



**Directorate of Town Planning  
Government of Odisha  
Bhubaneswar**

No - 6269 / DTP.

Date - 04/12/2018

**REQUEST FOR PROPOSAL FOR PREPARATION OF GIS / RS BASED  
MASTER PLAN FOR 24 (TWNETY FOUR) TOWNS OF ODISHA**

Directorate of Town Planning, Government of Odisha invites “**REQUEST FOR PROPOSAL FOR PREPARATION OF GIS/RS BASED MASTER PLAN FOR 24 (TWENTY FOUR) TOWNS OF ODISHA**” .ie. Rayagada, Koraput, Paralakhemundi, Deogarh, Anandpur, Joda, Nowarangpur, Malkangiri, Sunabeda, Udala, Padampur, Daspalla, Niligiri, Kamakhyanagar, Patnagarh, Bhuban, Kesinga, Hindol, Khariar Road, Dhamnagar, Gunupur, Karanjia, Titilagarh, and Jaleswar .Towns. The RFP Documents will be available from **Dt.11/12/2018 to Dt.11/01 /2019**. The RFP documents can be downloaded from [www.urbanodisha.gov.in/www.odisha.gov.in](http://www.urbanodisha.gov.in/www.odisha.gov.in) .The last date of submission of proposals is **Dt.14/01/2019 by 4.00 PM**. The Pre-bid meeting will be held on **Dt.21/12/2018 at 11.00 AM** in the Office Chamber of the Director of Town Planning, Odisha, Unit-V, Power House Square, Bhubaneswar-751001. **Please refer the RFP documents for further details.**

Sd/-  
Director, Town Planning  
Government of Odisha

# **REQUEST FOR PROPOSAL**

## **Preparation of GIS/Remote Sensing based Master Plan for 24 (Twenty four) Towns of Odisha**

**Invited by**

*Director of Town Planning, ODISHA  
Bhubaneswar  
On behalf the Regional Improvement Trust &  
Special Planning Authority*



**REQUEST FOR PROPOSAL FOR PREPARATION OF GIS/RS BASED MASTER PLAN  
FOR 24 (TWENTY FOUR) TOWNS OF ODISHA**

Sealed offers are invited for preparation of GIS/Remote Sensing based Master Plan for the following Towns. Interested entities qualifying the Eligibility Criteria mentioned in the Bid Document may participate through **Submission of their Technical and Financial Bid for maximum four Towns** as described below: Separate Bids are to be submitted for each towns with separate technical and financial bids duly sealed for each town putting them together in another envelope **super scribing the name of the town.**

**Table. -1. GIS/RS Based Master Plans for 24 (Twenty four) Towns**

Sl.No	Name of Towns	Bid document available from Planning Authority / website	Cross Demand Draft payable in favour of Planning Authority
1	2	3	4
1.	Rayagada	SPA, Rayagada	Special Planning Authority, Rayagada payable at Rayagada
2	Koraput	KRIT, Jeypore	Secretary, Koraput Regional Improvement Trust, payable at Jeypore.
3.	Parlakhemundi	SPA, Parlakhemundi	Special Planning Authority, Parlakhemundi payable at Parlakhemundi
4	Deogarh	SPA, Deogarh	Special Planning Authority, Deogarh payable at Deogarh
5.	Anandpur	SPA, Anandpur	Special Planing Authority, Anandpur, payable at Keonjhar
6.	Joda	SPA, Joda	Special Planning Authority, Joda, Payable at Keonjhar.
7.	Nawarangpur	SPA, Nawarangapur	Special Planning Authority, Nawarangpur payable at Jeypore.
8.	Malkangiri	KRIT, Jeypore	Secretary, Koraput Regional Improvement Trust, payable at Jeypore.
9.	Sunabeda	KRIT, Jeypore	Secretary, Koraput Regional Improvement Trust, payable at Jeypore.
10.	Udala	SPA Udala	Special Planning Authority, Udala, Payable at Baripada.
11.	Padampur	SPA Padampur	Special Planning Authority, Padmapur Payable at Baragarh
12.	Daspalla	SPA Dasapalla	Special Planning Authority, Dasapalla Payable at Bhubaneswar.
13.	Nilagiri	BRIT Balasore	Chairman Balasore Regional Improvement Trust, payable at Balasore
14	Kamakhyanagar	DRIT Dhenkanal	Secretary, Dhenkanal Regional Improvement Trust, payable at Dhenkanal
15	Patnagarh	SPA Patnagarh	Special Planning Authority, Patnagarh Payable at Patnagarh.
16	Bhuban	DRIT Dhenkanal	Secretary, Dhenkanal Regional Improvement Trust, payable at Dhenkanal
17	Kesinga	SPA Kesinga	Special Planning Authority, Kesinga Payable at Bhawanipatna
18	Hindol	SPA Hindol	Special Planning Authority, Hindol Payable at Dhenkanal.

19	Khariar Road	SPA Khariar Road	Special Planning Authority, Khariar Road, Payable at Bhawanipatna.
20	Dhamnagar	SPA Dhamnagar	Special Planning Authority, Dhamnagar, Payable at Bhadrak.
21	Gunupur	SPA Gunupur	Special Planning Authority, Gunpur Payable at Rayagada.
22	Karanjia	SPA Karanjia	Special Planning Authority, Karanjia, Payable at Baripada
23	Titilagarh	SPA Titilagarh	Special Planning Authority, Titilagarh, Payable at Titilagarh
24	Jaleswar	BRIT, Balasore	Chairman, Balasore Regional Improvement Trust, payable at Balasore.

Image Derived Digital Cadastral Revenue Maps showing Existing Land use of the area prepared from satellite data and depicted on revenue maps in GIS formats will be supplied to the bidders for the above mentioned 24 (Twenty four) Towns as indicated in Table-2 below as an input for preparation of the Master Plans.

**INFORMATION ON CAPTURING SATELLITE DATA FROM ORSAC, BHUBANESWAR**

**Table-2.**

Sl.No.	Name & Year of Image Capturing Data	Name of the Towns
1	2	3
1	World View – 0.5 , 2012 .	Rayagada, & Anandpur,
2	Cartosat-2 – 2014	Koraput, Parlakhemundi, Deogarh, Nowarangpur, & Malkangiri,
3	Cartosat -2 – 2015	Joda (Cartosat -2)
4	World View 0.5 - 2015	Sunabeda,Udala,Padampur,Dasapalla,Nilagiri, Kamakhyanagar,Patnagarh,Bhuban,Kesinga, Hindol,KhariarRoad,Dhamnagar,Gunupur,Kar anjia,Titilagarh & Jaleswar.

The Bid Document indicating the Terms of Reference, Scope of the work and Bid Formats can be obtained from Directorate of Town Planning Odisha for the Towns as indicated in the Column 2 (two) of above table-1 on payment of Rs.5,000/-(five thousand) in shape of Crossed Demand Draft ( non-refundable) in favour of the Concerned Planning Authority on any working day between **Dt.11/12/2018 to Dt. 11/01/2019** Bid document for individual towns of 24 (Twenty four) towns as mentioned above have been uploaded in the website which can be downloaded from [www.urbanodisha.gov.in/www.odisha.gov.in](http://www.urbanodisha.gov.in/www.odisha.gov.in) and Crossed Demand Draft of **Rs. 5000/- (Rupees Five thousand)** only payable in favour of Planning Authority is to be deposited along with the downloaded RFP & Deed of Agreement document while submitting the offer. **Separate Technical and Financial Bid individually/sealed for each town and put together in one sealed envelope “Superscribing Name of Town” is to be submitted.**

The last date of sale of tender paper is up to **Dt. 11/01/2019** and the bids are to be submitted by Speed Post/Courier/ Registered Post so as to reach **Directorate of Town Planning, Odisha, Bhubaneswar, Power house square Unit-V, Bhubaneswar-751001** on or before **4.00 PM Dt.14/01/2019** which will be opened **at the Office Chamber of Director of Town Planning, Odisha, Bhubaneswar on Dt. 15/01/2019 at 11.00 AM** in the presence of the bidders or their authorized representatives. **No drop box facility** is available for submission of bid.

**Pre Bid meeting** clarifying doubts and queries about the RFP and Deed of Agreement will be held on **Dt.21/12/2018 at 11.00 AM** in the Office Chamber of the Director of Town Planning, Odisha, Bhubaneswar. Tender receiving authority reserves the right to cancel any or all offers without assigning any reason thereof. For further clarification please contact Directorate of Town Planning, Odisha, Bhubaneswar through Land line No. :- **0674-2531319** of the Directorate Office, E-mail:-**dtpodisha@gmail.com**

Sd/-  
**DIRECTOR.**  
**Town Planning Odisha**  
**Bhubaneswar**

## **ABOUT THE BID DOCUMENT**

The Bid document comprises of the followings ;

- SECTION- I: OBJECTIVE AND SCOPE OF WORK
- SECTION- II: TERMS AND CONDITIONS
- SECTION- III: TECHNICAL BID PROFORMA
- SECTION-IV: COMMERCIAL BID PROFORMA
- SECTION – V: DRAFT CONTRACT AGREEMENT

## SECTION I

# OBJECTIVE AND SCOPE OF WORK FOR 24 (Twenty four) TOWNS

## INTRODUCTION

.....Master Plan Area comprising of..... sq.kms. NAC/Municipal area and .....number of Revenue villages of adjoining rural area , with a population of..... According to the 2011 census and stretches over an area of .....sq.kms. As per the statutory provision under the Odisha Town Planning and Improvement Trust Act' 1956, Master Plan is required to be prepared to translate broad implementable planning proposals along with detail land-use plans for achieving planned development of the town and its immediate surroundings within the Master Plan boundary.

The Master Plan will also dwell on the identification of the thrust areas, phasing of development, implementation strategies, resource mobilization and prioritization of the development initiatives.

### *Planning Area (Twenty four Towns)*

**The Master Plan Areas of the following Towns which comprises the following area;**

Sl.No	Master Plan Area	No. of Revenue Mouza	Area in sq. km.(approx)
1	2	3	4
1.	Rayagada	19	43.168
2	Koraput	21	37.63
3.	Parlakhemundi	27	27.098
4	Deogarh	10	16.87
5.	Anandpur	21	56.47
6	Joda	06	39.58
7	Nowarangpur	08	33.43
8	Malkangiri	06	22.82
9	Sunabeda	21	133.81
10	Udala	14	10.55
11	Padmapur	04	20.67
12	Daspalla	10	15.05
13	Niligiri	13	20.44
14	Kamakhyanagar	08	20.32
15	Patnagarh	03	23.10
16	Bhuban	23	18.89
17	Kisinga	09	21.34
18	Hindol	14	50.61
19	Khariar Road	06 (17 Units)	14.87

20	Dhamnagar	23	46.70
21	Gunupur	12	25.04
22	Karanjia	17(1- Forest)	33.22
23	Titilagarh	06	17.20
24	Jaleswar	15	16.98

## **OBJECTIVE**

The objective of the project is to prepare the Master Plan of ..... Town for a planned development as envisaged in OTP&IT Act 1956. Hence, Master Plan for .....Town shall be prepared taking into account the structural frame of the available Master Plan considering the existing developments in and around of the Master Plan area. The issues relating to proper road infrastructure and drainage are to be dealt meticulously while preparing the Master Plan in addition to other urban problems & their solutions.

### **THE MAIN OBJECTIVE OF THE MASTER PLAN WILL BE;**

- to utilize the existing Land Use Maps of the area prepared from Satellite Images and integrated and geo referred on revenue cadastral maps on GIS platform to be provided by Planning Authority as an input for preparation of the Master Plan. Necessary ground validation, data collection and other thematic map preparation has to be carried out by the bidder.
- to formulate a meaningful Physical Master Plan to promote regulate and guide the urban growth in the region by 2040 A.D. in a planned and healthy manner as per the relevant provisions of OTP & IT Act 1956 & Rules made thereunder.

## **APPROACH AND METHODOLOGY**

The Master Plan will provide all matters necessary for the proper development of area covered by the Plan.

According to the OTP&IT Act, the Master Plan has the following roles

1. Master Plan shall define the various zones into which the land covered by the Master Plan Area may be divided for the purpose of development and indicate the manner in which the land in each zone is proposed to be used and the stages by which any such development shall be carried out,
2. Master Plan shall serve as a basic frame work within which the Zonal Development Plan for various zones will be prepared.

The preparation of the Master Plan will start with the study of the existing conditions and assessment of the future needs and quantifying the deficiency and accounting for the potential resources and constraints. Based on the above studies development priorities will be set for the particular urban area taking into consideration the physical as well as socio-economic needs.

The formulation of the Master Plan for the development area will start after status analysis and consideration of the prime issues as indicated below.

### **A. Physical characteristics and natural resources.**

- Location and regional setting
- Climate





## **H. Resources**

- Fiscal Resources.
- Manpower/Human Resources
- Land Resources.

## **I. Environment**

- Air
- Water
- Soil erosion
- Sanitation and solid waste management

## **J. -Tourist Infrastructure**

- Potential tourist places
- Availability of Tourist Infrastructure

## **K. Development Management**

- Institutional set-up
- Legal support
- Sectoral integration and co-ordination
- Phasing of development

### **3. THE MASTER PLAN SHALL COMPRISE;**

- Reports on physical and socio-economic aspects
- Demography and other infrastructure facilities need proportions including having
- Functional plans supported by maps, charts and diagrams on the following heads;
  - a. Land use
  - b. Traffic and Transportation (Intra Town and Regional)
  - c. Housing & slum improvement in coordination with PMAY (Pradhan Mantri Awas Yojana) & Housing for all policy of Odisha -2015.
  - d. Public Utilities
  - e. Environmental Improvement
  - f. Education, Research and other community facilities both active & passive, organized open spaces,
  - g. Plantations, city forests etc.
  - h. Heritage and Tourism
  - i. Development and Management of water bodies and water fronts.
  - j. Financial implications & its augmentation with source & sectoral phasing
  - k. Administrative structures to implement the proposals envisaged in the Master Plan.
  - l. Zoning Regulation with specific emphasis on natural hazard prone zones, heritage sites, religious monuments and the ecologically sensitive areas..
- Strategies of development, identification of priorities for the city region and peripheral growths and their phasing.
- Investment Plan and Action Plan
- Digital proposed land use plan translated over revenue map in GIS format.

## **SCOPE OF WORK**

### **STAGE-I: PROJECT INITIATION**

- The project will be initiated within one month of signing the Deed of Agreement between both the parties. The Bid document shall form a part of the agreement
- The consultant shall carry out interactive discussion with different stake holders to generate development issues. The Departments and Agencies those shall be involved in the process of discussion are Planning Authorities, concerned Urban Local Body, Public Health Engineering organization, Forest and Environment Department, District Administrative Authorities etc.
- The..... Planning Authority shall provide all necessary assistance or organizing the interactive discussion through **workshops and seminars the cost of which shall be borne by consultant being inbuilt in whole project cost .**
- The consultant shall present the materials for discussion through power point presentation and prepare a brief Concept Report and submit soft and hard copy up to facilitate such discussions which will be circulated before the workshop.
- On the basis of interactive discussion with stakeholders, consultant shall prepare an' Inception Report' containing all the development issues, strategies, methodology and approach for preparation of Master Plan.

### **STAGE-II: DIGITAL BASE MAP VALIDATION**

- .....Planning Authority/ .....Regional Improvement Trust will provide the following inputs. (in case of 24 towns only)
  - Image Derived Digital Revenue cadastral maps of the Master Plan Area in soft copies.
  - Digital GIS based existing land use map prepared from satellite images on GIS platform.
- The GIS database will have following specifications:-
  - a. Geo-referenced W.V.0.5 m / Cartosat-2 resolution satellite image
  - b. Digital GIS formatted revenue maps edge matched and mosaiced of all the villages coming under Master Plan area. The geo-referenced image will be provided by respective Planning Authority of the Town.
  - c. GIS format land use map (level III/IV) of the city / town interpreted from satellite imagery with ground verification.
  - d. **Digitized cadastral maps of the city / town will be provided in cad/shape file.** Data of individual sheets, mosaic and geo-referenced revenue maps will be provided. Besides individual sheets mosaic of the sheets of a village (properly edge matched to form revenue villages and village mosaic to form the Master Plan Area will be provided to the selected bidder.
  - e. Shape files containing plot level spatial database (Land use with plot number and attribute as available in cadastral sheets) will be supplied in GIS database.

The above data bases supplied by the Planning Authority are to be validated by the bidder before use for Master Plan preparation. The existing land use maps / digital cadastral maps are to be used as base and bidder has to collect other information in such a format that it must be linked to supplied

GIS database. Soft copies of item (a) to (e) will be provided by the Special Planning Authority...../..... Regional Improvement Trust of the concerned town.

Vendors after checking/ validation have to print maps in the standard format as enclosed in Attachment (1) and submit to concerned Special Planning Authority/Regional Improvement Trust accordingly under intimation to DTP(O), Bhubaneswar.

The Master Plan has to be prepared on the supplied digital base map.

### **STAGE-III:**

#### **FIELD SURVEY, DATA COLLECTION AND UPDATION OF DIGITAL BASE MAP**

Field Survey and data collection is to be made to assess the followings.

- The Regional Resource Potentials of the hinterland should be studied in detail in the context of major economic activities, broad land use, major transportation and communication net work, regional level infrastructure facilities and broad environmental, ecological and conservation measures.
- The micro level study on land use and infrastructure developments such as roads, drainage environmental conservation etc.
- The micro level study through primary/ secondary survey on environmental features like; water bodies, natural channels/ creeks, forests, plantation, low lying areas, agricultural land, pollution level, tourism potentials and heritage preservation etc.
- Micro level study of solid waste management, sewerage disposal, scientific disposal system with respect to environmental conservation, innovative techniques for SWM, hospital waste, locality of garbage yard, treatment plant including privatization & public participation.
- 15% Stratified Random sample household survey would be undertaken for socio economic data i.e. demography, employment, economic characteristic, housing physical and social infrastructure besides the census data of 2001 and 2011(Census) Secondary Source Data.
- Survey would be undertaken to generate traffic and transportation data to quantify the travel need, road network inventory, traffic volume and passenger terminal, commuter survey, parking at critical areas, Origin and Destination survey and goods transport and travel need.
- Data on existing development control regulations and implementation mechanism would be compiled and analyzed to identify the gaps and necessary modification would be suggested.
- Data on existing institutional frame work, funding and implementation agencies would be compiled and analyzed to identify the gaps and necessary modification.
- Economic base study of industries, commercial and tourism activities.
- All the data mentioned above are to be compiled and analyzed to identify the trends, potentialities and problems of the core and peripheral sub-urbs of the Master Plan Area. This shall contain SWOT analysis.
- Analysis and trend based projections would be undertaken for the various aspects like land use requirements, socio-economic profile, traffic and transportation needs, infrastructure & community facilities, housing, trade and commerce, economic base industries and environmental concern.
- An examination of the application of new techniques of Urban Management which have come to operation in the recent years.

- Study of state policies/ strategies in respect of all key sectors with reference to the .....Master Plan Area and budgetary provisions/ five years plans/ action plans of different sectoral agencies.
- Study on Land Resources including Government, private, forest, community land etc. with suitability analysis with detail inventory and Real Estate Markets in both developed and newly developing areas.
- Study of Resource mobilization for Plan implementation.
- Study on different natural hazard prone areas.
- Study for rationalization of the land values in the city and region.
- Study of rationalized use of publicly owned land as a source of raising resources.
- Study of natural resources like, forest, mining, water body, ground water potentialities etc.
- The study of existing land use details depicted on the digital revenue village/ mouza maps and duly compared with digital satellite images derived existing land use with that of the field with a 20% stratified random sampling.
- Expenditure on collection of secondary information shall be part of the bidding cost.

#### **STAGE-IV: SEMINAR AND WORKSHOP**

Interactive seminars and workshops involving various stakeholders, local bodies, official and non-official with the preparation of compendium of such proceedings for taking the feedback & views while preparing the Master Plan proposals. This will be done soon after the concept report is submitted and after status report is submitted to know the aspiration and requirement of the public. The cost towards organizing such seminar and work shop shall be borne by the Consultant. However presentations and interactions with public and line departments is to be done by the Consultant.

#### **STAGE-V: PREPARATION OF MASTER PLAN**

Drafting of Planning proposals and Development Control Regulations in the Master Plan for adoption Planning Area.

- 1) **Land Use Plan** for proper utilization of land for residential, commercial, industrial, institutional, recreation, transportation, heritage, ecologically sensitive areas, agricultural & allied usages. Plan should indicate the standards of population density for various zones and building density.
- 2) **Housing Plan** shall have proposals for supply of housing with infrastructure development and strategies for overall improvement under Housing Sector fulfilling the housing stock gap.
- 3) **Traffic and Transportation Plan** with long/ short term strategies to take up development phase wise.
  - (a) Formation of new roads and missing links.
  - (b) Widening of existing roads & connectivity of missing links.
  - (c) On street/ off street parking facilities in critical areas.
  - (d) Design for junction improvement on priority basis.
  - (e) Traffic management schemes on priority basis.
  - (f) Flyovers and Bye-Passes.
  - (g) Terminal facilities.
  - (h) Mass transportation.

- (i) Circular/ Ring road.
  - (j) Non –motorized mobility plan with provision of Cycle track & pedestrian paths.
- 4) **Water Resources Development and Drainage Plan** duly specifying the master drains, missing link of drains, sewage management and scientific disposal indicating the disposal yards and treatment plants; Augmentation of existing water resources for domestic, commercial, industrial sectors and other sectoral uses (ground water and surface water); Formulation of rain water harvesting guidelines for implementation by private/ public agencies; Proposals for preservation/ protection measures for existing water bodies and natural water courses. Integrated Drainage plan addressing the issues of inundation and water logging.
  - 5) **Environment Management Plan** with proposals for environmental improvements, such as up-gradation / development plan, renewal and rehabilitation proposals. Development of passive & active open spaces, plantation and Forest Development Areas of towns.
  - 6) **Solid Waste Management Plan** with Innovative techniques for solid waste management, private and public participation aspects of SWM, location of garbage yard & treatment Plants/Landfill sites.
  - 7) **Social Infrastructure** including Education, Health, recreation and community facility plan indicating proposals for parks, open space for multi purpose uses, recreational, educational and cultural centers.
  - 8) **Zoning Regulation** for development control with flexible approach to accelerate development as may be necessary for implementation/ enforcement with due consideration as necessary for vertical and horizontal expansion of existing hamlets covering within the fold of Master Plan. The Zoning Regulation should specify provisions for natural hazard prone areas in general and earth quake prone area in particular.
  - 9) **Utility Services Plan** for Water Supply, Sewerage plan with sewerage treatment plan location and its management, Electricity net work with tentative location of step down grid station and fire services plan.
  - 10) **Economic Plan** containing capital investment proposals, augmentation of financial resources, rough estimates of revenue & resources with respect to implementation in different stages of Master Plan.
  - 11) **Disaster Management Plan** with proposal and mechanism to address the issues
  - 12) **Slum Development Plan** with focus on affordable housing encompassing PMAY guidelines & Housing for all policy of Odisha-2015.
  - 13) **Informal sector (street vendors)** plan with its location & mechanism of functioning and implementation including vegetables mandies and whole sale godowns.
  - 14) **Coastal Zone Management Plan** (wherever applicable) in consonance with the provisions made by the Ministry of Environment and Forest, Government of India and State Coastal Zone Management Authority in the Coastal Zone Management Plan prepared for the area.

All the development proposals shall be translated over revenue maps on G.I.S. platform with detail database of land use and other planning information. This database should also be integrated/ geo-

referenced with the satellite imagery for viewing. Different layers of development on a GIS platform is to be generated for appreciation of the proposal over the city base map of the Master Plan area..

#### **STAGE-VI: INVESTMENT & IMPLEMENTATION PLANNING**

- The Planning proposals shall have to be categorized into (a) Mandatory projects (b) Optional projects including identification of short and long term development projects.
- In respect of both mandatory and optional projects, the implementation proposals should be categorized into different phases co-terminus with 5 year Plans and annual plans by identifying the probable implementing agencies i.e. Government/ private/ public- private participation.
- The financial issues like costing, resource mobilization etc. shall have to be prepared & addressed.
- The proposal should also cover innovative mechanism in the domain of development charges, impact fees TDR (Transferable Development Rights) and Planning obligations as the possible ways of resource mobilization.
- Explore and evaluation and suggestion of innovative methods of getting land for public purpose/ development purpose instead of normal acquisition process.
- The bidder shall also evolve MIS mechanism for review and monitoring of development activities as per Master Plan proposal.

#### **STAGE-VII:**

##### **NOTIFICATION OF DRAFT PLAN INVITING OBJECTIONS AND SUGGESTIONS**

- .....Planning Authority / .....Regional Improvement Trust shall notify the draft Master Plan inviting objections & suggestions from public soon after the same is prepared and submitted by the bidder within a period of 60 (sixty) days from the date of Gazette Notification.
- The consultant shall provide necessary logistic & Technical support for display of the draft plan for public through multimedia process or any compatible communication technology specified by the Planning authority. Work shops and seminars may be organized to discuss on draft plan proposals involving all stake holders within a specified time period by the SPA/ Trusts. The cost of organizing such seminars and work shops shall be **borne by the Consultant as a constituent part of total Project Cost.**

The objections and suggestions received from the public will be tabulated, scrutinized and modifications to the draft Master Plan by incorporating the accepted suggestions through a Board of Enquiry to be constituted by the..... Planning Authority / .....Regional Improvement Trust. The bidder consultant shall facilitate such tabulation/ and generation of report and minutes for incorporating required changes in the Master Plan.

## **STAGE-VIII: FINALISATION OF DRAFT MASTER PLAN**

The Final Master Plan will be prepared by the consultant incorporating the recommendations and suggestions of Trust Board/SPA Committee on various aspects and will be submitted to the Planning Authority/ Regional Improvement Trust for final approval by Govt. in H & UD Department / Director Town Planning.

### **STAGE-IX : DELIVERY OF FINAL GIS DATABASE**

- Village wise digitized and geo-referenced revenue maps with village name, plot no, plot type- Govt/ Private, revenue sheet number, year of settlement etc.
- Digital mosaic of village maps with village name, plot no, plot type-Government/ Private., revenue sheet no, year of settlement, with geo-referenced image derived with **existing land use** .

#### **physical attributes**

- Physical attributes such as residential buildings, public & semi public institutions (Government Offices, hospitals, religious building etc.) parks, playgrounds and open spaces, water bodies, road net work, drainage channels & other physical characteristics and natural resources duly incorporated in different layers.
- a) Digital mosaic of village maps with village name, plot no, plot type-Government/ Private, revenue sheet number, year of settlement **with proposed land use**
- b) Geo-referenced Image derived and ground verified village wise **existing Land Use map** of the Master Plan area.
- c) Digital Geo referenced Image Derived village wise proposed land use map of the Master Plan Area.
- d) Composite Digital map of Master Plan area printable in 8 inches to 1 mile scale/ 4 inches to 1 mile/ 2 inches to 1 mile scale.

#### **Development of GIS System**

The above geo-database is proposed to be developed on Arc GIS platform as a Desktop application for viewing, querying and reporting of various spatial and non-spatial information within the areas of .....Planning Authority/ .....Regional Improvement Trust. The GIS database is to be prepared with mutually registered layers generated from cadastral maps, satellite image, field survey inputs, existing land use, proposed land use, etc.

#### **Thematic content of the GIS database is described below.**

1. Parcel boundaries
2. Land Use (existing)
3. Land Use (Proposed)
4. Drainage (Existing and proposed)
5. Surface Water bodies
6. Road & rail (existing)

7. Road & rail (proposed)
8. Transportation nodes
9. Canals
10. Health facility(existing & proposed)
11. Education Facility (existing & proposed)
12. Water supply infrastructure (proposed)
13. Sewage infrastructure (proposed)
14. Solid waste management infrastructure (Existing and Proposed)
15. Ground water prospect areas
16. Hazard zones (Flood and earthquake)
17. Administrative boundaries with
18. Urban sprawl
19. Satellite Image

The above themes are to be generated so as to facilitate preparation of maps as enumerated at **Attachment 2**. The attribute data of various themes are to be developed with feature code, name, description, etc.

**Scalability:**

1. Due care should be taken for integration of this system with the proposed E-Governance module of the concerned ULBs, particularly with respect to the Building Plan Approval System and the Property Tax Management System. The concerned ULBs are to be consulted and involved in this regard.
2. The Geo-database should have scalability for use across a Local Area Network and Internet.

**Operation and Training**

The GIS database shall be made operational in the ..... Planning Authority / .....Regional Improvement Trust by the bidder consultant one year hands on training is to be provided by the consultants to 4-5 identified users of the Special Planning Authority..... / .....Regional Improvement Trust for using the Geo-database in the office premises of the Planning Authority/ Regional Improvement Trust or any other suitable location to be decided by Special Planning Authority...../ .....Regional Improvement Trust.

**Warranty**

The bidder consultant shall provide 1 (One) year warranty support free of cost from date of commissioning of the GIS database in the Special Planning Authority/ Regional Improvement Trust. This shall however exclude any New/ Additional works beyond the scope so agreed upon during signing the agreement.

Security Deposit & Performance Guarantee to the tune of 5% (five) of the tender value is to be deducted as security deposit/ performance guarantee from each bill payable, which will be released after completion of three (3) months from the date of submission of final Master Plan. The said security deposit can be released on submission of Bank Guarantee by the Consultant for equal amount or more than the amount of security deposit.



## LIST OF DELIVERABLES

The bidder consultant has to furnish first the following deliverables. The bidder consultant is required to submit a map of the Master Plan Area in suitable scale both in hard and soft copy (10 copies each) showing therein all existing roads of all widths, ULB boundary, ward boundary and ward number, Revenue Village Boundary with name and PS number, water bodies, Green spaces, Important land marks, name of the important road, name of important localities within six week of the date of agreement.

**There after the following deliverables are to be made by the bidders :**

Sl. No.	Item of work
1.	<b>Submission of Inception Report.</b>
2.	<b>Submission of ground validated digital land use map (Two soft copies) &amp; one set hard copy</b>
3.	<b>Submission of Field Survey Status Report</b> <ul style="list-style-type: none"> <li>• 2 copies of the Report in both hard and soft copies along with all maps &amp; charts</li> <li>• 2 soft copies of GIS data depicting existing land use at cadastral level</li> <li>• 2 copies of existing land use map print from the GIS data (cadastral maps showing existing land use) in 1:2000 scale/ 1:1000 scale .</li> </ul>
4.	<b>Submission of Draft Master Plan</b> <ul style="list-style-type: none"> <li>• 2 copies of the Report in both hard and soft copies along with all maps &amp; charts</li> <li>• 2 soft copies of GIS data depicting all draft Plan proposal in 1:2000/1:1000 scale at cadastral level .</li> <li>• 2 copies of proposed land use map print from the GIS data (cadastral maps showing all draft plan proposals) in 1:2000 scale/1:1000 scale.</li> <li>• 2 copies of composite land use map prints of the Master Plan area in 4 inch to 1 mile/ 2 inch to 1 mile scale. (Hard copy)</li> </ul>
5.	<b>Submission of Final Master Plan</b> <ul style="list-style-type: none"> <li>• 4 copies of the Report in both hard and soft copies along with all maps &amp; charts</li> <li>• 2 soft copies of GIS data depicting all Final Plan proposal in 1:2000/1:1000 scale at cadastral level (Revenue Maps )</li> <li>• 4 copies of <b>Proposed Land Use Map print from the GIS data</b> (cadastral maps showing all final plan proposals) in 1:2000 /1:1000 scale</li> <li>• 2 copies of composite digital land use map of the Master Plan area in 4 inch to 1 mile/2 inch 1 mile scale (Soft copy).</li> <li>• 4 copies of composite land use map prints of the Master Plan area in 4inch to 1 mile/ 2 inch to 1 mile scale. (Hard copy).</li> </ul>

If required, the consultant shall also provide additional copies of reports and plans and maps at the request of Special Planning Authority...../ .....Regional Improvement Trust on payment of cost as mutually to be agreed upon

## TIME OF COMPLETION

The collection of data, preparation of base map, preparation & submission of Master Plan for Special Planning Authority...../.....Regional Improvement Trust shall be completed within 60 weeks as per work flow Table below from the date of initiation of the work. i.e. from the date of signing the agreement.

## WORK FLOW SEQUENCE FOR MASTER PLAN OF PLANNING AREA.

Sl. No.	Item of work	Time schedule for submission from the date of agreement in weeks
1	Inception report	2
2	Concept Report & inter active workshop	6
3.	Validation of supplied GIS data base	12
4	Status Survey Report & inter active workshop	20
5	Draft Master Plan	32
6	Interactive Seminar/ Workshop and feedback.	34
7	Statutory Obligation of Hearing by Board of Enquiry & observation compliance.	48
8	Final Master Plan.	60
	<b>Total</b>	<b>60</b>

## STAGES OF PAYMENT

The stages of payment of the Consultancy Fee to the consultant/ consulting firm shall be as follows;

Sl. No.	Fees to be paid in % of total consultancy fee	Stages of payment
1.	-	Inception Report
2	10%	After Submission of concept report
3	10%	On submission of Status Report & validation of GIS database
4	10%.	On Acceptance of Status Report & Validation of GIS data base
5.	20%	On submission of Draft Master Plan.
6.	10%	On acceptance of Draft Master Plan
7.	25%	On submission of final Master Plan.
8.	15%	After approval of Master Plan by Government

- 15% of consultancy fee as mentioned at point 8 of the above table, is to be released in favour of the consultant in case Government approval is not obtained to the final Master Plan submitted within 24 weeks of its submission.
- Payment of Cost towards procurement of satellite imagery and revenue village maps shall be made to NRSA, Dept. of Space, Government of India and Survey and Map Publication Cuttack by Planning Authorities.

## **SECTION II**

### **TERMS AND CONDITIONS**

#### **2.1 GENERAL**

##### **2.1.1 WORK NOT TO BE SUBLET**

The Bidder Consultant is prohibited from subletting the work under this agreement to any other agency or organization.

**2.1.2** Consortium bids are allowed subject to condition that not more than two members consortium and the lead member will have an equity of not less than 51%. The members of the consortium will be individually and severally responsible for discharging their obligation under this contract.

##### **2.1.3 PROJECT OFFICE**

The Bidder Consultant shall open its project offices (to be provided by the client free of cost) in the premises or in the near vicinity of the office of Planning Authority at the cost of the bidder of the .....Special Planning Authority .....Regional Improvement Trust during project period for effective communication with the Planning Authority/ Regional Improvement Trust and other stakeholders.

##### **2.1.4 CO-ORDINATION**

The Special Planning Authority..... / Secretary of the Regional Improvement Trust will function as the Technical Co-ordinator in respect of these projects and shall co-ordinate with various organizations for timely preparation of Master Plans. The bidder consultant shall appoint a Consultant-in-Charge to act as the Coordinator on his behalf and intimate the same to Planning Authority within two weeks from the date of signing of agreement.

##### **2.1.5 FORMATION OF A TECHNICAL CORE GROUP**

The Directorate of Town Planning in consultation with the concerned Special Planning Authority...../.....Regional Improvement Trust shall form a core Technical Group consisting of representatives of the Planning Authority, Stakeholders, Representative of Line Department and concerned ULBs to identify some important projects to be executed in different locations to boost physical and economic development of the proposed urban complex. The Technical Group shall also have technical experts to advise on related technical matters of the local area to be incorporated in the Master Plan.

##### **2.1.6 CONSTITUTION OF A STEERING COMMITTEE**

The Government of Odisha shall constitute a High Level Steering Committee to monitor the progress of the work and accord approval for release of payment to the consultant within the frame work of the agreement.

##### **2.1.7 MONITORING OF THE PROJECT**

During the process of the monitoring of the project the Steering Committee, at any point of time, may decide to withhold an amount of 20% of the payment due at that stage to the Consultant for non-

compliance of the assignment in specified time frame and with reference to any other aspects which is vital for successful completion of the assignment.

### **2.1.8 ROLE OF PLANNING AUTHORITY/ REGIONAL IMPROVEMENT TRUST**

The responsibility of the ..... Planning Authority/.....Regional Improvement Trust shall be as under ;.

- Provide all available secondary information to the consultant in shape of reports/ documents / plans relevant for preparation of Master Plan
- Provide necessary authorization for procurement of revenue maps, satellite imagery and any such information relevant to the preparation of Master Plan
- Release payment due to the consultant as per stages of payment enumerated in this agreement
- Co-ordination and organization of seminars/ workshops/ discussions with the stakeholders
- Publish the draft Master Plan for inviting objections/ suggestions in the Odisha Gazette and minimum one Local News paper as per provisions of the OTP & IT Act, 1956.
- Conduct hearing of objections and suggestions in respect of the draft Master Plan.
- Take steps for approval of the government on the Master Plan as per provisions of the OTP & IT Act, 1956.
- Take steps for the final notification of the Master Plan in the Odisha gazette and minimum one Local news paper for the Master Plan to come into force
- Provide office space to the Bidder consultant to establish his office and facilitate hands on training of staff to handle G.I.S

### **2.1.9 DATA SECURITY**

The Client has absolute right on the data and output so generated in the process of preparation of Master Plan. The consultant shall be responsible for security and safe custody of data. In no way the digitized information will be copied or duplicated or supplied to any other party or the same reproduced by the consultant in full or part during preparation of Master Plan and after submission of the same to the client.

### **2.1.10 RIGHT TO INSPECT**

The Special Planning Authority/ Secretary of Regional Improvement Trust or his authorized technical representative shall have the right to visit the Office of the Consultant/ Consulting Firm for checking the manner in which the work is progressing and to ascertain whether the job is being performed according to the specifications and legal requirements. The above Special Planning Authority/ Secretary of Regional Improvement Trust or its authorized representative may issue instructions as deemed fit for any modification/ inclusion of different aspects which may be required but not covered in work chart/ financial bid format and the consulting firm / consultant is bound to follow such instructions.

### **2.1.11 TIME EXTENSION**

Delivery of services shall be made by the Bidder Consultant in accordance with the time-schedule specified by .....Special Planning Authority/ Secretary of Regional Improvement Trust. The Consultant will strictly adhere to the time-schedule for the completion of Work. However, ..... Special Planning Authority/ Regional Improvement Trust can extend this time limit on approval of Steering Committee provided the cause of delay is not attributable to the consultant.

As soon as it becomes apparent to the selected bidder that the duration of the assignment stipulated in the contract cannot be adhered to, the bidder may apply for time extension to the client indicating justified reasons for the delay and also the date up to which extension is required. The client shall consider such request and may extend the duration of the assignment mutually agreed by both the parties. However, the decision of the client shall be final in this regard.

#### **2.1.12 PENALTY**

In the event of delay in stage wise execution of work, specified in this Contract / furnishing deliverables due to negligence or in-efficiency attributable to the consultant, the consultant shall be liable to a penalty @ 0.1% of the value of work order in respective phases, for every week of delay up to a maximum of 05% (five) of the contract value after which ..... Special Planning Authority/.....Regional Improvement Trust shall be at liberty to cancel the award. For the purpose of this clause, part of a week shall be considered to be a full week inclusive of Govt./Local holidays.

#### **2.1.13 PROGRESS OF THE PROJECT**

Progress of the Project may be intimated in writing to ..... Special Planning Authority/.....Regional Improvement Trust on monthly basis by the Consultant.

#### **2.1.14 CONFIDENTIALITY**

Any information pertaining to the Government of Odisha or any other agency involved in the project, matters concerning Government of Odisha that comes to the knowledge of the vendor in connection with this contract, will be deemed to be confidential and the consultant will be fully responsible, for the same being kept confidential and held in trust, as also for all consequences of its concerned personnel failing to observe the same. The consultant shall ensure due secrecy of information and data not intended for public distribution. An affidavit to this effect shall have be submitted along with security deposit by the Consultant.

#### **2.1.15 FORCE MAJEURE**

In case of delay in timely execution of the work caused by factors beyond the control of the consultant such as War, Riot, Earth Quake, Flood, Fire, other natural disasters, Restrictions imposed by the Government or other statutory bodies, the consultant shall intimate the .....Special Planning Authority/.....Regional Improvement Trust in writing the beginning and the end of the above clauses of delay, within 7 (seven) days of occurrence and cessation of the force majeure conditions.

#### **2.1.16 TERMINATION OF CONTRACT**

If the bidder consultant fails to carry out the award / work order in terms of this document within the stipulated period or any extension thereof, as may be allowed by ..... Special Planning Authority/.....Regional Improvement Trust, without any valid reasons acceptable to ..... Special Planning Authority/.....Regional Improvement Trust, ..... Special Planning Authority/.....Regional Improvement Trust may terminate the contract after giving 30 (thirty) days written notice, the decision of which shall be final and binding on the bidder.

Upon termination of the contract, ..... Special Planning Authority/.....Regional Improvement Trust shall be at liberty to get the work done at the risk and expense of the bidder through any other agency, and to recover from the bidder consultant compensation or damages.

### **2.1.17 LEGAL JURISDICTION**

All legal disputes are subject to the jurisdiction of Court of .....only.

## **2.2 BIDDING PROCEDURE**

### **2.2.1 ELIGIBILITY AND EVALUATION CRITERIA**

The Bidders are eligible upon compliance of the following minimum criteria for preparation of the Master Plans for the cities

#### **(A) Technical Criteria**

Bidder with at least 5 years experience in preparation of Master Plans/Geo Database of Towns/LIS Development/ Perspective Plan Preparation/ Regional Development Plan preparation/ Similar nature of work viz. experience in using GIS for property tax reform projects, preparation of city Sanitation Plan, Draft Development Plan and having experience of preparation GIS based CDP/ Master Plan for at least 1 (one) town with population more than 1 (one) lakh.

#### **(B) Financial Criteria**

Bidder must have average annual turnover of Rs.50 lakhs in each of the last 3 (three) years. In case of consortium, the financial turn over should be at least 25 lakhs in each of the last three years for the lead bidder with aggregate annual turnover of the consortium being in excess of Rs.50.00Lakhs in each of the last three years.(copy of the Audited report should be submitted alongwith the Technical bid.)

#### **(C) Manpower Criteria**

Bidder must have the following experts and willing to depute solely for the purpose for the Project .

- a. Urban Planner with 10 (ten) years of post qualification experience and having experience in preparation of Master Plan/ Urban Planning and/ or Transportation Planning as team leader and his acceptance letter to undertake the assignment of GIS/RS based Master Plan for the..... town for which the Bid has been submitted by the Bidder.
  - b. GIS Expert with 05 years of post qualification experience alongwith his/her acceptance letter.
  - c. Urban Planner with 5 years of post qualification experience as member of the team alongwith his/her acceptance letter.
  - d. Separate lump sum amount in Indian Rupees for each individual town is to be furnished as prescribed in financial bid proforma- **(Annexure-3)**.
2. The Bidders who will be eligible, as per the terms of the Bid Document, for preparation of GIS/RS based Master Plan can bid for maximum four towns as indicated in the Section-I. Non furnishing of such information with supporting document will lead to rejection of bid for additional towns. Self authenticated curriculum vitae (CV) and documents in support of Educational Qualifications of the professionals and experience along with copies of work

order/ assignment orders & successful completion of the work and acceptance by the agency/ Government are to be attached with the bid. In the event of substitution of Team Leader/Urban Planner/GIS Expert etc., the Professionals/Technical Persons with equivalent qualifications and experience can be replaced subject to acceptance by the 1<sup>st</sup> Party.

**However, for any professional and educational institute, university having full time under graduate/ post graduate course of Urban Planning approved by AICTE, UGC, the Financial Criteria shall be waived for the purpose of evaluation.**

### **2.2.2 GENERAL INFORMATION**

- a) The Bidder shall bear all costs associated with the preparation and submission of its bid and ..... Special Planning Authority/.....Regional Improvement Trust (hereinafter referred to as the Client) will in no case be responsible or liable for these costs, whether or not the Bid is finally accepted.
- b) Separate bids with all documents and EMDs is to be submitted for each town separately for which the Bidder intends to bid.
- c) There are Two parts of Bid Document namely “Technical Bid and “Financial Bid”. The bidder is required to fill up all the two parts of the bid papers and place them in two separate sealed envelopes super scribing
  - “Appointment of Consultant for preparation of a Master Plan for town taken up by.....Special Planning Authority / .....Regional Improvement Trust(Technical Bid).
  - “Appointment of Consultant for preparation of a Master Plan for town taken up by.....Special Planning Authority / .....Regional Improvement Trust (Financial Bid).
- d) These envelopes should be placed in another sealed envelope and addressed to Director of Town Planning, Power House square Unit-V, Bhubaneswar-751001. Odisha
- e) The envelope must show the name of the Bidder and present correspondence address and should be superscribed as “Appointment of Consultant for preparation of a Master Plan for .....Town.....(name of concerned towns) taken up by Special Planning Authority / .....Regional Improvement Trust on top of the envelope.
- f) Bids duly filled in and accompanying all supporting documents, shall be submitted through courier/speed post/ Registered post on or before date **14/01/2019** by 4.00 PM after which no bids would be accepted and bids received after the due date time are liable for outright rejection without any liability. There will be no drop box facility for submission of bids.
- g) The General bid will be opened at in the office of Director of Town Planning, Odisha, Bhubaneswar in the presence of bidder's representatives on **Dt.15/01/2019** at 11.00 AM. The bidder or One representative of bidder shall be permitted to be present at the time of opening the bid.
- h) The Financial Bids of only those bidders, whose bids are found eligible in the Technical evaluation, will be opened subsequently.
- i) Incomplete, illegible, conditional and unsealed bids will be summarily rejected. Telegraphic

bids/ bids submitted through E-mail will not be accepted and no correspondence will be made in this regard.

- j) All offers should be made in English. Conditional offers and offers qualified by such vague and indefinite expression such as “Subject to immediate acceptance”, “Subject to prior sale” etc. will not be considered and liable to be rejected.
- k) The Price and conditions of the offer should be valid for at least a period of 90 days from the date of bid opening. Bid with validity of less than 90 days shall be rejected.
- l) Modification of specifications and extension of closing date of bid if required shall be made by an Addendum. Copies of Addenda will be notified on the website. This shall be signed and shall form a part of the bid in full and/or part thereof.
- m) Bidders shall carefully examine the bid documents, the bidding criteria and the Scope of Services and fully inform themselves as to all the conditions and matters, which shall in any way, not affect the work or the cost thereof. Clarification on the bid document, if any, can be obtained from Director of Town Planning, Odisha on any working day during working hours.
- n) Submitted bid forms, with overwritten or erased or illegible rate or rates not shown in figures and words in English, will be liable for rejection. In case of discrepancy between words and figures noted against each items of the bid and between unit rates and the total amount, the decision of the bidding authority shall be final and binding on the bidders. Total of each item and grand total of whole bid should be clearly written. Corrections in the bid, if unavoidable, shall have to be made by rewriting with dated initial of the bidder after scoring out of the wrong entries. Clerical and arithmetical mistakes shall also result in rejection of the bid.
- o) The terms of payment applicable in this case are indicated in the General Terms and conditions of .....Special Planning Authority/.....Regional Improvement Trust. In exceptional cases alternative payment terms, than those specified, shall be considered by the client, if required.
- p) Request from the bidder in respect of additions, alterations, modifications, corrections etc. of either terms or conditions or rates after opening of the bid shall not be considered.
- q) While bids are under consideration, bidders and their representatives or other interested parties, are advised to refrain from contacting the officials of the Planning Authority/ Regional Improvement Trust or representatives, on matters relating to the bids under study. ....Special Planning Authority/.....Regional Improvement Trust if necessary will obtain clarification on bids by requesting such information from any or all the bidders either in writing or through personal contact as may be necessary. The bidder will not be permitted to change the substance of his offer after the bids have been received. Any attempt by any bidder to bring pressure of any kind on the bid evaluators may disqualify the bidder for the present bid and the bidder may be liable to be debarred from bidding in future for a period of five years.

### **2.2.3 Pre-bid Clarifications**

Clarifications on RFP documents can be sought for in writing/ by E-mail to [dtpodisha@gmail.com](mailto:dtpodisha@gmail.com). up to 20/12/2018. A pre-bid clarification meeting will be held on 21/12/2018 at 11.00AM. in the office chamber of Director of Town Planning, Odisha, Bhubaneswar.



#### **2.2.4 EMD**

The bidder shall furnish, as part of its technical bid, an EMD of amount Rs.1.00 lakh (Rupees one lakh only) for each town separately for which he intends to bid. The EMD shall be in the form of a crossed demand draft drawn in favor of (name of town)\_\_\_\_\_Special Planning Authority/.....Regional Improvement Trust from any Nationalized Bank located in India. Bids, not containing the EMD amount will be rejected outright. In case of successful bidder, the EMD shall be returned after the work is complete & final bill is paid. In case of unsuccessful bidders the EMD will be refunded within 3 (three) months from the date of finalization of bid/ signing of contract without interest.

#### **2.2.5 LANGUAGE OF BID & CORRESPONDENCE**

The Bid will be prepared by the Bidder in English language only. All the documents relating to the Bid (including brochures) supplied by the Bidder, and the correspondence will be in English language only. The correspondence by Fax / E-mail must be subsequently confirmed by a duly signed formal paper copy.

#### **2.2.6 BID CURRENCIES**

Prices shall be quoted in INDIAN RUPEES, inclusive all prevailing tax but excluding Service Tax.

#### **2.2.7 PERIOD OF VALIDITY OF BIDS**

For the purpose of placing the order, the Bids shall remain valid for at least 90 (ninety) days after the date of opening. A bid valid for a shorter period may be rejected as being non-responsive. During the period of validity of Bids, the rates quoted shall not be changed. In exceptional circumstances, bidders may be asked for extension of the period of validity of the Bid.

#### **2.2.8 FORMAT AND SIGNING OF BID**

The Bid shall be neatly typed and shall be signed, by an authorized signatory on behalf of the Bidder. The Bid shall contain no interlineations, erasures or overwriting, in order to correct error made by the Bidder. All corrections shall be done & initiated by the authorized signatory after striking out the original words / figures completely. Bids shall be packed and sealed as per procedure. All pages of the Bid, except for un-amended printed literature, shall be initialed by the person or persons signing the Bid.

#### **2.2.9 PREPARATION OF BIDS**

##### **(Technical Bid)**

Technical Bid includes “General Documentation” and “Project Understanding & Compliance”

##### General Documentation:

The Bidder has to submit the following as a part of the General Bid.

- a) Forwarding letter
- b) Bidder's Profile (Annexure 1, Bid proforma)
- c) EMD for one lakh in form of DD drawn in favor of \_\_\_\_\_Special Planning Authority/.....Regional Improvement Trust payable at .....
- d) Copy of certificate of registration establishing operation over past 5 years

- e) Copy of PAN card and IT return for FY 2015-16,2016-17&2017-2018.
- f) Copy of PF registration and return for FY 2017-18.
- g) Copy of Service Tax / GST. Tax registration and up to date return
- h) Copy of up to date VAT clearance certificate valid up to March 2015.
- i) Documentary evidence of preparation of GIS based CDP/ Master Plan for at least 1 (one) town with population more than 1 (one) lakh.
- j) Auditor certified Turnover statement for last 3 years

Individual bids General, Technical and Financial for each town is to be furnished separately.

Bids not accompanied by any of the above documents shall be treated as non-responsive and the bid is liable for outright rejection. The other Technical proposal shall be evaluated for responsive bid only.

### **Project Understanding & Compliance:**

The Bidder has to submit the Project Understanding containing the following documents as per proforma placed at Section III.

1. Approach & Methodology as proposed by the consultant along with timeline
2. Five years Experience in preparation of Master Plans/ LIS development/ perspective plan preparation/ regional development plan preparation and having experience of preparation GIS/RS based CDP/ Master Plan of at least **one town with population of more than 1 lakh**. List of relevant projects with name of client, value of work, location of work, etc. along with supporting work order/ completion certificate to be enclosed. Local organization with similar experience shall be given preference
3. Turnover statement supported with audited balance sheet
4. Details of GIS / survey & consultancy infrastructure available with the firm/institute in Odisha
5. List of personnel with CVs of key resource persons proposed for undertaking the present assignment.
6. Documents in support of affiliation/ recognition by any national agency (like NRSA/ Survey of India)
7. Quality Certifications, if any
8. **Financial Bid**: The bidder has to submit his financial bid for each town separately. For the purpose of evaluation, all financial bid shall be treated independent and mutually exclusive. The Bidder, upon submission of the bid shall have to confirm the same in their financial bid. Conditional Bids shall be rejected summarily.

### **2.2.10 SEALING AND MARKING OF BIDS**

The Bidder shall seal separately & mark various parts of the Bid as follows:

- (a) Technical Bid and
- (b) Financial Bid. All two parts shall be sealed in a covering envelope superscribed with "Appointment of Consultant for preparation of a Master Plan for town taken by.....Special Planning Authority / .....Regional Improvement Trust and "DO NOT OPEN BEFORE \_\_\_ AM/PM OF DT: \_\_\_\_\_". Every envelope and forwarding letter of various parts of the Bid shall be addressed to Director of Town Planning, Odisha, Bhubaneswar. The envelope shall be sealed by signing across all joints & pasting good quality transparent adhesive tape on top of such joints & signatures. If the envelopes are not sealed and marked as required above, Director of Town Planning, Odisha, Bhubaneswar will assume no responsibility for the Bid's

misplacement or premature opening. A Bidder who packs its Bid in a manner other than what has been separately described above, shall be rejected Bids sent through Telex / Telegrams / Fax / Email shall not be acceptable.

**Technical Bid and financial Bid individually sealed for the town are to be put in an envelope superscribing "Bids for work ( the name of the town) for which bid has been submitted.**

#### **2.2.11 DEADLINE FOR SUBMISSION OF BIDS**

Bids will be received by Director of Town Planning, Odisha, Powerhouse square, Unit –V. Bhubaneswar-751001 not later than 4.00 PM on DT: **14/1/2019**. On behalf of the Special Planning Authority/Regional Improvement Trust.

#### **2.2.12 APPLICATION OF BIDS**

Any eligible entity / institutions can bid for **maximum 04 (Four)** towns giving the financial bid for each town separately. While bidding, the bidder has to bid for the towns individually and separate documents for each town has to be submitted super scribing the name of the town as mentioned in

#### **2.2.13 LATE BIDS**

Any bid received by Director of Town Planning, Odisha, Bhubaneswar after the deadline for submission of bids prescribed in this request for proposal shall be rejected summarily.

#### **2.2.14 MODIFICATION AND WITHDRAWAL OF BIDS**

Modifications of Bids may be allowed by ..... Planning Authority if any substantial changes have to be made in the TOR mentioned. This option shall be applicable to every Bidder only in case of technical Bids who has submitted Bid. Bids cannot be withdrawn during the interval between its submission and expiry of Bid's validity period, as specified .

#### **2.2.15 BID OPENING**

The Bids shall be opened at 11.00 AM on **15/01/2019** in the office of Director of Town Planning, Odisha, Bhubaneswar in the presence of bidders or representatives of the bidders or who may choose to attend. . The Bidder or authorized representatives of Bidders will sign the register as evidence of their presence. In the first instance, envelopes super scribed with the words 'General Bid' only will be opened, and eligibility of each Bidder will be ascertained after examination of the General Bid. Technical & Financial Bids shall be opened subsequently for only those Bidders who are found to be eligible as per the General Bid.

#### **2.2.16 BID EVALUATION**

##### **Technical Bid**

Upon opening of the Technical bid, the submission documents shall be verified for declaring the bid responsive. Subsequently, only the responsive bids shall be evaluated for verification of the eligibility criteria and project understanding along with necessary supporting documents. All the bidder who shall be eligible for this purpose shall be shortlisted for opening of the financial bid.

##### **Financial Bid:**

The lowest financial offer shall be eligible for the purpose and award of work.

### **2.2.17 NOTIFICATION OF AWARD**

Prior to the expiry of the period of Bid validity, .....Special Planning Authority/.....Regional Improvement Trust shall notify the successful Bidder in writing by speed post or Fax or email that his/her Bid has been accepted. The liability of the Consultant(s) to perform the services will commence from the date of notification of Award of the work. The Completion Period shall be counted from the date of 'Notification of Award of Work'.

### **2.2.18 SELECTION FOR SIGNING OF AGREEMENT**

The Bidder, who has been issued Notification of Award of Work for more than one town, shall have to sign the Agreement for all towns . In such case, the authority shall verify compliance of additional Manpower Criteria in their bid.

Any town where offer of lowest financial bid was not selected, for any reason, for signing of the Agreement, the next lowest bidder shall be notified for award of the work at the lowest financial bid. This process shall be continued till identification of the bidder for the execution of the work.

### **2.2.19 SIGNING OF AGREEMENT**

Upon selection, the Bidder shall have to sign a Contract Agreement with the respective Special Planning Authority/ Regional Improvement Trust for execution of the work. A draft agreement shall term as a part of the Bid Document.

### **2.2.20 DISQUALIFICATION OR REJECTION OF BID**

The Bid is liable to be rejected or the bidder disqualified at any stage on account of the following.

- If the bid or its submission is not in conformity with the instructions mentioned herein.
- Cost of Bid document (in case of downloaded from website).
- If the bid is not accompanied by the requisite EMD.
- If it is not signed with seal, on all the pages of the bid document.
- If it is received after the expiry of due date and time.
- If it is incomplete and required documents are not furnished.
- If misleading or false statements/ mis-representations of facts are made as part of pre-qualification requirements.
- If found to have a record of poor performance such as having abandoned work, having been black-listed, having inordinately delayed completion and having faced Financial failures etc.

### **2.2.21 FORFEITURE OF EMD**

EMD made by the bidder shall be forfeited, for the respective town only, under the following conditions

- If the bid or its submission is not in conformity with the instruction mentioned herein.
- If the bidder withdraws the bid before the expiry of the validity period.
- If the bidder violates any of the provisions of the terms and conditions of the bid.
- In the case of a successful bidder fails to (a) accept award of work
- (b) sign the Contract Agreement with .....Special Planning Authority / .....Regional Improvement Trust, after communication of acceptance on placement of award.
- (c) the bidder violates any of such important conditions of this bid document or indulges in any such activities as would jeopardize the interest of .....Special Planning

Authority/.....Regional Improvement Trust in timely finalization of this bid.  
The decision of ..... Special Planning Authority / .....Regional Improvement Trust with prior approval of Director Town Planning, Odisha regarding forfeiture of bid security shall be final and shall not be called upon question under any circumstances. Default in such a case may involve black-listing of the bidder by ..... Special Planning Authority/ .....Regional Improvement Trust with prior approval of Director Town Planning, Odisha.

#### **2.2.22 RIGHT TO ACCEPT AND /OR REJECT ANY OR ALL BIDS**

Notwithstanding anything else contained contrary to this Bid Document, Director of Town Planning, Odisha, Bhubaneswar reserves the right to accept or reject any Bid or to annul the bidding process fully or partially, or modifying the same and to reject all Bids at any time prior to the award of work, without assigning any reason thereof and without incurring any liabilities in this regard.

#### **2.2.23 CORRUPT OR FRAUDULENT PRACTICES**

.....Special Planning Authority/.....Regional Improvement Trust/ Directorate of Town Planning, Odisha, Bhubaneswar requires that the Bidders under this bid observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Client (i.e. ....Special Planning Authority/.....Regional Improvement Trust) with prior approval of Director Town Planning, Odisha. defines the terms set forth as follows:- “Corrupt Practice” means the offering, giving, receiving or soliciting of any thing of value to influence the action of the public official in the procurement process or in contract execution; and “Fraudulent Practice” means a misrepresentation of facts, in order to influence a procurement process or execution of a contract to the detriment of the Client, and includes collusive practice among Bidders (prior to or after bid submission), designed to establish bid prices at artificial non-competitive levels and to deprive the Client of the benefits of the free and open competition; The Client with prior approval of Director Town Planning, Odisha will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question. The Client with prior approval of Director Town Planning, Odisha will declare a Bidder ineligible, either indefinitely or for a stated period of time, to be awarded a contract if at any time it is determined that the Bidder has engaged in corrupt and fraudulent practices in competing for or in execution of the contract.

#### **2.2.24 PERFORMANCE SECURITY**

Performance Security @ 5% (five) shall be deducted from each running bill, which shall be released after 3 (three) months of successful completion of work.

#### **2.2.25 COMPLETENESS OF BID OFFER**

The Bidder is expected to examine all instructions, forms, terms, conditions and deliverables in the Bid Documents. Failure to furnish all information required by the bid documents or submission of a bid offer not substantially responsive in every respect to the bid documents will be at the Bidder 's risk and may result in rejection of its bid offer. The bid offer is liable to be rejected outright without any intimation to the Bidder if complete information as called for in the bid document is not given therein, or if particulars asked for in the Forms / Proforma in the bid are not fully furnished.

**SECTION III**  
**BID PROFORMA**

*Forwarding Letter*

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Form

To

Sub: Appointment of Consultant for preparation of a Master Plan for Town taken up by.....Special Planning Authority / .....Regional Improvement Trust - regarding.

Sir,

I/ we \_\_\_\_\_ Consultant/ Consultancy firm herewith enclose Technical Proposal and financial proposal separately in two sealed covers put together in one sealed cover duly superscribing the name of work as specified at Sl.No. 2.2.10 (b) of the RFP for selection of my/our firm/ organization as consultant for preparation of GIS/RS based Master Plan for \_\_\_\_\_ Town of Odisha.

Yours faithfully,

Encl: As above.

Signature.....

Full Name.....

Address.....

(Authorized Representative)

Consultant/firm official seal.

**GENERAL BID PROFORMA****BIDDER'S PROFILE**

Name of the Organization	
Type of Organisation	
Service Profile	
Year of Establishment	
Registered Office Address	
Name and designation of Head of organization	
Correspondence Address	
Name & Designation of Contact person	
Telephone No.	
Fax No.	
E-mail Address	
Website	
Address of office in Odisha, if any	

**Documents in support of Eligibility:**

1. Tender Fee
2. EMD for \_\_\_\_\_ in form of DD drawn in favour of \_\_\_\_\_
3. Copy of certificate of registration establishing operation over past 5 years
4. Copy of PAN card and IT return for FY 2015-16,2016-17&2017-18.
5. Copy of PF registration and return for FY 2017-18
6. Copy of Service Tax/ GST registration and up to date return
7. Copy of up to date VAT clearance certificate valid up to March 2015
8. Documentary evidence of preparation of GIS based Master Plan for of at least 1 (one) town with population more than 1 (one) lakh.
9. Auditor certified Turnover statement for last consecutive 3 years

**TECHNICAL BID PROFORMA****1. Approach & Methodology proposed by the consultant****2. Experience in preparation of GIS based Master Plans/ LIS development/ perspective plan preparation/ Regional Development Plan (last 5 years).**

Sl.	Name of Project	Name of Client	Value of work	Total cost of Project/Work	Status (on-going / completed)	Supporting (Work order/ completion certificate)
1	2	3	4	5	6	7

**3. Turnover statement supported with audited balance sheet**

Sl.	Financial Year	Turn Over (INR) *	Supporting (Balance sheet and Profit & loss statement)
1	2015-2016		
2	2016-2017		
3	2017-2018		

(\* excluding supply of software/ hardware)

**4. Details of infrastructural resources available in Odisha**

Sl.	Location of works	Survey/ Mapping facility	Support facility

**5. List of personnel proposed for the work with skill sets**

Sl.	Name and designation	Qualification	Skill set	Years of Experience

- Enclose a copy of PF return as supporting
- Enclose CVs of Key Resource Persons

**6. Affiliations and Recognitions:**

Documents in support of affiliation/ recognition by any national agency (like NRSA/ Survey of India)

**7. Quality Certifications:**

Document in support of Quality Certification, if any



**FINANCIAL BID PROFORMA**

From ..... To.....  
.....  
.....  
.....

---

Sub: Appointment of Consultant for preparation of a Master Plan - Financial Bid

Sir,

I/we \_\_\_\_\_ Consultant/ Consultancy firm herewith submit our Financial Bid for selection of my/our firm/organization for the following work/ works.

*NB: the above fees shall be inclusive of all taxes but excluding Service Tax / GST*

Yours faithfully,

Signature \_\_\_\_\_  
Full Name \_\_\_\_\_  
Address \_\_\_\_\_  
(Authorised Representative)

**NOTE:- No bidder is allowed to bid for more than Four towns and the amount for each town should be mentioned separately.**

**Delivery of Land use & Cadastral map prints to Special Planning Authority / Regional Improvement Trust:**

- Mouza wise maps are to be printed north oriented in 1:2000 scale in standard A1 size in portrait or landscape as per template approved by Directorate of Town planning.
- Map exceeding A1 size in 1:2000 scale is to be printed in A0 size.
- Maps exceeding A0 size in 1:2000 scale are to be printed in multiple sheets of A0 size.
- In case of very large mouzas not fitting in A0 size in 1:2000 scale are to be printed in multiple sheets of A0/ A1 size in 1:4000 scale
- 2 (two) copies of Revenue Mouza map prints on 90gsm paper are to indicate the land use with plot boundary with parcel number. Care is to be taken to remove overlapping labels (plot nos), confining to the parcel boundary/ polygon. Parcel numbers are to be depicted in Arial Narrow font (9 point) in preferably east-west orientation.
- Composite **Existing Land Use** mosaic print with revenue mouza boundary and name of the jurisdiction area in 1:6000/1:32000 scale with legibility
- Composite to **Proposed Land Use Map mosaic print**.....with legibility

**Delivery of Master Plan maps to..... Special Planning Authority/ .....Regional Improvement Trust**

- All Softcopies
- PDF files of all land use map prints indicating cadastral plot numbers
- Composite Land use mosaic (.SHP) of the jurisdiction area

**MAPS REQUIRED OUT OF THE GIS/RS BASED  
MASTER PLAN**

Sl. No.	Title of Plan /Map	Contents required for Master Plan
1	Spatial Frame work	<ul style="list-style-type: none"> <li>• 36'' X 36'' Grid or 18'' X 18'' or higher</li> <li>• Registration points</li> </ul>
2	Constituent Areas/Administrative Map	<ul style="list-style-type: none"> <li>• Region /District Boundary</li> <li>• Planning Area Boundary</li> <li>• Zone Boundary</li> <li>• MC/ULB Boundary</li> <li>• Ward boundary</li> <li>• Taluka Boundary , if any</li> <li>• Major Transport Network</li> <li>• Location of major settlements (inclusive of slum pockets)</li> </ul>
3	Village Map	<ul style="list-style-type: none"> <li>• Revenue village Boundary</li> <li>• Village Name</li> <li>• Location of village</li> <li>• Plot No.</li> <li>• Urban Area</li> <li>• Forest area</li> <li>• Others</li> </ul>
4	Drainage	<ul style="list-style-type: none"> <li>• Perennial</li> <li>• Dry</li> <li>• Tidal water</li> <li>• Creeks</li> </ul>
5	Surface water bodies/ Ground Water Rechargeable Areas	<ul style="list-style-type: none"> <li>• River/Stream</li> <li>• Lake/Tank/Pond</li> <li>• Canal</li> <li>• Check dam</li> <li>• Flood Plain</li> <li>• Palaeo Channel</li> <li>• Valley Fill</li> <li>• Ox-bow Lake</li> </ul>
6	Ground Water Prospects	<ul style="list-style-type: none"> <li>• Very Good to good</li> <li>• Good to Moderate</li> <li>• Moderate</li> </ul>

		<ul style="list-style-type: none"> <li>• Moderate to poor</li> <li>• Poor to nil</li> </ul>
7	Flood hazard areas/ Disaster Management Plan for Floods	<ul style="list-style-type: none"> <li>• Flood hazard area</li> <li>• River/Waterbody</li> <li>• Non Flood Hazard area</li> <li>• Railway Line</li> <li>• Major Roads</li> <li>• Municipal Corporation /Municipality/NAC Areas ( as applicable.)</li> </ul>
8	Earthquake Hazard Zones/ Disaster Management Plan for Earth Quakes	<ul style="list-style-type: none"> <li>• Neo-tectonic fault</li> <li>• Fault including basement and cover</li> <li>• Sub-surface fault</li> <li>• Gravity fault</li> <li>• Minor lineament</li> <li>• Major lineament</li> <li>• Seismicity magnitude <ul style="list-style-type: none"> <li>- Moderate risk zone</li> <li>- Low risk zone</li> <li>- Very low risk zone</li> </ul> </li> <li>• Municipal Corporation /Municipality/NAC Boundary ( as per applicability)</li> <li>• Planning Area Boundary</li> </ul>
9	Population Density (Ward wise)	<ul style="list-style-type: none"> <li>• Persons per hectare</li> <li>• Population density ( &lt; 100 to &gt; 500)</li> </ul>
10	Health Facilities	<ul style="list-style-type: none"> <li>• Location of Hospitals</li> <li>• Primary Health Centres</li> <li>• Location of Nursing Homes</li> <li>• Location of Family Welfare &amp; Maternity centre</li> </ul>
11	Education Facilities	<ul style="list-style-type: none"> <li>• Primary School</li> <li>• Middle School</li> <li>• Secondary School</li> <li>• Senior Secondary School</li> <li>• College (of all types)</li> <li>• Vocational Training Institutes</li> </ul>
12	Water Supply Network	<ul style="list-style-type: none"> <li>• Source of Drinking water</li> <li>• Water Supply Net work</li> <li>• Location of water Treatment Plants</li> <li>• Pumping Stations</li> <li>• Over Head tanks</li> </ul>

		<ul style="list-style-type: none"> <li>• Under ground Tanks</li> <li>• Area covered under protected water supply</li> </ul>
13	Sewage Network	<ul style="list-style-type: none"> <li>• Location of Treatment plants</li> <li>• Sewage net work</li> <li>• Area served by under ground sewerage</li> <li>• (Proposed Treatment Plants)</li> </ul>
14	Solid waste Management Plan	<ul style="list-style-type: none"> <li>• Location of dust bins</li> <li>• Location of existing garbage yards</li> <li>• Area covered under collection of Solid waste</li> <li>• Proposed Location of solid waste disposal sites</li> </ul>
15	Existing Transport Network 2015	<ul style="list-style-type: none"> <li>• Railway Line (type, no of lines)</li> <li>• Road Type (NH, SH, MDR, express way, ring road, City road, lanes, rural road)</li> <li>• Road width (in feet)</li> <li>• Surface Type (WBM, Morrums, Black-top, CC)</li> <li>• Transportation nodes (bus terminus, railway station, airport, port/harbour)</li> </ul>
16	Proposed Transport Network 2040	<ul style="list-style-type: none"> <li>• Proposed Roads (width, type)</li> <li>• Proposed Rail Lines</li> </ul>
17	Environment Management Plan	<ul style="list-style-type: none"> <li>• Location of Environmentally sensitive areas</li> <li>• Water Bodies</li> <li>• Protected Forests</li> <li>• Rivers</li> <li>• Others</li> </ul>
18	Urban Sprawl	Physical Growth of settlement
19	Existing Land Use	As per supplied/ updated land use maps
20	Proposed Land Use 2040 (Level II)	<ul style="list-style-type: none"> <li>• Residential</li> <li>• Commercial</li> <li>• Industrial</li> <li>• Public &amp; Semipublic</li> <li>• Public Utilities &amp; Facilities</li> <li>• Recreational</li> <li>• Transportation</li> <li>• Rural Zone</li> <li>• Water bodies</li> <li>• Burial and Cremation Ground</li> </ul>

**ANNEXURE-II**  
**ATTRIBUTE DATA IN THE GIS FOR MASTER PLAN**

**Table-1 Existing Urban Land use/land cover.**

URBAN LULC-CODE	LEVEL-I	LEVEL-II	LEVEL-III	LEVEL-IV	LEVEL-V
01-01-00-00-00	Built up				
01-01-00-00-00		Built up (Urban			
01-01-01-00-00			Residential		
01-01-01-01-00				High density residential	
01-01-01-01-01					High rise apartment/flats
01-01-01-01-02					Medium rise apartments/flats
01-01-01-01-03					Low rise apartment/flats
01-01-01-01-04					Low rise row houses
01-01-01-01-05					Low rise Groups/houses/Tenements
01-01-01-01-06					Slums/Clusters
01-01-01-01-07					Others
01-01-01-02-00				Medium density residential	
01-01-01-02-01					High rise apartment/flats
01-01-01-02-02					Medium rise apartments/flats
01-01-01-02-03					Low rise apartment/flats
01-01-01-02-04					Low rise row houses
01-01-01-02-05					Low rise Groups/houses/Tenements
01-01-01-02-06					Slums/Clusters

01-01-01-02-07					Others
01-01-01-03-00				Low density residential	
01-01-01-03-01					High rise apartment/flats
01-01-01-03-02					Medium rise apartments/flats
01-01-01-03-03					Low rise apartment/flats
01-01-01-03-04					Low rise row houses
01-01-01-03-05					Low rise Groups/houses/Tenements
01-01-01-03-06					Slums/Clusters
01-01-01-03-07					Others
01-01-02-00-00			Industrial		
01-01-02-01-00				Service Industries	
01-01-02-02-00				Light industries	
01-01-02-03-00				Extensive industries	
01-01-02-04-00				Heavy Industries	
01-01-02-05-00				Hazardous industries	
01-01-02-06-00				Others	
01-01-03-00-00			Mixed Built up area		
01-01-04-00-00			Recreational		
01-01-04-01-00				Parks/Gardens	

01-01-04-02-00				Stadium	
01-01-04-03-00				Playground	
01-01-04-04-00				Golf course/Race course	
01-01-04-05-00				Zoological parks/Botanical gardens	
01-01-04-06-00				Historical monuments/Fort	
01-01-04-07-00				Planetarium	
01-01-04-08-00				Major function hall	
01-01-04-09-00				Swimming pool	
01-01-04-10-00				Major cinema hall	
01-01-04-11-00				others	
01-01-05-00-00			Public & Semi public		
01-01-05-01-00				Major educational Institute	
01-01-05-02-00				Cantonment	



01-01-05-03-00				Major Hospital	
01-01-05-04-00				Cremation /buried ground	
01-01-05-05-00				Social & cultural centre	
01-01-05-06-00				Religious places	
01-01-05-07-00				Major Govt. Offices	
01-01-05-08-00				Petrol/Gas filling station	
01-01-05-09-00				Police Station	
01-01-05-10-00				Fire Station	
01-01-05-11-00				Rest/Circuit House	
01-01-05-12-00				Electric sub - Station	
01-01-05-13-00				Jail	
01-01-05-14-00				Major Banks	
01-01-05-15-00				Others	
01-01-06-00-00			Communi- cation		
01-01-06-01-				Major Post	

00				Office	
01-01-06-02-00				Telephone Exchange	
01-01-06-03-00				Telegraphs Office	
01-01-06-04-00				Radio/TV Station	
01-01-06-07-00				Others	
01-01-07-00-00			Public Utilities & facility		
01-01-07-01-00				Water treatment plant	
01-01-07-02-00				Land fall/dumping ground	
01-01-07-02-00				Electric power plant	
01-01-07-04-00				Sewerage Treatment Plant	
01-01-07-07-00				Others	
01-01-08-00-00			Commercial		
01-01-08-01-00				Retail & general Business	
01-01-08-03-00				Community Center	
01-01-08-04-				Wholesale &	

00				Warehousing	
01-01-08-05-00				Major Shopping Center/Malls	
01-01-08-06-00				Major Hotels	
01-01-08-08-00				Parking area	
01-01-08-09-00				Market yards	
01-01-08-10-00				Others	
01-01-09-00-00			Transportation		
01-01-10-01-00				Bus terminus	
01-01-10-02-00				Railway station	
01-01-10-03-00				Air ports/Air Strips	
01-01-10-04-00				Sea port/Harbor	
01-01-05-00				Bridge/fly over	
01-01-10-06-00				Roads	
01-01-10-07-00				Railway lines/Sidings	

01-01-1008-00				Truck terminus	
01-01-1009-00				Berth/jetties/Break waters	
01-01-10-10-00				Others	
01-01-11-00-00			Reclaimed Land		
01-01-12-00-00			Vacant land		
01-01-12-01-00				Lay outs/Plotted land	
01-01-13-00-00			Vegetated area		
01-02-00-00-00		Built up (Rural)			
02-00-00-00-00	Agriculture				
02-01-00-00-00		Cropland			
02-02-00-00-00		Fallow land			
02-03-00-00-00		Plantation			
03-00-00-00-00	Forest				
03-01-00-00-00		Dense forest			
03-02-00-00-00		Open forest			
03-03-00-00-00		Plantation			

03-04-00-00-00		Mangroves			
04-00-00-00-00	Grazing land				
05-00-00-00-00	Wastelands	Salt affected			
05-00-00-00-01		Gullied/Rain			
05-00-00-00-02		Gullied Ravenous			
05-00-00-00-03		Land with/without scrub			
05-00-00-00-04		Barran/Rockey			
05-00-00-00-05		Sandy area			
06-00-00-00-00	Wet lands				
06-01-00-00-00		Marshy/Swampy			
06-02-00-00-00		Mudflats			
06-03-00-00-00		Waster logged			
06-04-00-00-00		Salts pans			
07-00-00-00-00	Water bodies				
07-01-00-00-00		River			
07-02-00-00-00		Canal			

07-03-00-00-00		Lakes/ponds			
07-04-00-00-00		Reservoirs			
07-05-00-00-00		Tanks			
07-06-00-00-00		Cooling pond/Cooling reservoirs			
07-07-00-00-00		Abandoned quarries with water			
09-00-00-00-00	Others				
09-01-00-00-00		Quarry/Brick Kilns			
09-02-00-00-00		Dam/Barrage			
09-03-00-00-00		Coral reef/Atoll			

**AGREEMENT OF CONSULTANCY SERVICES FOR PREPARATION OF GIS/RS BASED MASTER PLAN FOR.....TOWN UNDER SPECIAL PLANNING AUTHORITY...../.....REGIONAL IMPROVEMENT TRUST.**

THIS AGREEMENT MADE ON THIS \_\_\_\_\_ day of..... 20....

BETWEEN

Special Planning Authority...../.....Regional Improvement Trust, at \_\_\_\_\_ a body constituted under the Orissa Town Planning and Improvement Trust Act, 1956 having perpetual succession and common seal represented by Sri ..... S/o Sri ....., presently working as Special Planning Authority...../.....Regional Improvement Trust having, its office at Orissa , hereinafter called the client which term shall mean and include, unless excluded by or repugnant to the context, its successors in office and assigns of the one part (1<sup>st</sup> Part).

**AND**

..... registered under .....and having its registered office at....., here in after referred to as the "consultant", which term shall mean and include, unless excluded by or repugnant to the context, its successor or successors in office and assigns of the other part (2<sup>nd</sup> Part).

WHEREAS, the Special Planning Authority...../.....Regional Improvement Trust.....has decided to prepare a Geographical Information System and Remote Sensing based Master Plan for the Planning area.....within jurisdiction of Special Planning Authority...../.....Regional Improvement Trust.

WHEREAS, Directorate of Town Planning, Orissa, Bhubaneswar invited tender for preparation of the same by Planning Schools/ firms/ consultants in the news paper(Name)..... published on date.....

WHEREAS,.....hereinafter called.....was selected as the Consultant for the purpose on conclusion of the tender process.

WHEREAS, the tender proposal was sent to Government of Orissa in Housing & Urban Development Department for administrative & contract approval in their **letter \_\_\_\_\_ the Dt \_\_\_\_\_ of Directorate of Town Planning, Odisha, Bhubaneswar.**

WHEREAS, Government in Housing & Urban Development Department has accorded approval to the proposal in their letter.

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WHEREAS,.....in its letter No.....dt.....has communicated its consent to engage..... as Consultant for preparation of the GIS/RS based Master Plan within 60 (sixty) weeks.

NOW THIS AGREEMENT witnesses and it is hereby agreed and declared by and between the parties here to as follows :

Special Planning Authority ...../..... Regional Improvement Trust hereby appoints.....as the consultant on the following terms and conditions herein after appearing,



## **1. INTRODUCTION**

1.1 Special Planning Authority...../.....Regional Improvement Trust..... area comprising of Urban Local Body limits, ..... and .....(..... ) number of Revenue villages with adjoining rural area, has a population of ..... according to the 2011 Census figures and stretches over an area of ..... sq.kms. **As per the statutory provision under Section-29 of the Orissa Town Planning & Improvement Trust Act-1956**, a Master Plan is required to be prepared to translate broad implementable planning proposals along with detailed land-use plans.

The Master Plan will also deal on the identification of the thrust areas, phasing of development, implementation strategies, resource mobilization and prioritization of the development initiatives.

### **1.2 Planning Area**

The Special Planning Authority...../.....Regional Improvement Trust Area comprises the following area;

Master Plan Area	No. of Mouza	Area in sq. km.
Urban Local Body Area		
Beyond Urban Local Body Area		
Total Area.....		

## **2. OBJECTIVE**

2.1 The objective of the project is to prepare the Master Plan for the Special Planning Authority...../.....Regional Improvement Trust area for a planned development as envisaged in OTP & IT Act,1956. Hence, Master Plan (MP) for ..... Area shall be prepared taking into account the structural frame of the available Master Plan considering the existing developments in and around of the Master Plan area. The problems of proper road infrastructure and drainage are to be dealt meticulously while preparing the Master Plan in addition to other urban problems and their solutions.

## 2.2 THE MAIN OBJECTIVE OF THE MASTER PLAN IS;

To formulate a meaningful physical development Plan to regulate and guide the urban growth in the area by 2040 A.D. in a planned and healthy manner as per the provisions indicated in OTP & IT Act,1956 and Rules made there under from time to time.

## 3. APPROACH AND METHODOLOGY

3.1 The Master Plan will provide all matters necessary for the proper development of area covered by the Plan.

3.2 (a) Master Plan shall define the various zones into which the land covered by the Master Plan may be divided for the purpose of development and indicate the manner in which the land in each zone is proposed to be used and the stages by which any such development shall be carried out,

(b) Master Plan shall serve as a basic pattern of frame work within which the Zonal Development Plan of the various zones may be prepared, there after.

3.3 The preparation of the Master Plan will start with the assessment of the existing conditions and accounting for the potential resources and constraints. Thereafter, development priorities will be set for the particular urban area taking into consideration the physical as well as socio-economic needs.

3.4 The preparation of the Master Plan for the delineated planning area will start after status analysis and consideration of the prime issues as indicated below.

### A . Physical characteristics and natural resources.

- Location and regional setting
- Climate
- Existing land use translated over digital revenue plan as per interpretation of satellite imagery and ground truthing / field verification. The land use interpretation shall be up to level 3 classifications as per TCPO guidelines.
- Environmentally and ecologically sensitive area
- Heritage sites and buildings

### B. Demography

- Existing population , Sex-ratio, Literacy level, population density as per 2011 census figures
- Migration
- Occupational structures as per 2011 Census figures.
- Household characteristics

## **C. Economic base and employment**

### **(a) Formal sector**

- Primary: Urban agriculture, mining and quarrying
- Secondary: Industries
- Tertiary: Trade and commerce, urban services,

### **(b) Informal Sector//Trading Sector**

- Employment
- Trading

### **(D) Housing & Shelter**

- Housing and Shelter
- Existing housing stock
- Administration/Institutional
- Sectoral share- formal and informal.
- Urban slum pockets population, literacy density etc.

## **E). Transportation**

- Transportation
- Network with Terminals at Town and Regional Level.
- Infrastructure

## **F). Facilities**

- Health
- Education
- Administration /Institutional
- Recreation covering parks, playgrounds, Cinema Hall and other Community. recreational facilities

## **G). Infrastructure**

- Water
- Rain Water Harvesting for implementation by private/public agency
- Drainage and sewerage
- Power distribution to various sectors.
- Telecommunications
- Police
- Fire Services

- Cremation and graveyards
- Postal services

**H). Resources**

- Fiscal
- Manpower
- Land

**I). Environment**

- Air
- Water
- Soil erosion
- Sanitation and solid waste management

**j) Tourist Infrastructure**

- Potential Tourist places
- Availability of Tourist Infrastructures.

**k). Development Management**

- Institutional set-up
- Legal support
- Sectoral integration and co-ordination
- Phasing of Development

**4. THE MASTER PLAN SHALL COMPRISE;**

- Reports on physical and socio-economic aspects
- Projections and assessment of requirement & deficit/surplus
- Functional and spatial plans supported by maps, charts and diagrams on
  - a. Land use
  - b. Traffic and Transportation
  - c. Housing to slum improvement
  - d. Public Utilities and services.
  - e. Environmental Improvement
  - f. Education, Research and other community facilities
  - g. Parks, Plantations, city forests, recreation space etc.
  - h. Heritage and Tourism
  - i. Management of water bodies
  - j. Fiscal Planning

- k. Administrative set up required for implementation of the plan
- l. Zoning Regulation with specific emphasis on natural hazard prone zone.
  - (i) Spatial impact assessment of development proposals
  - (ii) Strategies of development and identification of priorities for the city region and phasing.
  - (iii) Identification of solves of project to be taken up on priority basis.
  - (iv) Investment Plan and Action Plan
  - (v) Digital proposed land use plan translated over revenue map in GIS format.

## **5. SCOPE OF WORK**

### **5.1 STAGE-I: PROJECT INITIATION**

- a) The project will be initiated within one month of signing a Deed of Agreement made between both the parties. The Bid document shall form a part of the agreement
- b) The consultant shall prepare an inception report & carry out interactive discussion with the citizens, elected representative & Line Department to generate development issues. The Departments and Agencies those shall be involved in the process of discussion are Planning Authorities, Urban Local Bodies, Line Departments & all stake holders.
- c) The Special Planning Authority...../ .....Regional Improvement Trust shall provide all assistance for organizing the interactive discussion through workshops and seminars.
- d) The consultant shall present the materials for discussion through power point presentation and prepare a brief “ Concept Report ” to facilitate such discussions.
- e) On the basis of interactive discussion with stakeholders, consultant shall prepare a “Concept Report” containing all the development issues, strategies, methodology and approach for preparation of Master Plan and shall submit to the .....SPA/.....Improvement Trust and Directorate of Town Planning in shape of soft and hard copies..

## 5.2 STAGE-II: DIGITAL BASE MAP VALIDATION

Special Planning Authority...../.....Regional Improvement Trust will provide the following inputs

- Digital cadastral database on revenue mouza sheet
- Digital GIS based existing land use map prepared from latest satellite images.

The supplied GIS database will have following specifications:-

- a) Geo-referenced 0.5/0.6m resolution satellite images.
- b) Digital GIS formatted revenue village maps of all the villages coming under master plan area covering .....Sq.km. The geo-referenced image will be provided by Special Planning Authority...../.....Regional Improvement Trust prepared through Orissa Space Application Centre.
- c) GIS format land use map of the (level-III/IV as at Annexure-II) city/town interpreted from satellite imagery with ground verification.
- d) Digitized cadastral maps of the city/ town (revenue village wise) shall be provided in CAD/DWG and shape file. Data of individual sheets, mosaic and geo-referenced revenue maps will be provided. Besides individual mosaic sheets of a village properly edge matched to form revenue villages and villages mosaic to form the Master Plan Area will be provided to the selected bidder.
- e) Shape files containing plot level spatial database (Land use with plot number and attribute as available in cadastral sheets) will be put in the supplied GIS database.

**The above database supplied to the Consultant are to be validated by the consultant before use for Master Plan preparation.** The existing land use maps/ digital cadastral maps are to be used as base and consultant has to collect other information in such a format that it must be linked to supplied GIS database. Soft copies of item (a) to (e) will be provided to the consultant by Special Planning Authority...../.....Regional Improvement Trust. Consultant after checking/ validation has to print maps in the standard format (enclosed in Attachment 1) and submit to .....SPA/ .....RIT accordingly.

The Master Plan has to be prepared on the supplied digital base map.

### **5.3 STAGE-III: FIELD SURVEY, DATA COLLECTION AND UPDATION OF DIGITAL BASE MAP**

- a) The Regional Resource Potentials of the hinterland shall have to be studied in detail in the context of major economic activities, broad land use, major transportation and communication net work, regional level infrastructure facilities and environmental, ecological and conservation measures.
- b) The micro level study has to be undertaken on land use and infrastructure developments such as roads, drainage, environmental conservation etc.
- c) The micro level study through primary/ secondary survey on environmental features like; water bodies, natural channels/ creeks, forests, plantation, low lying areas, agricultural land, pollution level, tourism potentials and heritage preservation etc.
- d) Micro level study of solid waste management, sewerage disposal, scientific disposal system with respect to environmental conservation, innovative techniques for SWM, hospital waste, location of garbage yard, treatment plant through privatization and/or public participation.
- e) 15% Stratified Random sample household survey would be undertaken for socio economic data i.e. demography, employment, economic characteristic, housing, physical and social infrastructure besides the census data of 2001 and 2011 Census (Secondary Source Data).
- f) Survey would be undertaken to prepare traffic & transportation data to quantify the travel need, road network inventory, traffic volume and passenger terminal, commuter survey, parking at critical areas, O.D. survey and goods transport & the travel need.
- g) Data on existing development control regulations and implementation mechanism would be compiled and analyzed to identify the gaps and suggestion for necessary modification and incorporation in the proposal.
- h) Data on existing institutional frame work, funding and implementation agencies would be compiled and analyzed to identify the gaps and suggestion for necessary modification.
- i) Economic base study of industrial, commercial and tourism activities.
- j) All the data mentioned above are to be compiled and analyzed to identify the trends, potentialities and problems of the core and peripheral sub-urbs of the Planning Area.

- k) Analysis and trend based projections would be undertaken on various aspects like; land use requirements, socio-economic profile, traffic and transportation needs, infrastructure & community facilities, housing, need for present and projected population trade and commerce, economic base of industries and environmental concern.
- l) An examination of the application of new techniques of Urban Management those have come to operation in the recent years.
- m) Study of state policies/ strategies in respect of all key sectors with reference to the Planning Area and budgetary provisions/ five years plans/ action plans of different sectoral agencies.
- n) Study on Land including Government, ULBs, Corporate Industrial Area, Private, Forest, Community land etc. with suitability analysis with detail inventory and Real Estate Markets in both developed and newly developing areas.
- o) Study of Resource mobilization for Plan implementation.
- p) Study on different natural hazard prone areas.
- q) Study for rationalization of the land values in the city and region.
- r) Study of rationalized use of publicly owned land as a source of raising resources.
- s) Study of natural resources like, forest, mining, water body, ground water potentialities etc.
- t) The study of existing land use details depicted on the digital revenue village/ mouza maps and compared with digital satellite image derived existing land use with that of the field with **20% stratified random sampling**.
- u) Expenditure on collection of Secondary Information is part of Bidding cost.

#### **5.4. STAGE-IV: SEMINAR AND WORKSHOP**

Interactive seminars and workshops involving various stakeholders, local bodies, official and non-official with the preparation of compendium of such proceedings for taking the feedback & views while preparing the Master Plan proposals. This will be done soon after the concept report is submitted and after status report is submitted to know the aspiration and requirement of the public. The cost towards organizing such seminar and work shop shall be borne by the Consultant as a constitutional part of total project cost.



## 5.5 STAGE-V: PREPARATION OF MASTER PLAN

Drafting of Development (Planning) proposals and Development Control Regulations in the Master Plan for Planning Area.

- 15) **Land Use Plan** for proper utilization of land for residential, commercial, industrial, institutional, recreation, transportation, heritage, ecologically, sensitive area, agricultural & allied & other usages. Plan should indicate the standards of population density for various planning zones. The land use plan & attribute data shall be in the category/ format specified at Annexure - I and II attached to this agreement.
- 16) **Housing Plan** should have proposals for supply of housing with infrastructure development and strategies for overall improvement under Housing Sector, Fulfilling the existing housing stock gap and future housing requirements.
- 17) **Traffic and Transportation Plan** with long/ short term strategies to take up development phase wise.
  - (a) Formation of new roads and missing links.
  - (b) Widening of existing roads & connectivity of missing links.
  - (c) On street/ off street parking facilities in critical areas.
  - (d) Design for junction improvement on priority basis.
  - (e) Traffic management schemes on priority basis.
  - (f) Flyovers & bye passes.
  - (g) Terminal facilities.
  - (h) Mass transportation.
  - (i) Circular/ Ring road.
  - (ii) Non motorized mobility plan with provision of cycle truck and Pedestrian Paths.
- 18) **Water Resources Development and Drainage Plan** duly specifying the master drains, missing link of drains, sewage management and scientific disposal indicating the disposal yards and treatment plants; Augmentation of existing water resources for domestic, commercial, Institutional and industrial sectors (ground water and surface water); Formulation of rain water harvesting guidelines for implementation by private/ public agencies; Proposals for preservation/ protection measures for existing water bodies and natural water courses .Integrated drainage plan the issue of inundation and water logging.
- 19) **Environment Management Plan** with proposals for environmental improvements, such as up-gradation / development plan, renewal and rehabilitation proposals. Development of passive and active open space and plantation and forest development areas of the town.

- 20) **Solid Waste Management Plan** with Innovative techniques for solid waste management, privatization and public participation aspects of SWM, location of garbage yard treatment Plants/ landfill sites .
- 21) **Social Infrastructure Plan** including Education, Health, recreation and community facility plan indicating proposals for parks, open space for multi purpose uses, recreational, educational and cultural centres.
- 22) **Zoning Regulation** for development control with flexible approach to accelerate development as may be necessary for implementation/ enforcement with due consideration for vertical and horizontal expansion of existing hamlets covering within the fold of Master Plan. The Zoning Regulation shall specify the provisions for natural hazards prone areas in general and earthquake prone area in particulars.
- 23) **Utility Services Plan** shall cover Water Supply, Sewerage, plan, with their treatment plant, locations and its management electricity network, with tentative location of step down grid station and fire services plan.
- 24) **Economic Plan** shall contain capital investment proposals, augmentation of financial resources, rough estimates of revenue & resources with respect to implementation in different proposals of Master Plan.
- 25) **Disaster Management Plan containing solutions & strategies to address disaster related issues.**
- 26) **Slum Development Plan with a focus on affordable housing .**
- 27) **Informal Sector (Street Vendors) Plan with its location and mechanism of functioning and implementation.**

**14) Coastal Zone Management Plan (wherever applicable) in consonance with the provisions made by the Ministry of Environment and Forest, Government of India and State Coastal Zone Management Authority in the Coastal Zone Management Plan prepared for the area.**

All the development proposals shall be translated over revenue maps by adopting G.I.S. with detail database of land use and other planning information. This database should also be integrated/ geo-referenced with the satellite imagery for viewing. Different layers of development on a GIS platform is to be generated for appreciation of the proposal over a town base map.

## **5.6. STAGE-VI: INVESTMENT & IMPLEMENTATION OF PLANNING**

- a) The Planning proposals shall have to be categorized into (a) Mandatory projects (b) Optional projects including identification of short and long term development prospective.
- b) In respect of both mandatory and optional projects, the implementation proposals should be categorized into different phases co-terminus with 5 year Plans and annual plans by identifying the probable implementing agencies i.e. Government/ private/ public- private participation.
- c) The financial issues like costing, resource mobilization etc. shall have to be prepared.
- d) The proposal should also cover innovative mechanism in the domain of development charges, impact fees TDR (Transferable Development Rights) and Planning obligations as the possible ways of resource mobilization.
- e) Explore and evaluation of innovative methods of getting land for public purpose/ development purpose instead of normal acquisition process.
- f) The consultant should evolve MIS for review and monitoring on-going development over the GIS data base prepared.

## **5.7. STAGE-VII: NOTIFICATION OF DRAFT PLAN INVITING OBJECTIONS AND SUGGESTIONS**

- a) Special Planning Authority...../.....Regional Improvement Trust shall notify the draft Master Plan for inviting the objections & suggestions from public with a specific period of 60 (sixty) days from the date of its notification in Odisha Gazette.
- b) The consultant shall provide necessary logistic & Technical support for display of the draft plan for public through multimedia process or any compatible communication technology specified by the planning authority. Work shops and seminars may be organized to discuss on draft plan proposals involving all stake holders. The cost of organizing such seminars and work shops shall be borne by the Consultant, the consultant which shall for may part of total project cost.
- c) The objections and suggestions received from the public will be tabulated, scrutinized and modifications to the draft Master Plan by incorporating the feasible

suggestions through a Board of Enquiry to be constituted by the Special Planning Authority...../.....Regional Improvement Trust.

#### **5.8. STAGE-VIII: FINALISATION OF DRAFT MASTER PLAN**

The Final Master Plan will be prepared by the Consultant incorporating the recommendations and suggestions of Board of Enquiries on various aspects and will be submitted to the.....Planning Authority/.....Regional Improvement Trust, Government for approval u/s 32 of OTP & IT Act,1956.

#### **5.9. STAGE-IX: DELIVERY OF FINAL GIS DATABASE**

- a) Village wise **digitized and geo-referenced revenue maps** with village name, plot no, plot type-Government/ Private., revenue sheet no, year of settlement etc.
- b) Digital mosaic of village maps with village name, plot no, plot type-Government/ Private., revenue sheet no, year of settlement, with geo-referenced image derived and **existing land use / physical attributes**
  - Physical attributes such as residential buildings, public & semi public institutions (Government Offices, hospitals, religious building etc.) parks and open spaces, water bodies, road net work, drainage channels & other physical characteristics and natural resources incorporated in different layers.
- e) Digital mosaic of village maps with village name, plot no, plot type-Government/ Private, revenue sheet number, year of settlement **with proposed land use**
- f) Geo-referenced Image derived village wise **existing Land Use map** with ground verification.
- g) Digital Geo referenced Image Derived village wise proposed land use map of the Master Plan Area.
- h) Composite Digital map of Master Plan area printable in 8inch to 1 mile scale/ 4 inches to 1 mile/ 2 inches to 1 mile scale.

#### **5.10 Development of GIS**

The above geo-database is proposed to be developed on Arc GIS platform as a Desktop application for viewing, querying and reporting of various spatial and non-spatial information within the areas of Planning Authority.

The GIS database is to be prepared with mutually registered layers generated from cadastral maps, satellite image, field survey inputs, existing land use, proposed land use etc. Thematic content of the GIS database is described below :

1. Parcel boundaries
2. Land use (existing and proposed)
3. Drainage
4. Surface Water Bodies and canals
5. Road & Rail (existing and proposed)
6. Transportation Nodes
7. Health facility (existing and proposed)
8. Education facility (existing and proposed)
9. Water Supply infrastructure ( proposed)
10. Sewage infrastructure
11. Solid Waste Management infrastructure
12. Ground water prospect areas
- 13.. Hazard zones (Flood and earthquake)
14. Admin boundaries
15. Urban sprawl
16. Satellite images

The above themes are to be generated so as to facilitate preparation of maps as enumerated at Attachment-1. The attribute data of various themes are to be developed with feature code, name, description etc. Attribute data of certain specific themes are enumerated at Attachment -2.

**Scalability :**

1. **Due care should be taken for integration of this system with the proposed E-governance module of the concerned ULBs, particularly with respect to the Building Plan Approval System and the Property Tax Management System. The concerned ULBs are to be consulted and involved in this regard.**
2. **The Geo database should have scalability for use across a Local Area. Network and Internet.**

**5.11 Operation and Training**

The GIS database shall be made operational in the Office of Special Planning Authority...../ ..... Regional Improvement Trust by the consultant. One Year hands on on-site training is to be provided by the consultants to 4 to 5 identified users of the Special Planning Authority...../.....Regional Improvement Trust for using the Geo-database.

## 5.12 Warranty

The consultant shall provide one year warranty support free of cost from date of commissioning of the GIS database in the Planning Authority. This shall however exclude any New/ Additional works beyond the scope of the agreement.

**5.13 Security Deposit & Performance Guarantee** to a tune of 5% of the tender value is to be deducted as security deposit/ performance guarantee from each bill payable, which shall be released after completion of 03 (Three) month from the date of submission of final Master Plan. The said security deposit can be released on submission of Bank Guarantee by the Consultant for equal amount or more than the amount of security deposit.

## 5.14 LIST OF DELIVERABLES

### The firm has to furnish the following deliverables

A map of the Master Plan Area in a suitable scale both in hard & soft copy (10 copies) showing therein, all existing roads of all width, ULBs Boundary, ward boundary & ward number, Revenue village boundary with name and PS number, water bodies, Green space, important land mark, Name of the road if any, Name of the locality, within six weeks of the date of agreement.

Sl. No.	Item of work
1.	Submission of Inception report
2.	Submission of Field Survey Status Report <ul style="list-style-type: none"><li>• 2 copies of the Report in both hard and soft copies along with all maps &amp; charts</li><li>• 2 soft copies of GIS data depicting existing land use at revenue level in 1:1000 scale</li><li>• 2copies of existing land use map print from the GIS data (revenue maps showing existing land use) in 1:2000/1:1000 scale</li></ul>
3.	Submission of Draft Master Plan <ul style="list-style-type: none"><li>• 2 copies of the Report in both hard and soft copies along with all maps &amp; charts</li><li>• 2 soft copies of GIS data depicting all draft Plan proposals in 1:2000 scale at cadastral level</li><li>• 2 copies of proposed land use map print from the GIS data (revenue maps showing all draft plan proposals) in 1:2000/1:1000 scale</li><li>• 2 copies of composite land use map prints of the Master Plan area in 4inch to 1 mile/ 2 inch to 1 mile scale.(Hard copy)</li></ul>
4.	Submission of final Master Plan <ul style="list-style-type: none"><li>• 4 copies of the Report in both hard and soft copies along with all maps &amp; charts</li><li>• 2 soft copies of GIS data depicting all final Plan proposal in 1:2000/1:1000 scale revenue maps</li><li>• 4 copies of proposed land use map print from the GIS data (revenue maps showing all final plan proposals) in 1:2000/1:1000 scale</li><li>• 2 copies of composite digital land use map of the Master Plan area in 4 inch to 1 mile/2 inch 1 mile scale(Soft copy).</li><li>• 4 copies of composite land use map prints of the Master Plan area in 4inch to 1 mile/ 2 inch to 1 mile scale.(Hard copy)</li></ul>

However the consultant shall also provide additional copies of reports and plans and maps at the request of Special Planning Authority...../ .....Regional Improvement Trust on payment of cost as mutually to be agreed upon.

## 6. TIME OF COMPLETION

6.1 The collection of data, preparation of base map, preparation & submission of Master Plan for Special Planning Authority...../.....Regional Improvement Trust shall be completed within 60 weeks as per work flow Table below from the date of initiation of the work. i.e. from the date of signing the agreement.

### 6.2 WORK FLOW SEQUENCE FOR MASTER PLAN OF PLANNING AREA.

Sl. No.	Item of work	Time schedule for submission from the date of agreement in weeks
1	Inception report	2
2	Concept Report & inter active workshop	6
3.	Validation of supplied GIS data base	12
4	Status Survey Report & inter active workshop	20
5	Draft Master Plan	32
6	Interactive Seminar/ Workshop and feedback.	34
7	Statutory Obligation of Hearing by Board of Enquiry & observation compliance.	48
8	Final Master Plan.	60
	<b>Total</b>	<b>60</b>

## 7. STAGES OF PAYMENT

7.1 The amount of Rs. .... lakhs inclusive of all payable taxes and duties (excluding Service Tax/ GST) shall be paid by Special Planning Authority...../.....Regional Improvement Trust towards consultancy fee to the Consultant.

7.1.1 The stages of payment of the Consultancy Fee to the consultant/ consulting firm shall be as follows:

Sl. No.	Fees to be paid in % of consultancy fee	Stages of payment
1.	-	Inception Report
2	10%	After Submission of concept report
3	10%	On submission of Status Report & validation of GIS database
4	10%.	On Acceptance of Status Report & Validation of GIS data base
5.	20%	On submission of Draft Master Plan.
6.	10%	On acceptance of Draft Master Plan
7.	25%	On submission of final Master Plan.
8.	15%	After approval of Master Plan by Government

7.2 15% of consultancy fee as mentioned at point 8 of the above table, is to be released in favour of the consultant in case Government approval is not obtained to the final Master Plan submitted within 06 (six) calendar months from the date of its submission.

7.3 Payment of Cost towards procurement of satellite imagery and revenue village maps shall be made to NRSA, Dept. of Space, Government of India and Survey and Map Publication Cuttack by concerned Planning Authorities.

## **8. WORK NOT TO BE SUBLET**

8.1 The Consultant is prohibited from subletting the work under this agreement to any other agency or organization. The Consultant can associate and avail assistance from different persons for collection of data, compilation there of and undertaking physical and socio-economic surveys as part of the procedure of execution of the works as per the agreement. In case of exigency, the Consultant may sublet the work or part thereof to any organization with prior written approval of the Authority in order to complete the exercise as per the specified time limit.

## **9. Deployment of man power in premises of Planning Authority**

9.1 The consultant shall deploy man power in the office premises to be provided by the Planning Authority free of cost of during project period for effective communication with the Special Planning Authority...../.....Regional Improvement Trust and other stakeholders.

## **10. CO-ORDINATION**

10.1 The Special Planning Authority...../.....Regional Improvement Trust or its authorized officer shall function as the Technical Coordinator in respect of these projects and shall co-ordinate with various organizations for timely preparation of Master Plans. The consultant shall appoint a Consultant-in-Charge and to act as the Coordinator on their behalf and intimate the same to the Planning Authority within two weeks from the date of signing of the Agreement.

## **11. CONSTITUTION OF CORE TECHNICAL GROUP**

11.1 The Government of Odisha / Special Planning Authority...../.....Regional Improvement Trust shall form a core Technical Group consisting of representatives of Special Planning Authority...../.....Regional Improvement Trust and concerned ULBs to identify some important projects to be executed in different locations to boost physical and



economic development of the proposed urban complex. The Technical Group shall also nominate technical Experts to advise on related technical matters of the local area.

## **12. CONSTITUTION A STEERING COMMITTEE**

12.1 The Government of Odisha shall constitute a high level Steering Committee to monitor the progress of the work.

## **13. MONITORING OF THE PROJRCT**

13.1 During the process of the monitoring of the project the Steering Committee, at any point of time, may decide to withhold an amount of 20% of the payment due at that stage to the Consultant for non-compliance of the assignment in specified time frame and with reference to any other aspects which is vital for successful completion of the project.

## **14. ROLE OF SPECIAL PLANNING AUTHORITY..... REGIONAL IMPROVEMENT TRUST**

The responsibility of the Special Planning Authority...../.....Regional Improvement Trust shall be as under.

- a) Provide available secondary information to the consultant in shape of reports/ documents/ plans relevant to preparation of Master Plan.
- b) Provide necessary authorization for procurement of revenue maps satellite imagery and any such information relevant to the preparation of Master Plan.
- c) Release payment to the consultant as per stages of payment as enumerated in this agreement .
- d) Co-ordinate organization of seminars/ work shops / discussion with the stake holders with the consultant team.
- e) Publish the draft Master Plan for inviting objection suggestions in the Odisha Gazette and local news paper as per provisions of OTP & IT Act, 1956.
- f) Conduct hearing of objections and suggestions in respect of draft Master Plan, through a Technical Committee to be constituted for the purpose.
- g) Take steps for approval of Government on the Master Plan as per provisions of OTP & IT Act,1956.
- h) Take steps for final notification of Master Plan in the Odisha Gazette and local news
- i) paper for the Master Plan to come in to force.

**15. DATA SECURITY**

15.1 The Client has absolute right on the data and output so generated in the process of preparation of Master Plan. The consultant shall be responsible for security and safe custody of data. In no way the digitized information so supplied to the consultant or generated by him, in the process of preparation of Master Plan will be copied or duplicated or supplied to any other party or the same reproduced by the consultant in full or part during preparation of Master Plan and after submission of the same to the client.

**16. RIGHT TO INSPECT**

16.1 The Special Planning Authority...../ Secretary of Regional Improvement Trust or his authorized representative shall have the right to visit the Office of the Consultant/ Consulting Firm for checking the manner in which the work is progressing and to ascertain whether the job is being performed according to the specifications and legal requirements. The above Special Planning Authority...../ Secretary Regional Improvement Trust or his/her authorized representative may issue instruction as deemed fit for any modification/ inclusion of different aspects which may required but not covered in work chart/ financial bid format and the consulting firm / consultant is bound to follow such instructions.

**17. TIME EXTENTION**

17.1 Delivery of services shall be made by the Consultant in accordance with the time-schedule specified by Special Planning Authority...../.....Regional Improvement Trust. The Consultant will strictly adhere to the time-schedule for the performance of Work. However, Special Planning Authority...../.....Regional Improvement Trust can extend this time limit on approval of-----steering committee provided the cause of delay is not attributable to the consultant.

**18. PENALTY**

18.1 In the event of delay in execution of work, specified in this Contract / furnishing of deliverables due to negligence or in-efficiency attributable to the consultant, the consultant shall be liable to a penalty @ 0.1% (One percent) of the value of work order in respective phases, for every week of delay up to a maximum of 5%,(five percent) after which Special Planning Authority...../.....Regional Improvement Trust shall be at liberty to cancel the award. For the purpose of this clause, part of a week shall be considered to be a full week.

**19. PROGRESS OF THE PROJECT**

19.1 Progress of the Project may be intimated in writing to Special Planning Authority...../.....Regional Improvement Trust on monthly basis.

**20. CONFIDENTIALITY**

20.1 Any information pertaining to the Government of Odisha or any other agency involved in the project, matters concerning Government of Odisha that comes to the knowledge of the vendor in connection with this contract, will be deemed to be confidential and the contractor will be fully responsible, for the same being kept confidential and held in trust, as also for all consequences of its concerned personnel failing to observe the same. The vender shall ensure due secrecy of information and data not intended for public distribution. The affidavit to this effect shall have to be submitted along with security deposit.

**21. FORCE MAJEURE**

21.1 In case of delay in timely execution of the work caused by factors beyond the control of the consultant such as War, Riot, Earth Quake, Flood, Fire, other natural disasters, Restrictions imposed by the Government or other statutory bodies, the consultant shall intimate the Special Planning Authority...../.....Regional Improvement Trust in writing the beginning and the end of the above clauses of delay, within 7 (seven) days of occurrence and cessation of the force majeure conditions.

**22. TERMINATION OF CONTRACT**

22.1 If the bidder fails to carry out the award / work order in terms of this document within the stipulated period or any extension thereof, as may be allowed by Special Planning Authority...../.....Regional Improvement Trust without any valid reasons acceptable to Special Planning Authority...../.....Regional Improvement Trust, Special Planning Authority may terminate the contract after giving 30 (thirty) days notice, and the decision of Special Planning Authority...../.....Regional Improvement Trust on the matter shall be final and binding on the bidder. Upon termination of the contract, Special Planning Authority...../.....Regional Improvement Trust shall be at liberty to get the work done at the risk and expense of the bidder through any other agency, and to recover such expenditure from the bidder as compensations or damages, caused by the consultant.

**23. TERRITORIAL JURISDICTION OF COURTS**

23.1 All legal disputes arising out of this contract are subject to the territorial jurisdiction of the courts only.

Special Planning Authority/Secretary  
.....Regional Improvement Trust

IN WITNESS WHERE OF the parties above named have hereto respectively signed at AM/PM ..... date.....20.....mentioned under their seal and signature.

The Agreement is drawn and executed in duplicate on stamp papers one of which is to be retained by each part.

EXECUTED AND DELIVERED BY

EXECUTED AND DELIVERED BY

By

**Consultant**

**Special Planning Authority...../**

**Regional Improvement Trust**

(Official Seal if any of Signatory)

(Official Seal of Signatory)

1.Witness  
Address

1.Witness  
Address

2.Witness  
Address

2.Witness  
Address

**Annexure-1****MAPS REQUIRED OUT OF THE GIS/RS BASED MASTER PLAN**

<b>Sl. No.</b>	<b>Title of Plan/Maps</b>	<b>Contents required for Master Plan</b>
<b>1</b>	<b>2</b>	<b>3</b>
1.	Spatial Frame work	<ul style="list-style-type: none"><li>• 36"x36' Grid or 18"x18" or higher</li><li>• Registration points</li></ul>
2.	Constituent Area/administrative Map	<ul style="list-style-type: none"><li>• Region/District Boundary</li><li>• Planning Area Boundary</li><li>• Zone Boundary</li><li>• MC/ULB. Boundary</li><li>• Ward Boundary</li><li>• Taluka Bounday</li><li>• Major Transport Network</li><li>• Location of Major settlements.</li></ul>
3.	Village Map	<ul style="list-style-type: none"><li>• Revenue Village Boundary</li><li>• Village Name</li><li>• Location of village</li><li>• Plot No.</li><li>• Urban Area</li><li>• Forest Area</li><li>• Others</li></ul>
4.	Drainage	<ul style="list-style-type: none"><li>• Perennial</li><li>• Dry</li><li>• Tidal water</li><li>• Creeks</li></ul>
5	Surface water bodies/Ground water Rechargeable areas	<ul style="list-style-type: none"><li>• River/Stream</li><li>• Lake/Tank/Pond</li><li>• Canal;</li><li>• Check dam</li><li>• Flood plain</li><li>• Palaeo channel</li><li>• Valley fill</li><li>• Ox bow lake</li></ul>
6.	Ground water Prospects	<ul style="list-style-type: none"><li>• Very Good to Good</li><li>• Good to Moderate</li><li>• Moderate</li><li>• Moderate to poor</li><li>• Poor to nil</li></ul>
7.	Floor hazard area/ Disaster Management Plan	<ul style="list-style-type: none"><li>• Flood hazard area</li><li>• River/Water body</li><li>• Non flood Hazard area</li></ul>

	<b>for Floods</b>	<ul style="list-style-type: none"> <li>• Railway Line</li> <li>• Major Roads Municipal Corporation Area</li> </ul>
<b>7.</b>	<b>Earthquake Hazard zones/Disaster Management Plan for Earth Quakes</b>	<ul style="list-style-type: none"> <li>• Neo tectonic fault</li> <li>• Fault including basement and cover</li> <li>• Sub surface fault</li> <li>• Gravity fault</li> <li>• Minor Lineament</li> <li>• Major Lineament</li> <li>• Seism city magnitude <ul style="list-style-type: none"> <li>– Moderate risk zone</li> <li>– Low risk zone</li> <li>– Very low risk zone</li> </ul> </li> <li>• Municipal corporation Boundary</li> </ul>
<b>8</b>	<b>Population Density (ward wise)</b>	<ul style="list-style-type: none"> <li>• Persons per hector</li> <li>• Population density (,100 to^ 500</li> </ul>
<b>10</b>	<b>Health facilities</b>	<ul style="list-style-type: none"> <li>• Location of Hospitals</li> <li>• Primary Health Centers</li> <li>• Location of Nursing Homes</li> <li>• Location of Family welfare &amp; Maternity Center</li> </ul>
<b>11.</b>	<b>Education Facility</b>	<ul style="list-style-type: none"> <li>• Primary school</li> <li>• Middle school</li> <li>• Secondary School</li> <li>• College</li> <li>• Vocational Training Institute</li> </ul>
<b>12.</b>	<b>Water supply Net Work</b>	<ul style="list-style-type: none"> <li>• Source of Drinking Water</li> <li>• Water supply Net Work</li> <li>• Location of Water Treatment Plants</li> <li>• Pumping Stations</li> <li>• Over Heads tanks</li> <li>• Under Ground Tank</li> <li>• Area covered under protected water supply</li> </ul>
<b>13.</b>	<b>Sewerage Network</b>	<ul style="list-style-type: none"> <li>• Location of Treatment Plants</li> <li>• Sewerage network</li> <li>• Area served by under ground sewage</li> </ul>
<b>14</b>	<b>Solid Waste Management Plan</b>	<ul style="list-style-type: none"> <li>• Location of dust bins</li> <li>• Location of existing garbage yards</li> <li>• Area covered under collection of solid waste</li> <li>• Proposed Location of solid waste disposal sites</li> </ul>
<b>15.</b>	<b>Existing Transport Network 2015</b>	<ul style="list-style-type: none"> <li>• Railway Line(type. No. of lines)</li> <li>• Road type (NF,SH,MDR express way,</li> </ul>

		<ul style="list-style-type: none"> <li>ring road, city road, Lanes, rural road)</li> <li>• Road width (in feet)</li> <li>• Surface type (WBM, Moorum, Black-top, CC)</li> <li>• Transpiration nodes (bus terminus, railway station, air port/ harbor)</li> </ul>
16	Proposed Transport Network 2040	<ul style="list-style-type: none"> <li>• Proposed Roads (width, typer)</li> <li>• Proposed Rail Lines</li> </ul>
17.	Environment Management Plan	<ul style="list-style-type: none"> <li>• Location of Environment sensitive areas</li> <li>• Water Bodies</li> <li>• Protected Forests</li> <li>• Rivers</li> <li>• Others</li> </ul>
18.	Urban Sprawl	<b>Physical Growth of settlement</b> <ul style="list-style-type: none"> <li>• 1990-1996</li> <li>• 1996-2011</li> <li>• River/Water body</li> <li>• Railway Line</li> </ul>
19.	Existing Land Use	Refer Table-1, Attachment-2
20.	Proposed Land Use 2040	<ul style="list-style-type: none"> <li>• Residential</li> <li>• Commercial</li> <li>– Mandi/Wholesale</li> <li>– Transport Nagar</li> <li>– SEZ</li> <li>• Industrial</li> <li>• Public &amp; semi Public</li> <li>• Public Utilities &amp; Facilities</li> <li>• Recreational</li> <li>– Regional Park</li> <li>– City/Other Parks</li> <li>– Stadium</li> <li>– Green Buffer</li> <li>• Transportation</li> <li>– Roads</li> <li>– Bus Stand</li> <li>– Railway Station</li> <li>– Airport</li> <li>* Rural Zone</li> <li>– Agriculture</li> <li>* Water Bodies</li> </ul>

**ATTRIBUTE DATA IN THE GIS FOR COMPREHENSIVE DEVELOPMENT PLAN**

**Table-1 Existing Urban Land use/land cover.**

URBAN LULC-CODE	LEVEL-I	LEVEL-II	LEVEL-III	LEVEL-IV	LEVEL-V
01-01-00-00-00	Built up				
01-01-00-00-00		Built up (Urban			
01-01-01-00-00			Residential		
01-01-01-01-00				High density residential	
01-01-01-01-01					High rise apartment/flats
01-01-01-01-02					Medium rise apartments/flats
01-01-01-01-03					Low rise apartment/flats
01-01-01-01-04					Low rise row houses
01-01-01-01-05					Low rise Groups/houses/Tenements
01-01-01-01-06					Slums/Clusters
01-01-01-01-07					Others
01-01-01-02-00				Medium density residential	
01-01-01-02-01					High rise apartment/flats
01-01-01-02-02					Medium rise apartments/flats
01-01-01-02-03					Low rise apartment/flats
01-01-01-02-04					Low rise row houses
01-01-01-02-05					Low rise Groups/houses/Tenements
01-01-01-					Slums/Clusters



02-06					
01-01-01-02-07					Others
01-01-01-03-00				Low density residential	
01-01-01-03-01					High rise apartment/flats
01-01-01-03-02					Medium rise apartments/flats
01-01-01-03-03					Low rise apartment/flats
01-01-01-03-04					Low rise row houses
01-01-01-03-05					Low rise Groups/houses/Tenements
01-01-01-03-06					Slums/Clusters
01-01-01-03-07					Others
01-01-02-00-00			Industrial		
01-01-02-01-00				Service Industries	
01-01-02-02-00				Light industries	
01-01-02-03-00				Extensive industries	
01-01-02-04-00				Heavy Industries	
01-01-02-05-00				Hazardous industries	
01-01-02-06-00				Others	
01-01-03-00-00			Mixed Built up area		
01-01-04-00-00			Recreational		
01-01-04-01-00				Parks/Gardens	
01-01-04-02-00				Stadium	
01-01-04-03-00				Playground	

01-01-04-04-00				Golf course/Race course	
01-01-04-05-00				Zoological parks/Botanical gardens	
01-01-04-06-00				Historical monuments/Fort	
01-01-04-07-00				Planetarium	
01-01-04-08-00				Major function hall	
01-01-04-09-00				Swimming pool	
01-01-04-10-00				Major cinema hall	
01-01-04-11-00				others	
01-01-05-00-00			Public & Semi public		
01-01-05-01-00				Major educational Institute	
01-01-05-02-00				Cantonment	
01-01-05-03-00				Major Hospital	
01-01-05-04-00				Cremation /buried ground	
01-01-05-05-00				Social & cultural centre	
01-01-05-06-00				Religious places	
01-01-05-07-00				Major Govt. Offices	
01-01-05-08-00				Petrol/Gas filling	

				station	
01-01-05-09-00				Police Station	
01-01-05-10-00				Fire Station	
01-01-05-11-00				Rest/Circuit House	
01-01-05-12-00				Electric sub Station	
01-01-05-13-00				Jail	
01-01-05-14-00				Major Banks	
01-01-05-15-00				Others	
01-01-06-00-00			Commu ni-cation		
01-01-06-01-00				Major Post Office	
01-01-06-02-00				Telephone Exchange	
01-01-06-03-00				Telegraphs Office	
01-01-06-04-00				Radio/TV Station	
01-01-06-07-00				Others	
01-01-07-00-00			Public Utilities & facility		
01-01-07-01-00				Water treatment plant	
01-01-07-02-00				Land fall/dumpi ng ground	
01-01-07-02-00				Electric power plant	
01-01-07-04-00				Sewerage Treatment Plant	
01-01-07-07-00				Others	
01-01-08-			Commer		

00-00			cial		
01-01-08-01-00				Retail & general Business	
01-01-08-03-00				Community Center	
01-01-08-04-00				Wholesale & Warehousing	
01-01-08-05-00				Major Shopping Center/Malls	
01-01-08-06-00				Major Hotels	
01-01-08-08-00				Parking area	
01-01-08-09-00				Market yards	
01-01-08-10-00				Others	
01-01-09-00-00			<b>Transportation</b>		
01-01-10-01-00				Bus terminus	
01-01-10-02-00				Railway station	
01-01-10-03-00				Air ports/Air Strips	
01-01-10-04-00				Sea port/Harbor	
01-01-05-00				Bridge/flyover	
01-01-10-06-00				Roads	
01-01-10-07-00				Railway lines/Sidings	
01-01-1008-00				Truck terminus	
01-01-1009-00				Berth/jetties/Break	

				waters	
01-01-10-10-00				Others	
01-01-11-00-00			Reclaim ed Land		
01-01-12-00-00			Vacant land		
01-01-12-01-00				Lay outs/Plotte d land	
01-01-13-00-00			Vegetat ed area		
01-02-00-00-00		Built up (Rural)			
02-00-00-00-00	Agricult ure				
02-01-00-00-00		Cropland			
02-02-00-00-00		Fallow land			
02-03-00-00-00		Plantatio n			
03-00-00-00-00	Forest				
03-01-00-00-00		Dense forest			
03-02-00-00-00		Open forest			
03-03-00-00-00		Plantatio n			
03-04-00-00-00		Mangrove s			
04-00-00-00-00	Grazing land				
05-00-00-00-00	Wastela nds	Salt affected			
05-00-00-00-01		Gullied/R ain			
05-00-00-00-02		Gullied Ravenous			
05-00-00-00-03		Land with/ without scrub			
05-00-00-00-04		Barran/ Rockey			

05-00-00-00-05		Sandy area			
06-00-00-00-00	Wet lands				
06-01-00-00-00		Marshy/Swampy			
06-02-00-00-00		Mudflats			
06-03-00-00-00		Waster logged			
06-04-00-00-00		Salts pans			
07-00-00-00-00	Water bodies				
07-01-00-00-00		River			
07-02-00-00-00		Canal			
07-03-00-00-00		Lakes/ponds			
07-04-00-00-00		Reservoirs			
07-05-00-00-00		Tanks			
07-06-00-00-00		Cooling pond/Cooling reservoirs			
07-07-00-00-00		Abandoned quarries with water			
09-00-00-00-00	Others				
09-01-00-00-00		Quarry/Brick Kilns			
09-02-00-00-00		Dam/Barrage			
09-03-00-00-00		Coral reef/Atoll			