total of 162.321 kilometres are proposed to be re-classified as national roads due to higher connectivity and bigger traffic volume.

- *Renaming or merging of roads.* A total of 36 road sections equivalent to 267.633 kilometres are proposed for renaming to reflect their actual location. These roads have maintained their old names despite the creation of new barangays or municipalities, or the movement of territorial boundaries. On the other hand, 8 sections spanning 41.358 kilometres are recommended to be merged as these are actually just stretches of the same road though with different names.
- *Lack of road safety features.* Around 80% of provincial roads do not have safety features such as warning signs, slope protection, guard rails, pavement markings, etc., which pose hazards to motorists, pedestrians, road builders, and the surrounding communities.
- *Scarcity of supply of materials for road and bridge development.* Watershed and protected areas limit the number and location of quarry sites to supply materials for road construction and maintenance. The distance from road work sites increases the travel time and expenses of contractors and thus increase the cost of road development in terms of implementation period and budget.

On the other hand, the diminishing supply of timber also poses a concern in the maintenance of timber and bailey bridges. Most of the 44 (51% of 86 provincial bridges) timber or bailey bridges are already old and thus need more maintenance works. These will have to be either reconstructed or upgraded to concrete or steel structures soon, but budget for road works is already limited as it is.

- *Errors in the use of GPS.* The recent use of GPS in measuring road length, though far effective, efficient and economical than the old chaining method, still has some limitations. A variable margin of error is recorded depending on the road surface condition, equipment operator, and satellite signal. The more accurate GPS devices are also more expensive.

IV. STRATEGIES FOR PROVINCIAL ROAD DEVELOPMENT

Development Vision, Goals and Objectives

Provincial Development Vision

The Provincial Government of Bohol envisions a province that is *“a prime eco-cultural tourism destination and a strong, balanced agro-industrial province, with a well-educated, God-loving and law-abiding citizenry, proud of their cultural heritage, enjoying a state of well-being and committed to sound environmental management.”*

Goals and Objectives of the PRNDP

Consistent and aligned with the overall development framework of Bohol, the PRNDP envisions the province to have ***sustainable and safe roads managed by a capable bureaucracy and an empowered citizenry for increased economic and social benefits to the Boholanos.***

The goal of the PRNDP is to develop a ***sustainable provincial road network by prioritizing and funding road development activities over a rolling five-year period.*** More specifically, the objectives can be detailed as follows:

- Directly support the objectives of the PDPFP by developing and maintaining selected roads over a rolling five-year period and improving external links and internal circulation of road vehicles;

The PDPFP's sub-sector goals for road infrastructure include the upgrading of the road network, bridges, buildings and ports, and the proper coordination among implementing agencies and stakeholders, and to pursue the following objectives:

1. To formulate road upgrade detailed engineering designs;
2. To construct efficient drainage systems;
3. To comply with Environmental Compliance Certificate (ECC) requirements from the Department of Environment and Natural Resources (DENR);
4. To improve roads leading to tourist destinations and ports; and
5. To provide standard road safety devices.

The PDPFP also prioritises the concreting/asphalting/soil stabilisation of steep grades and flood-prone areas, the fortification of linkage roads.

The goal for the transport sector is to provide and encourage an efficient, safe, convenient and economic transportation system including road, water, and air, to serve the needs of existing and projected urban and rural development within the province, as well as to accommodate the movement of people and goods and the transfer of energy, recognising the economic, social and energy impacts of the various modes of transportation.

Among the sub-sector's policies are for the Provincial Government to pursue the following:

1. To establish, in cooperation with DPWH and the local governments, a comprehensive list of recommended road improvement throughout the province, establish a suitable review mechanism for arriving at and amending priorities on a continuing basis, and work towards the creation of an on-going capital improvement program closely coordinated with all responsible agencies of government;
 2. To cooperate with and support the DPWH, DOTC, and all relevant infrastructure agencies in an effort to establish a viable and productive provincial transportation planning process and operation system geared to identifying, prioritising and resolving both present and future transportation needs, with special reference to a provincial road network; and,
 3. To appoint a committee of interested citizens to study all roads in the province and inventory and evaluate the aesthetic features of the views from such roads, consider the eligibility of specific sections for designation as scenic areas.
- Increase economic activity and improve public access to infrastructure and services by strategically developing and maintaining selected roads as part of an integrated provincial road network;
 - Develop road investment priorities through stakeholder and community consultation processes;
 - Develop provincial capacity to sustain and improve the existing road network through investment planning and budgeting, systems improvement, human resource development and community involvement;
 - Develop systematic, repeatable and transparent selection processes for prioritising road investment that involves stakeholder and community consultation as part of the decision making process; and,
 - Institutionalise road rehabilitation and maintenance as a critical function of the Provincial Government so that the road network is maintained in optimal condition with the efficient use of available resources.

Bohol Spatial Strategy

The integrated spatial vision of Bohol, indicated in Map 5, identifies key thematic areas of growth in terms of tourism, agriculture, trade and industry. The spatial vision is consistent with the current development trends in the province and the presence of infrastructure facilities needed.

In terms of spatial growth centres, agriculture is stronger as a growth driver in the central to northeast part of the province, more particularly in the production of rice, corn, banana,

mango, oil palm and coconut. Agricultural support facilities are also located in these areas to facilitate production, harvesting, processing and transport of agricultural produce.

Tourism, on the other hand, is a significant growth driver in the southwest part of the province near the city of Tagbilaran and the island of Panglao. More recently, the towns of Anda and Danao have become increasingly popular as alternative tourism sites; the former specialising in adventure tourism with the latter focusing on eco-tourism. Bohol is pushing for the development and promotion of its five tourism clusters that package tourism sites and activities into five tourism themes, namely:

Cluster and Theme	Area
1. Sun, Sea, Sand Adventure and Holiday Cluster	Panglao and Pamilacan Islands
2. Eco-Cultural Tourism Cluster	Tagbilaran City, Loboc, Carmen, Maribojoc
3. Ecotourism Cluster	Northwestern Bohol: island group of Loon, Calape, Danajon Double Reef
4. Agri-Tourism and Heritage Cluster	Northeastern Bohol
5. Culture and Heritage Cluster	Southeastern Bohol

Table 9. Ecotourism Clusters

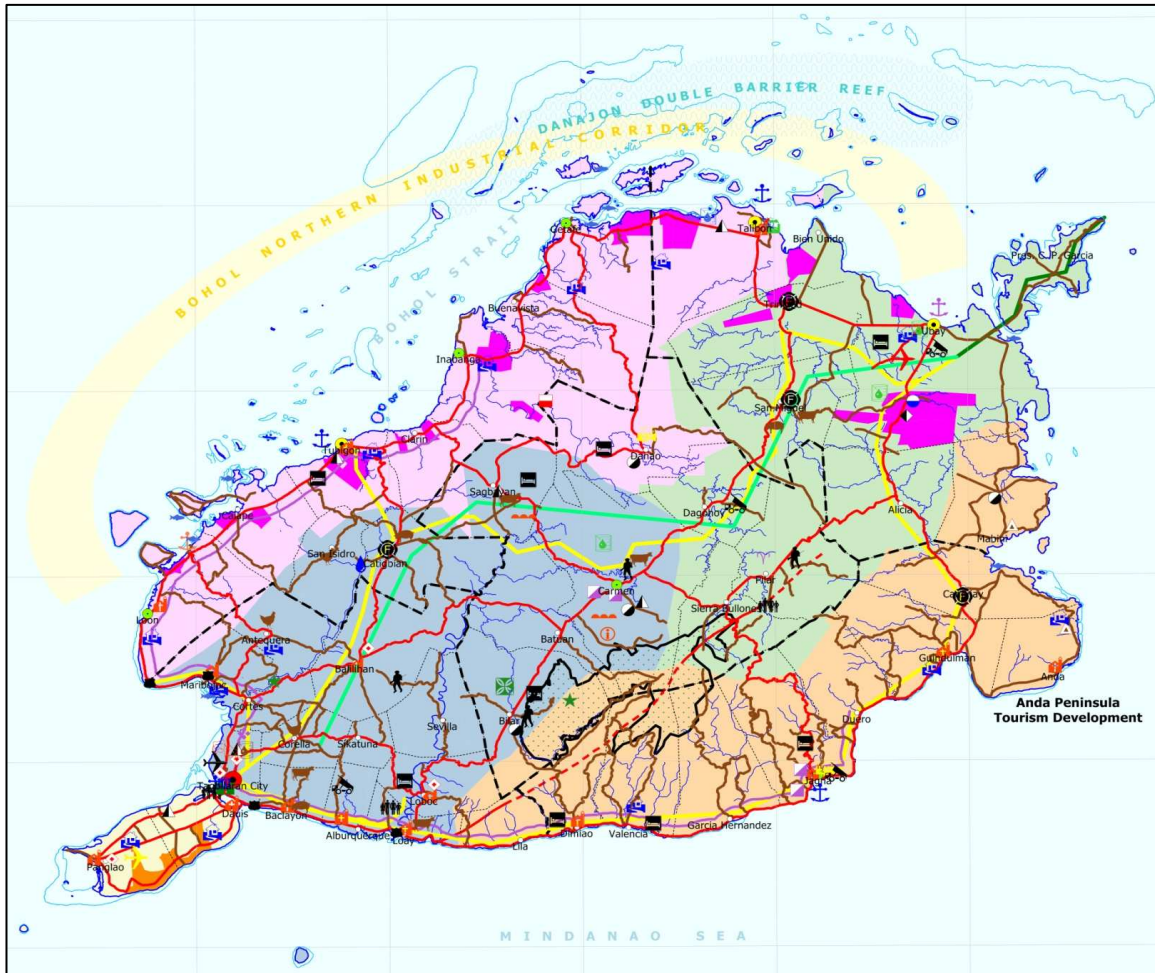
The province intends to disperse economic growth activities to spread benefits to the people in the different areas. In terms of industry, special economic zones are planned along the northeast part adjacent to the island of Cebu. Tourism activities, on the other hand, are planned to be de-concentrated away from the current tourism highway (Panglao to the Chocolate Hills) to the southeastern part as Anda, and the northern municipality of Danao. The One-Town-One-Product (OTOP) concept is also being introduced in the province aiming to develop a market niche for each of the municipality's products or services.

Major future projects are also being considered for the land uses of province. These include the New Bohol Airport Project in Panglao, the Panglao Island Tourism Estate Project, Bohol Circumferential Road Project III, Power Backbone Project, Irrigation Projects, Industrial/ Tourism Zones Development, Sea Ports Development and the Bohol-Cebu Friendship Bridge Project. Along with all of these future trends, opportunities for accommodation facilities and housing projects are highly evident particularly in tourism areas, major urban centres and their peripheries, and those near provincial entry and exit points.

Looking into Bohol's population trends, the NSO Census in 2007 showed a total population of 1,230,110. From only 592,000 residents in 1960, the population had almost doubled after 47 years. The results from the 2007 census show that Bohol's population increased by 90,980 persons. The 2007 population is larger by 8.0 per cent compared to the census count of 1,139,130 persons in May 2000.

Tagbilaran City, Bohol's capital and only city, is the largest and fastest-growing urban centre in the province which accounted for 7.5 per cent of the provincial population in 2007.

Meanwhile, the top ten municipalities of Bohol with the largest settlements accounted for about 40 per cent of provincial population.



Map 5. Spatial Development Strategy

As indicated in Map 6, apart from Tagbilaran City, the northeast municipalities records the highest population, more particularly the towns of Ubay, Talibon and Inabanga. These towns, along with Tubigon and Jagna, also among the most populated, are considered migration entry points as these towns have, or are near to passenger seaport terminals.

Towards this end, the provincial government of Bohol has embarked on a multi-year road network development strategy that includes:

1. An updated road condition survey and network inventory for better decision-making;
2. Road planning and prioritization using selection criteria in consultation with stakeholders;
3. Investment programming for provincial roads including careful planning for revenues and allocations;
4. Budgeting and public expenditure management to ensure cost-effective road management and service delivery;
5. Strengthening of the monitoring and evaluation and internal control in the road sector and engaging the participation of communities and the private sector; and,
6. Continuous human resource and capacity development of service providers for better road management.

To support the existing and projected urban and rural development trends and population needs, the Provincial Government needs to provide a safe and convenient transport system that includes roads. As infrastructure development is capital-intensive, the PGBh also needs to develop public-private partnerships and coordination for the programming of roads, public transit, airports and seaports.

Among the other infrastructure development strategies that impact on roads development outlined in the PDPFP include the following:

1. Prioritization of road improvement projects through suitable review mechanisms and transport planning processes;
2. Consideration of pedestrian traffic as an element of the transportation system in urban and urbanizing areas, development of an integrated system of safe and convenient pedestrian ways;
3. Timely, orderly and efficient management of utilities within the framework of urban and rural development with a route parallel to existing rights of way for a minimum scarring of natural landscape;
4. Conservation of wildlife habitat with a view of maintaining an optimum ecological balance and protection of endangered species (protection and improvement of existing habitat; creation of new habitat; review of land uses that may impact habitat such as highway/road construction)
5. Protection of outstanding scenic views and sites for future generations (establishing of viewing areas in scenic views and sites including those along highways; site design review)
6. Protection of sites, structures and objects that have historical, religious and social significance
7. Conservation and protection of natural resources, including air, water and soil from pollution or deterioration, which would dangerously alter ecological balance and endanger human health;
8. Protection of people, property and natural resources from exposure to natural and human-made hazards including impact of climate change (design and plan vertical and horizontal structures in accordance with the hazard risk management policies; non-development within areas vulnerable to hazards);

9. Ensuring that all quarrying of sand, gravel and rocks shall take place under conditions which foster compatibility with existing surrounding land uses; provision for the restoration of quarry sites;
10. Conservation of the province's agricultural land for the production of crops and livestock and to ensure that the conversion of agricultural land to urban use (including the construction of major roads), occurs in an orderly and economical manner;
11. Conservation of soil resources reflecting their suitability for forestry, agriculture and urban development (control of erosion and sedimentation in all vertical and horizontal infrastructure including roadway);
12. Creation of environment for commercial development, which shall preserve and enhance the vitality of the municipal central business districts, assure safer, more convenient and attractive commercial centers (highway service and tourist commercial uses catering to the needs of the travelling public); and,
13. Concentration of industries of similar types, service needs within the designated areas of each of the existing urban center, adequate land for new industrial development, relocation of existing industries from undesirable locations, attract new industries (industrial areas shall be served by utilities and road networks).

The second round of Provincial Road Sector Planning and Management Review (PRSPMR) also identified the following strategies for further action:

1. *Capacity building* of staff on various technical knowledge and skills ranging from multi-year budgeting, government accounting guidelines, procurement procedures, feasibility study and environmental management plan (EMP) preparation, human resource management planning to customer relations, tax collection strategy execution, M&E, among others,
2. *Provision of equipment and facilities* such as vehicles, ICT hardware and software, more efficient networking and systems backup, and bigger office space and records storage area;
3. *Staff augmentation* specifically for the PEO and PIAO;
4. *Refinement, installation and implementation of measures or mechanisms* such as the proposed per-kilometer cost, budgeting vis-a-vis the PRNDP, internal control system following the National Guidelines on Internal Control Systems (NGICS), and the Strategic Financial Management Plan (SFMP);
5. *Creation of bodies or teams* such as the price monitoring unit for the BAC or of economic enterprises to increase provincial revenues;
6. *Coordination with DPWH and other agencies* as well as MLGUs in the planning and implementation of road projects, and *continuing engagement with the private sector, civil society and communities*;
7. Continuous professionalization and empowerment of employees to minimize political interventions, and
8. *Additional funds for office operations.*

The strategic road development objective of the Province is to optimize the mobility pattern of people and goods from poor communities to urban areas, to increase economic growth, improve access to public infrastructure (including tourism) and services, and to provide an effective platform for integrating land use and transport planning. The mobility of people

and goods as a whole has not been appropriately addressed previously. Focusing on these rather than on vehicle transport will require less capital as funds are also needed for essential social services. Investments on road infrastructure shall be long-term using a forward-looking management approach focusing on appropriate and timely maintenance to minimize restoration cost.

The PEO is in the process of developing a computerized information system through its PEO-IT Section. It shall provide standardized data on social, economic, engineering and transport that are area-specific, and an integrated area-wide road network model using GIS to evaluate road network investments.

As resources are limited, selecting a network of core roads will enable the Provincial Government to focus its planning efforts and delivery services on these prioritized roads, using a stakeholder-agreed set of criteria.

Priority Road Selection Strategy

Bohol's core road network is defined by the PDPFP, the Provincial Spatial Development Strategy, location of growth centers and directions, and existing access infrastructure supporting the province's development strategy. Tools used for identifying core roads are geo-referenced data presented in maps such as the following:

- Base Map with administrative boundaries, existing land use, and access infrastructure
- Population Map and Population Growth Map
- Desire Lines
- Traffic Volume Map
- Road Capacity and Condition Map
- Other Thematic Maps showing socio-economic and environmental/hazards data.

Road selection is also guided by the following core principles:

- *Transparency.* Selecting the priority roads for maintenance, upgrading, or rehabilitation requires a transparent process. Setting the criteria, assigning points to each selection criteria, and the process of ranking should be done in a transparent manner so as to clear doubts and confusions as well as ensure that politicking and unfair advantage are avoided.
- *Stakeholder Participation.* It must be ensured that relevant stakeholders in the management and maintenance of roads are consulted in the process of selecting priority roads. These include local government units, non-government organizations, national government agencies, the business sector, the academe, and communities. Wider stakeholder engagement means better appreciation of the situation to allow a more meaningful and strategic ranking exercise.
- *Relevance to provincial goals.* While there are criteria to be agreed upon by stakeholders, it is important that an overarching consideration is the relevance of the prioritization exercise to the development goals of the provincial government.

In the road selection process, the province ensures an updated road condition survey and network inventory as a primary basis for road prioritization. This is led by the PEO in close coordination with the PPDO.

Secondly, a stakeholder’s workshop is convened to ensure a participatory process in road prioritization, and ward off the risks of politicization of the ranking process and to ensure coverage of different perspectives. In the stakeholders’ workshop, the criteria as well as the corresponding weights and points are defined by the participants.

Based on development trends and directions, forecasts on development scenarios in population and land use, road traffic volume, road condition, and alternative access points were also considered.

This year’s criteria essentially include the same elements from the previous year’s--Access and Connectivity, Road Condition, Traffic Volume, Population and Settlements, Poverty and Peace and Order Condition, and Environmental Considerations--with a slightly different weight distribution, shown in Table 10.

Criteria	Weight
Access and Connectivity	25%
Road Condition	15%
Traffic Volume	15%
Population and Settlements	15%
Poverty and Peace and Order Condition	15%
Environmental Considerations	15%

Table 10. Criteria for Road Selection and Prioritization

Of the province’s 164 roads, a total of 76 sections spread out in the four management units (21 for PMU 1, 15 for PMU 2, 20 for PMU 3, and another 20 for PMU 4) were chosen by the stakeholders to compose the core road network for 2011-2015. A list of the prioritized roads is provided in Annex 5.

Road and Asset Management Strategy

To realize increased economic growth and improved access to public infrastructure and services, the Provincial Government of Bohol is pursuing the sustainable maintenance of provincial roads as well as upgrading and rehabilitation of those requiring special attention, rather than developing new sections. Part of the road management strategy is the maintenance of the whole stretch of prioritized roads to ensure greater impact rather than working on specific patches.

There are five core strategies for road and asset management:

- **Sustained stakeholder participation.** The participation of several stakeholders in the management and maintenance of roads results in greater ownership and better use of road networks. This means that communities, non-government organizations, people’s associations, contractors, and the private sector are involved in the planning, implementation, monitoring, and evaluation of road and road projects.

- **Cost-effective road management systems.** The Provincial Government of Bohol finds the most strategic means of road management– more particularly in maintenance. A comparative study of the modes of service delivery points to maintenance by contract to have lesser cost without sacrificing work quality. In both cases of maintenance by contract or by administration, transparency and accountability need to be ensured.
- **Increasing user engagement in the management and maintenance of roads.** The effective maintenance of roads is not the business of government alone. Road users have to be engaged through public information campaigns that focus on awareness, appreciation, and saliency of user participation in the management of roads and road networks.
- **Convergence of national and local government offices in addressing road network development concerns.** PRMF promotes the convergence of stakeholders concerned with ensuring sustainable road management and maintenance to discuss and take strategic actions on various concerns on road management. Cost-sharing mechanisms, inter-agency monitoring and evaluation, and resource generation are practices that need to be continued.
- **Asset care for more productive and longer useful life.** The Provincial Government of Bohol needs to maintain well its current fleet of road maintenance equipment and maximize their productive use. An inventory of current road management assets has been undertaken to assess asset condition and ensure timely maintenance. In the current Provincial Government set-up, road maintenance assets are in the custody of the Provincial Motor Pool Office (PMMO), a separate department from the PEO. Inter-office arrangements have already been agreed to ensure not only proper care but optimal use of heavy equipment.

Two kinds of work category are under road asset management: asset preservation, and network development.

Further, asset preservation has four categories:

1. Routine maintenance of roads (routine pavement, routine drainage, and routine miscellaneous work)
2. Periodic maintenance of roads (preventive treatment, resurfacing, rehabilitation, and reconstruction)
3. Emergency maintenance, and
4. Bridge maintenance.

Network development, on the other hand, has two categories:

1. Road improvement (widening, re-alignment, and improvement of carriageway)
2. Road construction (upgrading and new opening).

The following options are being implemented by PEO in road maintenance service delivery:

1. *Maintenance by Administration (MBA).* The PEO utilizes its own equipment fleet in producing suitable materials that are delivered at site for spreading and compaction or through force account until all road project maintenance activities

are fully completed. This is the usual practice but needs to be improved with an accompanying road program/scope of work with bill of quantities per road section to be maintained by the project management units.

2. *Maintenance by Contract (hybrid)*. Some materials intended for use in road maintenance are bidded out to legitimate private contractors while the remaining materials are supplied by the PEO until all road maintenance activities for a particular project are fully completed.
3. *Maintenance by Contract (MBC)*. All road project maintenance activities (including the preparation of plans to procurement of materials and labor) in a particular program of work will be bidded out to legitimate private contractors until all road maintenance activities specified in the contract are fully implemented. The PEO shall render the supervision and monitoring of the project.

This is considered highly efficient as contractors are required to prepare the program of work for the road maintenance activities that the road maintenance engineers supervise. Road maintenance engineers also act as contract managers instead of actually doing road maintenance work by administration in a manner that does not match quality standards for road maintenance.

4. A variant of MBC is the *cluster or area-based approach*. This will ensure economies of scale for the road maintenance contractor. Based on geographic contiguity, a cluster of road sections to be maintained, which are proximate to each other, will be up for bid/tender.

Another innovation is the *multi-year budgets and contracts*. In this manner, road maintenance for several years is assured as there is already a commitment with the contractor through the signed contract, though performance will be assessed annually.

5. *Maintenance through Memorandum of Agreement (MOA) with the LGU*. All road maintenance activities (including the procurement of materials and labor) in a particular program of work will be downloaded to Local Government Units who shall render implementation of all road maintenance activities covered by the program of work. This is also an option that is already practiced by the PGBh, although not on a wide scale.

In all road maintenance strategy options, the local communities will participate as local labour hired by the contractor or the LGU.

Service Delivery and Procurement Strategy

The preferred service delivery mode is through contracting out as it is more cost-efficient. Private contractors who have proven track record in road service delivery will be invited to submit their tenders in a competitive, transparent process. However, as the Bids and Awards Committee (BAC) and other concerned offices are still enhancing their capacity in procurement procedures guided by R.A. 9184 and using the Philippine Government Electronic Procurement System (PhilGEPS), a gradual implementation of contract services will be followed in the next five years.

Through the PRMF capacity building component, provincial government offices have also already started enhancing their capacities to deliver their mandated services in relation to road sector planning (PPDO and PEO), design, construction and maintenance (PEO), and monitoring (the inter-agency Provincial Monitoring and Evaluation Committee including BEMO for environmental monitoring).

Third Draft

V. STRATEGIES FOR DEVELOPING CAPACITY TO MANAGE ROADS

Each province needs to have a thorough knowledge and understanding of its existing asset portfolio including its road network before it can plan for its management and sustainability. The main elements of road network asset management are: community benefits, road system performance, asset features, asset use, physical treatments, management of use, and asset management strategy. To promote the concept of total road network asset management, a conceptual framework should be developed which involves the following:

- **Use of community consultations for defining objectives and developing a level of service framework**
This is a fundamental part of the process because it prompts the province to assess its role and purpose with regard to stakeholder requirements and government policies, to review its core business, and to focus on core activities.
- **Development of asset strategies and plans**
This phase consists of developing Road Usage Strategies and Guidelines, Infrastructure Strategies and Road Asset Plans.
- **Identification of road network asset requirements**
This phase establishes gaps in asset performance by comparing current and future configurations and conditions with desired configuration and condition, and identifies projects to fill these gaps.
- **Development of an investment plan and a work program**
To ensure an equitable allocation of resources and to achieve the organisation's objectives, projects should be ranked in order of importance.
- **Implementation of road network asset management plans and actions**
This phase involves delivery all of the projects and tasks identified in the Works Program.
- **Monitoring and evaluation**
M&E should be performed to ensure that the road network asset management cycle has been carried out as documented and the work programs satisfy organizational and stakeholder requirements. The M&E process can be integrated into the PGBh's quality assurance system.

To ensure optimal service delivery in the road sector, road asset management has to be factored in as a major element in the planning process of the Provincial Government. Part of the asset management process is the development of other resources such as financial, human, information and physical resources. Enhancements in these areas are addressed in the human resource interventions identified in the Human Resource Management and Development Plan, which considers the following processes:

- Regular/annual updating of the road condition survey and network inventory;
- Consultative road planning and prioritization using stakeholder-agreed selection criteria;
- Investment programming with careful planning for revenues and allocations;

- Budgeting and public expenditure management for effective road management and service delivery;
- Strengthening of the monitoring and evaluation and internal control with private sector and community participation; and
- Continuous human resource and capacity development of service providers.

Revenue and Expenditure Management Strategy

Revenue Generation

In order to ensure adequate resources and reserves for the implementation of the development agenda of the provincial government, the following strategies are identified for achieving revenue targets specifically for the road sector.

For Revenue Generation and Treasury Management, the proposed managerial strategies to be employed involve improvement in organizational strategies, policy support, capacity building, systems improvement, linkages, and integrity development.

Organizational Strategies

- Fill up vacant regular positions in the Field Operation Division in the PTO as the division is in charge of the tax campaign activities and in the audit of municipalities. The audits will assure the PGBh of its accurate share in the real property taxes collected by the municipality.
- Create a composite team of personnel from PTO, the Governor's Office and BEMO to monitor payment of sand and gravel permit fees. The group will check strategic entry and exit points. Two or three teams will be assigned in different locations with shifting of assignments to maintain independence and avoid collusion with permittees. This is expected to increase collection of sand and gravel fees.
- Create the Public Enterprise Office to help raise revenues. This office will be responsible for the efficient utilisation of the assets of the PGBh. As the creation of this office is difficult to achieve considering the limitation of the Personal Services (PS) expense by 45%, it is suggested that such unit be considered as part of the existing office in charge of revenue generation.

Policy Support

- Craft guidelines in the granting of discounts for hospitals to serve as a guide in the effective sourcing of hospital funds that balance service with value for money principle. A decrease in hospital income has been noted due to arbitrary discounts given to constituents who view government hospitals as charitable organizations. While government hospitals are service-oriented to some extent, they also have to earn to survive.
- Amend Provincial Ordinance No. 2001-022 which considers the 30% share of the Chocolate Hills Complex fees as funds for tourism purposes and therefore a trust fund. For the past years, the province has supported tourism initiatives without getting anything in return. The 30% share should be considered as income and

not as trust fund so tourism concerns can be provided appropriations from the General Fund.

- Create a strategic road fund for the province. Relying on the appropriation for the PEO, the 20% Development Fund and other funding agencies will still leave the province in need of funds for maintaining roads that have been rehabilitated.

Capacity Building

- Continue capability building of personnel of the revenue generation offices. Training on revenue audit, risk assessment and analysis on cash and check collections are needed as asset protection is as important as revenue generation. This will answer the need for accuracy and the security of cash or collections to protect assets from fraud and irregularities. Revenue audit training is also needed as this will help the personnel in checking the accuracy of the share of the province in the real property tax collections and other tax imposition which requires automatic sharing with the province and the barangay.
- Closely monitor and evaluate the collection efficiency of the municipal LGUs per quarter. The Municipal Treasurer's Offices' staff will be coached and regular monthly meetings conducted for a continuing analysis of collection efficiency.

Systems Improvements

- Implement E-TRACS province-wide. Automated improvements on systems involving computation and the collection of real property taxes is basic in improving collection. The e-TRACS will be done in the next two years with five municipalities as pilot areas, namely Balilihan, Dimiao, Valencia, Loon and Talibon. Other municipalities will follow once they see the desired improvements. Another system is also seen which will compliment e-TRACS is the enhancement of the processing of assessment documents, certificates and other needed information. This will facilitate the preparation of these documents thus saving time for the property owner so that payment is also facilitated.
- Conduct a comprehensive review and assessment of targets versus accomplishments. This has not been done and this is usually the source of conflict between the Assessor and the Treasurer in administering their respective functions. Revenue estimates are done separately without considering the total assessed value of the asset base thus it could be understated. PAssO and the Treasury should come up with a target that is realistic and achievable within the total assessed value. This should not be too low nor too high but enough to make the Treasury team give their best in the attainment of the new targets. This will also motivate the Assessor's Office to come up with a more accurate and realistic asset base.

Linkages

- Promote strong coordination between PTO and PAssO through E-TRACS and GIS implementation. These two softwares can bring the two offices together which will improve the system of assessing, collecting and recording between the two offices. Assessment will be facilitated through GIS to help in producing a more

accurate tax base so that estimates and the corresponding collection will not be delayed.

- Enhance the links between the PTO with the Municipal Treasurer's Offices (MTOs). The desire to increase locally generated revenue is a concern of all municipalities. MTOs should come up with a list of all possible taxable sources of revenue. Their monthly meetings will be used in formulating strategies and measures to tap these possible sources and improve collection efficiency.
- Improve the linkages among members of the Expanded Local Finance Committee (ELFC). Target setting in revenue generation should also involve the ELFC so that techniques and strategies are evaluated and recommended by the committee. Coordination with the HRMDO is also recommended as the effort will also involve personnel.

Expenditure and Budget Management

- One of the most important committees created under the Local Government Code of 1991 is the Local Finance Committee (LFC) originally composed of the Treasurer, Budget Officer, and the Planning Officer. Later on the Provincial Government included the Accountant, Legal Officer, Assessor, the Provincial Administrator, and the Internal Auditor as the need was seen. With this composition, it is now considered a very powerful committee as it deliberates on the financial needs of the Provincial Government for appropriation. It evaluates and recommends policies and strategies and therefore dictates on the financial operation of the local government unit. This influence is the result of the strong coordination of the offices involved so that the Province is now on its way in promoting a strong planning and budget linkage as shown in the implementation of the Work and Financial Plan and the Annual Investment Plan.
- Another effort of the LFC is the implementation of the PAccO audit guidebook. This guidebook offers a list of supporting documents of the different claims of the Provincial Government ranging from the ordinary personnel claim for salaries and wages to suppliers' claims for payment. It has been observed that delays in processing come from the lack of supporting documents. The guidebook is meant to address the need for a speedy processing of claims.
- As the different offices are already using the guidebook, another innovation which could help in the management of expenditure is the assignment of Administrative Officers (AOs) in the different offices in the pre-screening of claims. The Provincial Accountant's Office is short of technical personnel to pre-audit claims. The hiring of additional personnel is not an option because of the 45% cap on Personal Services. The AOs will check the completeness of supporting documents and the accuracy of mathematical computations. In this way, claims are already pre-screened so that when they are submitted for processing to PAccO, there will be lesser problems, facilitating a faster processing time. Training of these personnel will then be conducted in order to capacitate them to do the additional job.

Internal Audit and Internal Control

The Provincial Government of Bohol fully supports the establishment of internal control procedures and internal audit.

- In December 2010, in line with Republic Act 3456, amended by R.A. 4177, and to meet a performance target of PRMF, the Sangguniang Panlalawigan passed an ordinance creating the Provincial Internal Audit Office (PIAO). Within the five-year implementation period of the PRMF, the Provincial Government aims to strengthen internal control systems and internal audit services to cover all operations of the provincial government particularly PEO's road maintenance and rehabilitation projects and activities. Internal audits of the different PGBh offices will be conducted annually. This will strengthen control over financial and operating data. It can also assess the economy and efficiency of government resource utilisation in the provincial government.
- The PIAO has completed its first Risk Assessment Report, approved by the Governor. The report documents the province's preliminary step towards institutionalising a purposive and strategic internal audit function of the Provincial Government. For this process, six offices were considered priority participants, as these have direct bearing and implication on the implementation of PRMF in the province. These are the Provincial Planning and Development Office (PPDO), the Provincial Budget Office (PBO), the Bids and Awards Committee (BAC), the Provincial Treasurer's Office (PTO), the Provincial Accountant's Office (PAccO), and the Provincial Engineer's Office (PEO). The plan is to gradually cover all departments in the provincial government. These offices are prioritized in the Audit Plan for 2011. Risk matrices of the BEMO, HRDMO, PAssO, and PGSO will be approved by the Provincial Governor before August 31, 2011.

The achievement of goals and objectives of the Provincial Government of Bohol is affected by the risks that are inherent in their operations and functioning. Such risks are usually unnoticed by the local government management causing damage and losses which could have been avoided or mitigated if they were properly identified and correspondingly addressed. Generally, an appropriate internal control system is the primary defence that an LGU can have to mitigate risks. Such need has prompted the Department of Budget and Management to promulgate the National Guidelines on Internal Control Systems (NGICS) for use of all government agencies in the country.

- PIAO has also formulated an Audit Operations Manual where risk management is an integral component, in accordance with national and local legislations and standards as well as with Executive Order No. 09 dated July 18, 2006, which established the Internal Audit Service of the Provincial Government of Bohol. The manual, approved by the Governor and the Sangguniang Panlalawigan, includes the Internal Audit Charter which defines the policy of the provincial government on internal auditing and sets the framework within which the PIAO will operate.

The charter includes the purpose, independence, authority, functions, responsibilities, scope of work and method of operation of the PIAO.

- An Annual Audit Plan has also been prepared, in accordance with the provisions on annual audit planning of the PIAO Operations Manual using a risk assessment approach. The Audit Plan includes several processes such as identification and analysis of risk areas, prioritisation of auditable areas, setting of audit objectives per risk area, allocation of audit resources, and planning for other audit services. The whole process is designed to attain effective and efficient local government operations and transparent and accountable governance by institutionalising sound management processes, and strengthening internal control systems and procedures. For 2011, the Annual Audit Plan includes the operations and compliance audit of PEO on road maintenance and rehabilitation activities. An internal Audit Report which covers PEO's road maintenance and rehabilitation activities will be completed by the end of March using the procedures detailed in the approved Operations Manual and approved Audit Plan. It will be accepted in writing by the Governor and a notice of compliance must be issued to the department concerned.

Human Resource Management and Development Strategy

The development and management of a road network could not be achieved without human resources capable and skilled to carry out the functions of the program. It is thus imperative for the Provincial Government to enhance the capabilities of its workforce to fully carry out plans and targets towards achieving goals and objectives in the road sector.

To ensure that the skills of the staff match the requirements of program implementation, a staff skills inventory is conducted every three years, the results of which are analyzed to identify gaps and recommend necessary human resource interventions and other capability building programs.

The success of the implementation of the programs does not only depend on the capabilities of the human resources but also on the structures, systems and processes adopted by the Provincial Government. To address this concern, an assessment of the HR systems was done during the formulation of the Human Resource Management and Development Plan. The results of the assessment will be the basis for the enhancement and establishment of HR systems that are more responsive and relevant to the achievement of the programs and the overall directions of the Provincial Government.

These human resource systems for recruitment, retention, promotion, rewards, incentives, personnel relations, succession planning, retirement and other processes ensure that the right persons are engaged to carry out program implementation, and that adequate incentives and capacity development are provided for employees to stay on the job and productively contribute to the attainment of the province's development directions. Annexure 9 outlines the Capacity Development Plan of the provincial government for 2011-2015.

Information Management Strategy

Efficient information management is the key to better decision-making for local government units. For many LGUs, major issues of service delivery are ‘repair and renew’ rather than design. Engineers, technical staff, administrators, and politicians all benefit if decisions about maintenance, repair and renewal are based on reliable data, solid engineering principles and accepted economic value.

When reliable data and effective decision-support tools are in place, the costs for maintenance, repair and renewal will be reduced and the services will be timely, with less disruptions. These improvements will all reduce the costs of managing LGU infrastructure.

The Provincial Government’s strategy for the next five years is the highlighting of immediate priorities to be addressed within the next 12 months. This will show a staged and prioritized approach in implementation activities, dependencies, responsibilities, benefits and risks. The objective is to set firm foundations for the use and management of information based on current and future operational needs.

Through improved use and management of information, the strategy will enable the Provincial Government to realize the following:

- Increase the delivery of effective services
- Optimize access to these services, and
- Inform, involve and engage key stakeholders.

The emphasis of this strategy is ensuring current systems and infrastructure to be robust and secure. The installation of the Provincial Capitol Computer Network Backbone is aimed to connect all departments within the capitol compound, enhance the connectivity of each office and smoothen the sharing of common databases and other projects implemented in the Provincial Government.

It is also planned to interconnect all departments outside the capitol by employing wireless technology. Interconnectivity of all departments will ensure smooth information exchange and sharing of data.

In addition, the strategy embraces the creation of the ICT Unit that will provide an “umbrella” framework in which other initiatives can be incorporated.

The Provincial Government through the Bohol Information Communication Technology Unit (BICTU) has prepared a data capture program for Geographic Information System database according to agreed data standards and PRNDP needs. Training in spatial analysis for development and infrastructure planning will be provided to further capacitate the GIS personnel.

A GPS reference base station has also been installed at the Provincial Capitol building that will ensure accuracy of the data gathered from the road survey. This will also help GIS personnel in building topographic, land use and land cover databases for the province. It will

also assist the PGBh develop an online atlas that is accessible to the public and includes PRNDP and PDPFP strategies.

A policy agreement on data sharing between LGUs and national government agencies will be developed to further enhance partnerships. The ICT Plan also includes maintenance activities for the hardware and funding for additional equipment and database maintenance.

The development of an organizational model and staffing positions, as well as the annual provision of funds for the ICT/GIS unit will ensure its sustainability. The integration of the M&E reporting system will also be developed as decision support of department heads and the Governor.

In addition, BICTU will enable the Provincial Government to integrate and implement all the developed information systems and other IS in support to the strategic direction of the government.

The provincial E-TRACS team has installed and piloted the program in five municipalities. A Memorandum of Agreement (MOA) was signed by the mayors on E-TRACS implementation, support and information sharing. The team has also been preparing an E-TRACS expansion program to the rest of the municipalities using MLGU funds. Training programs and continuous technical support will be provided to capacitate the staff of the municipal partners in using the system. This program will further help the Provincial Government in raising revenues from the collection of taxes on business and real properties.

Environmental Management Strategy

The vision of the Province of Bohol underscores sustainable environmental management in all aspects of development. It seeks to rehabilitate and restore the natural ecological balance and aesthetic quality being impacted by human activities, urbanization and population growth. These pressures on Bohol's environment and natural resources affect human health and other social dimensions.

Road maintenance and rehabilitation works are one of the threats to environmental quality if implemented without environmental considerations. PRMF espouses compliance with environmental standards by requiring the preparation and implementation of an environmental management plan (EMP) for each road project. Environmental considerations are to be factored in throughout the planning, design, construction/rehabilitation and maintenance stages of provincial roads. The Bohol Environment Management Office (BEMO) oversees the compliance with this requirement.

To be able to do this, BEMO needs to be capacitated in developing a registry of environmentally critical, sensitive and hazardous areas to guide planners for road rehabilitation and maintenance. Further, BEMO needs to be capacitated in developing EMPs. Alongside these capacity development activities is the procurement of needed equipment and software to gather information in the field which will then be stored in the BEMO database and with the assistance of BICTU, used to generate maps. BEMO has already designated a monitoring officer as a member of the Provincial Monitoring and

Evaluation Committee (PMEC) tasked to monitor all these, but capacitation is still needed in the conduct of environmental monitoring of roads projects and compliance with EMPs.

Once these are in place, Bohol will then be compliant with the requirements of the Philippine Environmental Impact Statement System (PEISS) and other environmental standards.

Gender Equality and Social Inclusion Strategy

Gender equality is the equality of the socially constructed roles and identities of men and women as well as the relationships between them. These roles change over time and vary by culture. Social inclusion on the other hand is the removal of institutional barriers and the enhancement of incentives to increase access by diverse individuals and groups to development opportunities.

It has been noted among development practitioners and donors, including AusAID and the Asian Development Bank, that certain groups are disadvantaged because of gender discrimination, ethnicity, religion and geographic location. Social exclusion is a cause and effect of poverty because of unequal access and opportunities to services, resources and some on political activities.

Gender mainstreaming is one way of reducing poverty and improving living standards and sustained economic growth by promoting gender-responsive policy reforms and improving the capacities of service delivery institutions, as well as building the capacities of women to effectively participate in development planning and management.

Key to the empowerment of women is their meaningful participation in all aspects of development interventions, from project identification to its planning, implementation and management, and monitoring and evaluation stages. Their access to and control over resources that can be harnessed to provide services to women, men and their families at each stage is critical, as much as their access to and control over benefits of development interventions is necessary for their well-being and continued participation.

Other social groups that have been traditionally excluded in the planning and access to development projects and benefits are people with disabilities (PWDs), those living in highly inaccessible rural areas, those living with HIV/AIDS, indigenous peoples, and children.

In the road infrastructure subsector, some key questions have to be raised to ensure gender equality and social inclusion such as, "How to improve women's and disadvantaged groups' employment opportunities in the transport sector" and "How to improve their access to transport."

Women and disadvantaged groups can be mobilized by involving them through community and stakeholder consultations in road identification and designing, particularly if they live close to identified road project sites, in the actual road building or maintenance works, as well as in monitoring and evaluation through their participation in multi-sectoral M&E groups.

In the planning stage, gender analysis should be conducted to ensure road development will have equitable and inclusive development impacts. Consultations with women can be done through focus group discussions where gender issues are identified, such as women's time and work burden, their livelihood and other economic activities, safety issues in public transport, women's means of transportation, maternal and child mortality, access to safe drinking water, nutrition, domestic violence, trafficking, higher incidence of HIV/AIDS among women compared to men, among other concerns.

One of the main obstacles in effectively incorporating gender equality issues in transport sector is the lack of gender disaggregated data and gender statistics that can be used for planning.

Among strategies that can be pursued to include women and other disadvantaged groups are:

- Sex and sector-disaggregated data gathering
- Prioritising of local unskilled labor (40% women) by contractors
- Equal pay for equal work; no child labor
- Road maintenance delegated to communities (50% women)
- All roads with speed bumps in villages for public safety, especially for children, the elderly, and PWDs
- Paved road shoulders to allow carts with wheels which are still being used in rural areas
- Community-based road safety facilitators (50% women)
- Climate change adaptation to involve women in planning and caring for roadside trees, and
- Social and gender training for all PMU staff.

Gender equality is to be pursued not only for road end-users but also for management staff and even road contractors/bidders by raising awareness on gender and development (GAD), promoting diversity in the workplace and encouraging women to engage in non-traditionally female roles such as road design and construction, database development and maintenance, and the corresponding on-site infrastructure.

In order to better respond to the different socio-economic needs of local women and men, the provincial government through the PEO, the Provincial Agriculture Office (PAO), and the Office of the Provincial Veterinarian (OPV) should reach out to women and men in the communities particularly the low-income and disadvantaged groups, the transport sector, local NGOs/women's groups as well as other government departments working on women's empowerment and social issues to ensure that their specific needs are effectively and equitably addressed.

In developing, implementing, monitoring and evaluating road projects, the Harmonized Guidelines on Gender and Development (2nd ed.) issued in 2007 by the National Economic and Development Authority (NEDA) and the then National Commission on the Role of Filipino Women (now the Philippine Commission on Women), is an essential reference material. It includes specific checklists to ensure gender mainstreaming in infrastructure projects such as road development (see Annexure 6).

Community Engagement Strategy

As the provincial road network plan is envisioned to primarily deliver benefits to communities and other road beneficiaries particularly in rural areas, core approaches should lead to engaging key stakeholders including the civil society organizations, communities, road beneficiaries and industry players in provincial road development. Community participation is also enshrined in the Local Government Code of 1991 which declares people's participation and people empowerment a state policy in effective local governance.

Likewise, AusAID underscores that encouraging an active and representative civil society and working directly with communities help strengthen local demand and incentives for good governance practices as well as enhances aid effectiveness of development assistance (*Approaches to Building Demand for Better Governance*, 2007).

The intertwining objectives of civil society engagement in the context of PRMF are three-pronged:

- creating innovative avenues for wider civil society participation in the road infrastructure and services delivery;
- expanding the space for vertical accountability; and
- promoting citizens' engagement in building demand for transparency and accountability in government in the long term.

In general, community engagement activities range from consultations and knowledge sharing, extension work, IEC (information, education, communication), private sector and community participation in public processes, to collaborative actions either in informal groups or formal partnerships done on a regular basis and at each stage of any development intervention.

For the PRNDP, these engagements can be in the form of providing inputs during the criteria formulation and road prioritization process, sending comments and feedback on the draft of the plan, publishing the PRNDP (print, broadcast, social networks, and on the PGBh website) so that communities and the private sector are aware of the road development directions thus spurring investments, sharing local knowledge (such as flood-prone areas, steep slopes, unstable soils) as inputs to road designs, involvement in data gathering (with training in GPS/GIS and other data gathering tools), and participation in monitoring of plan implementation--to demand greater accountability and transparency from government.

The facilitation of partnership events by such offices as the PAO, OPV, the Provincial Health Office (PHO), as well as the PEO is encouraged to foster collaboration among development partners and stimulate their commitments for the success of the road network development undertaking. These events include community resource inventories and integrated development planning workshops, peace and order and public safety forums, technology and livelihood skills trainings, agriculture and community-based tourism enterprise development activities, and health impact assessments.

On the other hand, since PAO, OPV, and PHO personnel are the front liners in community service delivery even up to the remotest barangays, and are thus familiar with community needs and dynamics as well as the rural geographic features and constraints, their inputs in

road planning would be very substantive. They can provide critical information on identifying areas needing farm to market roads, access to social services, as well as potential for quarry sites and sources of unskilled labor for road works.

These engagements promote gender equity, cultural sensitivity and social inclusion. Active community participation means good governance, and good governance means good roads. Meaningful community engagement thus ensures good roads that are responsive to local needs which in turn leads to sustainable development.

Monitoring and Evaluation Strategy

The monitoring and evaluation strategy is inherent in the objectives of the PRNDP. There are three important aspects of this strategy:

- To establish baseline information on the condition of the project area particularly the physical and social condition of the project sites as well as the status capacity levels of selected PGBh offices involved in road network development;
- To develop and make operational an effective data collection system from the partners and direct implementers of the PRNDP;
- To establish an efficient feedback mechanism on the developments of PRNDP to the partners and implementers for information and management action.

The PRNDP needs to be complemented by a Monitoring and Evaluation (M&E) Framework that is anchored on the following strategies:

- A lasting, sustainable and institutionalized monitoring and evaluation system that is anchored on an office that spearheads and orchestrates all monitoring and evaluation activities of the province;
- The M&E Framework that has clear focus and covers the whole hierarchy of objectives emanating from national and regional development goals to the provincial development goals as enshrined in the PDPFP;
- The framework that follows a logical framework analysis that covers the outcomes, benefits, and impact attributable to PRNDP. While its scope is comprehensive, the data it covers are limited to what is needed by the stakeholders and decision makers – making the M&E manageable and implementable;
- A set of monitoring tools and techniques to generate information to measure development results and link these to the overall development framework of the Province of Bohol;
- A roads infrastructure monitoring system that is linked with other development sectors and compatible with existing management information systems of the provincial government;
- Community engagement and active involvement in the monitoring and evaluation of road services delivery and actual road works; and,

- Continuous process improvement and capacity building of provincial government departments, offices and personnel linked with and influencing the road sector.

Cognizant of the critical role of monitoring and evaluation in any development intervention, and admitting that it has heretofore not given enough focus and importance to M&E, the Provincial Government through Executive Order 25 issued on November 23, 2010, created the Provincial Monitoring and Evaluation System (ProMES). The ProMES established a province-wide network of monitoring units among different government and non-government institutions. The system organized two monitoring teams, one at the provincial and another at the sectoral level to provide the PDC and other decision-making stakeholders with timely information on programs and projects being undertaken by the Provincial Government. These are:

- (i) the Provincial Monitoring and Evaluation Committee (PMEC) composed of heads of various provincial government offices, the president of the mayors' league, the provincial director of the DILG, a representative of civil society organizations, chairpersons of the PDC social, economic and infrastructure committees, as well as the project officers of ODA-funded projects; and
- (ii) the Sectoral Monitoring Units (SMUs) composed of M&E officers from the different provincial government offices, national government agencies, and non-government organizations who monitor projects in their respective sectors.

Utilizing a standardized set of input and output forms, the SMUs are to gather data from the implementing offices/organizations/units and prepare the necessary reports for submission to the PMEC, which in turn consolidates these reports for the information and action of the PDC. Monitoring will include identification of implementation problems and issues or outstanding performance of a project, the effect of remedial measures on project concerns as suggested by the PDC, and successful practices and innovations that can be replicated.

VI. FROM PLAN TO REALITY

Investment Program Summary

To sustainably maintain road development projects, the Provincial Government of Bohol depends on its local revenues, fund transfers from the national government, and other development assistance funds. However, the increase in operating and maintenance costs has presented some constraints on the availability of these funds thus creating an unstable fund generation mechanism. Fund transfers called internal revenue allotment (IRA) have been found to be unpredictable and are beyond the control of LGUs. It is recommended the provincial government work on developing strategies that could help generate a more stable revenue generation process to hasten economic growth and effectively maintain road development projects. The 20% Development Fund (external fund) is allotted for upgrading and maintenance of provincial roads.

The PRMF has grant funds from the Australian Government designed for provincial road rehabilitation as well as capacity building activities. Aside from this, the Performance Incentive Fund is conceived in its project management design to award performing local government units based on performance criteria. The provincial government has to qualify for performance standards if it aims to receive the incentive fund for the duration of the PRMF.

The SLRF has reportedly decreased due to the number of provincial roads that were converted to national roads although the reason is linked to the reduced number of vehicle registrations in the province for a definite period.

The provincial government should gradually become independent from PRMF funds by the end of 2015. Maintenance by contract is promoted to maximize resources and productivity, as this has become the commitment of the provincial government. Still, this relies on the availability of funds that would cover the maintenance costs for the five-year period. As maintenance by contract increases take effect each year, maintenance by administration declines reasonably.

Physical Works

For the next five years (2011-2015), the projected sources of funds include the provincial government's General Fund and special allocations from the 20% Development Fund and the identified counterpart for PRMF-assisted road rehabilitation and maintenance works, the PEO budget for Maintenance and Other Operating Expenses (MOOE), and the Special Local Road Fund, as well as the PRMF base fund.

The General Fund allocations increase by 25 per cent each year while the PGBh counterpart for PRMF road projects and the PEO MOOE increase by 15 per cent in 2012 and in increments of 5% every year thereafter.

For PRMF base funds, except for 2012, the amount tapers off as it wraps up its engagement with the Provincial Government in 2015.

Fund Source	2011	2012	2013	2014	2015	Total
1. General Fund	36.05	45.06	56.33	70.41	88.01	295.86
2. Special Budgetary Allocations						
• 20% Dev't Fund	71.50	78.65	86.52	95.17	104.68	436.52
• PGBh Counterpart for PRMF	13.78	15.85	19.02	23.77	30.90	103.32
3. Identified Fund Sources						
• PEO-MOOE	30.00	34.50	41.4	51.75	67.275	224.93
• SLRF	6.00	5.00	4.00	3.00	2.00	20.00
4. PRMF	87.00	90.00	85.00	80.00	75.00	417.00
Total (PHP Million)	259.88	285.93	311.53	345.55	391.75	1,594.64

Table 11. Forecast Source of Road Maintenance Funds (in Million Pesos)

For the same period, an estimated 128 road sections will require improvements either maintenance (58), rehabilitation (22), or upgrading (48) activities, or a combination of these road works. A total of 32 bridges are also up for maintenance or upgrading.

Management Unit	Number of Roads			
	For Maintenance	For Rehabilitation	For Upgrading	Total
I	13	9	9	31
II	15	4	7	26
III	20	4	18	42
IV	10	5	14	29
	58	22	48	128

Note: Bad roads are set for rehabilitation, poor roads for upgrading, while fair and good roads are set to be maintained.

Table 12. Summary of Planned Road Works

To estimate the budgetary requirements for road works, the following assumptions were used:

1. Base year is 2011
2. 10% escalation per annum for the succeeding years
3. Costs:

Type of Work	By Administration Rate (PHP per km)	PRMF Rate (PHP per km)
Routine Maintenance	100,000.00	100,000.00
Periodic Maintenance	300,000.00	300,000.00
Rehabilitation	500,000.00	7,000,000.00

Table 13. Assumptions in Estimating Costs for Road Works

About P982.4 million is estimated to be required in the next five years for the provincial government to sustainably manage its core roads. The estimated P1.6 billion from various internal and external sources will sufficiently cover the budgetary requirements for the core roads and will have some amount left over for those next in rank in the roads list.

Table 14 shows the investment schedule for the next five years. A substantive P353.4 million or 36% of the total budget for the five years is to be provided by PRMF. As local capacity for road management increases, the budget allocation for roads also increases starting in 2012, from 64% to 72%.

Road Work and Source of Funds	Cost Estimates (in million pesos)					
	2011	2012	2013	2014	2015	Total
1. Maintenance						
General Fund	30.06	30.87	33.88	37.64	42.96	175.41
20% Development Fund						
LGU Counterpart (12%)	0.24	5.08	1.67	0.94	1.12	9.05
PRMF	2.46	2.95	13.01	7.42	8.63	34.47
Sub-Total: All	32.76	38.9	48.56	46	52.71	218.93
Sub-Total: PGBh	30.3	35.95	35.55	38.58	44.08	184.46
2. Upgrading						
General Fund						
20% Development Fund	44.5	51.43	61.94	70.75	85.99	295.31
Others (PPA, Congress)	0	10	0	0	0	10
Sub-Total: All	44.5	61.43	61.94	70.75	85.99	305.31
Sub-Total: PGBh	44.5	51.43	61.94	70.75	85.99	295.31
3. Rehabilitation						
20% Development Fund	12	13.24	7.19	3.73	6	42.16
LGU Counterpart (12%)	7.12	10.96	8.36	8.64	6.3	41.38
PRMF	52.23	87.01	63.33	66.82	49.55	318.94
Sub-Total: All	71.35	111.21	78.88	79.19	61.85	402.48
Sub-Total: PGBh	19.12	24.2	15.55	12.37	12.3	83.54
4. Bridge Upgrading/ Maint.						
General Fund	2.608	2.957	5.449	7.451	5.641	24.086
20% Development Fund	0	0	6.63	0	0	6.63
Others (PPA, Congress)	0	25	0	0	0	25
Sub-Total: All	2.608	27.957	12.079	7.451	5.641	55.716
Sub-Total: PGBh	2.608	2.957	12.079	7.451	5.641	30.716
Total All Sources	151.218	239.497	201.459	203.391	206.191	982.436
Total PGBh	96.528	114.537	125.119	129.151	148.011	594.026
% of PGBh to Total	63.83%	47.82%	62.10%	63.49%	71.78%	60.46%
Total PRMF	54.69	89.96	76.34	74.24	58.18	353.41
% of PRFM to Total	36.17%	37.56%	37.89%	36.50%	28.22%	35.97%

Table 14. Summary of Road Investments, 2011-2015

Service delivery for maintenance works will increasingly be by contract. Starting at 10% for PGBh funds in 2011, contracted road works will comprise 30% of total maintenance funds by 2015. SLRF maintained roads will also be totally contracted out by 2012.

Fund Sources	2010	2011	2012	2013	2014	2015
Maintenance by Contract						
Provincial Gov't of Bohol	0%	10%	15%	20%	25%	30%
PRMF	0%	100%	100%	100%	100%	-na-
SLRF	74%	80%	100%	100%	100%	100%
Maintenance by Administration						
Provincial Gov't of Bohol	100%	90%	85%	80%	75%	70%
PRMF	0%	0%	0%	0%	0%	0%
SLRF	26%	20%	0%	0%	0%	0%

Table 15. Service Delivery Graduation (% Share of the Total Maintenance Fund)

Capacity Development

For capacity development, the Provincial Government has projected around P60 million for trainings and other capacity development activities in the next five years, around 8% or P4.6 million of which is projected to come from PRMF funds. Provincial government employee associations, namely the Bohol Provincial Employees League (BOPEL), the Bohol Association of Women in Government Service (BAWIGS), and the Bohol Provincial Employees Multi-Purpose Cooperative (BOPE-MPC) are also putting in substantive counterparts for their staff development initiatives ranging from organizational streamlining, personnel training, human resource systems development, other capacity development activities, to health and wellness. Table 15 summarizes the estimated costs of these initiatives.

HRMD Intervention Areas	Cost Estimate per Year					Total
	2011	2012	2013	2014	2015	
1. Organisational	1,255,000	1,105,000	1,105,000	1,005,000	1,005,000	5,475,000
2. Personnel	2,054,662	1,880,000	1,215,000	1,115,000	1,015,000	7,279,662
3. HR Systems	1,340,000	1,850,000	1,555,000	1,200,000	1,205,000	7,150,000
4. Other Capacity Development	2,056,601	1,449,520	510,000	135,000	35,000	4,186,121
5. Health and Wellness	2,074,000	8,186,500	8,186,500	8,186,500	8,186,500	34,820,000
Total	8,780,263	14,471,020	12,571,500	11,641,500	11,446,500	58,910,783

Table 16. Summary of Capacity Development Estimated Costs, 2011-2015

Evaluating and Reporting on Performance

Monitoring, evaluating and reporting on the implementation of the PRNDP are crucial to assess the effectiveness and usability of the Plan. Evaluating the performance is hinged on the following objectives:

1. To enable the Province to determine its status and progress against the PRNDP targets, objectives, and goals, and provide actionable information to stakeholders and decision makers; and
2. To enable the Province to improve PRNDP activities and subsequent plans, making it more effective in delivering what it should deliver.

M&E activities for the PRNDP are conducted within the framework and structure of the Provincial Project Monitoring and Evaluation System (ProMES) and works on the logical framework established within the Plan. Such activities reckon on set targets and determine whether desired outputs and outcomes are achieved within the covered timeframe. Involved offices and stakeholders also have to identify mechanisms and practices in the PRNDP implementation that need to be continued.

Specific to the PRNDP, monitoring and evaluation shall be conducted monthly by the PEO on road works, by the HRMDO on capacity development, and the concerned offices on their corresponding functions.

The M&E organization, structure, framework, data collection requirements, evaluation process, and reporting templates are found in Annexure 7.

Third Draft