Vishwakarma Yojana: Phase IV

PROJECT REPORT
ON

VISHWAKARMA YOJNA: AN APPROACH TOWARDS RURBANISATION

----------Village, ----------District

Prepared By:

NAME	ENROLLMENT NO

Year: 2016-17
Gujarat Technological University,
Ahmedabad, Gujarat

PROJECT REPORT
ON

"Vishwakarma Yojana: Phase-III
An Approach towards Rurbanisation
for
…….. Village, ……..District, Gujarat
Year: 2016-17

Prepared by

NAME ENROLLMENT NO

Nodal Officers:

write Name & Institute of both degree & diploma college Nodal Officer

Institute Logo

GUJARAT TECHNOLOGICAL UNIVERSITY
Chandkheda, Ahmedabad – 382424
Gujarat

Institute Name
Address

Certificate

Abstract

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1.9.3 Objectives

1.9.4 Key elements of a model village

1.9.5 Resources

2.10 Various infrastructure facilities, its types, importance in rural context

2.11 Various guidelines / Norms for Villages for the provisions of different infrastructure facilities.

2.12 Concept: Rurban town & its importance

2.13 Sustainable Development

2.14 Renewable energy source planning particularly for villages

2.15 Techno- economic survey of village. [Design the survey form to collect information from the village]

Note: All the Electrical students will add their part 2.16 onwards

3. Ideal village visit

3.1 Background

3.2 Study Area Location

3.3 Physical & Demographical Growth

3.4 Economic profile

3.5 Social scenario

3.6 Infrastructures facilities

3.7 Key elements of ideal village

3.8 Resources

3.9 SWOT analysis of ideal village

3.10 Future prospects

3.11 Benefits of the visits

Note: All the Electrical students will add their part 3.12 onwards

4. Sustainable Technical Options for Solid & Liquid Waste Management in Rural Areas:

4.1 Technical Options for Liquid Waste Management in Rural Areas:

4.1.1 Stabilization pond system for waste water treatment

4.1.2 Duckweed based waste water treatment with pisciculture

4.1.3 Root zone treatment system

4.1.4 Anaerobic Decentralized Waste Water Treatment System

4.1.5 Aerobic DEWATS

4.1.6 Soakage pit system

4.1.7 Study Technological Options at Household Level Management like;

4.1.8 Kitchen Garden with Piped Root Zone System, Kitchen Garden without Piped Root Zone System and Leach Pit

4.1.9 Any other

4.2 Technical Options for Solid Waste Management in Rural Areas:

4.2.1 Technology options for composting of wastes

4.2.2 Pile Method, NADEP Method, Bangalore Method, Indore Method and Coimbatore Method

4.2.3 Vermi composting

4.2.4 Windrow Composting

4.2.5 Thermophilic Composting

4.2.6 MARC Method

4.2.7 Biogas Technology

4.2.8 Toilet Linked Biogas Plant

4.2.9 Any other

5. Case Studies and Best Practices in Solid and Liquid Waste Management in Rural Areas

5.1 Practicing Zero Waste Management in Vellore, Tamil Nadu

5.2 Solid Waste Management-Vermi tank at Hari Mandir, Panchavati, Nashik

5.3 Vermi Composting from Solid Waste by KGS, Kanpur in U.P.

5.4 Making Nightsoil-based Biogas Plants Viable in Maharashtra's Pune District

5.5 Zero waste management model in valod village, Tapi district

5.6 Solid Waste Management-Conversion of Waste Paper Into "Pepwood"

5.7 Biogas Technology at KGS, Kanpur

5.8 Liquid and Solid Waste Management in Dhamner Village, Dist. Satara in Maharashtra

5.9 Greywater Management - A Case Study of Mehsana, Gujarat

5.10 Liquid Waste Management through Root Zone Treatment at Community Level, Sughad, Gandhinagar, Gujarat

5.11 Liquid Waste Management in Maharashtra

5.12 Black Water Management from Community Toilet in Tamil Nadu

5.13 Covered Drainage System in Banthra Village Uttar Pradesh

5.14 Eco Friendly Plastic Fuel (Conversion of Waste Plastic into Liquid Hydrocarbons/Energy)

5.15 Gray Water Recycling with Piped Root Zone Treatment

5.16 Any other

6. **Feasibility, Construction, Operation and maintenance of various design for sanitation facility options in Rural Areas along with cost**

6.1 Low cost toilet

6.2 Eco sanitation

6.3 Community level toilet facilities

6.4 any other

For Electrical students:

4.2.10 Various models for generating Sustainable Energy in Rural areas.

5. 17Study Various Applications Which Are Suitable For Villages With Reference To

5.1 Solar Energy,

5.2 Biomass Energy And

5.3 Other Renewable Energy Sources

6.5 Concept: Energy Audit

6.5.1 Types : Energy Audit & Its Importance

6.5.2 Performing energy audit in different Public building of villages

6.5.3 Different Techniques to save energy in rural areas

6.5.4 Various best practices with respect to energy management in rural areas.

7. **Study Area Profile**

7.1 Study Area Location

7.2 Physical & Demographical Growth

7.3 Brief history

7.4 Economic profile

7.5 Social scenario

7.6 Village map (Map with all existing facilities) & Study area land use details

8. Data Collection

8.1 General (methods for data collection)

8.2 Primary survey details (Techno Economic Survey)

i. Introduction of Village

ii. Geographical Detail

iii. Demographical Detail

iv. Occupational Detail

v. Physical Infrastructure Facilities

- Drinking Water
- Drainage Network
- Transportation & Road Network
- Electricity
- Sanitation Facilities
    i. Waste Management Facilities
- Irrigation Facilities
- Housing condition
    i. Social Infrastructure Facilities
- Health Facilities
- Education Facilities
    i. Socio-Cultural Facilities

    -Community Hall

    -Public Library

    -Public Garden /Park/Playground

    -Village Pond/Lake

-Other Recreation Facilities

ii. Other Facilities

iii. Sustainable Infrastructure Facilities

iv. Existing Condition of Public Buildings

v. Any other details

vi. Suggestions for Sustainable Infrastructure Facilities & Repair & Maintenance of existing Public Infrastructures

8.3 Smart Village Survey details

9. Sustainable Planning Proposal (Prototype Design)

9.1 Observation

9.2 Recommendations

9.3 Suggestions

9.4 Design Proposals

9.4.1 Sustainable design (Civil)

9.4.2 Sustainable design/ Repair & Maintenance of existing Infrastructures (Civil)

9.4.3 Sustainable design (Electrical)

10. Future Action Plan

11. Conclusion

- **Annexure**

- Survey Form
- Abstract of data
- Base map of Village
- Photographs
- Drawings/Sketches (A3 Size)

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Abbreviations

Chapter 1: Introduction

1.1