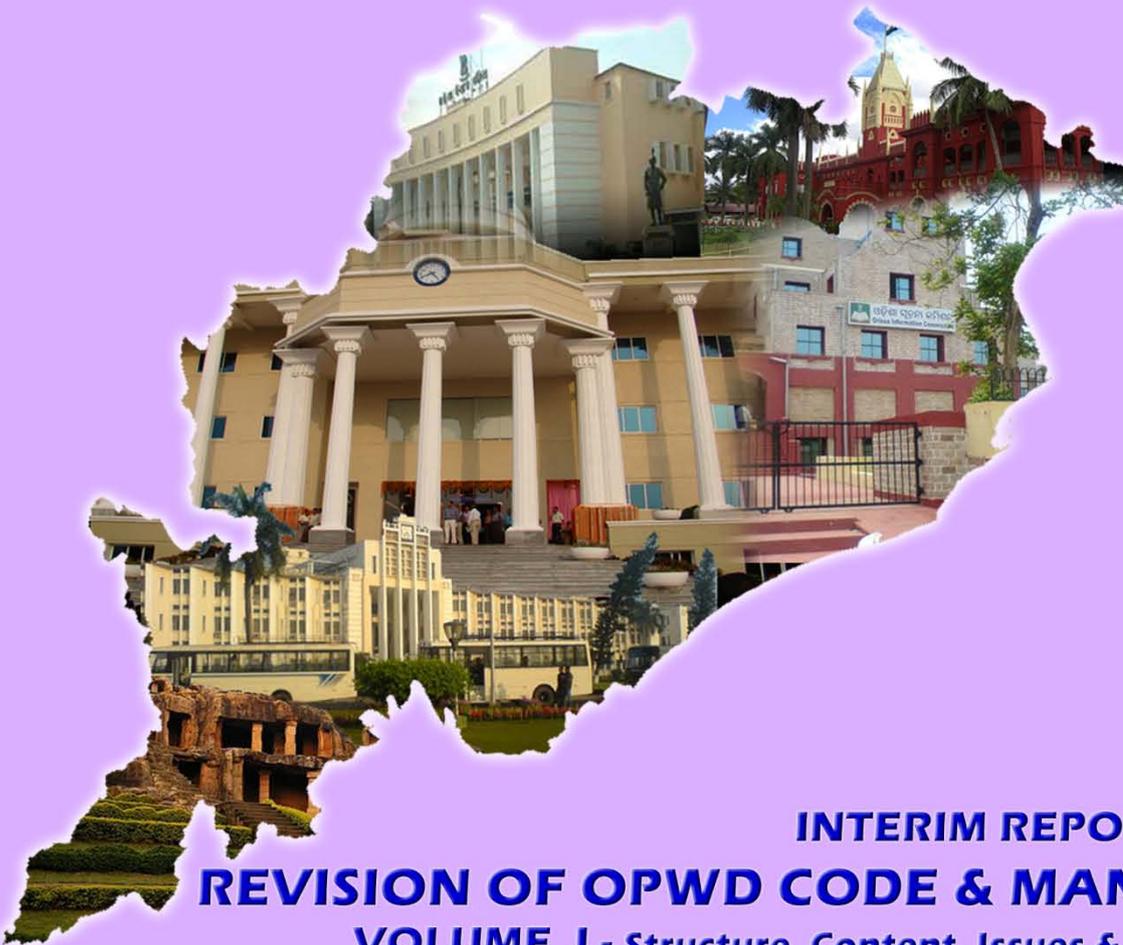




**Government of Odisha (GOO)
Chief Engineer, World Bank Projects, Odisha
Odisha State Roads Project**

**Consultancy Services for
Road Sector Institutional Development
Loan # 7577-IN**



**INTERIM REPORT ON
REVISION OF OPWD CODE & MANUAL
VOLUME I - Structure, Content, Issues & Timing**



**Intercontinental Consultants
and Technocrats Pvt Ltd**



In association with

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**Abbreviations**

AE	Assistant Engineer
CE	Chief Engineer
EE	Executive Engineer
EIC	Engineer in Chief
EPC	Engineering, Procurement & Construction
FYP	Five Years Plan
GIS	Geographical Information System
GOI	Government of India
GOO	Government of Odisha
GTAPL	Grant Thornton Advisory Pvt. Ltd.
HR	Human Resource
HRD	Human Resource Development
HRM	Human Resource Management
ICT	Information and Communication Technology
ICTPL	Intercontinental Consultants and Technocrats Pvt. Ltd.
IDS	Institutional Development Strategy
IEC	Information, Education and Communication
IRC	Indian Roads Congress
ISAP	Institutional Strengthening Action Plan
JE	Junior Engineer
KBK	Kalahandi, Nuapada, Bolangir, Sonepur, Koraput, Rayagada, Malkanagiri and Nawarangpur
LASA	LEA Associates South Asia Pvt. Ltd.
LCV	Light Commercial Vehicle
LWE	Left Wing Extremist
MD	Managing Director
MDR	Major District Road
MIS	Management Information System
MLA	Member of Legislative Assembly
MoRT&H	Ministry of Road Transport and Highways
MVD	Motor Vehicle Department
NABARD	National Bank for Agriculture and Rural Development
NGO	Non-Governmental Organisation
NH	National Highway
NHAI	National Highways Authority of India
OBCC	Odisha Bridge and Construction Corporation Ltd.
OD	Organisational Development



ODR	Other District Road
OPWD	Odisha Public Works Department
ORSAC	Odisha Space Application Centre
OSRP	Odisha State Roads Project
OSRTC	Odisha State Road Transport Corporation
OWD	Odisha Works Department
PMU	Project Management Unit
PPP	Public Private Partnership
PRD	<i>Panchayati Raj</i> Department
PWD	Public Works Department
R&B	Roads and Bridges
RD	Rural Development
RDC	Road Development Corporation
RDD	Rural Development Department
RDQP	Research Development and Quality Promotion
RIDF	Rural Infrastructure Development Fund
ROW	Right of Way
RR	Rural Road
RSA	Road Safety Assessment
RSAP	Road Safety Action Plan
RSID	Road Sector Institutional Development
RTA	Road Transport Authority
RTI	Right to Information
RTO	Road Transport Officer
RW	Rural Work
SBD	Standard Bidding Document
SCRB	State Crime Records Bureau
SE	Superintending Engineer
SH	State Highway
SPV	Special Purpose Vehicle
STA	State Transport Authority
SWOT	Strengths, Weaknesses, Opportunities and Threats
TL	Team Leader
TNA	Training Needs Assessment
ToR	Terms of Reference
ULB	Urban Local Body
VR	Village Road
WB	The World Bank



SECTION **1**

INTRODUCTION



1 Introduction

1.1 Project Background

The Government of Odisha (GOO) has developed an Institutional Strengthening Action Plan (ISAP) for the period 2008–18 to initiate restructuring and strengthening of institutions involved in road development and management. The ISAP 2008–18 has identified several key result areas to be addressed within a short term (2 years) to a medium term (2–5 years) horizon.

GOO has appointed **Intercontinental Consultants and Technocrats Pvt. Ltd (ICTPL), New Delhi, in joint venture with Grant Thornton Advisory Pvt. Ltd. (GT-APL), UK and in association with ARKITECHNO Consultants (India) Pvt. Ltd., Odisha**, to provide consultancy services for Road Sector Institutional Development (RSID) Study to assist in the realisation of ISAP objectives.

The Odisha Works Department (OWD) is the Client for this study and the contract for the consultancy services was signed on **16th March 2012** and the Consultant team has been mobilized on **9th April 2012**.

1.2 Project Objectives

The broad objective of consultancy services is Road Sector Institutional Development. However, the specific objectives of the RSID consultancy are:

- to enhance the institutional capacity of OWD and where appropriate, as well as other concerned GOO road sector agencies engaged in road infrastructure development
- to improve the engineering aspects and planning for the road network along with the road safety management in the State
- to initiate mechanism for sustainable future growth of the road sector with the resources dedicated to roads infrastructure development

1.3 Objective of the Report

The **revision of existing OPWD Code and preparation of a Manual and Standard Bidding Documents** are some of the major tasks under this project. This requires consultants to carry out detailed study of the existing OPWD Code and revise the same to equip OWD to meet all the potential future challenges envisaged in efficient management of public works in Odisha.

The report intends to meet the requirement of the Terms of Reference (ToR) – to submit the ‘Interim report of Draft OPWD Code and Manual’ by the end of month 9 from the inception of the project. The report explains in detail the issues and concerns with the existing OPWD Code, structure and contents of the proposed Code as well as consultant’s schedule of expected deliveries.

The report has two volumes as follows:

- **Volume I – Structure Content, Issues and Timing**



- **Volume II – Details of submitted chapters.**

1.4 Revision of OPWD Code and Manual – ToR

1.4.1 Scope of Work

The scope of work includes comprehensive revision and updating of the Odisha Public Works Department (OPWD) Code along with a Manual, giving the framework of policy, standards, responsibilities and powers for planning, project preparation, contracting and execution management of public works in Odisha (including Buildings), then assisting their submission for GOO endorsement and subsequently facilitating their promulgation/operationalization.

This involves inter alia:

1. updating of procedures, responsibilities and accountabilities through all the work stages from project inception/planning to completion, in conformity/consistency with GOI and GOO accounting and audit requirements;
2. revision of provision on dispute redressal mechanism(s) to acknowledge relevant 'complaints handling' and RTI Act aspects;
3. inclusion of new section on PPP policy, and guidelines on Environment and Social (safeguards) Management, on e-procurement requirements and processes, on Construction Zone Safety guidelines and on Road Safety Engineering/Design requirements;
4. assistance to OWD for completion of the already underway review/updating of contractual documents for all GOO procurement of goods, works and services, with their integration/cross-referencing in the contents to the revised Code and the Manual, wherever appropriate; and
5. facilitating workshops and other 'consultation' initiatives for the progressive review for evolving the revised draft Code and Manual in consultation with both OWD staff and other concerned GOO agencies at appropriate stages.

1.4.2 Deliverables

The deliverables under this task include:

1. Interim report on Revision of OPWD Code and preparation of a Manual (Structuring, Content, Issues, Timing)
2. Final revised OPWD Code, OPWD Manual, Procurement Manual and all Standard Bidding Documents (goods, works & services) after completion of related workshop/consultation with various stake holders.



SECTION 2

PREPARATORY WORKS

(REVIEWS AND CONSULTATIONS)



2 Preparatory Works (Reviews & Consultations)

The Consultants have carried out the following works to identify the gaps and the amendments/revisions required in the existing OPWD Code and to prepare the required deliverables before preparation of the Interim Report:

1. Detail study of the existing OPWD Code.
2. Review of Codes and Manuals of other Public Works Departments (PWDs) of other States and Central PWD.
3. Review of all circulars issued by GOO related to OWD's working in terms of Policy, planning, organizational matters, review of the amendments issued to the provisions of existing OWD Code.
4. Discussions with OWD Officers at various levels regarding shortcomings in the existing OPWD Code, Tender Documents, which were deliberated at length. Their views on the modifications and additions in the revised Code and Tender Documents were duly considered.
5. A detailed presentation for feedback was made on the proposed structure of Code, Bidding Documents and the Manual. The modifications proposed in the existing provisions and the additions which are proposed to be made in revised Code were discussed. During the presentation, chapter wise contents of the revised Code, Bidding Documents and Manual were also shown and discussed.
6. Based on the feedback from the OWD, the Chapters were reorganized and the contents of revised Code and Manual were finalized.
7. Various Chapters have been drafted and submitted to OWD and discussion/feedback is in progress.
8. The draft Standard Bidding Document (SBD) for Procurement of Works on e-procurement mode, draft SBD for Procurement of Goods and engagement of consultants for consultancy services were submitted to OPWD.
9. Regular interaction has been held with the designated team of officials of OWD to get their feedback on the proposed modifications, and these are being duly considered in finalizing the chapters/documents.



SECTION 3

CURRENT OPWD CODE (ISSUES AND CONCERNS)



3 Current OPWD Code (Issues & Concerns)

The following are the major gaps observed in the existing OPWD Code:

1. Construction Technology, Contract Management, Audit & Accounting rules and requirements and Project Management have undergone considerable change in the past couple of decades and their integration into the working of OWD is a mandatory requirement.
2. There have been changes in policy and legal aspects affecting the working of OWD. Prominent among them are the introduction of PPP Policy, RTI Act etc., and accordingly, these provisions have to form part of OPWD Code/Manual.
3. Several new technical guidelines in the form of IRC Codes, BIS Codes, and National Building Codes have come into existence and the Code/Manual has to change to reflect these new developments.
4. Issues pertaining to land acquisition and resettlement as per the recent government and court directives are not adequately addressed in the existing OPWD Code.
5. Assessment of social and environmental impacts due to infrastructure development and its mitigation measures to comply with recent government/court directives are not adequately addressed in the existing Code, and need review.
6. The issues pertaining to quality control and quality assurance of works, as required to meet the desired levels of quality in structures, have not been adequately addressed in the existing Code. The restructuring of the organization have become imperative and corresponding provisions need to be included in the revisions undertaken.
7. Considering the present cost index, limits of delegation of financial powers to officers need to be enhanced for effective functioning. But, this is not to be included in Code, as is the case in existing Code, and required to be included in the Manual.
8. The existing Invitation for Bids (IFB) and F1/P Contract form format is outdated and needs to be standardized as per Government of India (GoI) guidelines. There is no specific document for procurement of goods and engagement of consultants for consultancy services. These documents have to be updated leading to:
 - Standard Bidding Documents for procurement of Works, on e-procurement mode;
 - Standard Bidding Documents for procurement of Goods; and
 - Standard Bidding Documents for engagement of Consultants for consultancy Services.
9. OWD is adopting information technology (IT) based scientific approach for asset management/maintenance management and the provisions for these need to be addressed in the revised Code. GOO is strategically moving towards delivery of works through Public-Private Partnership (PPP) mode. The present Code does not have any provision for such arrangements.
10. The formation of budget, responsibility and accountability need to be addressed in the revised Code since there are no provisions for the same in the existing Code.



11. The present Code does not have any provisions for the OWD to comply with the Right to Information (RTI) Act, which has to be addressed.
12. Road Safety is a critical issue during design, construction, upgradation and operation of road network and this is not addressed in the existing OPWD Code.
13. The detailed procedure for Governance, Accounting and Audit needs to be attended.
14. Odisha Works Department does not have a Manual, which otherwise would have laid down the procedures for implementation of the provisions in the Code.
15. The administrative and technical powers of the Officers are dealt in the existing Code, whereas this should be in the Manual for time to time updation.

The following are the major modifications required in the Code and provisions in the Manual:

1. Modifications are required in the procedures for facilitating speedy execution.
2. The OWD Officers need to be delegated enhanced powers for faster decision making.
3. Provisions to include adequate project planning, detailed survey, geotechnical investigation and detailed project report.
4. Provisions for innovative technologies, life cycle cost analysis and integrated management.
5. Improved Human Resource Development (HRD) by providing entry/in service training, changes in transfer policy, Annual Confidential Report, promotion policy, etc.
6. Modifications need to be brought about in contracting system like e-procurement, prequalification of contractor etc.
7. The different modes of PPP such as Build-Operate and Transfer (BOT) model, Annuity based BOT model, Build-Own and Operate (BOO) model, Build-Own-Operate and Transfer (BOOT) model, Build-Lease and Transfer (BLT) model and Operate-Maintain and Transfer (OMT) model have been elaborated.
8. Provisions for engaging consultants in design, construction supervision and maintenance of works.
9. Redefining duties and responsibilities of OWD Officers to ensure improved performance.

The following provisions are proposed in the revised Code:

1. Comprehensive provisions for quality management of works;
2. Reference to the Standard Bidding Documents for Works, Goods and Services;
3. Procurement Manual with Standard Bidding Documents;
4. Provisions for IT based Road Asset Management/Maintenance Management;
5. Detailed provisions for Dispute Redressal, Arbitration, etc;
6. Information Technology and Management Information System;
7. Safety Management in design and construction;
8. Environment and Social Management;



Section 3: Current OPWD Code (Issues & Concerns)

Road Sector Institutional Development, Odisha

9. Land Acquisition: Details of Land Acquisition Act and OWD Officers' role;
10. Budget; and
11. Accounting Procedure and Audit.



SECTION 4

PROPOSED STRUCTURE OF THE REVISED OPWD CODE



4 Proposed Structure of the Revised OPWD Code

The existing Code has 6 Chapters are as shown below:

- Chapter I: Introduction
- Chapter II: Establishment
- Chapter III: Works
- Chapter IV: Public Buildings
- Chapter V: Miscellaneous Rules Excluding Accounts Procedure
- Chapter VI: Powers of Sanction of Govt. and of the Officers of Department in charge of public works

After discussions with OWD Officers, the Chapters 1 to 5 have been retained in the present form. However, various clauses are being modified, added or deleted, wherever necessary. As desired by the client, the Chapter 6 'Powers of Sanction of Govt. and of Officers of Department' in charge of public works, is proposed to be deleted from the revised Code, and now shall be made part of the Manual only on the lines of the CPWD Manual.

The topics which are not covered in the existing Code have been added as new Chapters. Consequently, the revised Code will have total 12 Chapters out of which chapters 1 to 5 will be the modification of the corresponding chapters in the existing Code. The remaining 7 Chapters (Chapters 6–12) are being drafted to cover topics which are not covered in the existing OPWD Code. The structure of the revised OPWD Code shall be as follows:

- Chapter 1: Introduction
- Chapter 2: Organisation & Establishment
- Chapter 3: Works
- Chapter 4: Public Buildings
- Chapter 5: Miscellaneous Rules
- Chapter 6: Budget, Accounts & Audit
- Chapter 7: Safety Management and Environmental Safeguards
- Chapter 8: Asset Management
- Chapter 9: Quality Management
- Chapter 10: Dispute Redressal, Arbitration and RTI
- Chapter 11: Public Private Partnership (PPP)
- Chapter 12: Information Technology (IT) & Management Information System (MIS)



SECTION 5

REVISED OPWD CODE – CONTENTS



5 Revised OPWD Code – Contents

The chapter wise modifications proposed in Chapter 1–5 of existing Code and contents of additional Chapters 6–12 with their justification are given in the following sections.

5.1 Modifications proposed in chapters (1–5) in existing OPWD Code

5.1.1 Chapter 1: Introduction

The following are the new provisions in this chapter:

- **General Background** – This will cover a brief history of Odisha PWD since its inception.
- **Revision of Code** – Details of earlier revisions and what is intended in the present revision.
- **Scope of Code** – Under this, scope of the new revised code is being highlighted.
- **Justification for revision of Code** – Under this various reasons due to which the Code has to be revised are being listed.
- **Function and Responsibility** – Under this, the function and responsibilities assigned to the officers of OWD and other engineering departments is highlighted.
- **Further Revision of Code** – Under this paragraph, guidelines for notifying changes in Code in the future is being given.
- **Interpretation of Code** – This indicates how provisions in the Code will be interpreted in case of disputes.
- **Instruction/Circulars under the Code** – Under this, standardization of procedure for issuance of instruction/circular related to the Code has been clarified.

The definitions of various terms and functionaries are retained in the existing Code. In addition, of definitions of officers/parties (for example, EIC, consultants etc.) not covered earlier have also been included. The definitions of major and minor works have been revised and the financial limits of the same have been amended. The list of the controlling officers of various departments with the government has been specified.

5.1.2 Chapter 2: Organisation & Establishment

The existing Chapter 2 of ‘Establishment’ is proposed to be renamed as ‘Organization and Establishment’ to cover both of these entities.

Organisation

The EIC, Chief Architect and others in Architectural establishment not included in the existing Code, are being added. While retaining this clause, a new sub clause is being added for creation of additional Circles, Divisions, Sub-divisions etc., based on work load and to take care of special projects taken up using new implementation models like PPP and other externally funded projects.



In addition, clauses have been added for updating establishment to adapt to latest technology, materials and work processes.

Duties Responsibility & Accountability:

- The clause is being modified to include duties and responsibilities of EIC, which are not described in the existing Code.
- Duties and Responsibilities of Chief Architect and other Architects as well as Chief Engineer (Design Directorate), are being added.
- The responsibilities of Superintending Engineers (SEs) are being modified to include supervision and quality control. The duties & responsibilities of SE (Electrical), SE (Mechanical) and other Engineers in their unit are being added, as the same was not provided in the existing Code.
- Some additional duties for Executive Engineers (EEs) and Assistant Engineers (AEs), and Junior Engineers (JEs) are being listed wherever considered necessary.
- A sub clause listing out accountabilities of officers are also being added. In addition, a sub clause indicating duties and responsibilities of ministerial staff, which were not provided, are added now.

Out Sourcing

A new clause is being added for outsourcing of services and activities such as horticulture works, housekeeping services, maintenance of buildings, etc., which is normally done by the Department.

Establishment

The matters pertaining to Establishment such as recruitment to various services, advancement/ career promotions, confidential reports and transfer of charges have been addressed in this chapter.

5.1.3 Chapter 3: Works

The existing Code covers the following topics under this chapter:

1. Classification of works
2. Basic Rules of Initiation of work
3. Requisition by Civil Officers
4. Preparation of Estimate
5. Contract
6. Sale and acquisition of land
7. Execution of works
8. Execution of works by Civil Officers
9. Deposit work

The points observed in this chapter on the existing Code, where changes are required, and the recommended revisions are shown below:

- Items to come under new road work, which were not clearly defined in the existing Code are now being defined;



- Major/Minor and Petty Works needed to be redefined by enhancing the financial limits of such works;
- There is a requirement to elaborate the clause on Administrative Approval to include proper requisition of work by Administrative Department and the way forward for building works. In addition, it is required to include the provisions for feasibility and Detailed Project Report (DPR) for Administrative Approval and Technical Sanctions of major projects;
- The circumstances requiring revision of estimate and approval needs to be elaborated;
- The cost of Petty Works needs to be redefined. Similarly, the clause on 'Preparation of Estimate' needs to be elaborated to include drawing/design and other calculations required for detailed cost estimate. The provision of Schedule of Rates (SoR) and methods to work out the same needs to be added;
- There is a requirement to provide for a committee which can revise SoR periodically to make the SoR consistent with the rates prevalent in the industry;
- The repairs and maintenance needs to be redefined to have clear understanding of ordinary repairs, periodic repairs and special repairs for buildings, roads and irrigation works;
- Provision under maintenance of roads need to be elaborated;
- Work program for road regarding upgradation of existing assets such as two laning, four laning, six laning etc. needs to be spelt out;
- Under contract sub-head, it is required to define all types of contract and elaborate them all;
- Turn key projects (EPC) is required to be defined;
- The procurement provision in this Code is to be deleted since, a procurement manual is being drafted which will substitute these procedures;
- The clause on land acquisition needs to be redrafted taking into consideration the amendment in acquisition system, which stands adopted/tested in other states;
- Role of departmental officer in land acquisition needs to be defined;
- Various sections of land acquisition need to be elaborated for proper understanding;
- Provision is needed for dealing with court cases in matters of land acquisition;
- Provisions need to be added for resettlement and rehabilitation for the affected persons due to land acquisition for upgradation of infrastructure;
- The procedure for carrying out deposit works from the other departments needs to be detailed and powers to undertake the deposit works to be clarified;
- The provisions need to be made to improve the work process to deal with the audit reports and timely submission to the office of Accountant General;
- Mode of operation and accounting has to be specified to ensure transparency in utilization; and
- Realization of deposit is an important issue which needs to be addressed properly.



The provisions in the existing Code have been amended to take care of the above observations. The original clauses are being modified/deleted and new clauses added to facilitate these changes in this chapter. The content and format of this chapter in brief are as follows:

1. Classification of Works	
i. Original works ii. Repair works iii. Works for Maintenance and operations, Minor.	iv. Major works v. Minor works
2. Basic Rules for Initiation of Public Works	
i. Introduction ii. Administrative Approval a. A/A for buildings, b. A/A based on DPR/Prefeasibility Study c. A/A for Addition & Alteration or change in scope.	iii. Technical Sanction iv. Allotment of Funds
3. Requisition of Civil Officers	
i. Procedures with regard to works costing less than Rs. 5 lakhs ii. Procedure with regard to works costing more than Rs. 5 lakhs iii. Procedure with regards to Repair works.	
4. Preparation of Estimate	
i. Schedule of Rates ii. Technical Committee for Schedule of Rate for uniformity iii. Provision of contingency in estimates iv. Estimate for Original Works a. Buildings b. Roads c. Bridges d. Embankments e. Canal Projects f. Storage Projects g. Town Water Supply Projects	v. Repairs or Maintenance and Operation a. Ordinary repair b. Periodic repair c. Special Repair d. Flood Damage Repair vi. Maintenance of Road vii. Work Program for Roads viii. Special Rules for preparation building repair estimates ix. Special Rules for preparation of Road estimates
5. Contract:	
i. General a. Item rate Contract b. Percentage rate Contract c. Lump Sum Contract	vi. Management Meetings vii. Sealing of bids & Tender documents viii. Security for Performance of Contract ix. Enforcement of terms and conditions of



d. Turnkey Contract (EPC) e. Work order f. Supply of Material	Contract
ii. Tender Documents	x. Officers empowered to Execute Contract
iii. Tenders	xi. Progress Report of Measurements on works executed under Contract
iv. Procedure for scrutiny of tenders	xii. Execution of Contract
v. Time Control	xiii. Extension of time
	xiv. Deviation from Contract
6. Sale and Acquisition of Land	
i. Procedure with regard to ownership like a. Private parties b. State Govt. c. Govt. of India d. Public Body	vii. Court Cases
ii. Role of departmental officers in Land Acquisition	viii. Takeover of Land by negotiation/consent
iii. Steps in Land Acquisition Activities	ix. Land Acquisition under externally aided projects
iv. Consent Award	x. Rehabilitation of Project affected person
v. Possession of Land	xi. Supervision of Land Acquisition process
vi. Payment of Annuity	xii. provision to deal with land held for Military proposes
7. Execution of works	
i. Commencement of Work	v. Advances to the Contractor
ii. Scope of Sanction	vi. Sanitation on extensive work
iii. Lapse of Sanction	vii. Information to be given to Survey Dept.
iv. Misc. Rules for Execution of Work	
8. Execution of works by Civil Officers	
9. Deposit Works	
i. Definition and General description of Deposit Work	iv. Realization of Deposit
ii. Procedure before undertaking deposit work	v. Execution of deposit works and settlement of Account
iii. Powers to undertake deposit work	

5.1.4 Chapter 4: Public Buildings

Observations on the existing provisions and notes proposed for improvement are as follows:

- Clause on General Rules needs to be amended to provide for proper inventory both in hard copy and digital form.



- The provision of fire protection needs to be revised to provide for latest fire detection and fire-fighting system.
- New provisions are required to be made for hiring of building for Government use.
- Provisions of furniture in office buildings, rest houses and residences of high dignitaries need to be revised since the existing provisions are out dated.
- Similar modifications are required to be made for provisions of furniture in Governor's residence.
- The existing clause on sale and dismantlement of buildings needs to be modified and redrafted to bring clarity in its operation.
- Need to provide for Hiring Committee for hiring private buildings for office purpose.
- Need to define area requirement for the office of all levels of staff and officers to set uniform standard.
- The clause for renting of public buildings needs to be redrafted to make it simpler and without ambiguity.
- The detailed provision of inspection of public buildings is proposed to be replaced by brief details. The details shall be made part of the Manual.
- The clause on residences for Government officials needs to be redrafted for better allotment control and to guard against unauthorized occupation of Government residential buildings.
- Buildings of historical interest are to be attended under the guidance of the Archeological Department and budgetary provisions need to be provided for the same.

The original provisions under this chapter is proposed to be modified/deleted or new provisions added to take care of above mentioned deficiencies.

The Contents of this Chapter and its format are as follows:

Section	
1. General Rule – <i>Register of building, use of building, insurance of buildings, provision of Fire protection, Hiring of building etc.</i>	8. Public health management, water supply and electrical installations in buildings
2. Fixture and Furniture	9. Building of Historical Interest
3. Furniture of Governor's residence – <i>Certificate for verification of Furniture</i>	10. Inspection of Public building
4. Purchase & Sale of building – <i>Purchase of building, Sale and dismantle of buildings</i>	11. Residences for Govt. Official – <i>Unauthorized Occupation</i>
5. Hiring of Office Accommodation	12. Lease of buildings
6. Renting of Building	13. Provision of residences
7. Taxes of Public Building	14. Procedure for Reduction in Rent
	15. Periodical review of Concession

5.1.5 Chapter 5: Miscellaneous Rules

The following are the contents of this chapter:



- a. Initial records of accounts of works (Muster Roll, Measurement books, Machinery Log book)
- b. Stores

The Observations on existing provision and proposed amendments are as follows:

- The existing provisions with regard to Muster Roll, Measurement books and Log books are generally in order but needs to be redrafted to be more specific and concise.
- Power to dispense with the measurement given to AE needs to be deleted as it is not a regular practice.
- Action after loss of measurement books to be redrafted in line with provisions in CPWD manual. This is an important issue and existing code does not address it adequately.
- The clause on review of Measurement Books in Division office needs to be redrafted to provide for clarity.
- Clause on custody of cash also need to be redrafted, to enable efficient work process
- The clause for Cashier and Divisional Account needs to be rephrased for clarity.
- The general clause on Stores (procurement and maintenance) needs to be redrafted to take care of computerization of store management in OWD.
- The provision for custody of Stores needs to be redrafted to elaborate the system.
- In acquisition of Stores including tools and plants, provisions need to be added to guard against excess and exorbitant purchases.
- The clause for tools and plant need to be redrafted for clarity.
- Procedure for independent physical verification of Stores needs to be added as the same is not provided in the existing Code.
- The clause on loss of Stores due to theft, fraud and negligence need to be redrafted and provisions need to be added for clarity and effective control.
- Provision to deal with surplus and unserviceable Stores needs to be revamped to streamline the procedure.
- The clause for mathematical instruments needs to be rewritten to cater to the present system.
- The clause on recording plans and drawings need to be rephrased in concise manner with stipulation of digital form of records.

The provisions under this chapter are proposed to be modified/deleted and new provisions added to remove above mentioned deficiencies in this chapter. The contents and the format of this chapter in brief will be as follows:

Section
1. Initial Records of Account
i. Muster Roll



ii. Measurement Book	
iii. Machinery Log Book	
2. Custody of Cash	
i. Responsibility of Govt.	
ii. Cashiers	
3. Stores	v. Acquisition of Stores
i. Stock or General Stores	a. Stock – Taking
ii. Tools and Plant	vi. Disposal Stores
iii. Road Metal	a. Loss of Stores
iv. Material Charged direct to work	b. Sale of Stores
	c. Surplus and unserviceable Stores
	vii. Mathematical Instrument
4. Store Keeper	
5. Departmental Workshop	
6. Transfer of Charge	
7. Recording of Plans and Drawings	
8. Destruction of Records	

5.1.6 Chapter 6: Budget, Accounts and Accounting procedure

The old Chapter VI (Power of Officers) is proposed to be deleted and shifted from the Code as decided by OWD and proposed to be covered in the Manual, following the practices adopted in CPWD. The new chapter VI will contain Budget and the Accounting procedure. Both of these new topics were not addressed adequately in the existing OPWD Code and therefore, the same has been detailed out in the new chapter 6. The necessity of these topics for their inclusion in the revised Code and their contents are given below:

Budget Estimates, Duties and Responsibilities of the Officers:

Budget is an important legislative function and substantial part of it pertains to OWD. It is therefore considered necessary that this subject be included in OPWD Code so that OWD Officers are well conversant and able to fulfill their part of duty in this regard.

Similarly, Accounts and Accounting Procedures are the key to the work process in OWD, and therefore, proposed to be made part of the revised Code.

The details on Budget under this chapter are based on 'Odisha Budget Manual' and 'CPWD Works Manual' which are suitably modified to meet the procedures prevailing in OWD. The brief contents in this part of the Code, and its format are as follows:

Section	
1. General: To cover definitions, main heads	9. Final Budget



<p>of expenditure like voted & charged.</p> <ol style="list-style-type: none"> 2. Preparation of Budget: Details about stages of budget. 3. Forms of Budget 4. Head of Account 5. Revised Estimate 6. Budget Estimate 7. Rules for preparation of budget Estimate 8. New Schemes – (i) List of new schemes (ii) Seeking approval of Finance (iii) Processing by Finance 	<ol style="list-style-type: none"> 10. Savings Excesses and Supplementary Demands 11. Distribution of Grants 12. Reconciliation of Accounts 13. Appropriation and Re-appropriation of Accounts
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Accounts and Accounting Procedures:

These are based on references adopted from ‘Accounts and Audit Code Vol. I and III, GOO and CPWD Manual.

The contents in brief and the format of this part of the Chapter are shown below:

Sections	
<ol style="list-style-type: none"> 1. General – General Concept of Accounting 2. Accounts in Odisha PWD <ol style="list-style-type: none"> i. Expenditure on Public Works ii. Suspense head of Account iii. Cash Account iv. Maintenance of Cash book and rectification of Errors v. Imprest Account vi. Working directions vii. Temporary Advance Account 3. Cheque Books 4. Monthly Settlement 5. Stores Account <p>Stock – Stock receipts, Stock issues, Bin card, Abstract of transactions, Function in division office.</p> 	<ol style="list-style-type: none"> 6. Suspense Account –Purchase, Stock, MPWA, Workshop suspense, Values found Surplus and deficit 7. Transfer Entries in PW Accounts 8. Accounts of Works – Initial Record, Work Abstract, Register of works, Contractor’s Leger, Register of Deposits 9. Monthly Accounts 10. Accounts of March 11. Responsibility of Divisional Accountant in Compiling Accounts 12. Audit and Inspection – AG/Director of Audit Inspection, Inspection Reports, Procedure in Division Office, Procedure in Circle office.

5.1.7 Chapter 7: Safety Management & Environment Safeguard

The safety in design, construction, maintenance and operation must be an essential part of work process in PWD. The modern construction practices require high level of safety management. To ensure safety in all aspects of works, necessary provisions need to be added to the OPWD Code. In



view of the above, a separate chapter for ‘Safety Management’ is included in the revised OPWD Code.

Similarly, the issue social and environmental impacts, assessment and mitigation are to be addressed in all major projects undertaken by OWD, and therefore, necessary provisions to cater for these needs to be included in OPWD Code, and similarly in the Manual.

Brief contents and the format with regard to safety management being included in the revised OPWD Code, which is as follows:

Sections	
1. General	5. Technical Resource through Road Safety Cell
2. Safe Road System (SRS) – Plan, Do, Check and Act (PDCA) approach adopted	i. Road Safety in Division
3. Co-ordination among departments like OPWD, Motor Vehicle, Police, Town Planning, Health etc. necessary	6. Monitoring and Evaluation
i. Accountability	i. Periodic Review
ii. Specific Role	ii. Non – Conformity and Corrective action
4. Safety Engineering for Roads	iii. Continual Improvement
i. Road Safety Audit	7. Building and Structure Safety
ii. Road Safety Assessment for existing Roads	8. Electrical Safety
iii. Improvement of Black Spots	9. Public Safety
iv. Construction Stage Safety	10. Safety features of Water Supply and Sanitation Works
v. Pre-opening Stage Safety Audit	11. Fire Safety
	12. Workers Safety
	13. Personal Protective Equipment

The contents for social and environment management are also given in brief, and the format of this in the Chapter is as follows:

Section	
1. General	5. Environmental and other related clearness
2. Environmental Management	6. Regular Works/Projects – Standard Environment Management Plans (EMP)
a. Introduction	7. Conduction Environment Impact Assessment (EIA) and Preparation of Environment Management Plans (EMP)
b. Issues affecting environment adversely due to use of Land for construction and its mitigation,	8. Social Impact Management
c. Air – Air pollution due to construction activity and measures to control,	a. Social Impact Assessment
d. Water–Water pollution due to	b. Social Issues and Counter Measures



<ul style="list-style-type: none"> e. Noise and Vibration – Disturbance due to construction and measures to control. f. Flora & Fauna – Adverse effect on them and measure to control. 3. Environmental regulation <ul style="list-style-type: none"> a. National Level Legislation b. State Level Legislation c. Other related Legislation 4. Implementing Organization <ul style="list-style-type: none"> a. Ministry of Environment & Forest b. Central Pollution Control Board (CPCB) c. Odisha State Pollution Control Board (OSPCB) d. Odisha State Forest Department 	<ul style="list-style-type: none"> c. Social Screening and scoping Process (Categorization) 9. Key Elements of SIA process <ul style="list-style-type: none"> a. Scoping b. Profiling c. Public Consultation and Participation d. Mitigation, Monitoring and Management e. Audit f. Engagement of Consultant
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5.1.8 Chapter 8: Asset Management

The Present OPWD Code does not provide for data led asset management, which is being taken up by all Departments. This subject is related to record and upkeep of public assets, and therefore, forms an important part of OWD functions. Since OWD maintains significant public assets, it was considered necessary to be included in the revised OPWD Code on the lines of other States.

This chapter will cover Right of Way Management, GIS and Road/Building/Irrigation asset management. The brief contents and the format of this Chapter are as follows:

Sections	
<ul style="list-style-type: none"> 1. General : General details of Assets maintained by OWD 2. Asset inventories 3. Land Management – What is Land management, check of boundaries, Encroachments, Surplus Land 4. Management of Road <ul style="list-style-type: none"> i. Road Land ii. Prevention of Unauthorized occupation, iii. Building and Control Lines, iv. Regulation of Construction for Public Utilities and Drains, v. Median openings & unauthorized median cuts 	<ul style="list-style-type: none"> vi. Location & Layout of Petrol Pumps, vii. Location of bus stands viii. Road Side Advertisements, ix. Removal of obstructions, x. Traffic Survey & Axle Load Survey xi. Preventing overloading. 5. Maintenance of Asset – <ul style="list-style-type: none"> i. Input based maintenance ii. Performance based maintenance iii. Toll based maintenance 6. Geographical Information System (GIS) 7. General Policy



5.1.9 Chapter 9: Quality Management

In view of greater emphasis on quality management in construction and maintenance of all public works, it is considered necessary to have a chapter exclusively for quality management. Necessary provisions for quality control, quality assurance and quality audit of all public works have been incorporated in this chapter.

The brief contents of the chapter in revised OPWD Code are as follows:

Section	
1. General : Aspects covered in the term Quality	7. Function and Responsibility of Chief Engineer (Quality Assurance)
2. Quality Management System	8. Water used for Construction
3. Quality Assurance	9. Field Laboratories
4. Quality Assurance Manual	10. Outside/Independent testing facility
5. Quality Management Plan (QMP)	11. Quality Control
i. QMP in tender document	i. Quality Control of Material
ii. Submission of method statement by Contractor	ii. Process Control
iii. Contractors designs based items	iii. Performance tests
iv. Quality Assurance of Materials	iv. Supervision and Checking
6. Responsibility for Quality Assurance	12. Quality Audit

5.1.10 Chapter 10: Dispute Resolution, Arbitration and RTI

The present OPWD Code does not cover work procedure for dispute redressal and arbitration. In view of increasing cases of litigation and its importance in view of sizeable public expenditure involved, it is considered necessary to include this in revised Code so that, OWD officers are well conversant with the process and better equipped to deal with them. Provisions are made to reduce the legal implications for the department and early completion of the projects. The work process to comply with the provisions made in the RTI Act has been addressed in the Manual.

The contents of this chapter are generally based on Haryana PWD Code and CPWD Code. The brief contents and its format are as follows:

Section	
1. Dispute Redressal and Arbitration	2. Arbitration
i. Disputes	i. General Provision regarding Arbitration
ii. Disputes at different stages of the Project,	a. Law governing Arbitration
iii. Dispute Redressal	b. Settlement during Arbitration proceedings
iv. Dispute in Consultancy Services	c. Application for Appointment of



<p>v. Dispute of Foreign aided or Centrally funded projects</p>	<p>Arbitration</p> <p>d. Processing of application for appointment of Arbitrator</p> <p>ii. Procedure after filing of Award</p> <p>iii. Period of Limitation</p> <p>iv. Dispute Redressal Committee</p>
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5.1.11 Chapter 11: Public Private Partnership (PPP)

GOO Planning and Co-ordination Department vide resolution no. 12711/PPP35/2006 dated 7 August 2007, have issued 'Orissa Public Private Partnership (PPP) Policy, 2007' specifying that the PPP approach is well suited for the infrastructure sector as it supplements scarce public resources, creates a more competitive environment to improve efficiency and reduce cost. GoI has also formed National PPP Policy and large number of infrastructure projects has been undertaken in PPP mode successfully. It is, therefore, considered necessary to have an exclusive chapter on this subject in the revised OPWD Code.

The proposed chapter 11 deals with institutional arrangements, project procurement process, monitoring of construction, operation and maintenance, completion certificates and dispute resolution for projects taken up under PPP mode.

The chapter has been drafted based on National PPP Policy and quoted resolutions of GOO and Haryana PWD Code. The brief contents of this chapter are as follows:

Section	
<p>1. General</p> <p>i. User free Build Operate and Transfer (BOT) model</p> <p>ii. Annuity based BOT model, (iii) Build Own and Operate (BOO) model</p> <p>iii. Build-Own-Operate and Transfer (BOOT) model</p> <p>iv. Build- Lease and Transfer (BLT) model</p> <p>v. Operate-maintain and Transfer (OMT) model.</p> <p>2. Institutional Arrangement</p> <p>i. State Level</p> <p>a. High Level Clearance Authority (HLCA)</p> <p>b. Empowered Committee on Infrastructure.</p>	<p>ii. Department Level – PPP Cell to be headed by EIC and supported by 1 SE, 2 EEs and 4 AEs.</p> <p>3. Project Procurement Process</p> <p>i. Identification of Project,</p> <p>ii. Bid Document,</p> <p>iii. Invitation of Bids,</p> <p>iv. Financial Clause.</p> <p>4. Independent Engineers</p> <p>5. Change of Scope</p> <p>6. Operation and Maintenance</p> <p>7. Completion Certificate</p> <p>8. Project Hand over and Defect Liability period</p> <p>9. Termination</p> <p>10. Steering Committee</p> <p>11. Dispute Resolution</p>



5.1.12 Chapter 12: Information Technology & Management Information System

Information Technology (IT) and Management Information System (MIS) has become an important tool for upgradation of departmental procedures and improving the efficiencies in all aspect of OWD work process, starting from initiation of the project to its completion, monitoring at all stages, etc. In view of the above, it is considered essential to make this part of revised OPWD Code, and also the Manual.

The chapter 12 shall be drafted based on references to various studies, Kerala PWD Manual, ToR of OWD project for strategy formulation of IT-ICT-MIS.

The brief contents of this chapter are as follows:

Section	
1. General – Information technology Act 2000, Govt. of Odisha ICT Policy 2004, Draft ICT Policy 2012 etc.	6. Integrated Computerised Management Information System
2. Organisation	7. Financial management System(FMS)
3. Functions	8. Geographical Information System (GIS)
4. Current status and long term objectives	9. Road Maintenance Management System (RMMS)
5. Web base Information and Governing system (WINGS)	10. IT-MIS strategy formulation and implementation



SECTION 6

REVISED OPWD CODE-TIMING



6 Revised OPWD Code – Timing

The preparation of OPWD Code required significant consultation and feedback from officers of the Department at various levels. In addition, the circulars issued by the GOO had to be reviewed to understand the amendments carried out in the working procedures. The ToR required that the submission of Interim Report with reference to the revision of existing OPWD Code shall be made by October 2012, which was subsequently revised to December 2012.

Following discussions with the OWD representatives who were assigned to review the suggested revisions in the Code, it was decided that the revisions shall be presented in a matrix format with justifications for change so that reviewers can evaluate and comment on the submissions. This was not envisaged at the time of submission of Inception Report, and hence this required to revise the schedule and format of submissions.

Accordingly, it was agreed with the Client to present each chapter in a matrix form for review and acceptance, following which the Consultants have submitted 9 chapters as per the schedule shown in **Table 6-1**.

Table 6-1: Schedule of Submitted Chapters of Revised OPWD Code

Sl. No.	Chapters Submitted	Date of Submission	Feedback Received	Whether approved
1.	Chapter 1 – Introduction	20/04/2013	Yes	Yes
2.	Chapter 2 – Organisation & Establishment	02/05/2013	Yes/ Partial	
3.	Chapter 3 – Works	17/05/2013	Yes/ Partial	
4.	Chapter 4 – Public Buildings	25/05/2013		
5.	Chapter 5 – Miscellaneous	19/06/2013		
6.	Chapter 8 – Asset Management	07/06/2013		
7.	Chapter 9 – Quality Management	07/06/2013		
8.	Chapter 10 – Dispute Redressal, Arbitration and RTI	07/06/2013		
9.	Chapter 11 – Public Private Partnership	07/06/2013		

The details of submissions of the above chapters are shown in Volume II of this report.

In addition to the above, SBDs for the procurement of Works, Goods and Services were submitted on 25th January 2013. The review of the same is in process with the Client, and the modified copy of the SBDs shall be submitted after the receipt of feedback/comments from the Committee formed by EIC for this task. The planned date of submission of modified copies of SBDs is 15th July 2013.



In addition to the above, it was requested by the Client and ISAP facilitator Mr. Murahari Reddy during the World Bank mission to provide appraisal of the standard Engineering Procurement Contract (EPC) documents circulated by the GoI for adoption by the GOO. Subsequently, the appraisal of EPC document was submitted on 17 June 2013.

The revised schedule of submission of OPWD Code and the Manual was discussed during the World Bank mission on 11-13 April 2013, and in the subsequent Aide Memoire issued by CE (World Bank) vide letter no. PMU (WB) – 33/2012 dated 01 June 2012, it was mentioned that the task of ‘Code and Manual Revision’ shall be completed by end of 2013.

It is important to note that the review and feedback on the submitted chapters needs to be expedited to achieve the agreed milestones. The schedule of future submissions planned by the Consultants to complete the task by end of this year is shown in **Table 6-2**.

Table 6-2: Schedule of Remaining Submissions

Sl. No.	Items	Scheduled date of Submission
1.	Chapter 6 – Budget, Accounts and Audit	30/06/2013
2.	Chapter 7 – Safety Management and Environmental Safeguards	30/06/2013
3.	Chapter 12 – IT and MIS	30/06/2013
4.	Final OPWD Code	*30/08/2013
5.	Draft OPWD Manual	*30/09/2013

**Subject to the provided, receipt of feedback (comments/suggestions) from the Client on all chapters by 30th July 2013.*



SECTION 7
CONCLUSION



7 Conclusion

The existing OPWD Code was originally framed and came in force in 1976, and since then number of amendments have been carried out to reflect the periodic changes in technology and methods of construction. However, due to the rapid changes in technologies in infrastructure delivery and contracting industry during the last decade, it has been realized by the GOO that the OPWD Code needs a comprehensive revision to achieve the efficient delivery of public services.

The Consultants, engaged in the revision of OPWD Code and preparation of the Manual, have carried out a thorough review of the existing Code and determined the gaps in the existing code, referring to the best practices in other selected States and CPWD Manual. Subsequently, the following major changes in structure and additional documents have been proposed by the Consultants and accepted by the Client.

1. Chapter 1 to 5 chapters will remain as it is, but with significant changes and updating
2. Chapter 6 – Powers of Sanction of Government and of Officers of Department In-charge of Public Works will be deleted from the Code and shall be the part of Manual only
3. New seven chapters are added as follows:
 - Chapter 6 – Budget, Accounts and Audit;
 - Chapter 7 – Safety Management and Environmental Safeguards;
 - Chapter 8 – Asset Management;
 - Chapter 9 – Quality Management;
 - Chapter 10 – Dispute Redressal, Arbitration and RTI;
 - Chapter 11 – Public Private Partnership; and
 - Chapter 12 – IT and MIS.
4. New SBDs for Procurement of Works, Goods and Services
5. New OPWD Manual, which will detail out the methodology to follow for the work procedures addressed in the Code.
6. The manual will also have a section for RTI under Chapter 10.

The Consultants are holding continuous discussions with the committee appointed for finalising the Code. Based on their suggestions, the various chapters are being finalised.

The submissions of complete set of the above documents have been planned before December 2013, as agreed with the Client and the World Bank.



SECTION 8
REFERENCES



8 References

1. Government of India, Central Public Works Department Manual, New Delhi, 2012.
2. Government of Kerala, Public Works Department, Kerala Public Works Department Manual, Kerala, 2012.
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5. Government of Odisha, Odisha Works Department, Odisha Public Works Department Code, Edition 2012.
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10. Bureau of Indian Standards, National Building Code of India, BIS, 2005.