DETAIL PROJECT REPORT

Vishwakarma Yojana: Phase VIII

AN APPROACH TOWARDS RURBANISATION CHANVAI Village

VALSAD District

PREPARED BY

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YEAR: 2020-21

GUJARAT TECHNOLOGICAL UNIVERSITY
Chandkheda, Ahmedabad – 382424 Gujarat

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CERTIFICATE

This is to certify that the following students of Degree/ Diploma Engineering successfully submitted

Detail Project Report for ,

VILLAGE - CHANVAI

DISTRICT - VALSAD

Under

VishwakarmaYojana: Phase-VIII

in partial fulfillment of the project offered by

GUJARAT TECHNOLOGICAL UNIVERSITY, CHANDKHEDA

during the academic year 2020-21.

This project work has been carried out by them under our supervision and guidance.

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ABSTRACT

Vishwakarma Yojana Project and how you do your vision project

Vishwakarma yojana Project is one of the best project for the students of Gujarat Technological University.The students who have worked with this project get maximum knowledge because of real village development project. And also very much benefit's for villagers because they may get the facilities which we have design.

About your village description

According to Census 2011 information the location code or village code of Chanvai village is 523290. Chanvai village is located in Valsad Tehsil of Valsad district in Gujarat, India. It is situated 8km away from Valsad, which is both district & sub-district headquarter of Chanvai village. As per 2009 stats, Chanvai village is also a gram panchayat. The total geographical area of village is 931.68 hectares. Chanvai has a total population of 5,834 peoples. There are about 1,321 houses in Chanvai village. Parnera is nearest town to Chanvai which is approximately 3km away.

About existing village condition

In Chanvai village before our survey & Design. Villagers we're facing different problems because village will not fully developed and the facilities like drainage,bus stops, roads, Street lights etc. are not there

About your proposed design your view for village development

After doing different surveys and data collecting and by meeting village peoples we are planning to design & maintenance of different structures like Street light for proposed road, Repair & maintenance of Bus stops, Repair of existing roads etc.

About future scope of the village development

Development of the village by giving facilities & try to developed as villagers are not suffer from any problems.

Key words

Village development, facilities, Design and Village survey.

ACKNOWLEDGEMENT

We are highly indented to **Gujarat Technological University**, Ahmedabad for providing us such opportunity to work under Vishwakarma Yojana to get real work experience and applying our technical knowledge in the development of Villages.

We wish to express our deep sense of gratitude to **Prof. (Dr.) Navin Sheth**, **Hon'ble Vice Chancellor, Gujarat Technological University-Ahmedabad**, for his encouragement and giving us the wonderful project.

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CONTENT

LIST OF TABLES

LIST OF FIGURES

43	Bus stop 1	55
44	Bus stop 2	55
45	Roads	55
46	Earthen Road	55
47	Internal Bitumenious Road	55
48	Solar Street Light	57
49	Soil Liquefaction	63
50	Sustainable Sanitation	64
51	R.C.C. Water Tank	70
52	Drainage Line	70
53	Water Line	71
54	Solar street Light	75
55	Bus stop	85
56	Photo with sarpanch	127
57	Gram Panchayat	129
58	Village Entrance	129
59	Main Road	129
60	Road 1	129
61	Road 2	129
62	Road 3	129
63	Road 4	129
64	Earthen Road 1	129
65	Earthen Road 2	129
66	Internal Road 1	129
67	Internal Road 2	129
68	Internal Road 3	129
69	Internal Road 4	130
70	Primary school	130
71	Primary school	130
72	Primary school	130
73	School garden	130
74	Primary school	130
75	Kutchcha house	130
76	Water tank 1	130
77	Katchcha house	130
78	Water tank 2	130
79	Angamvadi	130
80	Bus stop	130
81	Bus stop	131
82	Electric pole	131
83	Canal	131
84	PHC Centre	131

5 ABBREVIATIONS

SHORT NAME / SYMBOL	FULL NAME
VY	VishwakarmaYojana
PHC	Primary Health Centre
CHC	Child Health Centre
CD	Community Development
HA	Hectare
LED	Light Emitting Diode
IoT	Internet of Things
CT	Census Town
PMAYG	PradhanMantriAwasYojana – Gramin
PMGSY	PradhanMantriAwasYojana – Gramin
RO	Reverse Osmosis
WI-FI	Wireless Fidelity
ATM	Automated Teller Machine
CCTV	Closed Circuit Television
NSSO	National Sample Survey Office
SAGY	SansadAdarsh Gram Yojana
STP	Sewage Treatment Plant
PVC	Poly Vinyl Chlorid
CI	Cast Iron
QTY	Quantity

Chapter 1 - IDEAL VILLAGE VISIT FROM DISTRICT OF GUJARAT STATE

1 Background & Study Area Location

" VishwakarmaYojana" Project is to provide the benefit of real world experience and simultaneously apply technical knowledge in the development of rural infrastructure planning & management

Tithal is an out growth in valsad district of Gujarat. Tithal is located around 4.1 kilometer away from its district headquater valsad. It is known for its beach with brownish-black color soil. Swaminarayan temple, saibaba temple and shantidham temple are local place of worship in tithal.

The official language of Tithal

The native language of Tithal is Gujarati and most of the village people speak Gujarati .

Tithal village people use Gujarati language for communication.

The nearest railway station in and around Tithal

The nearest railway station to Tithal is Valsad which is located in and around 5.0 kilometer distance. The following table shows other railway stations.

Valsad railway station 5 km

Dungari railway station 11 km

Atul railway station' 8 km

Pardi railway station 14 km

Nearest districts to Tithal

is located around 4.1 kilometer away from its district head quarter Valsad. The other nearest district head quarters is navsari situated at 55.9KM distance from Tithal . Surrounding districts from Tithal are as follows.

Valsad district	27.0 KM.
Navsari district	55.9 KM.
Bharuch district	143.7KM.

Nearest town/city to Tithal

Tithal nearest town/city/important place isValsad located at the distance of 4.1 kilometer. Surrounding town/city/TP/CT from Tithalare as follows.

Valsad 4.1 KM.

Atul 10.6 KM.

Pardi 14.0 KM.

Vapi 32.3KM.

Daman 29 KM.

Schools in and around Tithal

Tithal nearest schools has been listed as follows.

Government Gujarati Primary School 1.1 KM.

Shramijvi Madhyamic School 1.2 KM.

Seth R.J.J. High school, Valsad 3.5KM.

R..M.V.M. High school,valsad 5 KM.

Bai Ava Bai High school 4.2 KM.

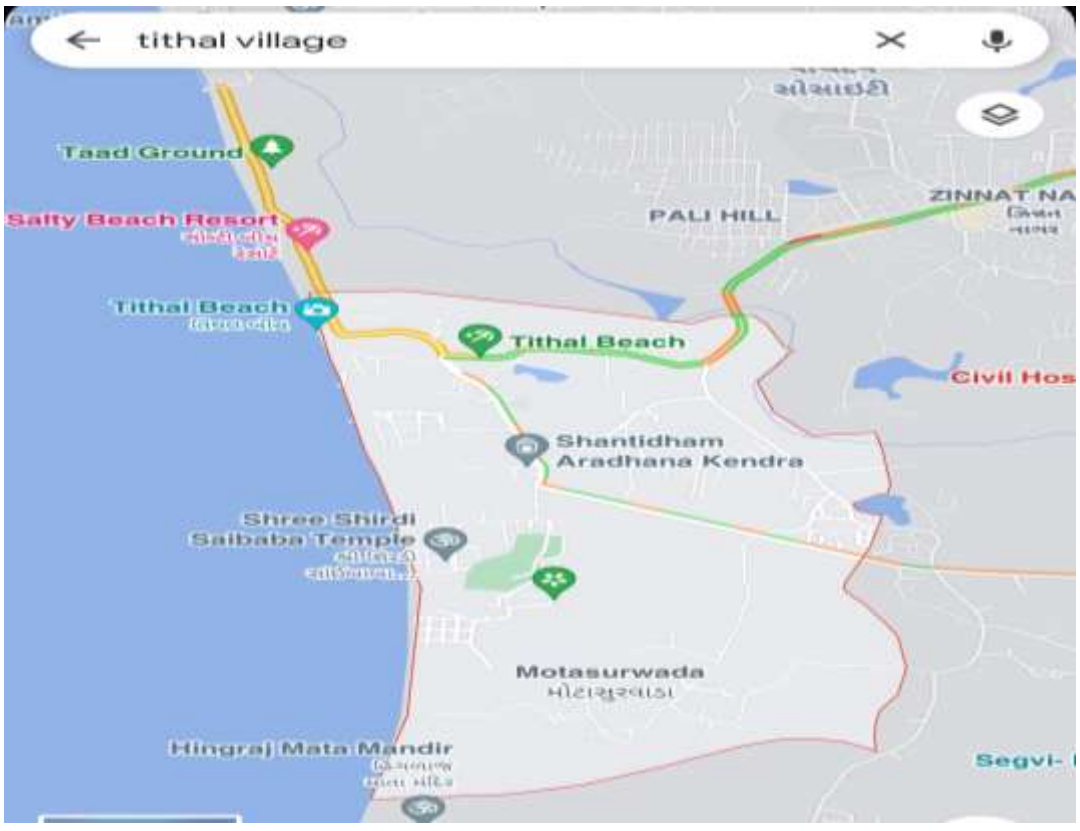

Figure 1 Village Map

1.1 Concept: Ideal Village, Normal Village

Villagers or Inhabitants

A village is formed, governed and maintained by its villagers. The People of an ideal village should be honest and hard-working. They should possess qualities like tolerance to every faith and religion, brotherhood and unity. They should live like a large family and help one another in the hour of need. They should have a sense of discipline and a spirit of service before self. They should keep themselves abreast of not only the happenings of the village but also of the country and the world as a whole. They should always be active and cheerful. Simple living and high thinking should be their motto in life.

Basic Infra-structures

Besides the people, an ideal village should have the following basic infra-structures:

Good Connectivity

Good connectivity is one of the most essential requirements of an ideal village. The village should be well-connected to other parts of the country by roads and also by rails, if possible. The streets and lanes of the village should also be well maintained so that people can easily commute from one part to another.

Houses

The houses should be neat and clean. They should be well-ventilated to allow free flow of light and air. There should be good arrangement for proper sanitation and drainage system.

Sufficient sources of potable water

An ideal village should have good supply of clean drinking water. There should be enough wells, tube-wells and even submersibles to meet the needs of the villagers. It would help everyone get good drinking water. There should also be separate ponds for villagers to take bath and to get water for their cattle.

Proper sanitation and drainage facilities

An ideal village should have good system of sanitation and drainage so that dirty water and waste can be easily drained out. It would help the village keep clean and free from many diseases caused by filthy water. It would also save the villagers from water-logging during the rainy season.

Pasture land for cattle

Almost every villager living in a village keeps cattle. There should be enough paster land for grazing of their cattle. Generally, it should be within the village, at a distance from the houses or just outside the village

Food and fodder

The villagers grow food and vegetables not only for themselves but also for the urban people. They also grow fodder for their cattle. They also produce dairy, poultry and other products for their own consumption as well as for supply to urban areas. There should be proper arrangements in the village itself to provide them with good seeds and all assistance related to their produces.

Wholesale market within the village

Most of the people living in villages are farmers by profession. They grow food crops, cash crops and fodders in their fields. While they consume the food crops for themselves and the fodder for their cattle, the cash crops the other surplus products are sold in the market to meet their other requirements. There should be provision for wholesale market in the village itself so that the villagers can sell their surplus products there at reasonable rates and get good return. This would save them from the hands of the middle men and bring prosperity.

Cottage Industries

An ideal village should have well-established small cottage industries so that the artisans and small farmers can utilize their skills and extra time to produce articles necessary for day to day use and earn a handsome profit by selling them in the market.

Healthcare Centres and hospitals

Besides food, the other most important aspect of human life is health. An ideal village should have proper facilities taking care of the health of the villagers as well as of their cattle and poultry. There should be one-two healthcare centres depending upon the population of the village. A small hospital also adds to the quality of such a village. Besides health centres for the villagers, veterinary dispensaries should also be there to take care of their live-stock.

Educational facilities

An ideal village should have proper arrangements of education for the children. There should be Primary schools and High schools so that the little children need not go out of the village for education. Primary education should be free and compulsory for every child up to a certain age.There should also be soft skills training centres and preferably an adult education centre for the elders who want to get education.

In addition to the above, some other facilities like a post-office, college, playground for children and a meeting place for elders should also be part of an ideal village.

Conclusion

In a nutshell, an ideal village should have all possible provisions and basic intra-structures for the all-

round development of the people living there. The life in such a village would be such as would never lure a person to leave his home and dowel in an urban area.

1.2.1objectives of Ideal village details

The basic objectives of ideal village is

- Development Programmes have been alleviation of poverty and unemployment through creation of basic social and economic infrastructure,
- provision of training to rural unemployed youth and providing employment to marginal Farmers/Labourers to discourage seasonal and permanent migration to urban areas

1.2.2 Example of Case studies of ideal village of India

Case Study of Model Village from the state of Gujarat – kolavada

- Gujarat State has been marching from "Swarajya to Surajya" through implementation of various community and welfare schemes of rural development. It is necessary that Gram Panchayats perform their duties and responsibilities by more programmes and 17hmedabad17g17nce, work as per their expectations with certain goal and with foresight for social, human, economic and personal development and become committed to increase citizen services, create atmosphere of healthy competition. As a result, the villages would become prosperous and smart, migration from villages toward cities would decrease. In this project to providing This facilities to funded by government for his various scheme Planning for the new village to existing village. The Gujarat Government to various program and scheme for smart Village. Our integrated design is a way forward to be deal with the Demographic deficit & also achieve the goals of inclusive growth. In this project providing facilities for Sanitation, Solid waste management, Sawchtta.
- Kolavada is a village panchayat located in the Gandhinagar district of Gujarat state,India. The latitude 23.2711934 and longitude 72.6121294 are the geocoordinate of the Kolavada. Gandhinagar is the state capital for Kolavada village. It is located around 3.7 kilometer away from Kolavada.. The other nearest state capital from Kolavada is Ranchi and its distance is 360.0 KM. The other 17hmedabad17g state capitals are Daman 317.8 KM., Raipur 340.2 KM., Mumbai 479.9 KM.,

Nearest districts to Kolavada

Kolavada is located around 3.7 kilometer away from its district head quarter gandhinagar. The other nearest district head quarters is sagar situated at 60.9 KM distance from Kolavada . Surrounding districts

from Kolavada are as follows.

Mansa (mansa) district	15.1 KM.
Ahmedabad (18hmedabad) district	27.0 KM.
Mehsana (mehsana) district	43.0 KM.
Sabarkantha (himmatnagar) district	50.4KM.

1.2.3 The Idea of a model/Smart Village

- Smart Village is a concept adopted by national, state and local governments of India, as an initiative focused on holistic rural development, derived from Mahatma Gandhi's vision of AdarshGram(Ideal Village) and Swaraj (Self Reliance).
- Prime Minister NarendraModi launched SansadAdarsh Gram Yojana (SAGY) or SAANJHI) on 2 October 2014, Gandhi's birthday, in addition to Smart Cities and Digital India, as a development programme for India.
- The Parliamentarian's Model Village Scheme main goal is for each Member of Parliament and Minister to adopt a rural village and develop it into a model by 2019 under the SAGY guidelines.
- The vision of SAGY is a integrated village development plan, encompassing Personal, Human, Social, and Economic dimensions.
- In the concept of "Smart Village" the development of the village shall be based on the five paths Retrofitting, Redevelopment, Green fields, e-Pan, Livelihood.
- Under the concept of Smart Village, the Foundation has adopted Village Dhanora, The. Bari, District Dholpur, a small and remote village of Rajasthan to develop it as India's First Smart Village. The village is situated 30 km away from Dholpur district head quarter and 248 km from Jaipur. The population of the village is about 2,000.
- The village was devoid of its basic needs like sanitation, internal roads. It was also facing various other similar problems such as lack of access to potable water, non-availability of water conservation system, encroachment on the roads, power fluctuation, non-availability of employment oriented education, unemployment and poverty.
- Now Dhanora has become role model of Rural Development. Dhanora village was also given an award by Prime minister of India Mr. NarendraModi in the year 2018

1.2.4 Ancient History Civil / Electrical concept about Indian Village / other Countries Perspective about village and its new Development

Rural areas and rural development are not novice concepts. These concepts have been prevalent within the country since ancient times. The social, economic, political, and cultural spheres are the ones that need to be taken into consideration, when the concept of rural development is researched upon. The crucial aspects are, policies and programs need to be put into operation to alleviate the problems and challenges that are experienced by rural individuals. The various problems and challenges prove to be impediments within the course of their progression. It is essential to understand how the development of rural communities takes place in ancient times and in pre and post-independence periods. The main areas that have been taken into account include, emergence of rural development, rural development in the pre-independence period, rural development in the post-independence period, Mahatma Gandhi and rural development, significance of rural development concepts and policies and evaluation of rural development policies and programs.

1.3 Detail study (Socio economic, physical, demographic and infrastructure details)of Ideal village / Smart Village

Smart Village is a concept adopted by national, state and local governments of India, as an initiative focused on holistic rural development, derived from Mahatma Gandhi's vision of Adarsh Gram (Ideal Village) and Swaraj (Self Reliance). Prime Minister NarendraModi launched SansadAdarsh Gram Yojana (SAGY) or SAANJHI) on 2 October 2014, Gandhi's birthday, in addition to Smart Cities and Digital India, as a development programme for India The Parliamentarian's Model Village Scheme main goal is for each Member of Parliament and Minister to adopt a rural village and develop it into a model by 2019 under the SAGY guidelines. The vision of SAGY is a integrated village development plan, encompassing Personal, Human, Social, and Economic dimensions.

1.4 SWOT Analysis of Ideal Village

STRENGTH

- -Good Road facilities.
- -Lake at the centre of village.
- -In Lake Statue of Sardar Patel.
- -Cctv Cameras in whole village.
- -House design like Foreign Structure s.
- -Clean water tanks.

- -Garden Facilities.
- -30,000 Trees & Plants.
- -Engineering College.

OPPORTUNITY

- BETTER LIVING EXPERIENCE
- MODERN LIFE STYLE
- MODERN FACILITIES
- BETTER ENVIRONMENT

1.5 Future Prospects of Development of the Ideal Village

Rain water harvesting

Green building system

Fire safety availability

environment without pollution effects

Reuse of water

solid waste management

Unity of villagers

Maintenance of infrastructures

Development of village by Latest techniques & methods

1.6 Benefits of the visits of Ideal Village

By visiting ideal village we get knowledge of development of village by proper planning with maximum facilities &. So onAlso the methods they apply to developed are helpful for us. It gives best way to make improvements in our project

1.7 Civil aspects required in Ideal Village

Basic infrastructures,

Proper Sanitation & Drainage facilities,

Portable drinking water,

Educational facilities,

Healthcare centres

Chapter 2 – ChanvaiVillage Literature Review – (Civil & Electrical Concept)

2.1 Introduction: Urban & Rural village concept

URBAN VILLAGE CONCEPT

- In urban planning and design, an urban village is an urban development typically characterized by medium-density housing, mixed use zoning, good public transit and an emphasis on pedestrianization and public space.
- Urban villages are seen to provide an alternative to recent patterns of urban development in many cities, especially decentralization and urban sprawl. They are generally purported to:Reduce car reliance and promote cycling, walking and transit useProvide a high level of self-containment (people working, recreating and living in the same area)Help facilitate strong community institutions and interaction

RURAL VILLAGE CONCEPT

- Rural development has traditionally centered on the exploitation of land-intensive natural resources such as agriculture and forestry. However, changes in global production networks and increased urbanization have changed the character of rural areas. Increasingly tourism, niche manufacturers, and recreation have replaced resource extraction and agriculture as dominant economic drivers.
- The need for rural communities to approach development from a wider perspective has created more focus on a broad range of development goals rather than merely creating incentive for agricultural or resource based businesses. Education, entrepreneurship, physical infrastructure, and social infrastructure all play an important role in developing rural regions.
- Rural development is also characterized by its emphasis on locally produced economic development strategies.
- In contrast to urban regions, which have many similarities, rural areas are highly distinctive from one another. For this reason there are a large variety of rural development approaches used globally.
- Rural development is a comprehensive term. It essentially focuses on action for the development of areas outside the mainstream urban economic system. We should think of what type of rural development is needed because modernization of village leads to urbanization and village environment disappears.
- Rural development is the process of improving the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated areas.

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- Rural development is a comprehensive term. It essentially focuses on action for the development of areas outside the mainstream urban economic system. We should think of what type of rural development is needed because modernization of village leads to urbanization and village environment disappears.
- A village is a clustered human settlement or community, larger than a hamlet but smaller than a town (although the word is often used to describe both hamlets and smaller towns), with a population typically ranging from a few hundred to a few thousand. Though villages are often located in rural areas, the term urban village is also applied to certain urban neighborhoods. Villages are normally permanent, with fixed dwellings; however, transient villages can occur. Further, the dwellings of a village are fairly close to one another, not scattered broadly over the landscape, as a dispersed settlement.
- In the past, villages were a usual form of community for societies that practice subsistence agriculture, and also for some non-agricultural societies. In Great Britain, a hamlet earned the right to be called a village when it built a church.[1] In many cultures, towns and cities were few, with only a small proportion of the population living in them. The Industrial Revolution attracted people in larger numbers to work in mills and factories; the concentration of people caused many villages to grow into towns and cities. This also enabled specialization of labor and crafts, and development of many trades. The trend of urbanization continues, though not always in connection with industrialization. Historically homes were situated together for sociability and defence, and land surrounding the living quarters was farmed. Traditional fishing villages were based on artisan fishing

and located adjacent to fishing grounds.

Urban village

In urban planning and design, an urban village is an urban development typically characterized by medium-density housing, mixed use zoning, good public transit and an emphasis on pedestrianization and public space. Contemporary urban village ideas are closely related to New Urbanism and smart growth ideas initiated in the United StatesUrban villages are seen to provide an alternative to recent patterns of urban development in many cities, especially decentralization and urban sprawl. They are generally purported to:Reduce car reliance and promote cycling, walking and transit useProvide a high level of self-containment (people working, recreating and living in the same area)Help facilitate strong community institutions and interaction

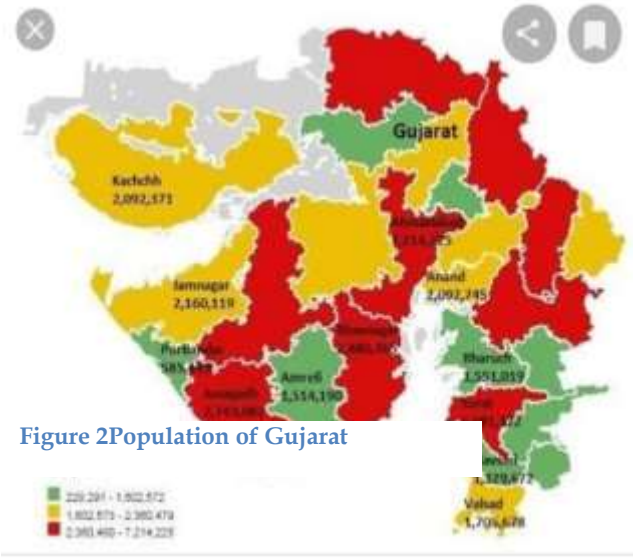

Figure 2Population of Gujarat

The urban population of India has seen a rise from 17.1 per cent to 29.2 per cent between 1950 and 2015. Meanwhile, the rural population declined from 82.9 per cent (in 1915) to 2015's 67.2 per cent. … The urban rate has consistently overpowered the total population growth rate over the last seventy years.

The population of Gujarat at the same date and time is 6.04 crore comprising 3.15 crore males and 2.89 crore females. Of this, the rural population stands at 3.47 crore and the urban population 2.57 crore. The rural population has increased by 29.54 lakh and the urban population by 68.15 lakh in the last decade.

2.6 Rural Development Issues – Concerns – Measures

ISSUES:-

The major problems consist of the agriculture, the ownership of the land, the lack of cottage industries, lack of education social evils, death of animal, wealth, bad wealth and so on. These problems are the result of traditionalism and conservatism of the Rural Society.

Concerns:-

Rural areas are still plagued by problems of malnourishment, illiteracy, unemployment and lack of basic

infrastructure like schools, colleges, hospitals, sanitation, etc. This has led to youth moving out of villages to work in cities. This could be compared to the brain drain from India to US

Measures:-

reduce production costs,improveproduction,increasequality,preserve the natural environment

implement hygiene and animal welfare standards and promote diversification of farming activities.

Some regions/Member states show increases in income and better use of factors of production as a result of this measure.

2.7 Various infrastructure guidelines with the Norms for Villages for the provisions of different infrastructure facilities

TABLE-1 infrastructure facilities

Facilities	Planning commission/UDPFI Norms	Required as per Norms
Education		
Anganwadi	Each or per 2500 Population	0
Primary School	Each or per 2500 Population	1
Secondary School	For 7,500 Population	0
Higher Secondary school	Per 15,000 Population	0
College	Per 125,000 Population	0
Tech. Training institute	Per 100,000 Population	0
Agriculture Research Centre	Per 100,000 Population	0
Medical facility		
Govt./Panchayat Dispensary or sub PHC or health center	Each Village	1
PHC & CHC	Per 20,000 Village	1
Child Welfare and Maternity Home	Per 10,000 Population	1
Hospital	Per 10,000 Population	0
Transportation		
Pucca Village Approach Road	Each Village	1
`Bus/Auto Stand Provision	All villages connected by PT (ST Bus or Auto)	1

Drinking Water		
Water facilities		1
Over Head Tank	1/3 For Demand	1
U/G Sump	2/3 For Demand	1
Public Latrines	Each Village	1
Cremation ground	For 20,000 Population	1
Post Office	For 10,000 Population	1
Gram Panchayat Building	Each individual/group Panchayat	1
APMC	Per 100,000 Population	1
Fire Station	Per 100,000 Population	1
Police Station	Per 15,000 Population	1
Community Hall	Per 10,000 Population	1

2.8 Other Projects / Schemes of Gujarat / Indian Government

Gujarat govt. Schemes:

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

Swachh Bharat Mission (Gramin) (SBM)

SaansadAdarsh Gram Yojana (SAGY)

PradhanMantriAwasYojana (Rural)

Integrated Watershed Management Programme (IWMP)

Mission Mangalam

Mission Antyodaya

National Rurban Mission

Gujarat VadilSukhakariYojana 2020 – Healthcare Initiative for Elderly Citizens:

Figure 3Gujarat vadilsahkariyojana

VadilSukhakariYojana has been launched by the Ahmedabad Municipal Corporation as a healthcare initiative for elderly citizens. In this scheme, the teams of the doctors and paramedical staff will visit elderly citizens particularly those senior citizens with co-morbidities. In this article, we will tell you about the VadilSukhakariYojna complete details.

Gujarat KisanSarvodayYojana 2020 Phase 1 to Provide Electricity to Farmers

Figure 4Kishansarvodayyojana

KisanSarvodayYojana Phase 1 has been launched by Gujarat government to provide electricity to all farmers during day time. The state govt. has changed the name from DinkarYojana to KisanSarvodayYojana. The 1st phase of the scheme would be virtually launched by PM NarendraModi on 24 October 2020. Gujarat KisanSarvodayYojana.

Gujarat Ganga SwarupaYojana 2020 (VidhvaSahayYojna) Pension Amount / Income Eligibility

Gujarat govt. has launched Ganga SwarupaYojana to provide pension to widows. The state govt. has changed the name of previously running VidhvaSahayYojna to Ganga SwaroopBeheno Ne SahayataYojana. This widow pension scheme initiative is an effort to show sensitivity and transparency of the Gujarat government. In the Gujarat Ganga SwarupaYojana

Gujarat Digital SevaSetu Phase 1 to Connect Village Panchayats with Optical Fibre Network

Gujarat govt. has announced to start Digital SevaSetu Phase 1 on 8th October 2020. In this programme, the state government has connected 3,500 village panchayats with 100 MBPS optical fiber network. It is a revolutionary step of the govt. towards transforming public service delivery system in rural areas of the state and realizing the

Figure 5Digital sevasetu

Gujarat VahliDikriYojana 2020 Application / Registration Form – Rs. 1 Lakh to Daughter

Figure 6VahliDikariYojana

Gujarat govt. is running VahliDikriYojana (Dear Daughter Scheme) for girl children of the state. Under this VahliDikriYojana, the state govt. will provide education incentives and Rs. 1 lakh to first and second daughters of family. This one lakh assistance amount would be provided when the girl attains the age of 18

Gujarat Two Wheeler Scheme 2020 – Subsidy on Purchase of Electric Scooters.

Figure 7Gujarattwo wheeler schem

Gujarat Two Wheeler Scheme has been announced by the state government on 17 September 2020. In this 2 Wheeler Scheme, the Gujarat govt. will provide Subsidy on purchase of electric scooters to encourage use of e-vehicles to prevent air pollution.

Chapter 3 – Smart (Cities / Village) Concept Idea and its Visit (Civil & Electrical Concept)

3.1.1 Introduction –

Smart Village " is that the technology should acts as a catalyst for development, enabling education and local business opportunities, improving health and welfare, enhancing democratic engagement and overall enhancement of rural village dwellers.

3.1.2 Concepts –

- Smart Village is a concept adopted by national, state and local governments of India, as an initiative focused on holistic rural development, derived from Mahatma Gandhi's vision of Adarsh Gram (Ideal Village) and Swaraj (Self Reliance).
- Prime Minister NarendraModi launched SansadAdarsh Gram Yojana (SAGY) or SAANJHI) on 2 October 2014, Gandhi's birthday, in addition to Smart Cities and Digital India, as a development programme for India
- The Parliamentarian's Model Village Scheme main goal is for each Member of Parliament and Minister to adopt a rural village and develop it into a model by 2019 under the SAGY guidelines.
- The vision of SAGY is a integrated village development plan, encompassing Personal, Human, Social, and Economic dimensions.

3.1.3 Definition – CIVIL

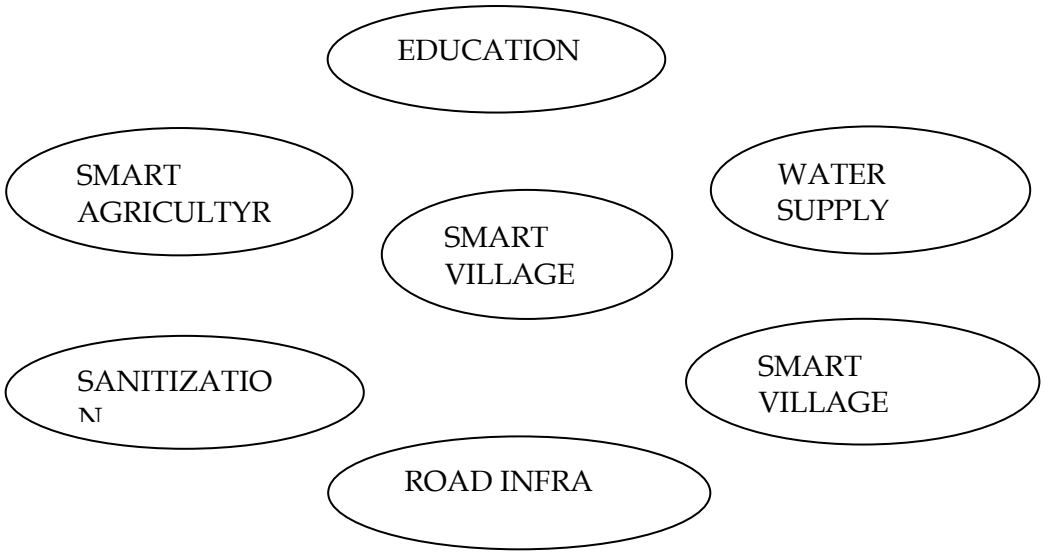

FIG.8 Flow chart

3.1.4 Definition – ELECTRICAL –

- Worldwide, 1.3 billion people remain without access to electricity and 2.7 billion are still cooking on harmful and inefficient stoves. Many live in remote rural village communities, and until they have access to energy services, little progress can be made to develop and improve their lives.
- Improving the lives of rural communities by developing smart villages is a concept analogous to the more familiar smart cities. The vision for smart villages is that modern energy access can act as a catalyst for development – in education, health, food security, productive enterprise, clean water and sanitation, environmental sustainability and participatory democracy – which in turn supports further improvements in access to energy. Integrating energy access with other development initiatives, harnessing and developing local entrepreneurial capacities, and technological advances in the supply and use of sustainable energy are making such transformative change possible.

3.2 Vision-Goals, Standards and Performance Measurements Indicators

3.2.1 Vision-Goals –

The vision of smart village is that modern energy access can act as catalyst for development in education , health , productive enterprise , clean water , sanitation , environmental sustainability and participatory democracy which helps to support further improvement in access to energy .

3.2.2 Standards –

Smart village concept emerged due to some different characteristics between rural and urban areas. ... The proposed smart village model was categorized into 6 dimensions including

1) Governance,

(2) Technology,

(3) Resources,

(4) Village Service,

(5) Living, and

(6) Tourism

3.2.3 Performance Measurements Indicators –

Human Development

100% Institutional Deliveries

End all preventable maternal deaths

End all preventable infant deaths

Malnutrition free children (below 5 years of age)

Zero school drop outs upto 12th class.

Environmental Development

GP / Ward has trees in vacant land i.e. common land, road side, institutional premises

GP / Ward has functional water conservation and harvesting structures n Functional solid / liquid waste management system.

Social Development

End open defecation n End girl-child marriages (girls below 18 years of age) Good Governance

GP / Ward has functional Information Centre i.e. Computer Lab, and MeeSeva Centre

GP / Ward has telecom/ internet connectivity

GP / Ward has functional grievance redressal system

Gram Sabha/Ward Sabha held 4 times a year with 2/3rd attendance

GP / Ward has its own dynamic development plan prepared by community participation.

Economic Development

Home for all – with access to toilet, safe- drinking water, and regular power

Every household has diversified livelihood opportunities and/or micro- enterprise

Every village household has a functional bank account/PM Jan Dhan Bank Account

Every farmer has soil health card, enriched micro-nutrients n Functional toilet, potable water, electricity available in AnganwadiCentres, Govt. Schools, healthcentre, GP / Ward building.

3.3 Technological Options

3.3.1 Civil related Technological options –

1) Enhanced use of smartphones & optical fiber technology for internet techniques

Enhanced use of smartphones & optical fiber technology for internet techniques

a) climate Smart technology

FIG.9 Climate smart technology

B) Smartapps for smart agriculture

C) online farming trainings

2) Sanitation & Smart Sewage management system

3) online library & E-education

4) water harvesting system

5) Solar powered borewells

6) Smart public transport system

7) renewable energy sources & Solar energy

8) latest medical facilities

9) Cyber security

10) Smart building

3.4 Road Map and Safe Guards

- PradhanMantri Gram SadakYojana (PMGSY) has proved to be a transformative scheme. Thousands of villages which were cut-off from the outside world were connected. The national rural road construction program has built paved roads to over 100,000 villages since its launch in 2000.
- A research report 'Market Access and Structural Transformation: Evidence from Rural Roads in India' by Sam Asher and Paul Novosad examines the labor market consequences of high rural transport costs by estimating the causal effects of a USD 37 billion rural road construction program, which has provided over 100,000 Indian villages with paved connections to the wider road network.
- It states, "These effects are driven by villages close to large cities, where a new rural road represents a larger proportional decrease in total transportation costs to external demand for rural labor and production." Similarly the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has brought significant improvement in employment generation in rural India. The scheme that is termed the biggest poverty reduction scheme provides jobs to over 50 million households.
- However, the government needs to find out some innovative ways through which rural workforce can be provided skills and improve their employability in the evolving markets in rural India.

3.5 Issues & Challenges

3.5.1 Issues –

There is a huge requirement for smart technology to be used in these smart villages. There is a need of proper financial resources and a market to create these smart technologies. But as of now there are a lot of constraints to get the ecosystem ready for financial resources as well as for proper marketization

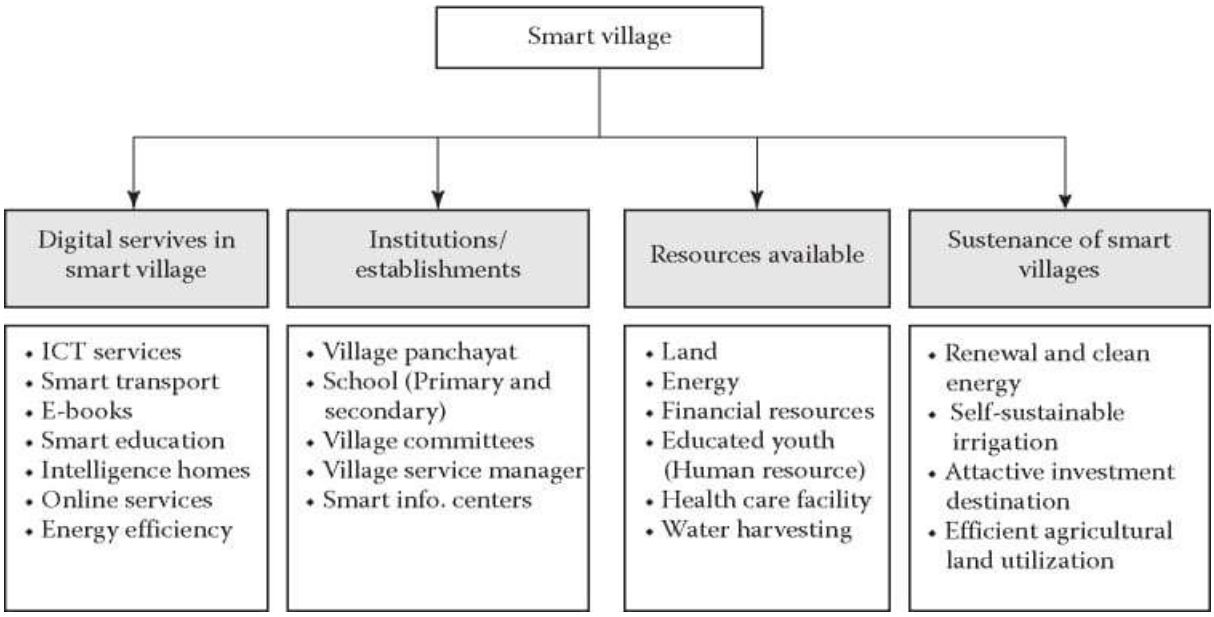

FIG.10 Issues and challanges

Ecosystem of a smart village.

Budget Constraints

There is a huge issue of budget constraints, which essentially has limited innovative thinking and created obstacles for many other initiatives. The budget constraints have created many hindrances for a lot of smart initiatives that if properly nurtured could be more cost- effective and efficient (UK Government Press, 2013).

Smart Technology

It is considered that smart technology for these smart villages is still in the precommercial or in some cases the conceptual stage. And since the technology is in the pre-mature or conceptual stage, it generates uncertainties regarding return on investment as far as financial parameters are concerned. This also results in apprehension of a long payback period, and investors are unwilling to invest, which contributes to financial uncertainties for smart technology initiatives (Hirst et al., 2012).

Lack of Knowledge

- The other challenges related to smart village initiatives in India is the lack of knowledge of the people using modern technology. The citizens' experience of these smart technology initiatives has largely not been good for several reasons, one of which is due to the paucity of knowledge of the common people as to how to use modern digital technologies,
- Internet and other modern technology, and also the fact that there are very few people, especially in rural areas of India, as with other parts of the developing world, who know how to efficiently use and apply modern digital technologies, such as "smart meters" (Bracknell Forest Homes). There are other constraints that, though not so vital, also deserve mention, such as lack of technology-related skills, constraints on integration, and limited understanding and influence over the basic available services.
- Issues such as data privacy and security and political interferences also do not help to overcome the issue.

3.6 Smart Infrastructure - Intelligent Traffic Management

- In present-day times, the number of vehicles has increased drastically, but in contrast, the capabilities of our roads and transportation systems still remain underdeveloped and as a result, fail to cope with this upsurge in the number of vehicles.
- As a consequence, traffic jamming, road accidents, increase in pollution levels are some of the common traits that can be observed in our new age cities. With the emergence of the Internet of Things and its applicability in Smart Cities, creates a perfect platform for addressing traffic-related issues, thus leading to the establishment of Intelligent Traffic Management Systems (ITMS).
- The work presented in this paper talks about an intelligent traffic management system that lays its foundation on Cloud computing, Internet of Things and Data Analytics. Our proposed system helps to resolve the numerous challenges being faced by traffic management authorities, in terms of predicting an optimum route, reducing average waiting time, traffic congestion, travel cost and the extent of air pollution.
- The system aims at using machine learning algorithms for predicting optimum routes based upon traffic mobilization patterns, vehicle categorization, accident occurrences and levels of precipitation. Finally, the system comes up with the concept of a green corridor, wherein emergency services are allowed to travel without facing any kinds of traffic congestion.

3.7 Cyber Security or any other concept as per the (Annexure 1)

- Cybersecurity is security as it is applied to information technology. This includes all technology that stores, manipulates, or moves data, such as computers, data networks, and all devices connected to or included in networks, such as routers and switches. All information technology devices and facilities need to be secured against intrusion, unauthorized use, and vandalism.
- Additionally, the users of information technology should be protected from theft of assets, extortion, identity theft, loss of privacy and confidentiality of personal information, malicious mischief, damage to equipment, business process compromise, and the general activity of cybercriminals.
- The general public should be protected against acts of cyberterrorism, such as the compromise or loss of the electric power grid.
- Under such circumstances, many metropolitan cities are dealing with challenges such as overpopulation, waste management, massive energy consumption and pollution as a result of dramatic increase of migrants and travelers.
- Traditional access control systems, therefore, can no longer effectively deal with such multidimensional challenges, traffic jams and long queue waiting times should not be accepted as the norm. Cities have to innovate themselves with better and smarter access control systems to track and manage their populations, vehicles, buildings and touristic sites.

3.8 Retrofitting- Redevelopment- Greenfield Development District Cooling

- Retrofitting refers to the addition of new technology or features to older systems, for example:power plant retrofit, improving power plant efficiency / increasing output / reducing emissionshome energy retrofit, the improving of existing buildings with energy efficiency equipment
- seismic retrofit, the process of strengthening older buildings in order to make them earthquake-resistant
- Naval vessels often undergo retrofitting in dry dock to incorporate new technologies, change their operational designation, or compensate for perceived weaknesses in their design or gun plan.

Redevelopment-

Redevelopment is any new construction on a site that has pre-existing uses. It represents a process of land development uses to revitalize the physical, economic and social fabric of urban space.

Greenfield development :-

Over 10% of global electricity consumption today is used for cooling, and demand for cooling continues to increase. District cooling (centralized cooling) is a modern approach that uses increased efficiency,

local sources and multi-generation to deliver more cooling capacity while reducing electricity consumption, peak load and environmental impacts. A district cooling business is easy to start and delivers multiple benefits to the customer.

3.9 Strategic Options for Fast Development

There are a number of ways to generate options, for example:

-Use Ansoff's matrix to consider all the possibilities of selling: existing products to new customers (new geographies, customer segments, etc),

-new products to existing customers, or evennew products to new customers .

-Use the innovation templates for a systematic approach to developing new products and services.

-Use Porter's generic strategies as a framework for choosing between and developing options based on either:Cost Leadership,Differentiation orFocus. Add, change or remove a competitive factor on your Strategy Canvas.

-This best done using the Voice of the Customer (VOC) off the back of customer research.

-Develop options which flow directly from the insights in your SWOT analysis.

-For a portfolio of businesses or products, use a BCG Analysis. or a Pareto Analysis to understand and develop your options for shaping the portfolio. Ask people for ideas.

Developing options from the insights in your SWOT analysis

Weaknesses:

-Strengthen your capability or acquire the resources

-Partner with some who is strong at it

-Avoid it by focusing on customer segments who value it less highly

-Discount opportunities which rely on it

Strengths:

-Find other products, services or customer segments which rely on it

-Promote it to your customers

-Target customers who prize it most highly

Opportunities:

-Invest in building and using related strengths

-Position and promote yourself as a leader in the field

-Conceal your intentions so that competitors are less aware of the opportunities

Threats:

-Exit or de-emphasis directly affected markets

-Capitalise on a competitor's weaknesses in this area

-Seek to neutralise it

3.10India's Urban Water and Sanitation Challenges and Role of Indigenous Technologies

- The seriousness of the challenges associated with urban water supply and sanitation in India have been recognised in recent times. After decades of neglect, the first national effort to invest in theurban water and sanitation sector commenced in the 1970s, but was accorded considerable priority in the subsequent two decades as a part of different national- and state-level schemes, culminating most recently in the 'Swacch Bharat Mission'.
- As most of the recent reports and commentaries, (M. Shah (2013) have highlighted, the problems of the urban water and sanitation sector in India are complex and shall need concerted efforts to sustain the policy momentum. This paper attempts to highlight the multidimensional nature of the challenge, and sets out recommendations for strengthening existing policies and their implementation.
- While the concerns of urban water and sanitation are faced in many countries in the global South, the scale of gaps in access and services in India poses a dilemma. According to the 2011 census, India has a total population of 1.21 billion, which is an addition of 181 million people during the decade of 2001–2011 Census of India, 2011b). Although only 31.16 percent of India is urban according to the Census of India, at 377 million, India's current urban population is larger than the entire population of United States which is the third most populous country in the world.
- As recent commentators have highlighted, if India fails to meet its MDG or the emerging SDG targets, the global targets would not be met. Unlike many other countries, India has the unenviable situation of needing to simultaneously improve access to water and sanitation, and responding to increasingly urgent environmental challenges.
- The policy responses need to provide for improved public health outcomes via universal access and improved service quality, while facing the challenge of increasingly severe water and resource constraints on one hand, and limited institutional and financial capacities on the other. This paper acknowledges that there has been considerable movement in the policy space: it takes the existing framework and initiatives as its starting point, critically examines them, and builds upon them.

3.11 Initiatives in village development by local self-government

- Indigenous peoples have historically been the poorest and most excluded populations in many parts of the world. They have not only faced serious discrimination in terms of their basic rights to property, language, culture and citizenship but also in terms of access to basic services and essential material conditions for a satisfying life. In many countries there exists a high correlation between poverty and being indigenous with the socioeconomic conditions and access to basic social services significantly worse for the indigenous peoples than for the non-indigenous population .
- Over the past decade there has been a strong reaffirmation of indigenous identity and important advances in indigenous peoples' human development. In particular, there has been an emergent trend of strong indigenous organizations and a new indigenous leadership as well as a growing awareness of the mestizo population about the multi-ethnic and pluricultural character of societies. This new trend of the strengthening of the indigenous movement forms the basis for indigenous peoples to define their own development priorities and to become the agents of their own human development.

3.12 Smart Initiatives by District Municipal Corporation

1. Water supply
2. Recreational facilities
3. Sewerage
4. Transport & mobility
5. Storm water drainage
6. Parks and open spaces
7. Electricity/Solar Lighting
8. Slum Improvement including housing
9. Solid waste management
10. Housing for all
11. Communication
12. Tourism
13. Smart solutions for convenience of citizens
14. Vertical development of Buildings (residential & commercial)
15. Citizen safety
16. Initiative in village

3.12Any Projects contributed working by Government / NGO / Other Digital Country concept

Government Projects:

Jan DhanYojana

Fig.11 Jan DhanYojana

MyGov

Fig.15MyGov

SaansadAdarsGramYojana

Fig.19SaansadAdarsh Gram Yojana

ShramevJayate

Fig.12ShramevJayate

Smart Cities Project

Fig.16 Smart Cities Project

Mahatma Gandhi National Rural Employment Guarantee Act

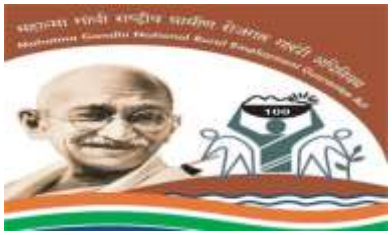

Fig.20 Mahatma Gandhi National Rural Employment Guarantee Act

Clean Ganga Project

Fig.13 Clean Ganga Project

Swachh Bharat Abhiyan

Fig.17Swachh Bharat Abhiyan

DeendayalUpadhyaya Gram JyotiYojana

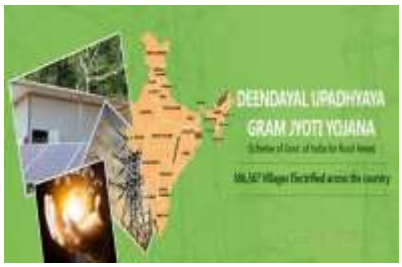

Fig.21DeendayalUpadhyaya Gram JyotiYojana

AamAadmiBimaYojana

Fig.14AamAadmiBimaYojana

Make in India

Fig.18 Make in India

National Health Mission

Fig.22 National Health Mission

Integrated Child Development Services Scheme

Fig.23 Integrated Child Development Services Scheme

National Rural Livelihood Mission (NRLM)

Fig.24 National Rural Livelihood Mission (NRLM)

Indira AwaasYojana

Fig.25 Indira AwaasYojana

PradhanMantri Gram SadakYojana

Fig.26PradhanMantri Gram SadakYojana

Integrated Watershed Management Programme

Fig.27 Integrated Watershed Management Programme

3.13 Regarding Environment –

- In each country, rural areas cover the bulk of available land; however, they generally remain outside the mainstream of innovative development processes. Still, they have potential and are vital for implementing the highly valid concept of persistent and sustainable development.
- The idea of such growth can be implemented in many ways, and the smart development concept is one of these ways.
- The aim of this paper is to present the smart village concept as a means to achieve the sustainability and resilience of rural areas, relying on the analysis of basic theories of sustainable and persistent growth.
- The study examines and evaluates the state of the potential for the smart growth of rural areas in all

regions of Poland, as well as presents the results of the empirical research on such potential in three regions of Eastern Poland.

- The smart growth potential of the regions in question was determined by means of 24 variables representing the following fields: management, life quality, economy, society, natural environment and mobility.
- It was concluded that the smart village concept can be useful in facilitating sustainable development of rural areas.
- Further research concerning the problem should in particular focus on strengthening the relations between rural communes with cities and towns in their close vicinity.

3.14 Regarding Employment –

- A key way of developing smart cities is by enabling smart evolved technology for local area development in the cities. Such development will generate employment for a large segment of local population.
- Application of smart solutions will enable cities to use technology, information and data to improve their services.
- Integration of technology is a major challenge and implementation of technology across smart cities needs a lot of hand holding at the moment.
- To understand the dynamics of smart cities and to create a strong ecosystem it is important that the workforce has advanced skill sets.

Chapter 4 – About CHANVAI VILLAGE

4.1 Introduction About Chanvai Village details

- A key way of developing smart cities is by enabling smart evolved technology for local area development in the cities. Such development will generate employment for a large segment of local population. Application of smart solutions will enable cities to use technology, information and data to improve their services. Integration of technology is a major challenge and implementation of technology across smart cities needs a lot of hand holding at the moment. To understand the dynamics of smart cities and to create a strong ecosystem it is important that the workforce has advanced skill sets.
- According to Census 2011 information the location code or village code of Chanvai village is 523290. Chanvai village is located in Valsad Tehsil of Valsad district in Gujarat, India. It is situated 8km away from Valsad, which is both district & sub-district headquarter of Chanvai village. As per 2009 stats, Chanvai village is also a gram panchayat.
- The total geographical area of village is 931.68 hectares. Chanvai has a total population of 5,834 peoples. There are about 1,321 houses in Chanvai village. Parnera is nearest town to Chanvai which is approximately 3km away.

  Total Population - 5834

  Male Population - 2944

  Female Population -2890

Connectivity of Chanvai

Public Bus Service -Available within village

Private Bus Service -Available within <5 km distance

Railway Station -Available within <5 km distance

Nearby Villages of Chanvai

- Dulsad
- Bhutsar
- Ronvel
- BhomaPardi
- Anjlav
- Chichwada

- Dived
- Magod
- MagodDungri
- Atar
- Meh

TABLE.2Chanvai - Village Overview

Chanvai - Village Overview	
Gram Panchayat :	Chanvai
Block / Tehsil :	Valsad
District :	Valsad
State :	Gujarat
Pincode :	396020
Area :	931.68 hectares
Population :	5,834
Households :	2514
Nearest Town :	Parnera (3 km)

4.1.1 Justification/ need of the study

- Village studies have its own importance. These have enriched the knowledge of the Indian Society in general and rural India in particular. These have given great encouragement to the growth of rural society.
- After independence, planners in India realised that unless Indian villages were properly studied, no real progress could be made.

Scholars now began to pay more and more attention to village studies.

(i) Village studies help in planning rural reconstruction.

(ii) Village studies provide useful information to other disciplines.

(iii) Village studies provide useful knowledge about Indian social reality.

4.1.2 Study Area (Broadly define)

The study area defines the project into two parts –

1. Civil Branch

infrastructure, garbage management system, recreation works, drainage system, water pumping and distribution system, irrigation systems and other civil related work etc.

2. Electrical Branch

Electrical department students will study on electrical works like power supply in the village, 24x7 electricity in the households, power breakage problems, ELCB problems and solutions, street lightings, etc. and other electrical related works whichever is required for the enhancement of village.

By doing this project, we could know the present conditions of the village in terms of basic and public amenities, essential commodities, other infrastructural amenities for the need of people and on the adequacy of the available resource with reference to the population of the village and growth of the area with the consultation of Local revenue authorities, TDO and DDO for the future need of the village for targeted population growth, etc. For lack of facilities of village like public toilet, public garden, poor conditions of road and infrastructure etc. maintenance is required in govt. different structures of the village.

4.1.3 Objectives of the study

- Village studies have its own importance. These have enriched the knowledge of the Indian Society in general and rural India in particular. These have given great encouragement to the growth of rural society.

After independence, planners in India realised that unless Indian villages were properly studied, no real progress could be made.

Scholars now began to pay more and more attention to village studies.

(i) Village studies help in planning rural reconstruction.

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4.1.4 Scope of the Study

(i) To improve productivity and there by the income ofthe rural poor

(ii) To ensure enlarged employment opportunities at a faster pace

(iii) To achieve the removal ofunemployment and a significant reduction in under employment

(iv) To ensure an appreciable rise in the standard oflivingofthe poorest sections ofthe population and

(v) To provide some ofthe basic needs ofthe people - clean drinking water,elementary education, health care, rural roads etc.

- It can be easily concluded, that for the development of an economy in both rural and urban areas need to be focused upon. Rural areas need drastic changes in areas like infrastructure, credit availability, literacy, poverty eradication, etc. The schemes that are already in place with the aim of rural development need a new outlook and proper updating. Accordingly, the government needs to act for the upliftment of rural India.

4.2 CHANVAI VILLAGE Study Area Profile

4.2.1 Study Area Location with brief History land use details

TABLE.3 Village details

Description	Data
Village Name	Chanvai
Gram Panchayat Name	Chanvai
CD Block Name	Valsad
Teshil Name	Valsad
Reference Year	2009
Sub District HQ Name	Valsad
Sub District HQ Distance	11 Km
District HQ Name	VALSAD
District HQ Distance	45 Km
Nearest Town	Parnera
Nearest Town Distance	3 Km
Pincode	396020
Map Coordinates	20.5630° N, 72.9756° E

TABLE.4 Land use details

Sr. No.	Description	Information
1)	Total Area (in ha)	931.68
2)	Residential Area (in ha)	3.00
3)	Forest Area (in ha)	4.43
4)	Irrigative Land Area (in ha)	576.73
5)	Non-Irrigative Land Area (in ha)	445.99
6)	Vacant Land Area (in ha)	12.30
7)	Water bodies	2 Nos. of Pond

4.2.3 Physical & Demographical Growth

Physical Details

TABLE.5 Physical details

Sr. No.	Description	Information
1	Coordinates of Village	20.5630° N, 72.9756° E
2	Total Area (in ha)	931.68
3	Forest Area (in ha)	4.43
4	Irrigative Land Area (in ha)	576.73
5	Non-Irrigative Land Area (in ha)	445.99
6	Vacant Land Area (in ha)	12.30
7	Water bodies	3 Nos. of Pond
8	Nearest Town with Distance	Umbergaon (CT) (25 Kms.)

TABLE.6 Population

Census Parameter	Census Data
Total Population	5834
Total No of Houses	1321

Female Population %	49.5 % (2890)
Total Literacy rate %	75.8 % (4420)
Female Literacy rate	33.9 % (1978)
Scheduled Tribes Population %	75.1 % (4380)
Scheduled Caste Population %	1.9 % (113)
Working Population %	39.9 %
Child(0 -6) Population by 2011	591
Girl Child(0 -6) Population % by 2011	53.6 % (317)

Demographic growth details

TABLE.7 Demographic growth details

Description	**Census 2011 Data**
Village Name	Manekpur
Teshil Name	Umbergaon
District Name	Valsad
State Name	GUJARAT
Total Population	2919
Total Area	465 (Hectares)
Total No of House Holds	589
Total Male Population	1465
Total Female Population	1454
0-6 Age group Total Population	401
0-6 Age group Male Population	217
0-6 Age group Female Population	184
Total Person Literates	1578
Total Male Literates	915
Total Male Literates	663
Total Person Illiterates	1341

Total Male Illiterates	550
Total Male Illiterates	791
Scheduled Cast Persons	32
Scheduled Cast Males	20
Scheduled Cast Females	12
Scheduled Tribe Persons	1301
Scheduled Tribe Males	1286
Scheduled Tribe Females	1301

4.2.4. Economic generation profile / Banks

There is only one bank in Chanvai village Which is State bank of india. Which is located near AXN Resort. So Village People get benefits from the bank.

State Bank of India - Chanvai is located at Gujarat state, Valsad district, Chanvai city and the bank branch's address is [DistValsad Gujarat 396020]. Contact phone number / numbers - 02632-233547. The IFSC Code is SBIN0003520. Branch code is the last six characters of the IFSC Code - 003520. Individual bank branch's details are listed above

4.2.5. Actual Problem faced by Villagers and smart solution

The villagers faced many problems due to their village conditions.

In many area in Chanvai village there are many problems. Which have to be solved

For that we are going to design some infrastructures for the villagers.

We also studying for the smart solution

-Talking about actual problems faced by the villagers of the village & their solutions are –

TABLE.8 Problems and solution details

Problems	**Solutions**
WATER Facilities	Water tank should be maintained properly.
DRAINAGE Facilities	Construction of new drainage line for required area.
Storm water Facilities	Execution of new pipe Culvert & Maintained old one.
ROAD FACILITIES	Required Maintenance & repair of Road.
WASTE MANAGEMENTS	Required 3’R Bins At all streets to maintain Waste.
AGRICULTURAL	Farmers Required Modern Techniques of Farming.

Public Transport	Required Bustop.
Electricity	Power is not available 24/7 in village. Street lights Should be provide in Village

4.2.6. Social scenario -Preservation of traditions, Festivals, Cuisine

All types of caste are staying in this village and all have their respective areas

- MotiChanvai
- NaniChanvai
- Patel Faliya
- Desai Faliya
- WadiFaliya
- PanjarFaliya
- BavvanFaliya
- Chanvai Society
- AmaliyuFaliyu
- Kolfadiya
- Dozy faliya
- Kazi street
- Suvidhafaliya
- Amaliyafaliya
- D.P. faliya
- Ektafaliya
- School faliya

The people of chanvai village Celebrates all types of Festivals with joy & happiness.

4.2.7 Migration Reasons or trends.

TABLE.9Migration Reasons or trends

1981 Census	*1991 Census*	*2001 Census*
Employment	Employment	Work/Employment
Education	Business	Business
Family moved	Education	Education

Marriage	Family moved	Marriage
Others	Marriage	Moved with birth
	Natural Calamities	Moved with household
	Others	Any other reason

- Employment opportunities are the common reason due to which people migrate, Except this lack of opportunities,
- Better education,
- Construction of dams,
- Globalization,
- Natural Disaster (Flood & Drought)
- Crop Failure Forced Villagers to migrate to cities
- Poverty
- Lack of facilities.

4.3 Data Collection (Photograph/Graphs/Charts/Table)

We have Collected data related to chanvai village from Official websites, grampanchayat, Villagers, By visiting Village, etc.

4.3.1Primary details of survey details

Primary village survey details obtained by observing the current condition of the village is'

Roads – The Main Roads of the village are all weathered Road but Required some Maintenance.The Internal Roads of the Village are not maintained For many years. And at some areas there are Earthen roads. By taking advantages of Government schemes village is developed by paver blocks roads.

Drainage Facility – There is no drainage line in the village, so we will design Drainage Facilities.

Sanitation Facility – After implementation of Swachh Bharat Yojana, the people of village has its own Toilet per house.

Street Lights – The village approach road does not have sufficient lighting systems, but in side the village there are only some areas where there is a proper street lighting and rest of the village is suffering from darkness at night.

Educational Facilities – There are 4 nos. of Aanganwadi available, 3 nos. of primary schools, 1 no. of secondary with high secondary school available.

Occupational Details – The general earning of village is based on agriculture as well as on the different industries like ATUL LTD, Sugar Factory, etc,.

Recreational Activities - There is no recreational area for the children as well as the senior citizen.

Renewable Source – Solar street lighting is available, but it needs to be renovated as it is not used from some time. Keeping solar lightning aside there is no other renewable power source. Or any other biogas plant in the village.

Irrigation Water – According to survey there is no public supply of water for irrigation or drinking purpose, everyone is having bore wells or tube wells at their homes.

4.3.2 Average size of the House - Geo-Tagging of House

There is no any information available about Geo-Tagging House.

4.3.3 No of Human being in One House

According to the Census of 2011, the population was approximately 5834 and the households were approximately 1321. So, the number of human beings in one house is approximate 4-6 persons in a house.

4.3.4 Material available locally in the village and Material Out Sourced by the villagers

The construction Materials available in the village are as listed below:

- Cement
- Sand
- Black Sand
- Aggregates
- Soil for earth filling
- Bricks (All Classes)
- Structural members useful for making steel structures
- Wood, Plywood, Teak Wood/Saag Wood
- Piping & related materials
- Other Hardware
- Paints, Varnishes & related materials
- Tar & Bitumen

4.3.5 Geographical Details

TABLE.10 Geographical Details

Sr. No.	Description	Information
1.	Coordinates of Village	20.5630° N, 72.9756° E
2.	Total Area (in ha)	931.68
3.	Nearest Town with Distance	VALSAD(9.5KM)

4.3.6 Demographical Detail - Cast Wise Population Details / Which ID proof using by villagers

TABLE.11 Cast wise population

Description	Census 2011 Data
Total Population	5834
Total Male Population	2944
Total Female Population	2890
Scheduled Cast Persons	113
Scheduled Tribe Persons	2380
Scheduled Tribe Males	2204
Scheduled Tribe Females	2176

4.3.7 Agricultural Details / Organic Farming / Fishery

ChanvaiAgricultural Commodities Data are as follows –

TABLE.12 Agricultural Details

Description Type	Commodities
Agricultural Commodities (First)	sugarcane
Manufacturers Commodities (First)	N/A
Agricultural Commodities (Second)	Mango and chickoo
Agricultural Commodities (Third)	Rice,wheat,sorghum

4.3.8 Physical Infrastructure Facilities - Manufacturing HUB / Ware Houses

There are no Manufacturing hub but there are some of the major manufacturing hub in near by

villages.

- Atul Ltd
- Sugar factory
- GIDC Pardi
- GIDC gundjalav

4.3.9 Tourism development available in the village for attracting the tourist

There is no development of places for tourism purpose or for attraction of the tourists to the village.

4.4 Infrastructure Details (With Exiting Village Photograph)

FIG.28Grampanchayat

FIG.29Village entrance

FIG.30 PHC Centre

FIG.31Anganvadi

FIG.32 Primary school

FIG.33 Primary school

FIG.34 Water Tank

4.4.1 Drinking Water / Water Management Facilities

The drinking water facilities is not available in the village . So, the people of the village have their own sources like borewell, RO Purified Water of 20 litres daily bottle facilities, etc. It can be Start by by repairing the existing water tanks . Or proper distribution network.The water supply pipeline should be there but required maintenance. Also people have 185 handpump in the village and 20 wells

In the village at some of the specific area drinking water R..O. plant should be if provided then it good for the vilagers.

FIG.35 Water Tank

4.4.2 Drainage Network / Sanitation Facilities

Drainage Facilities are not there in the village.

4.4.3 Transportation & Road Network

As village is start from N.H. no. 48 Road conditions is good at entrance. But at some stages it reuired repairing.Rural roads are not properly maintained in the village.Required proper design of all weathered roads in the village.

FIG.36Main Road

FIG.37Village entrance

Fig.38 Village Road

4.4.4 Housing condition

60% of the housing is of Pucca (50% with cc plaster on the walls and 20% without plaster) housing where as 40% of the housing is of Kutcha (mud/dung used as binder with the wood as a supporting elements). Some of houses got an increment due to PMAYG mission and so they are having Pucca houses.

4.4.5 Social Infrastructure Facilities, Health, Education, Community Hall, Library

FIG.39Health centre

FIG.40Primary school

FIG.41 PHC Centre

4.4.5 Existing Condition of Public Buildings & Maintenance of existing Public Infrastructures

FIG.42Grampanchayat

FIG.44Bus stop

FIG.46Earthen Road

FIG43 Bus stop

FIG.45Roads

FIG.47Internal Bituminous Road

4.4.6 Technology Mobile/ WIFI / Internet Usage Details

Now a days there are about 90% of people using mobile phones with Internet connectivity.

There is no public wifi available in village. Some of the villager are using wifi in their home by privetly. the usage of internet in mobile is more in the youth village

4.4.6 Sports Activity as Gram Panchayat

No sports activity conducted by Gram Panchayat. The ones who are interested set ups their own matches with other neighbouring village teams in case of cricket, volleyball, kabaddi, etc.

4.4.7 Socio-Cultural Facilities, Public Garden /Park/Playground /Pond/ Other Recreation Facilities

Public Garden: There is no Public Garden in the village.

Public Library: There is no Public Library in the village.

Park/Playground: The children of the village school ground as their playground. There is no separate playground for kids or for adults to play.

Village Pond: There is one pond or lake in the village.

Community Hall: There is no community Hall in the village.

4.4.8 Other Facilities (e.g. like foot path development-Smart Toilets-Coin operated entry, self-cleansing, waterless, public building)

No other facilities are available like smart toilets, coin operated toilets, self-cleansing toilets, waterless toilets, etc. in the village. According to the villagers if this is setup, then it will be a great beneficial for them as well.

4.4.9 Any other details

No other details other than mentioned above.

4.5 Existing Institution like - Village Administration – Detail Profile

4.5.4 BachatMandali

No BachatMandali in this village.

4.5.5 DudhMandali

In this village total there are two dudhmandali.

4.5.6 Mahila forum

There are many of the mahila groups

4.5.7 Plantation for the Air Pollution

In the village atmospheric condition is good because there are many trees and plants in the village at road surface and other areas.

4.5.8 Rain Water Harvesting - Waste Water Recycling

Rain water harvesting system is not adopted in the village because many of the people of the village not have any idea and information about it.

4.5.9 Agricultural Development

As most of the village people doing farming in the village. The have huge amount agriculture land in which they grow different types of crop but still they do not get maximum benefit of it because they are not using latest agricultural techniques as they are not aware of such activities.

4.5.7 Any Other

Solar street lighting system

1. Parts of a solar street lighting system
2. Approximate cost
3. Advantages

Solar street lighting system uses the photovoltaic technology to convert the sunlight into DC electricity through solar cells. The generated electricity can either be used directly during the day or may be stored in the batteries for use during night hours.

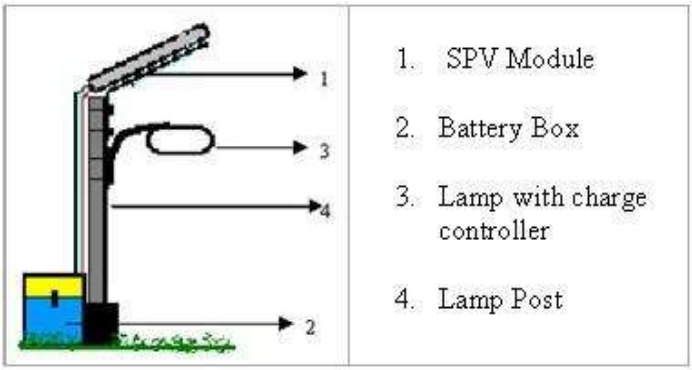


FIG.48Solar street lighting system

Part of solar street light system

The solar street lighting system comprises of

- Solar photovoltaic module
- Battery box
- Lamp with charge controller
- Lamp post

In general, the specifications of the parts are

- 74 Watt Solar PV Module
- 12 V, 75 Ah Tubular battery with battery box
- Charge Controller cum inverter (20-35 kHz)
- 11 Watt CFL Lamp with fixtures
- 4 metre mild steel lamp post above ground level with weather proof paint and mounting hardware.

Solar street lighting system is ideal for street lighting in remote villages. The system is provided with battery storage backup sufficient to operate the light for 10-11 hours daily. The system is provided with automatic ON/OFF time switch for dusk to dawn operation and overcharge / deep discharge prevention cut-off with LED indicators.

- The SPV modules are reported to have a service life of 15-20 years. Tubular Batteries provided with the solar street lighting system require lower maintenance; have longer life and give better performance.

Approximate Cost

The Approximate cost for the most common specification is around Rs 24000.it varies based on models.

Advantages

- No requirement of electricity
- Easy to install
- Simple to operate and Low maintenance cost
- Eco friendly

Chapter 5. Technical Options with Case Studies (For any one Topic, Take a new concept design, prototype model with actual costing)

5.1 Concept (Civil)

5.1.1 Advance Sustainable construction techniques / Practices and Quantity Surveying

1. Solar Power

- Solar power has been increasingly exploited as sustainable construction technology. In green construction, it can be utilized in two ways, one pertains to active solar energy and another is passive solar power.
- Active solar power utilizes functional solar systems that absorb the radiation of the sun to use for heating and electricity provision. It reduces the need for electricity or gas. On the other hand, passive solar power uses the sun rays to warm homes through the placement of windows strategically and the use of heat-absorbing surfaces.
- The windows let the energy in, and the heat absorbed reduces the requirement of using power for warming the house during cold times such as winter.
- The upfront installation costs are higher than traditional means, but in the long-term, it saves on energy bills and reduces greenhouse gas emissions from non-renewable energy sources like fossil fuels.

2. Biodegradable Materials

- The use of biodegradable materials is an eco-friendly means of making construction sustainable. Most traditional construction materials lead to the accumulation of waste products and toxic chemicals, the majority of which take hundreds of years to break down. And even after they degrade, they contaminate and harm the environment.
- Readily biodegradable materials such as sustainably sourced bamboo, timber, mycelium (a kind of fungus), classic linoleum, and organic paints don’t have to end up in a landfill.
- They limit the negative impacts on the environment as they easily breakdown without releasing toxins. The biodegradable materials used for building foundation, walls, and insulators are also forming part of sustainable construction technologies.

3. Green Insulation

- Insulation is one of the greatest concerns when it comes to the construction of buildings and homes. However, most people hardly know that insulators are simply wall filters that don’t need to be made

from expensive and highly finished materials.

- The green insulation has proven to be a sustainable construction technology as it eliminates the need for high-end finishes made from non-renewable materials.
- It also offers a solution by using materials that are old and used, such as denim and newspaper. In other words, green insulation utilizes recycled material to line the walls.

4. The Use of Smart Appliances

- Homes and commercial buildings consume the world's most energy. This is why it has necessitated the use of smart appliances as part of sustainable construction technologies. The durable construction technologies emphasize on the installation of energy-saving and efficient appliances.
- Appliances like a micro oven, SmartGrid refrigerators, dishwashers, and washing machines are examples of such sustainable technologies. The technology is aimed at establishing zero-energy homes as well as commercial buildings.

5. Cool Roofs

- Cool roofs are one of the sustainable green design technologies that aim at reflecting heat and sunlight away. It helps in keeping homes and buildings at the standard room temperatures by lowering heat absorption and thermal emittance.
- The cool roof design makes use of reflective paints and special tiles that absorb less heat and reflect most of the solar radiation by reducing temperatures as much as 50 degrees Celsius during summer.
- Cool roofs also help minimize the dependence on air conditioning and, in turn, reduce energy use, which leads to decreased cumulative greenhouse gas emissions from power plants.

6. Sustainable Resource Sourcing

- Sustainable resource sourcing is the key element of sustainable construction technology because it ensures the use of construction materials designed and created from recycled products, and that should be environmentally friendly.
- In most cases, agricultural wastes or by-products are used to produce construction materials. Overall, the materials are remanufactured, recycled, recyclable, and obtained from sustainable sources.

7. Low-Energy House and Zero-Energy Building Design

- Sustainable construction technologies typically include mechanisms to lessen energy consumption. The construction of buildings with wood, for instance, is a sustainable construction technology as it

has a lower embodied energy in comparison to those build of steel or concrete.

- Sustainable green construction also makes use of designs that cut back air leakage and allow free flow of air while using high-performance windows and insulation techniques.
- The strategic placement of windows makes day-lighting available, thereby minimizing the need for electric lighting during the day.
- These techniques are meant to reduce the dependency on air conditioning and interior heating by using renewable energy such as solar energy for lighting and water heating. The initial expenditure of setting up zero-energy buildings may be high, but they pay off in the long run

8. Low-Emitting Materials

- Selecting low emitting materials and products is an essential consideration in today's design and construction world. It not only improves human health but also goes a long way in protecting the overall environment.
- It helps the building projects achieve Green building credits from agencies like LEED, IGBC, and GRIHA. These low-emitting materials credits usually apply to an extensive range of environmentally friendly building products, including adhesives, interior paints, coatings, and sealants used on-site, composite wood, flooring, thermal, ceilings and walls.

9. Electrochromic Smart Glass

- Electronic Smart Glass constitutes one of the techniques used in sustainable construction. The electronic smart glass works mainly in summer to shut out the heat of solar radiation. The smart glass uses tiny electric signals to slightly charge the windows to alter the amount of solar radiation it reflects.
- It is incorporated into the building's control system, therefore, allowing the users to choose the amount of solar radiation to block. With this technology, homes and commercial buildings can save a lot on heating, ventilating, and air conditioning costs.
- The smart glass is still being perfected and is soon set to be fully used in sustainable construction as smart energy-saving technology.

10. Water Efficiency Technologies

- There are several water-efficient technologies used, which are all part of sustainable construction technologies. Essentially, the technologies encompass the re-use and application of efficient water supply systems, including the use of processes like dual plumbing, greywater re-use, rainwater

harvesting, and water conservation fixtures.

- Dual plumbing, for instance, lowers sewer traffic and enhances the potential of re-using water on-site. On the other hand, rainwater harvesting provides water for multi-purpose usage, and it can also be stored for future use.
- These methods ensure that water is adequately managed, recycled, and used for non-portable purposes like washing cars and flushing toilets.

In general, the water-efficient sustainable construction technologies lower water usage costs and help in water conservation. In urban areas, the technologies intend to reduce wastage of water by 15% to address freshwater shortages.

11. Sustainable Indoor Environment Technologies

- The health and safety of the building residents are fundamental, and it must be guaranteed during the construction of any building or home. Therefore, sustainable indoor technologies are mandatory in green construction.
- The materials used must maintain green safety standards which include non-hazardous elements such as non-toxic materials, low volatile emissions, and moisture resistance.
- For instance, materials made of cork, wood, and bamboo are naturally sourced and do not contain any toxic, irritating, or carcinogenic elements. The materials using low VOCs also enhance IAQ and restrict exposure to health-threatening chemicals such as vinyl, phenol-formaldehyde, and lead.

12. Self-Powered Buildings

- The self-powered buildings are a work of art of sustainable construction technology. The reason is that self-powered buildings bring about the realization of zero-energy construction.
- The buildings are built such that they can generate sufficient power to support their energy requirements and even direct surplus energy back into the power grid.
- Mostly wind power technology is used and it is highly familiar in skyscrapers where wind turbines are mounted at the rooftops. Continuous and substantial air currents at higher altitudes propel the turbine blades, which generates the power requirements for the building.

13. Passive House

- Passive House (Passivhaus in Germany) is considered the most advanced form of green construction with amazing benefits. It uses no mechanical or electrical devices but relies on the building design.
- Every aspect of a building uses the design of building to control the temperature using solar power,

either heating a house in the winter or rejecting the heat in the summer. Passive houses save cooling-related energy up to 90% compared to the typical building stock.

14. Technology Efficiency

- Construction of a building requires much energy and that is also in the form of fossil fuels that release CO2 and other emissions. If this process is made more efficient, it is possible to complete more buildings in less time. It significantly reduces the environmental impact per building.
- Another aspect is that here the construction relies on a large number of temporary workforces, which is managed inefficiently. If a contractor management system is used to ensure that workers receive the proper training and that they arrive at the site ready to work from the very first day, projects take less time to complete as there are no more waiting around.

15. Rammed Earth Brick

- Rammed earth brick is one of the ancient construction technologies which has been lately re-introduced to cater to the demands of environmental sustainability. The sourcing and formation of rammed-earth bricks make it ideal for sustainable construction as it lessens environmental impacts.
- The technique uses sustainably sourced raw materials. Making of building a rammed-earth structure has been made more accessible because of technological advancements; however, still, the ancient preparation process is followed.
- Moist earth mixture and hard substances such as clay or gravel are mixed with stabilizing elements like concrete and compacted to create dense, hard walls.
- Rammed-earth structures contribute to fewer emissions and the material can equally maintain the temperature of a building, ensuring that buildings remain cool in the summer and warm in the winter.

16. Prefabrication/Modular Construction

- It could be in the category of technological efficiency, but it’s potential is so great that it deserves a class of its own. Prefabrication allows you to build ‘off-site’ in a controlled environment. This construction needs fewer workers compared to standard construction and there is also less waste, both financially and environmentally.
- The other essential benefit is that workers’ safety is much more ensured in prefabrication and modular construction because conditions are controlled. Hazards can be better identified and the corrective steps are taken to prevent worker injury.

5.1.2 Soil Liquefaction

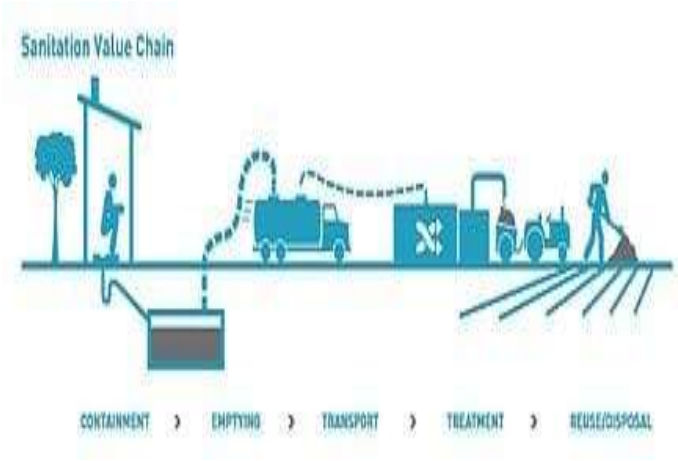
Soil liquefaction occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition, in which material that is ordinarily a solid behaves like a liquid.

- In Other word Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other.
- In soil mechanics, the term "liquefied" was first used by Allen Hazen[1] in reference to the 1918 failure of the Calaveras Dam in California. According to Allen Hazen theory there are two types of soil liquefaction 1) Flow liquefaction 2)cyclic liquefaction
- In India, damages due to liq- uefaction on a large scale were noticed during 26 January 2001 Bhuj earthquake (Mw-7.6). Historically ground failure due to liquefaction was not well reported in India. However, a few case studies on paleoliquefaction show evidence of liquefaction in India in historic time.
- Methods to reduce damage due to soil Liquefaction:

1) By avoiding construction on saturated soils
2) Liquefaction-proof structural system
3) Improving Soil Conditions

Methods to mitigate soil liquefaction have been designed to improve soil strength and quality. Methods such as Vibro compaction, dynamic compaction, and use of vibro stone columns are preferable.

5.1.3 Sustainable Sanitation



Sustainable sanitation is a sanitation system designed to meet certain criteria and to work well over the long-term. Sustainable sanitation systems consider the entire "sanitation value chain", from the experience of the user, excreta and wastewater collection methods, transportation or conveyance of waste, treatment, and reuse or disposal. The Sustainable Sanitation Alliance (SuSanA) includes five features (or criteria) in its definition of "sustainable sanitation". Systems need to be economically and socially acceptable, technically and institutionally appropriate and protect the environment and natural resources.

The purpose of sustainable sanitation is the same as sanitation in general: to protect human health. However, "sustainable sanitation" attends to all processes of the system: This includes methods of collecting, transporting, treating and the disposal (or reuse) of waste

Health

Poorly handled fecal sludge poses high health risks (much spillage and no personal protective equipment for the workers)Health aspects include the risk of exposure to pathogens and hazardous substances that could affect public health at all points of the sanitation system from the toilet via the collection and treatment system to the point of reuse or disposal. The topic also covers aspects such as hygiene, nutrition and the improvement of livelihood achieved by the application of a certain sanitation system, as well as downstream effects.

Environment and natural resources

Environment and natural resources aspects involve the required energy, water and other natural resources for construction, operation and maintenance of the system, as well as the potential emissions to the environment resulting from use. It also includes the degree of recycling and reuse of excreta practiced and the effects of these, for example reusing the wastewater, returning nutrients and organic material to agriculture, and the protecting of other non-renewable resources, for example through the

production of renewable energy (e.g. biogas or fuel wood).

Technology and operation

Technology and operation aspects incorporate the functionality and the ease with which the system can be constructed, operated and monitored using the available human resources (e.g. the local community, technical team of the local utility etc.). It also concerns the suitability to achieve an efficient substance flow management from a technical point of view. Furthermore, it evaluates the robustness of the system, its vulnerability towards disasters, and the flexibility and adaptability of its technical elements to the existing infrastructure, to demographic and socio-economic developments and climate change.

Finance and economics

Financial and economic issues relate to the capacity of households and communities to pay for sanitation, including the construction, maintenance and depreciation of the system. Besides the evaluation of investment, operation and maintenance costs, the topic also takes into account the economic benefits that can be obtained in "productive" sanitation systems, including benefits from the production of the recyclables (soil conditioner, fertiliser, energy and reclaimed water), employment creation, increased productivity through improved health and the reduction of environmental and public health costs.

Socio-cultural and institutional aspects

Socio-cultural and institutional aspects take into account the socio-cultural acceptance and appropriateness of the system, convenience, system perceptions, gender issues and impacts on human dignity, the contribution to subsistence economies and food security, and legal and institutional aspects.

5.1.4 Transport Infrastructure / system

Transport infrastructure consists of the fixed installations necessary for transport and includes roads, railways, airways, waterways, and terminals.

1. Roads
2. Rails
3. Pedestrian / Bicycle paths
4. Urban waterways
5. Subway system
6. Bridges and fly-overs
7. Terminals

7.1 Airports

7.2 Train station

7.3 Metro station

7.4 Bus terminal

7.5 Freight terminal

7.6 Sea port

8. Traffic intersections

9. Related subjects

10. Footnotes and references

1. Roads

A road is a paved surface to facilitate the movement of people or goods with [#_Road_transport road transport] means, such as as automobiles, bicycles, buses, vans or trucks.

Roads in itself are not an interesting security target, but blocking a road will cause problems with the traffic flow and reachability of certain parts of the city or area. This can be prevented by designing a Robustness robust road system and to detect a disruption and minimize the consequences, using Traffic monitoring and traffic management.

2. Rails

Rails are the infrastructure for rail transport. A rail road which connects two locations is also called a rail line.As for roads, rails on itself are not an interesting security target, but blocking a railroad will cause large problems with the rail transport.

3. Pedestrian / Bicycle paths

Delineated bicycle and pedestrian paths at roundabouts in The Netherlands Pedestrian paths or sidewalks, curbs, pavements, footpaths or platforms are paths alongside a road designated for pedestrians. Bicycle paths comprises of several different forms of cycling infrastructure, Segregated cycle facilities are a form of cycling infrastructure consisting of marked lanes, tracks, shoulders and paths designated for use by cyclists and from which motorised traffic is generally excluded. The term includes bike lanes, cycle tracks, separated bike lanes, road shoulders and side paths located within a road right-of-way.

4. Urban waterways

Inter and intra urban transport over waterways such as canals, rivers or other waterways forms a smaller

although still important aspect of the urban transport system. For port cities such as Rotterdam, Antwerp or Hamburg the waterway system is of vital importance for their economic development.

5. Subway system

A rapid transit, underground, subway, elevated railway, metro or metropolitan railway system is an electric passenger railway in an urban area with a high capacity and frequency, and grade separation from other traffic. Rapid transit systems are typically located either in underground tunnels or on elevated rails above street level.

6. Bridges and fly-overs

- A bridge is a structure built to span physical obstacles such as a body of water, valley, or road, for the purpose of providing passage over the obstacle.A flyover is a bridge, road, railway or similar structure that crosses over another road or railway forming a grade separation. Various different designs are possible depending on the length of the span and the conditions of the site.
- Bridges and fly-overs form a vital and vulnerable element of a transport system since blocking can cause serious disruptions in the transportation system. Security risks are high since bridges and fly-overs are generally difficult to reach in case of emergencies.

7. Terminals

- A terminal is any location where freight and passengers either originates, terminates, or is handled in the transportation process. Terminals are central and intermediate locations in the movements of passengers and freight. They often require specific facilities and equipment to accommodate the traffic they handle.

-Terminals may be used both for interchange of passengers and cargo.

-Examples of passenger terminals are airports, railway stations and bus stations.

-Examples of terminals for cargo are warehouses, trucking terminals, refueling depots (including fueling docks and fuel stations), and seaports.

- All terminals are important for security, since it are potential targets for terrorists.

7.1 Airports

An airport is a location where aircraft such as fixed-wing aircraft, helicopters, and blimps take off and land. Aircraft may be stored or maintained at an airport. An airport consists of at least one surface such as a runway for a plane to take off and land, a helipad, or water for takeoffs and landings, and often includes buildings such as control towers, hangars and terminal buildings.

7.2 Train station

A train station, also called a railroad station (mainly in the United States) or railway station (mainly in the British Commonwealth) and often shortened to just station, is a railway facility where trains regularly stop to load or unload passengers or freight. It generally consists of a platform next to the track and a station building (depot) providing related services such as ticket sales and waiting rooms.

7.3 Metro station

A metro station or subway station is a railway station for a rapid transit system, often known by names such as "metro", "underground" and "subway".Metro stations are very vulnerable for terrorist attacks, as can be seen from this list with underground attacks attacks on the London underground.

7.4 Bus terminal

A bus terminus is a designated place where a bus or coach starts or ends its scheduled route .

7.5 Freight terminal

A freight terminal is a processing node for freight. Most freight terminals are located at ports. They may include airports, seaports, railroad terminals, and trucking terminals. Freight is usually loaded onto and off the transport.

7.6 Sea port

A sea port (or shortly port) is a location on a coast or shore containing one or more harbours where ships can dock and transfer people or cargo to or from land.

8. Traffic intersections

At traffic intersections, a certain type of traffic infrastructure is intersecting. Mostly this concerns road intersections, though also rail and air intersections are possible.To prevent incidents at road intersections, the traffic can be controlled with traffic signals. Traffic intersections are an attractive target for terrorists, since damaging an intersection has larger consequences in terms of disrupting the traffic flow and number of possible injuries than for a road segment.Possible measures to prevent attacks at important intersections are monitoring with cameras and providing sufficient route alternatives.

5.1.5 Vertical Farming

Vertical farming is the practice of growing crops in vertically stacked layers. It often incorporates controlled-environment agriculture, which aims to optimize plant growth, and soilless farming techniques such as hydroponics, aquaponics, and aeroponics. Some common choices of structures to

house vertical farming systems include buildings, shipping containers, tunnels, and abandoned mine shafts.

5.1.6 Corrosion Mechanism, Prevention & Repair Measures of RCC Structure

Corrosion Mechanism , Prevention & Repair Measures of RCC Structure Though concrete is quite strong mechanically , it is highly susceptible to chemical attack and thus structure gets damaged and even fail unless some preventive measures are adopted to counteract this and thereby increasing the durability of structure . In the case of Reinforced concrete structure the ingress of moisture or air may lead to corrosion of steel , cracking and spalling of concrete cover thereby reducing durability of concrete structure . Repair has been sul;ggested as the protective solution for damaged structure due to corrosion .

5.1.7 Sewage treatment plant

- Sewage treatment is the process of removing contaminants from municipal wastewater, containing mainly household sewage plus some industrial wastewater. Physical, chemical, and biological processes are used to remove contaminants and produce treated wastewater (or treated effluent) that is safe enough for release into the environment. A by-product of sewage treatment is a semi-solid waste or slurry, called sewage sludge. The sludge has to undergo further treatment before being suitable for disposal or application to land.
- Sewage treatment may also be referred to as wastewater treatment. However, the latter is a broader term which can also refer to industrial wastewater. For most cities, the sewer system will also carry a proportion of industrial effluent to the sewage treatment plant which has usually received pre-treatment at the factories themselves to reduce the pollutant load. If the sewer system is a combined sewer then it will also carry urban runoff (stormwater) to the sewage treatment plant. Sewage water can travel towards treatment plants via piping and in a flow aided by gravity and pumps.
- The first part of filtration of sewage typically includes a bar screen to filter solids and large objects which are then collected in dumpsters and disposed of in landfills. Fat and grease is also removed before the primary treatment of sewage.

Chapter 6. Swatchh Bharat Abhiyan (Clean India)

6.1 Swatchhta needed in allocated village -Existing Situation with photograph

Swatchhta needed in allocated village is as per the following...

The various process is as listed below.

1) Cleaning & Filteration of R.c.c. water tank

FIG.51 R.C.C.WATER TANK

2) Drainage line maintenance

FIG.52 DRAINAGE LINE

3) Waterline/Pipeline maintenance of drinking water.

FIG.53 Waterline

As shown in the above picture, At many spots the facilities provided by the government are there in the village, but it requires proper maintenance. So that it can work properly & easily and No any such Facilities or design should be made for that.

4) Solid-waste Management.

5) Garbage collection.

6) Reuse, Reduce & Recycle.

For this Process of Reduce, Reuse & Recycle basically people are using Less Plastics Bags as much as possible instead of this using home-made or cotton Bags for daily use.

6.2. Guidelines - Implementation in allocated village with Photograph

Many of the people of Chanvai village have their Own Toilets. Many of them got the benefits from government. But required more toilet blocks in village as some of them are not getting yet.
Also as taking about village it requires Public toilet in some major places.

6.3. Activities Done by Students for allocated village with Photograph

There is no activity done by students due to lockdown and covid-19 situation.

Chepter7. Village condition due to Covid-19

7.1. Taken steps in allocated village related to existing situation with photograph

- In this Pandemic situation of Covid19 villagers are in trouble situation due to lockdown but they follow the govt. Guidelines And stay at their home & wear masks as well as doing uses of hand sanitizer Food supply is the major problem for villagers in the lockdown But they survived
- Many peoples and trusts also helped villagers by giving them food kits. They also get benefits from government by the Ration shop dealer. They get free ration from it.
- The gram panchayat also plays an important role in it as they sanitizing the whole village by tanker. And also closed the Fair stalls runs at Main circles. The aarogya/health Department Of the village also doing the awareness camps for the people of village and guide them properly that maintain social distance, wear mask, use hand sanitizer, Prevent measures taken when we went to vegetables markets etc. so, There is no any positive case in the village in whole lockdown.

Photos of Sanitizing the whole village by tanker

Distribution of rashan kit by goverment

7.2. Activities Done by Students for allocated village with Photograph

There is no activity done by us, due to lockdown but when we visited the village for our project work. We met with the people of Chanvai village and there we saw that the people maintained social distancing, wear masks and use hand sanitizer.

7.3. Any other steps taken by the students / villagers

There is no any other steps taken by us and by the villagers as they followed the guidelines given by government properly.

Chepter 8. Sustainable Design Planning Proposal (Prototype Design)- Part- I

(Scenario / Existing Situation / Proposed Design in Auto cad / Recapitulation Sheet / Measurement Sheet / Abstract Sheet / Sustainability of Proposal / Any other software)

8.1 Design Proposals

8.1.1 Sustainable Design (Civil)

1. Solar Power

Solar power has been increasingly exploited as sustainable construction technology. In green construction, it can be utilized in two ways, one pertains to active solar energy and another is passive solar power.

Active solar power utilizes functional solar systems that absorb the radiation of the sun to use for heating and electricity provision. It reduces the need for electricity or gas. On the other hand, passive solar power uses the sun rays to warm homes through the placement of windows strategically and the use of heat-absorbing surfaces.

The windows let the energy in, and the heat absorbed reduces the requirement of using power for warming the house during cold times such as winter.

The upfront installation costs are higher than traditional means, but in the long-term, it saves on energy bills and reduces greenhouse gas emissions from non-renewable energy sources like fossil fuels.

8.1.2 Physical design (Civil)

1) Drainage line design

8.1.3 Social design (Civil)

2) Bus Stop design and Maintainance

8.1.4 Socio-Cultural design (Civil)

3) Community Hall design

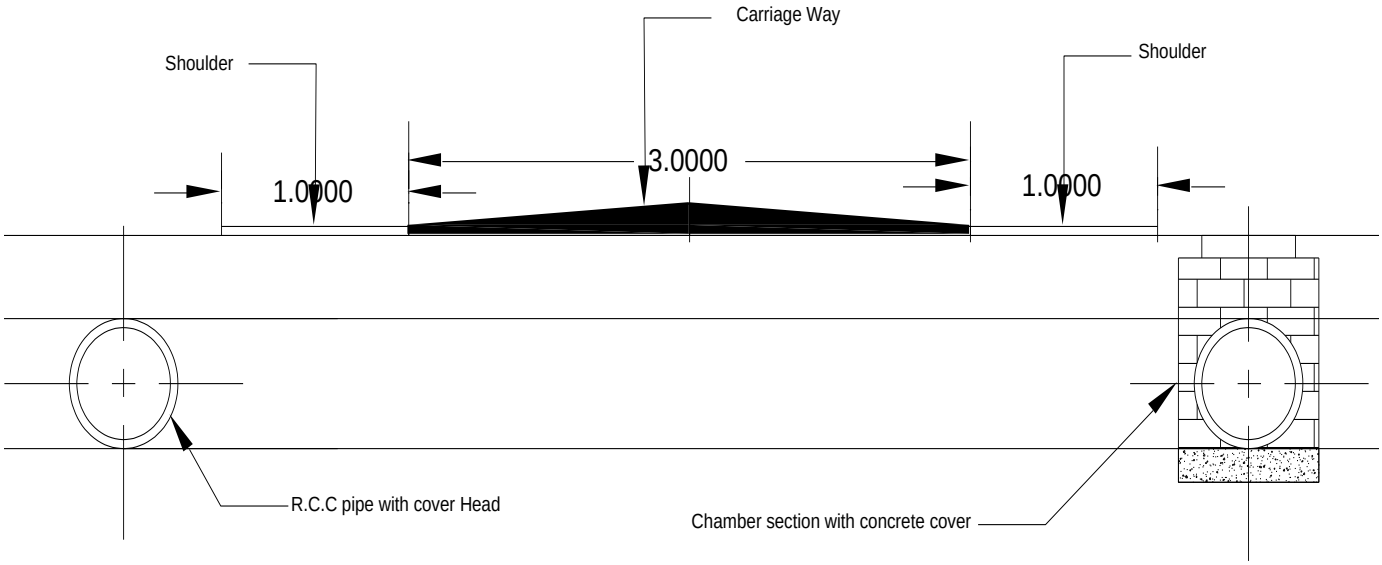
8.1.5 Smart Village Design (Civil)

4) Library

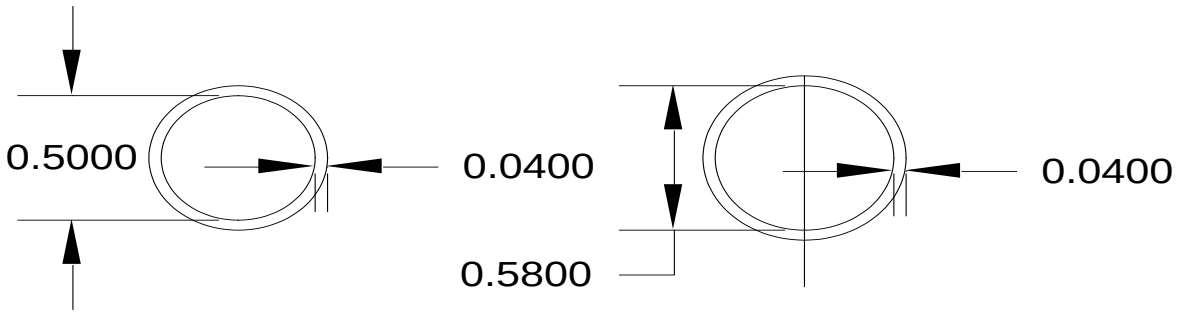
5) Maternity Home

6) Roads

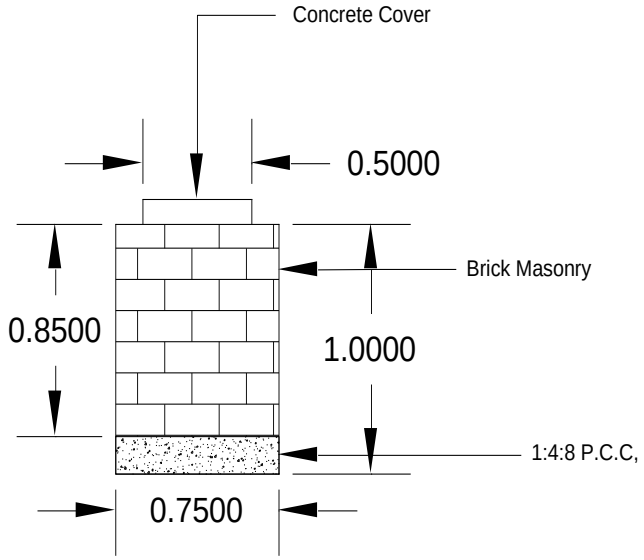
- **DESIGN 1- Drainage Line design for village road**



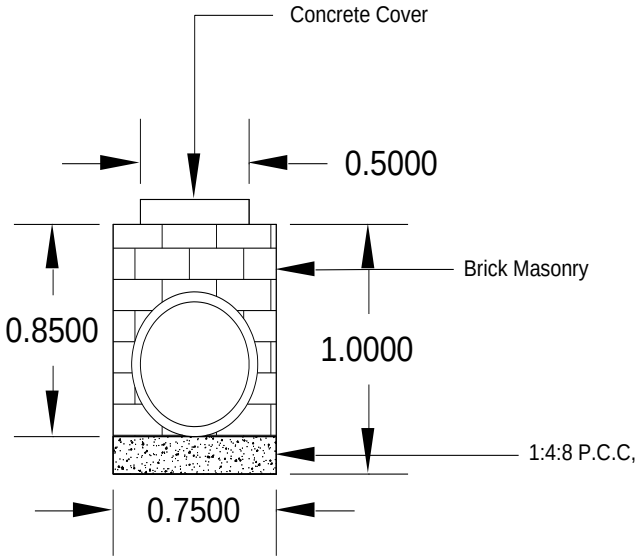
C/S Of Road with Drainage



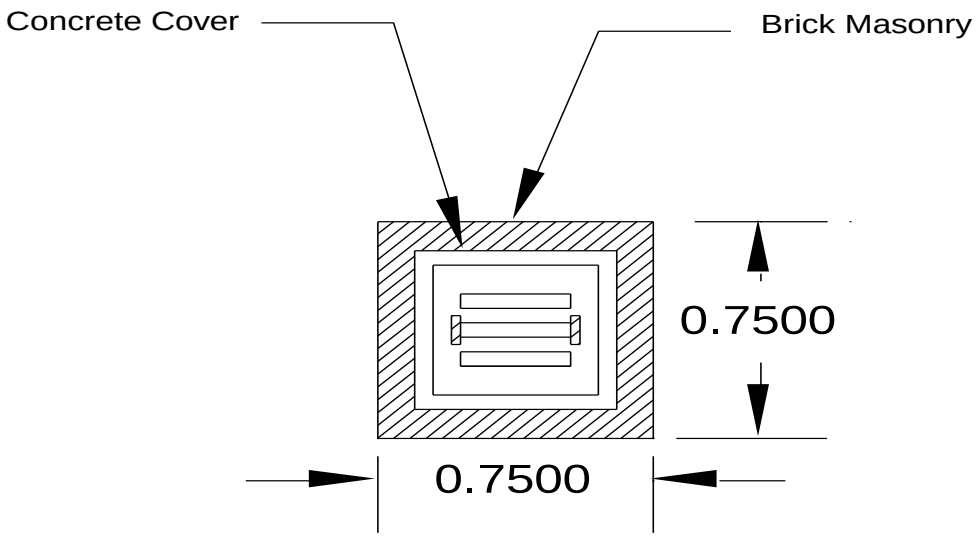
R.C.C pipe with cover Head



Side View Of Chmber Section



C/S Of Chamber with Drainage pipe



Top view of Chmber Head

Calulation for Drainage line

Length of road= 300mtr

Width of road= 3mtr

Required R.C.C. Pipe = 300mtr + 300mtr

= 600mtr

Dimension of 1 R.C.C. pipe = 2.5 mtr

Total R.C.C. pipe Req. = 600- (0.75 X 60)

= 600-45

= 555mtr required

= 555/ 2.5

=222 nos R.C.C. required

Spacing between two Chamber = 10 mtr (as per IRC)

Required Chamber

For 1side 30 chamber required

For Both side 60 Chamber Required

Chamber top cover (concrete cover) = 60 nos

Brick work for 1 chamber

Length = 0.75mtr for one side

= 0.75 X 4 = 3mtr

=3-(Dia of R.C.C.pipe + Dia of R.C.C. pipe head)

= 3-(0.264 + 0.341)

Width = 0.3mtr

Height = 0.85 mtr

Total Brickwork = 0.75 X 0.3 X 0.85

= 0.191 cu.m.

= Total brickwork - (area covered by Pipe)

= 0.191 -2(0.265 X 0.3)

=0.191 -0.158

= 0.043 cu.m

For 60 chamber = 0.043 X 60

= 2.58 cu.m

MEASUREMENT SHEET:-

Table 13. Measurement sheet

Sr. No	Description	Nos	L	B	H/D	Unit	Quantity	Total
1	founadation	2	300 m	0.75 m	1m	Cu.m	450	450
2	P.C.C.(1:4:8) Below chember	60	0.75	0.75	0.15m	Cu.m	5.0625	5.0625
3	Brick work	60	-	-	-	Cu.m	0.043	2.58

RATE ANALYSIS :-

Table 14. Rate Anaalysis

SR.NO	ITEM	QUANTITY	RATE	UNIT	AMOUNT
1	Excavation for foundation in any types of soil.	450.00	250.00	Cu.m	112500.00
2	P.C.C.(1:4:8) Concreting work under the foundation	5.0625	2750.00	Cu.m	13920.00
3	R.C.C. Pipe	222	3500.00	Nos	777000.00
4	Placing and earth filling charge	222	250.00	Nos	55500.00
5	Brick work for Chamber	2.58	1756	Cu.m	4530.00
				Total	963450.00

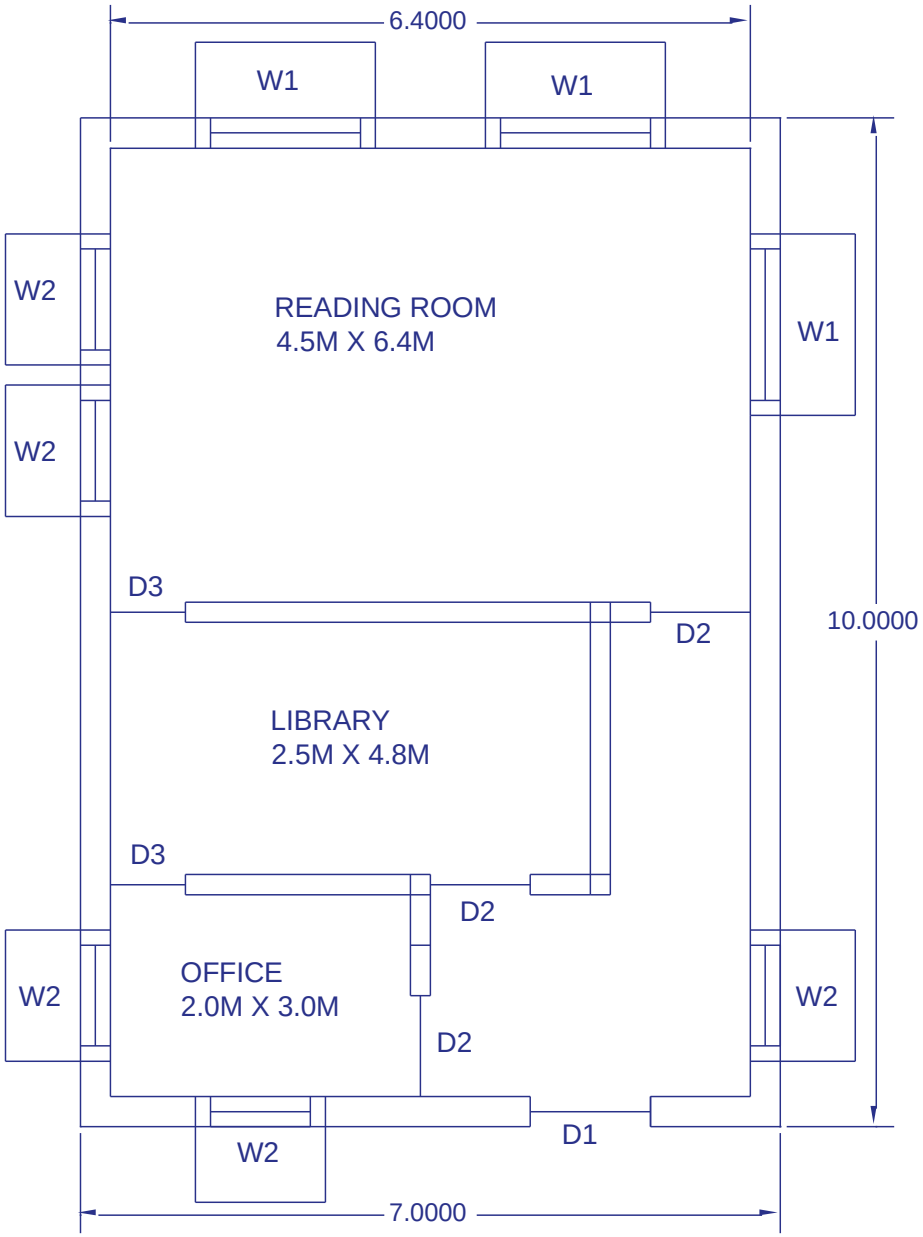
DESIGN 2- Library

Library details;

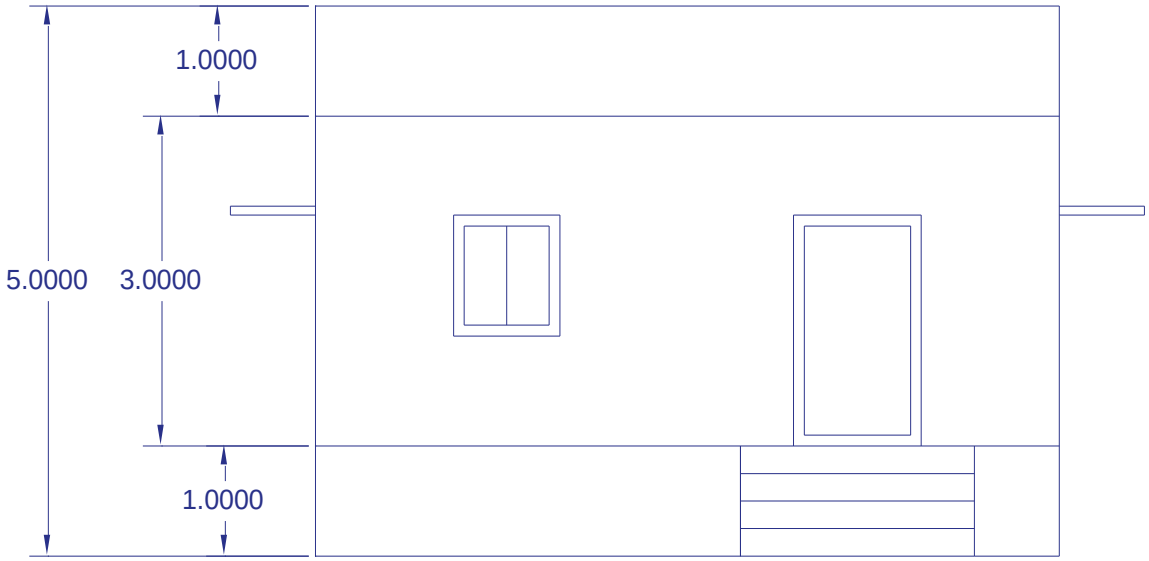
Length- 10.0,Width – 7.00m

Area = 7.00m x 10.00m = 70.00sq.m

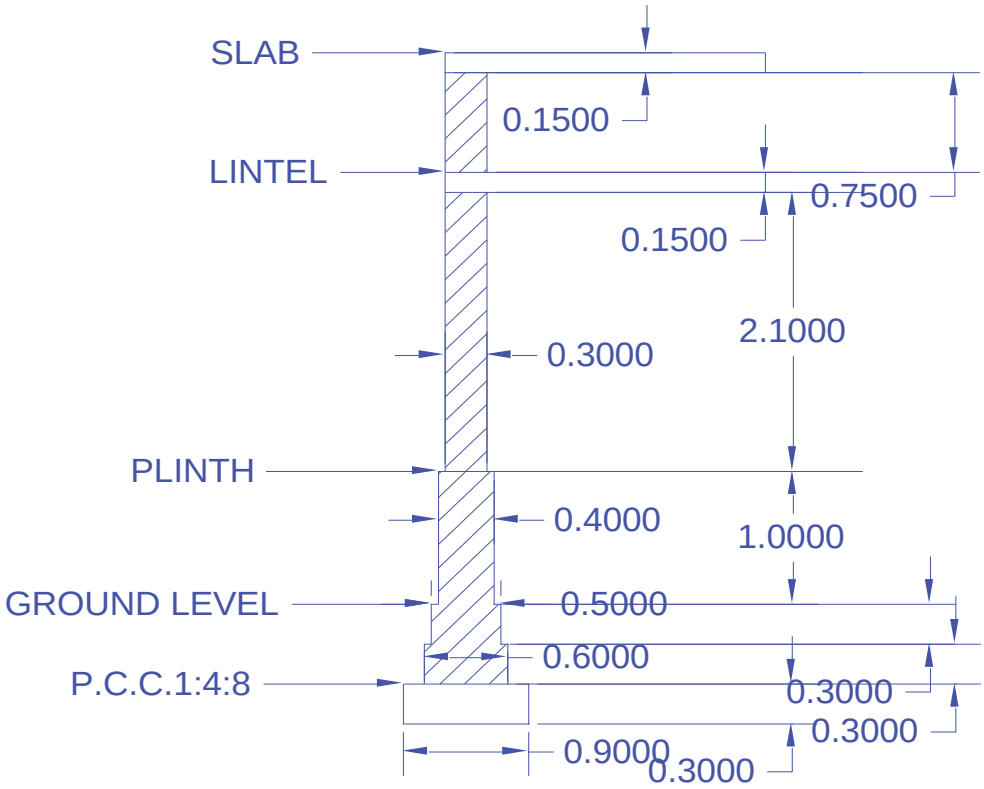
1. Office-2.00m x3.00m
2. Library- 2.50m x 4.80m
3. Reading room – 4.50m x 6.40m



PLAN(LIBRARY)



ELEVATION (LIBRARY)



FOUNDATION

Door and Window schedule

	Dimension	Nos
D1	(1.2mx2.1m)	1
D2	(1.0mx2.1m)	3
D3	(0.75mx2.1m)	2
W1	(1.5mx1.2m)	3
W2	(1.0mx1.2m)	5

Quantity sheet:-

SR no.	Item Description	No	Length m	Width m	H/D m	Quantity
1	Excavation In foundation Long Walls: L= (4.5+0.2+2.5+0.2+2)+(2x0.15)+(2x0.45) L= 10.6 m.	2	10.6	0.9	0.9	17.17
	Short Walls Type 1 L= (6.4+2+0.15-2x45) L=5.8 m	3	5.8	0.9	0.9	14.09
	Short Walls Type 2 L=(4.8+2x0.15-2x0.45) L=4.2 m	1	5.2	0.9	0.9	3.04
					Total QTY	34.66 cu.m.
2	Plain Cement Concrete Long Walls Short Walls Type 1 Short Walls Type 2	 2 3 1	 10.6 5.8 4.2	 0.9 0.9 0.9	 0.3 0.3 0.3	 5.72 4.7 1.13

					Total QTY	11.55 Cu.m
3	Brick Work in foundation upto Plinth					
	Long Wall					
	First step L= 10.6-2x0.15, L=10.3 m	2	10.3	0.6	0.3	3.71
	Second step L=10.3-2x0.05, L= 10.2m	2	10.2	0.5	0.3	3.05
	Third step L= 10.2-2x0.05, L=10.1m	2	10.1	0.4	1.0	80.8
	Short Walls Type 1					
	First step L=5.8-2x0.15, L=5.5m	3	5.5	0.6	0.3	2.97
	Second step L= 5.5-2x0.05, L=5.4m	3	5.4	0.5	0.3	2.43
	Third step L= 5.4-2x0.05, L=5.3m	3	5.3	0.4	1.0	6.36
	Short Walls Type 2					
	First step L=4.2-2x0.15, L=3.9m	1	3.9	0.6	0.3	0.702
	Second step L= 3.9-2x0.05, L=3.8m	1	3.8	0.5	0.3	0.570
	Third step L= 3.8-2x0.05, L=3.7m	1	3.7	0.4	1.0	1.480
					Total QTY	29.352 Cu.m
4	Brick work in super structure					
	Upto slab					
	Long Wall L=10.6m	2	10.6	0.3	3	19.08
	Short wall T-1 L=5.8m	3	5.8	0.3	3	15.66
	Short wall T-2 L= 4.2m	1	4.2	0.3	3	3.78
	For Parapet Wall					
	Long Wall L= 10m	2	10	0.3	1	6
	Short Wall L= 6.4m	2	6.4	0.3	1	3.8
					Total QTY	48.36 Cu.m

	Deduction					
	For Door/window					
	D1(1.2x2.1)	1	1.2	0.3	2.1	0.756
	D2(1.0x2.1)	3	1.0	0.3	2.1	1.89
	D3(0.75x2.1)	2	0.75	0.3	2.1	0.945
	W1(1.5x1.2)	3	1.5	0.3	1.2	1.62
	W2(1.0x1.2)	5	1.0	0.3	1.2	1.80
					Total	(-)7.011
						cu.m
	Deduction for lintel 15cm thick					
	D1(1.2x2.1)	1	1.2	0.3	0.15	0.054
	D2(1.0x2.1)	3	1.0	0.3	0.15	0135
	D3(0.75x2.1)	2	0.75	0.3	0.15	0.0675
	W1(1.5x1.2)	3	1.5	0.3	0.15	0.2025
	W2(1.0x1.2)	5	1.0	0.3	0.15	0.225
					Total	(-)0.684
					QTY	Cu.m
	Net Quantity of Brick work					
	= 48.36-7.011-0.684					40.665cu.m.
5	R.C.C. work in slab,chajja and lintel					
	R.C.C. Slab:L=10.0m,B=7.0m	1	10	7	0.15	10.5
	R.C.C. chajja:					
	W1	3	1.8	0.6	0.15	0.486
	W2	5	1.3	0.6	0.15	0.584
	R.C.C. lintel from item 4					0.684
					Total	1.754
					QTY	Cu.m
6	Earth filiing					
	H=1-0.075-0.025 H=0.9m					
	L=10-0.3-0.2-0.2-0.3 L=9m					
	B=7-0.3-0.3-0.2 B=6.2m	1	9	6.2	0.9	50.22

						Cu.m
7	Plaster work					
	External plaster					
	Long wall L=10m	2	10	-	5	100sq.m.
	Short wall L=7m	2	7	-	5	70sq.m.
	Internal plaster					
	For Cealing					
	Reading room	1	4.6	6.4	-	28.8sq.m.
	Library	1	2.5	4.8	-	12sq.m.
	Office	1	2.0	3.0	-	6sq.m.
	Open space	1				10.18sq.m.
	Internal wall					
	Reading room					
	Long wall L= 6.4	2	6.4	-	3	38.4 sq.m.
	Short wall L=4.5	2	6.4	-	3	27 sq.m.
	Library					
	Long wall L= 4.8	2	4.8	-	3	28.8 sq.m.
	Short wall L=2.5	3	2.5	-	3	22.5 sq.m.
	Office					
	Long wall L= 3	2	3	-	3	27 sq.m.
	Short wall L=2	3	2	-	3	12 sq.m.
	Open space					
	Long wall L= 4.7	1	4.7	-	3	14.1 sq.m.
	Short wall L=3.2	1	3.2	-	3	9.6 sq.m.
					Total QTY	406.38 sq.m.

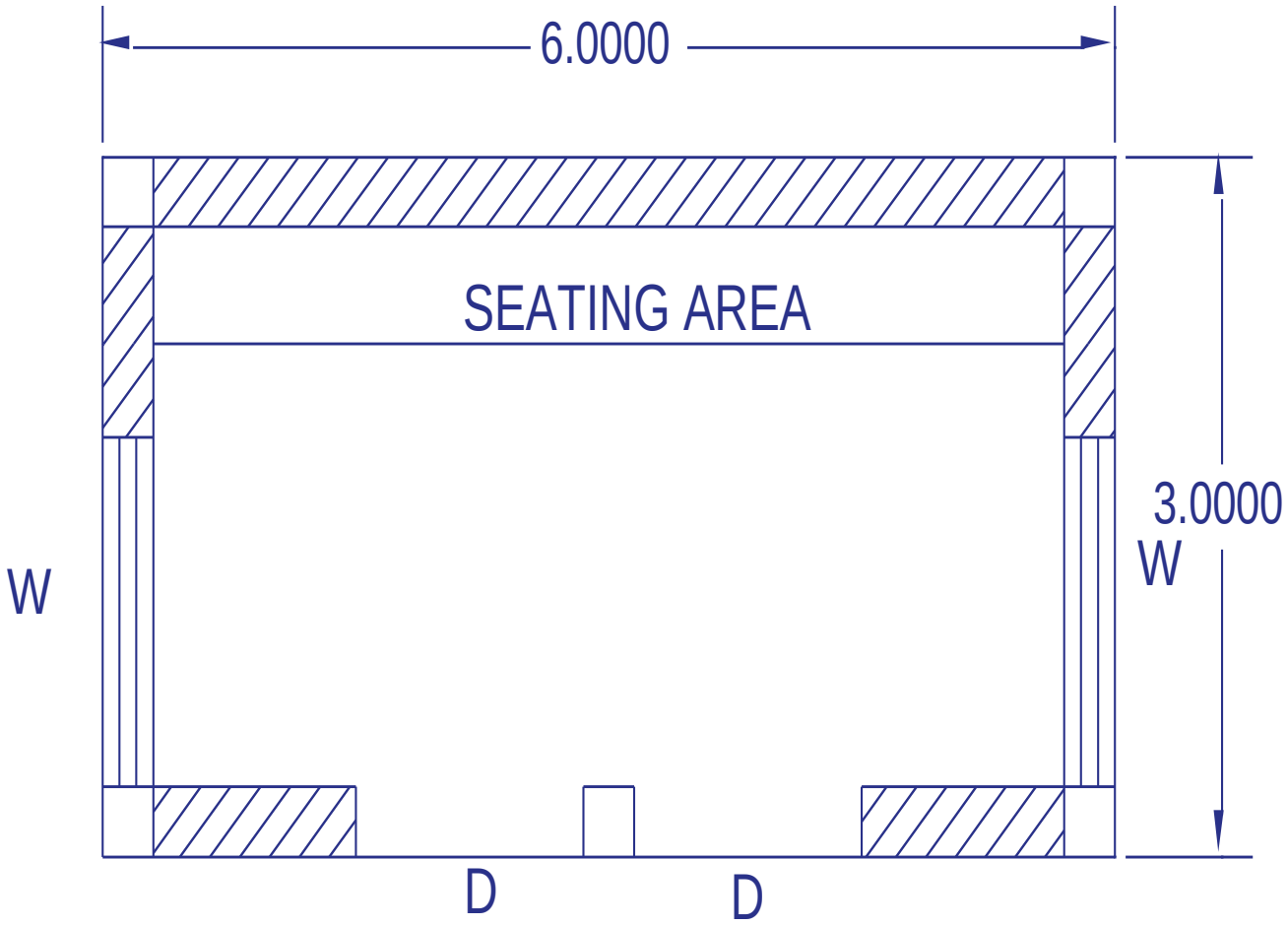
	Deduction for plaster work					
	D1(1.2x2.1)	1	1.2	2.1	-	2.52sq.m
	D2(1.0x2.1)	3	1.0	2.1	-	6.30sq.m
	D3(0.75x2.1)	2	0.75	2.1	-	3.15sq.m
	W1(1.5x1.2)	3	1.5	1.2	-	5.40sq.m
	W2(1.0x1.2)	5	1.0	1.2	-	6.00sq.m
					Total QTY	(-)23.37sq.m
	Net Quantity of Plaster work =406.38-23.37					383.01 sq.m.
8	Flooring (Marble flooring 2cm thick)					
	Reading room	1	4.6	6.4	-	28.8sq.m.
	Library	1	2.5	4.8	-	12.0sq.m.
	Office	1	2.0	3.0	-	6.00sq.m.
	Open space	1				10.18sq.m.
	Door sills D1	1	1.2	0.3	-	0.36 sq.m.
	Door sills D2	3	1.0	0.3	-	0.90 sq.m.
	Door sills D3	2	0.75	0.3	-	0.45 sq.m.
					Total QTY	58.69 sq.m.

Rate Analysis Sheet :

SR No.	Particular of item	Quantity	Per	Rate	Amount Rs
1	Excavation for foundation	34.66	Cu.m	350	12131
2	P.C.C.In foundation	11.55	Cu.m	4850	56017.5
3	Brick work in foundation	29.325	Cu.m	6720	197064
4	Brick work in super structure	40.66	Cu.m	6720	273235.2
5	R.C.C. Work in Slab	14.01	Cu.m	14050	196840.5
6	Earth filling	50.22	Cu.m	350	172354.5
7	Plaster work	383.01	Sq.m	450	172350
8	Flooring	58.69	Sq.m	1550	67493.5
				Total	1147486.2

- **DESIGN 3- Maintenance of Bus stop**

FIG.55 Bus stop



AUTOCAD Drawing of bus stop

In this village two Bus stop are constructed years ago and not maintain properly

So required maintenance like plastering and brick work .

- Bus stop

  lengt-6m

  width -3m

  height-3m

Brick work –

Length-1.2m height 0.5m and thicknes 0.3m

Area 0.18sq.m

Plaster work –

Old plaster are damaged and cracks are form

So that for new plaster work removal of existing plaster should be done firstPlaster work

MEASUREMENT SHEET:-

Table 15. Measurement sheet

Sr. No	item	Nos	L	B	H/D	Quantity	Total
Total plaster	1 Plaster work (1:6) External plaster -Long wall -Short wall -Short wall 2	 1 2 2	 6 3 1.5	 	 3 3 0.5	 18 18 1.5	 37.50sq.m
plaster	Internal plaster -Long wall -Short wall -Short wall2 -ceiling	 1 2 2 1	 5.4 2.7 1.5 5.4	 2.7	 3 3 0.5 	 16.2 16.2 1.5 14.58	 48.48sq.m
er	Column plaster	4	0.3		3	0.27	3.6sq.m
ring	Window sill	4 4	2.5 1.5	0.3 0.3		3.0 1.8 Total =	4.80sq.m 94.38sq.m
wor	2 Deduction for window opening	4	1.5		2.5	15	-15
r	3 Brick work	2	1.5	0.3	0.5	0.450cu.m	0.450cu.m
	4 Flooring Door sill	1 2	5.4 1		2.4 0.3	12.96 0.60	 13.56sq.m

- Total Plaster work
  = 94.38-15
  =79.38sq.m
- Total brick work
  = 0.450cu.m

Rate Analysis Sheet :

SR No.	Particular of item	Quantity	Per	Rate	Amount Rs
4	Brick work	0.450	Cu.m	6720	3,204.00
7	Plaster work	80	Sq.m	450	36,000.00
8	Flooring	13.56	Sq.m	1550	21,018.00
				Total	60,222.00

- **Design 4 Community Hall**

Community Hall Detail

Area = 10Mtr X 15.50 Mtr

Main Hall Area = 8.40 mtr X 10.10mtr

Meeting Room Area = 2.70 mtr X 2.70mtr

Kitchen Room Area = 2.70 mtr X 4.40mtr

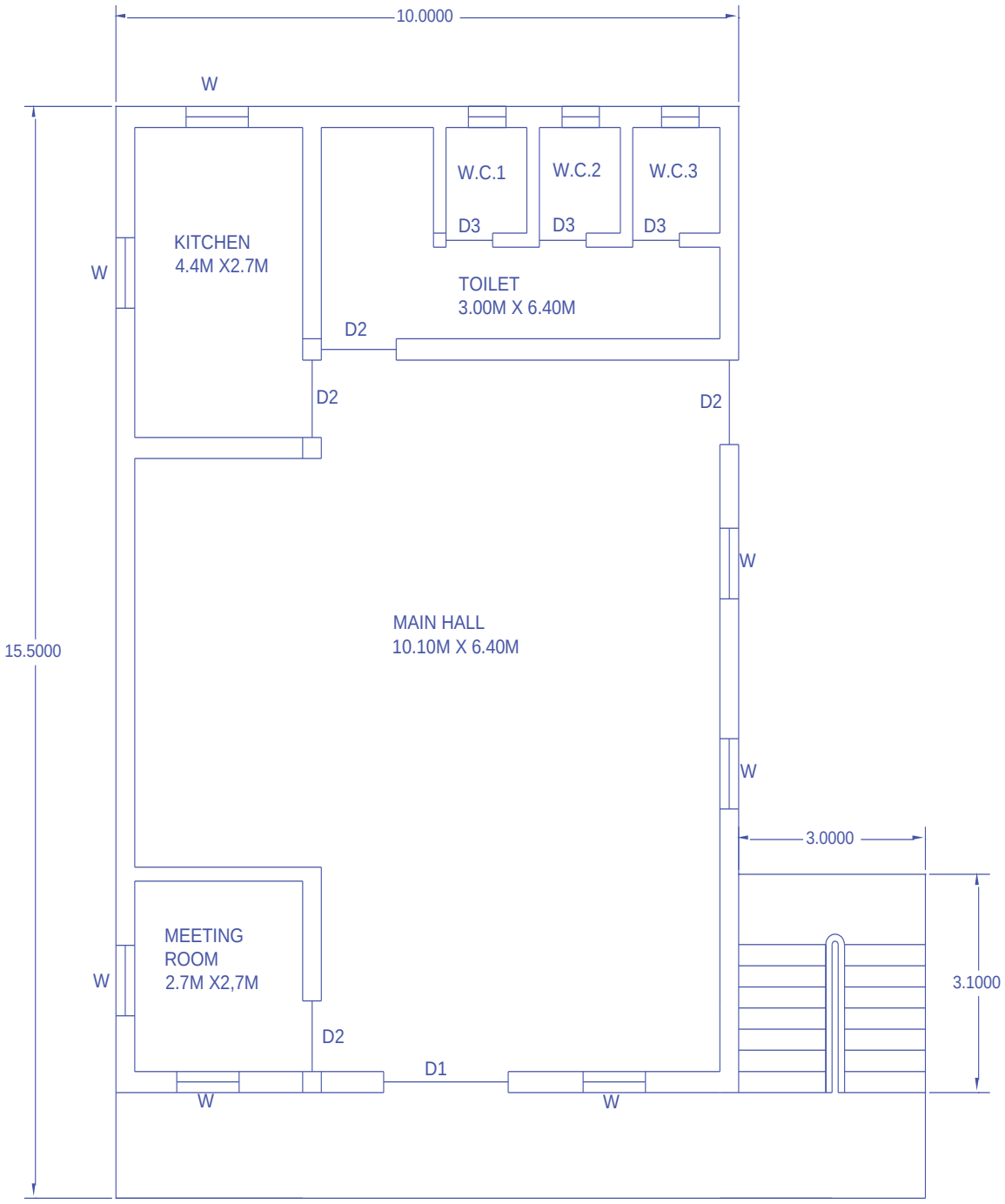
Toilet Block Area = 6.40mtr X 3.00 mtr

Staircase Area = 3.00mtr x 3.10 mtr

Stair height (Rise) = 0.20 mtr

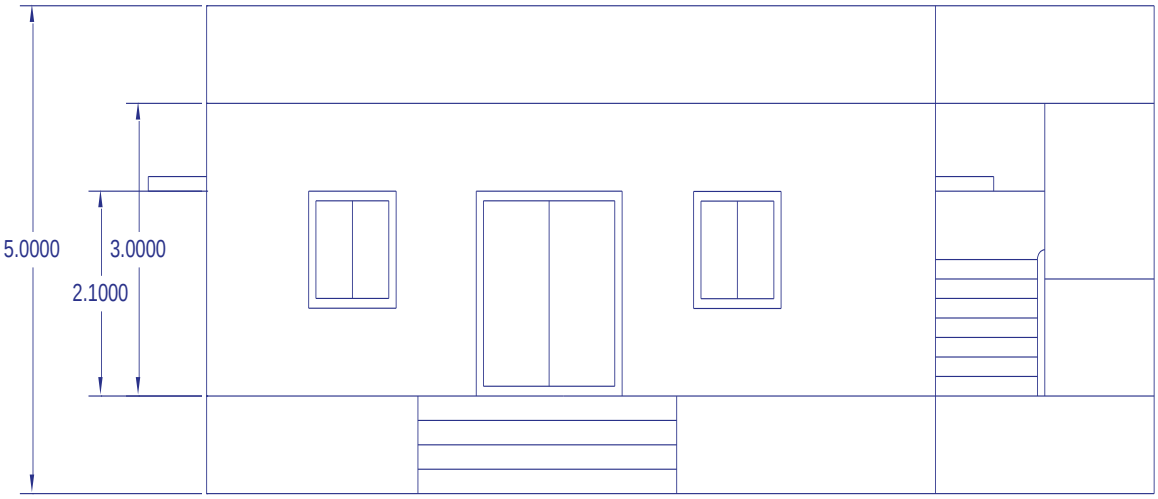
Stair width (Tread) = 0.30 mtr

Flight Width =0.9 mtr

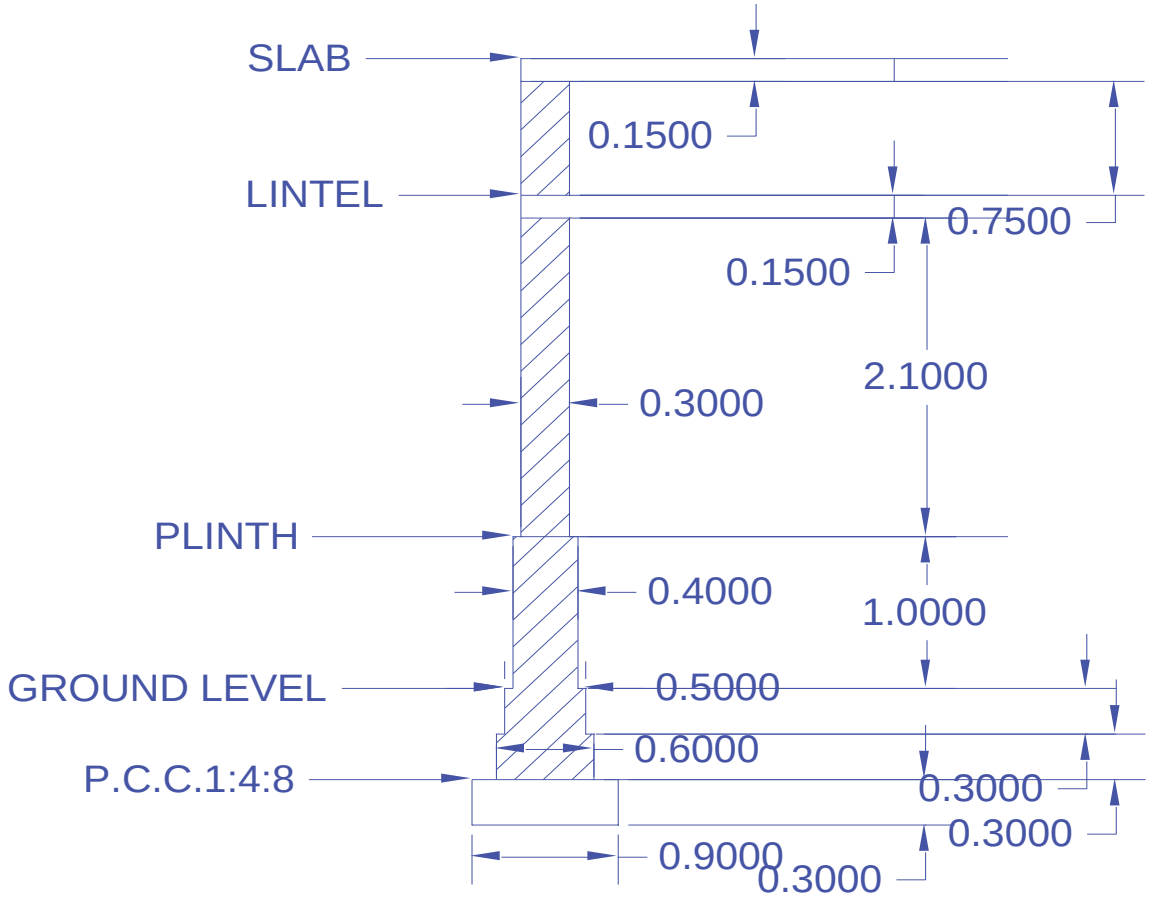


All Dimension are in meter.

AutoCAD Drawing of Community Hall (PLAN)



ELIVATION



FOUNDATION

Door & window Schedule

	Dimension	Nos
D1	(2.0m x 2.1m)	1
D2	(1.2m x 2.1m)	4
D3	(0.75m x 2.1m)	3
W1	(1.0m x 1.2m)	7
V	(0.6m x 0.6m	3

- **DESIGN-5 :- Internal Road design**

Road details

Road length – 1000 meter

Road width – Carriage way -3 meter

- Shoulder -1 meter in Both side
- Shoulder width + Carriage way + Shoulder width

  1.0+3.0+1.0

  =5.0 meter Overall width of road

Total width of Roadway is 5 meter with Shoulder

Pavement details

Thickness of Different pavement layer as pe IRC

Surface course thickness- 25-50 MM

Blinder course Thockness- 50-100 MM

Base course Thickness- 100-300MM

Sub Base Thickness- 100-300 MM

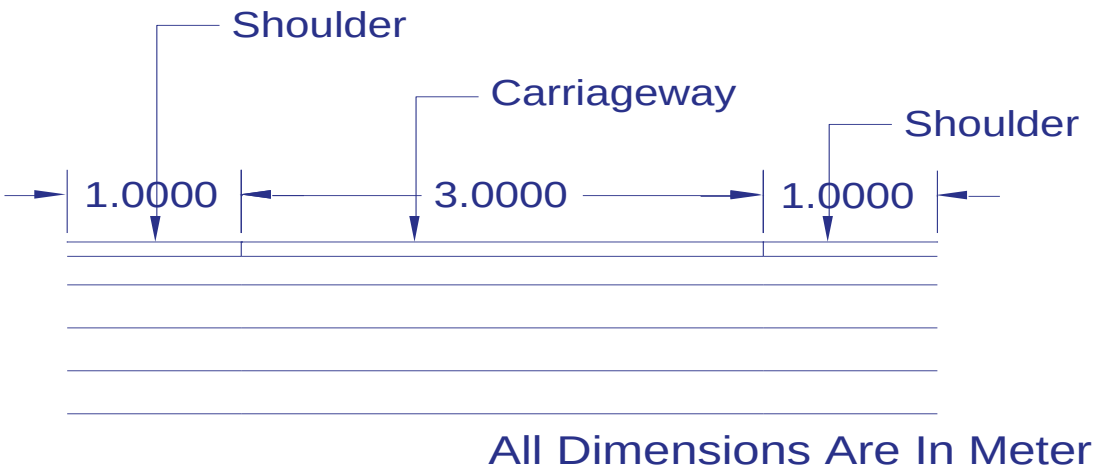
Provided thickness

Surface course thickness-50 MM

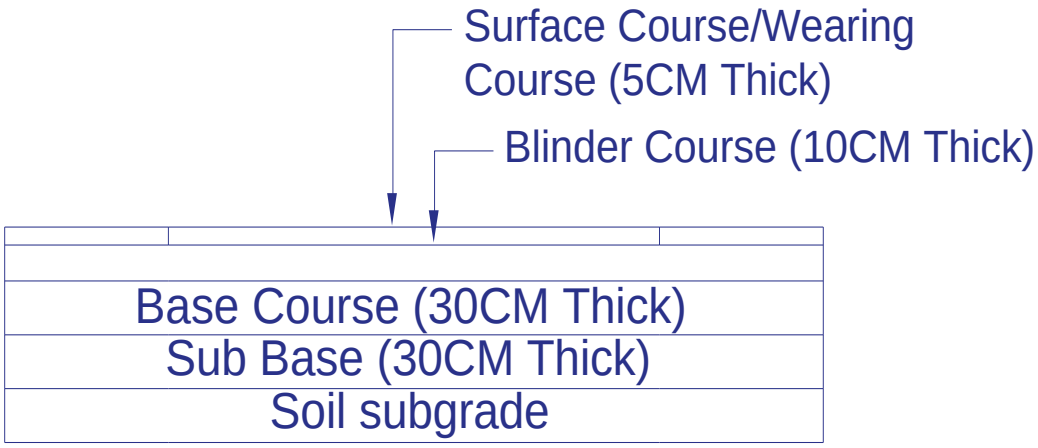
Blinder course Thockness-100 MM

Base course Thickness-300MM

Sub Base Thickness- 300 MM

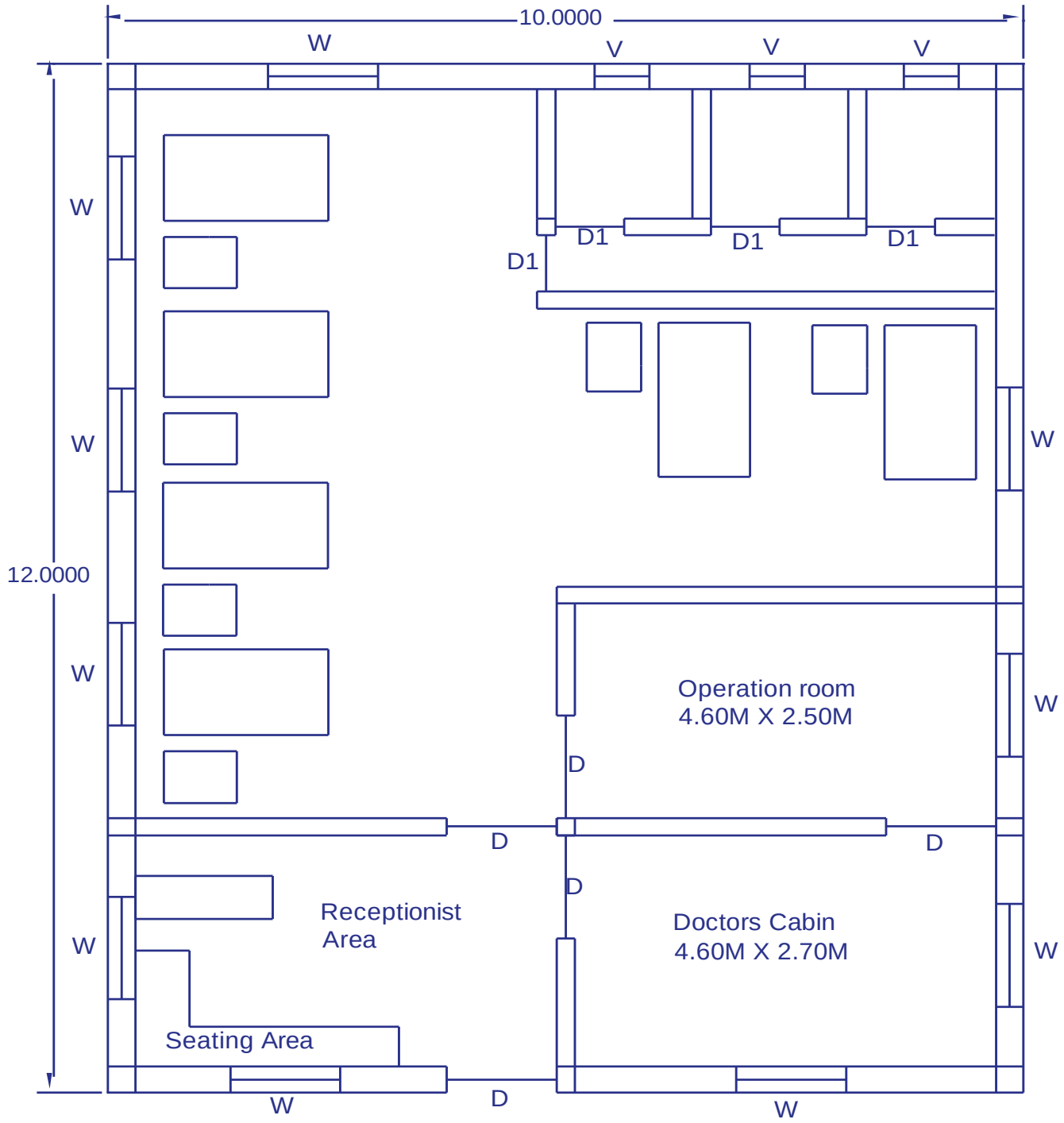


AutoCAD DrawindOf Road Section

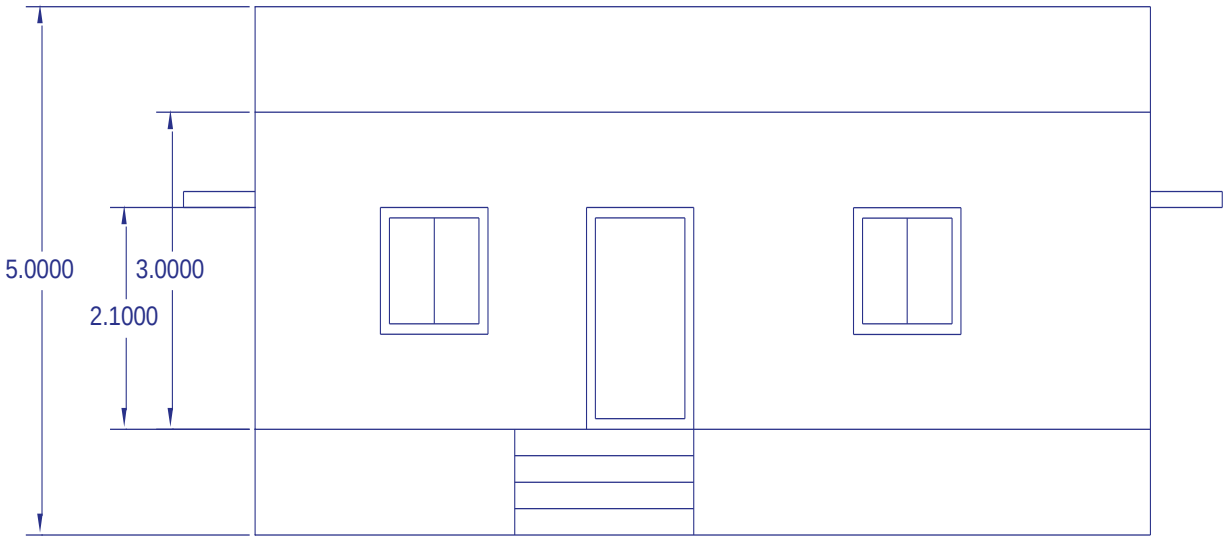


AutoCAD Drawing Of Road Pavement

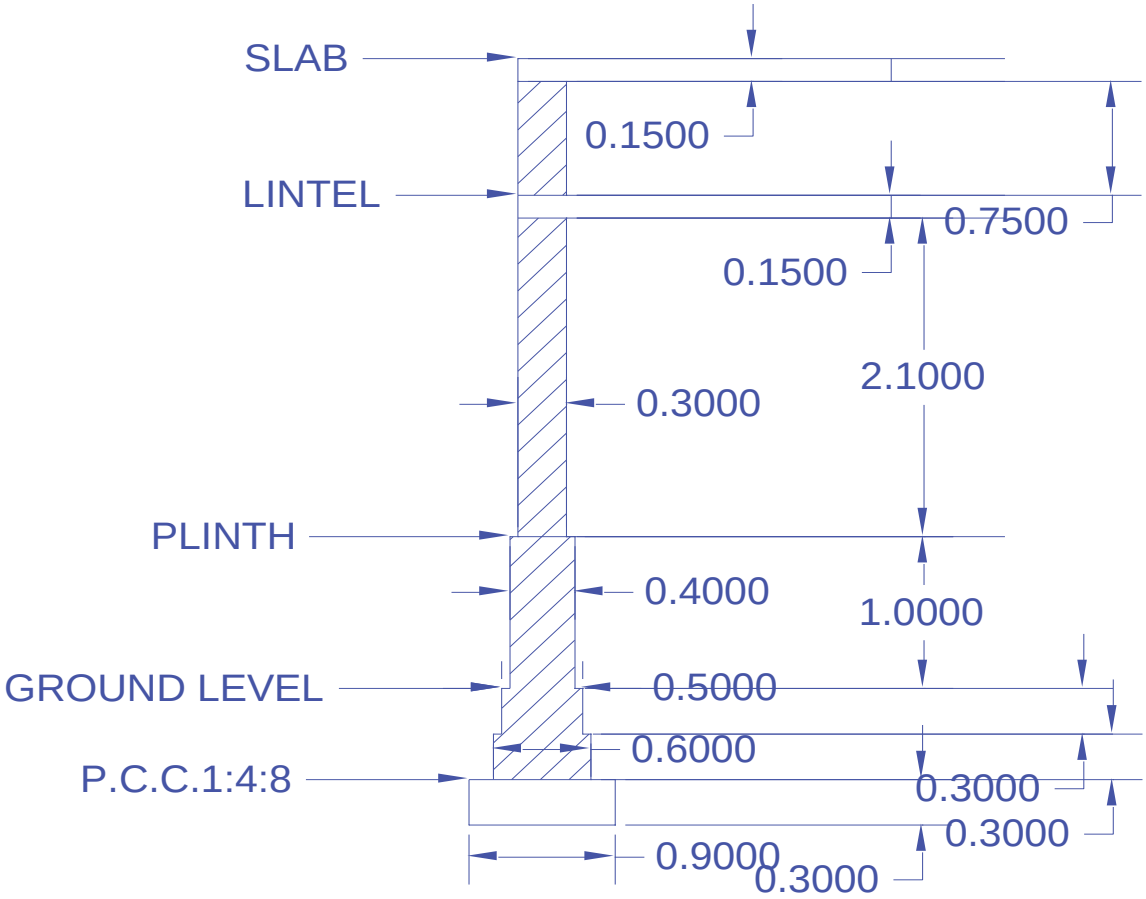
- **Design-6 MATERNITY HOME**



AutoCAD Drawing of Maternity Home (PLAN)



ELEVATION



FOUNDATION

MATERNITY HOME DETAILS:-

Area of maternity Building = 10 mtr X 12 mtr

Receptionist area = 4.60mtr X 2.70 mtr

Doctors cabin = 4.60mtr X 2.70 mtr

Operation room = 4.60 mtr X 2.50 mtr

General ward area = 6 bed

Toilet block = 3 nos

Area of 1 Block = 1.50 mtr X 1.50mtr

	Dimension	Nos
D	(1.2mx2.1m)	5
D2	(0.75mx2.1m)	4
W	(1.0mx1.2m)	10
V	(0.6m x 0.6m)	3

8.2. Reason for Students Recommending this Design

We the students recommending this design On the basis of Different surveys and by different interaction done with the village people and Gram panchayat members. we have decided to give some Designs of the structures which is benefits for villagers and for better growth of the allocated village. So, for that we have started working on it. We have Finalized for this design and after planning it on Autocad software.

Also we have Given Estimation & Costing of the Designs given by us.

By this designs and facilities given by us the villagers life will become easier.

Also as per the data collection & information given by the gram panchayat members we have decided for this DESIGN.

Chapter 9. Proposing designs for Future Development of the Village for the PART-II Design

By the study of vishwakarmayojana phase viii part-1 (Chanvai village, Dist. Valsad) After doing various surveys & After collecting information from Gram panchayat& Villagers. We have given some of the important structures new designs and also the old structures estimated cost which requires Repair & Maintenance.

In the Part-1 Design chapter we cannot give the maximum design as per facilities required for the village development due to the Pandemic situation.

So, we decided to design some of the basic requirements of the village.

FOR PART-1 DESIGN…

1) Drainage line design for village
2) Bus stop design and maintainance
3) Library design
4) Community hall design
5) Road design
6) Maternity Home design

FOR FUTURE DEVELOPMENT PART -2 DESIGN

1) Anganvadi design
2) Village market design
3) Public garden
4) Cricket ground
5) Vocational training centre
6) Pond development

Chapter 10. Conclusion of the Entire Village Activities of the Project

As per Vishwakarma yojana phase -08 our project is to developed the allocated Chanvai village District, Valsad. So we carried out different surveys and done different Interaction with the people of the allocated village, ideal village and smart village. We also met with the villages Sarpanch's, Talati & Gram sevak, of the smart, Ideal as well as allocated village and for finalized the design we Collected data from the gram panchayat of allocated Chanvai village. The survey was carried out by us to know the problems facing by the allocated villagers. And to know the facilities which they required in the village. From all this data which we collected from the different sources, We have decided to give Drainage Line at some area, Community hall, Public Library, Bus stops repair & Maintenance, Road Design & Maternity Home Design. So, we carried out Planning, Design and also estimation and costing of the structures. The details of the following designs are shown through the photos. In our Part-2 of Vishwakarma yojana we are also worked as per Phase-1 & as per index provided by Vishwakarma yojana department. So we again visited the allocated village, Again we met with Sarpanch, Gram panchayat members for further information for the part-2 designs. In our part-2 Design after different interactions done by us we had finalized the following designs. i.e. Aanganwadi design, village market design, Public Garden, Cricket Ground, Vocational training centre and Pond development. For all this designs we had collected the data from grampanchayat.

The design should be Finalized in such a way that all the people either young, senior citizen, women or kids all of them can use the facilities and will Take advantages of it, as we give Community hall, Public Library, Bus stops, Road Design, Maternity Home, aanganwadi, public garden, vocational training centre, village market and development of pond for a nice view and for the jogging area.

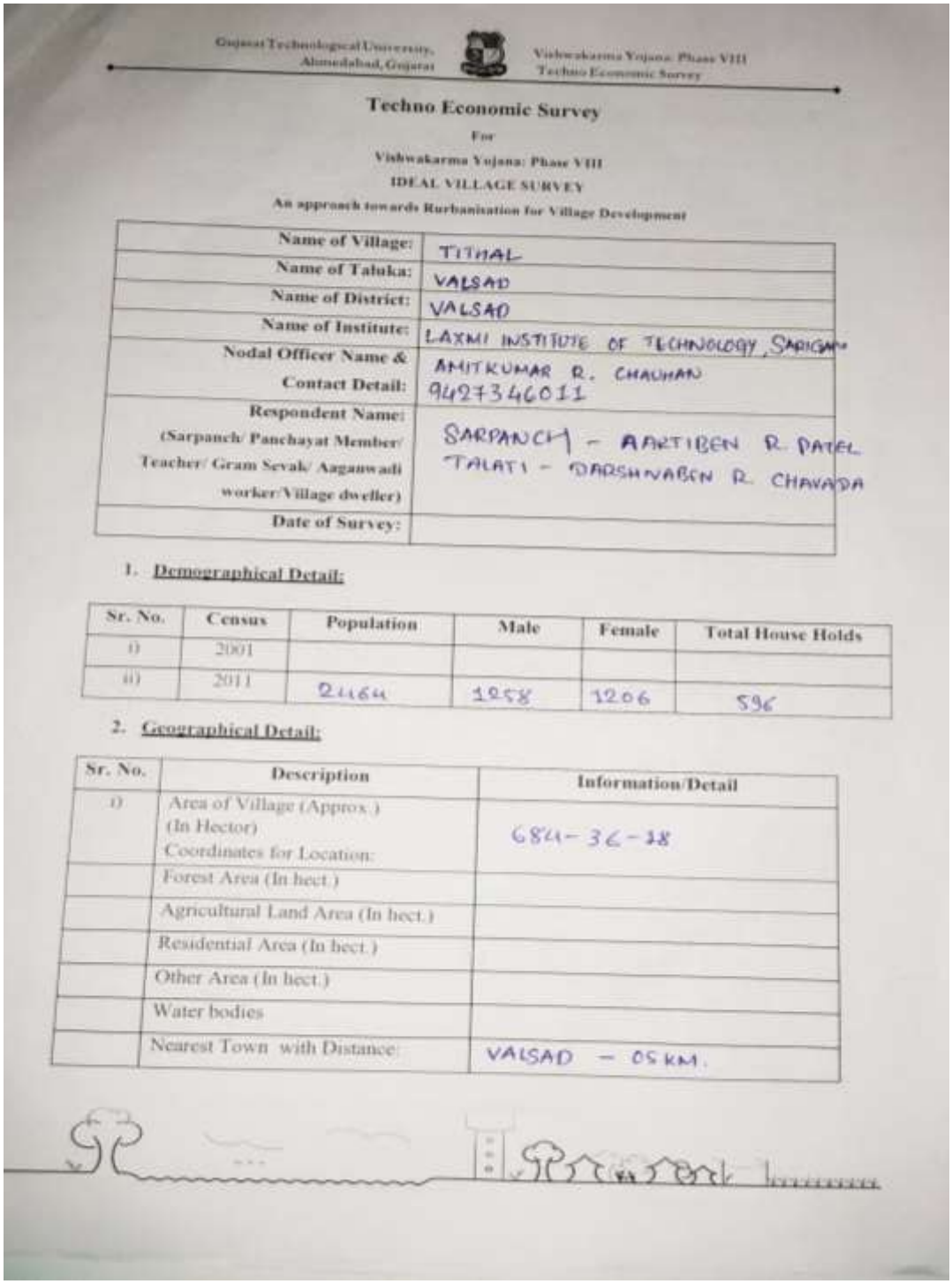
By this Facilities or Designs the village people's life will be easier in their day to Day life..

Chapter 11. References referred for this project

- Census department, Ministry of Home Affairs, Govt. of India
  www.censusindia.gov.in
- VishwakarmaYojana& its concept:
  http://www.vyojana.gtu.ac.in/
- Demographic and other data of the village:
  www.censusindia.gov.in ,
  https://www.census2011.co.in/
  https://www.census2011.co.in/data/village/523290-chanvai-gujarat.html#:~:text=Chanvai%20is%20a%20large%20village,as%20per%20Population%20Census%202011.&text=In%20Chanvai%20Male%20literacy%20stands,female%20literacy%20rate%20was%2076.88%20%25
  https://www.villagemaps.in/gujarat/chanvai-valsad-523290/
  https://villageinfo.in/gujarat/valsad/valsad/chanvai.html
- For Smart City concept and its visions:
  https://www.thesmartcityjournal.com/en/articles/1333-smart-cities-futuristic-vision
- For various details of Smart, Ideal & Allocated Village: http://www.onefivenine.com/india/villag/Valsad
- For different topics related to project:
  https://www.saurenergy.com/solar-energy-news/govt-extends-phase-ii-of-atal-jyoti-yojana-till-mar-2021
- For getting thorough data of the allocated village (Chanvai):
  https://etrace.in/census/village/manekpurumbergaon-district-valsad-gujarat-523660
- Urban Transportation System Book
  Professional Practice and Valuation Book by R. P. Rethaliya, B. N. Dutta& A. S. Kotadia
- For proper location:
  https://www.google.com/maps
  https://www.villagemaps.in/gujarat/chanvai-valsad-523290/

12. Annexure attachment

Survey form of Ideal Village Scanned copy attachment in the report for Part-ISurvey



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

Techno Economic Survey

For

Vishwakarma Yojana: Phase VIII

IDEAL VILLAGE SURVEY

An approach towards Rurbanisation for Village Development

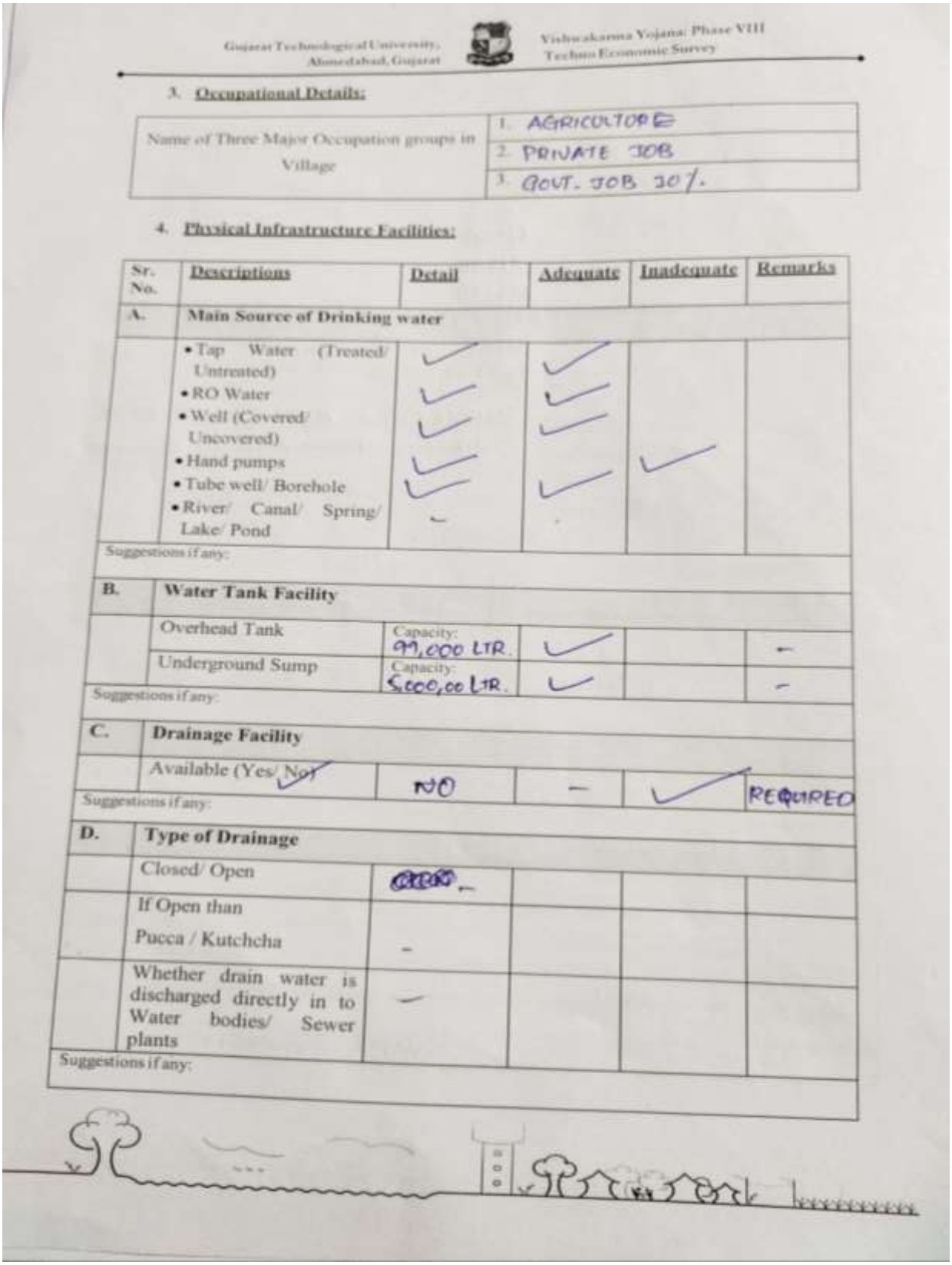
Name of Village:	TITHAL
Name of Taluka:	VALSAD
Name of District:	VALSAD
Name of Institute:	LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM
Nodal Officer Name & Contact Detail:	AMITKUMAR R. CHAUHAN 9427346011
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Aaganwadi worker/Village dweller)	SARPANCH - AARTIBEN R. PATEL TALATI - DARSHNABEN R. CHAVADA
Date of Survey:	

1. Demographical Detail:

Sr. No.	Census	Population	Male	Female	Total House Holds
1)	2001				
2)	2011	2464	1258	1206	596

2. Geographical Detail:

Sr. No.	Description	Information/Detail
1)	Area of Village (Approx.) (In Hector) Coordinates for Location:	684-36-38
	Forest Area (In hect.)	
	Agricultural Land Area (In hect.)	
	Residential Area (In hect.)	
	Other Area (In hect.)	
	Water bodies	
	Nearest Town with Distance:	VALSAD - 05 KM.



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

3. **Occupational Details:**

Name of Three Major Occupation groups in Village	1. AGRICULTORE 2. PRIVATE JOB 3. GOVT. JOB 30%

4. **Physical Infrastructure Facilities:**

Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
	• Tap Water (Treated/ Untreated) • RO Water • Well (Covered/ Uncovered) • Hand pumps • Tube well/ Borehole • River/ Canal/ Spring/ Lake/ Pond	✓ ✓ ✓ ✓ ✓ –	✓ ✓ ✓ ✓ –	✓	
Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank	Capacity: 99,000 LTR.	✓		–
	Underground Sump	Capacity: 5,00,00 LTR.	✓		–
Suggestions if any:					
C.	**Drainage Facility**				
	Available (Yes/ Not)	NO	–	✓	REQUIRED
Suggestions if any:					
D.	**Type of Drainage**				
	Closed/ Open	OPEN			
	If Open than Pucca / Kutchcha	–			
	Whether drain water is discharged directly in to Water bodies/ Sewer plants	–			
Suggestions if any:					

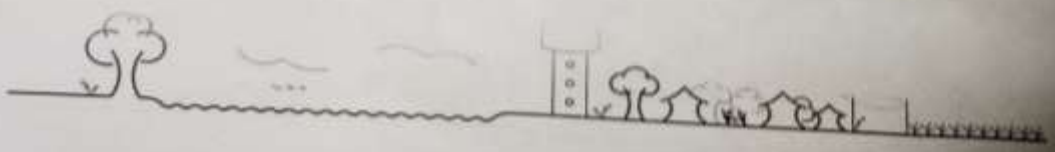
	General Market	NO	-	-	-
	Shops (Public Distribution System)	YES	✓	-	-
	Panchayat Building	YES	✓	-	-
	Pharmacy/Medical Shop	YES	✓	-	-
	Bank & ATM Facility	NO	-	✓	-
	Agriculture Co-operative Society	NO	-	-	-
	Milk Co-operative Soc.	YES	✓	-	-
	Small Scale Industries	NO	-	-	-
	Internet Cafes/ Common Service Center/Wi Fi	NO	-	-	REQUIREMENT FOR WIFI —
	Other Facility	-	-	-	-
Suggestions if any:					

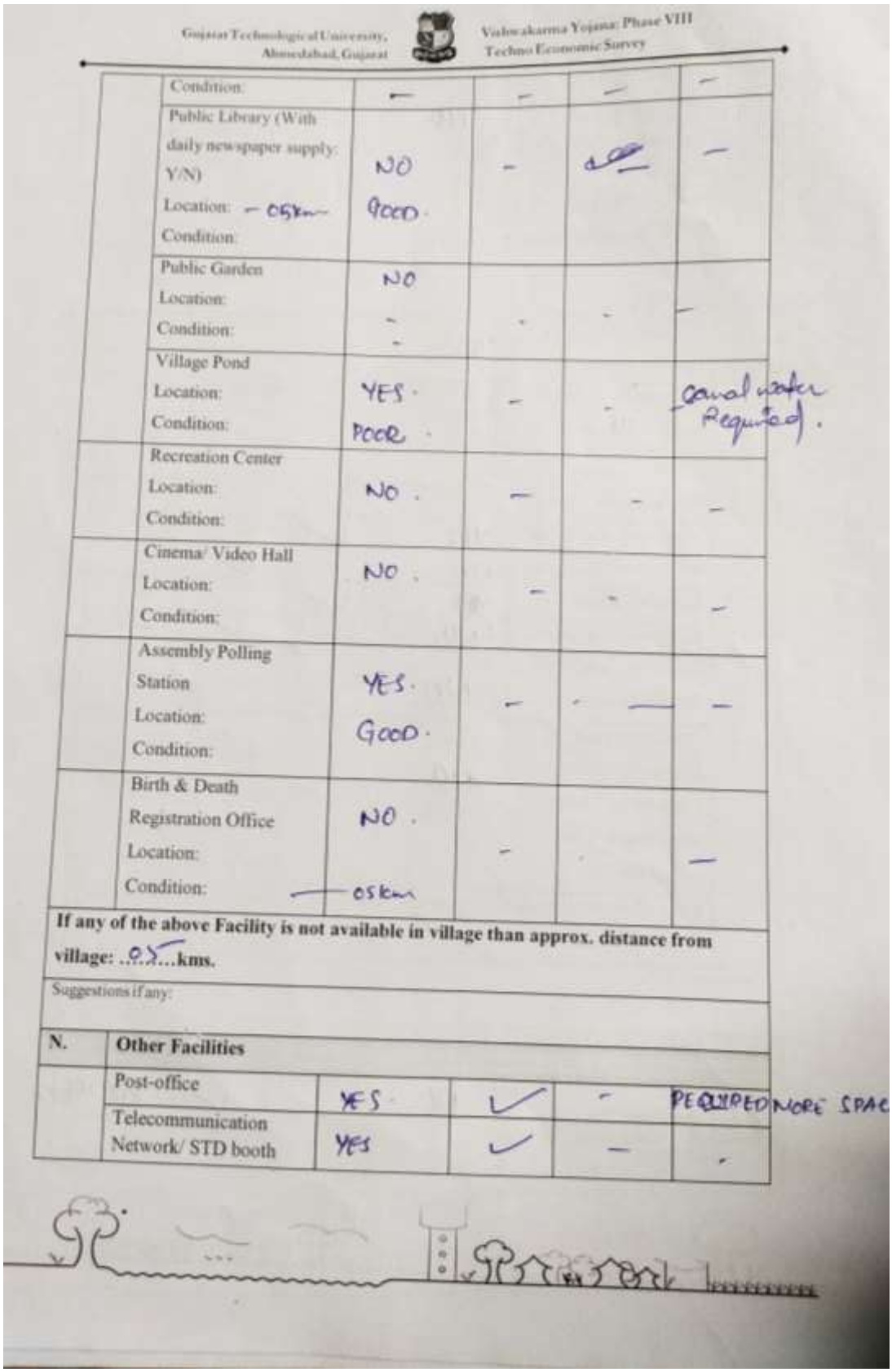
6. **Sustainable /Green Infrastructure Facilities:**

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
O.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources	NO	-	✓	REQUIREMENT.
P.	Bio-Gas Plant Solar Street Lights Rain Water Harvesting System	NO	-	✓	REQUIRED
Q.	Any Other	-	-	-	-

7. **Data Collection From Village**

Village Base Map Available: Hard Copy/Soft Copy	YES (BOTH)





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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

	Condition:	—	—	—	—
	Public Library (With daily newspaper supply: Y/N) Location: — 05km Condition:	NO GOOD.	-	—	—
	Public Garden Location: Condition:	NO - -	-	-	—
	Village Pond Location: Condition:	YES. POOR.	-	-	canal water Required.
	Recreation Center Location: Condition:	NO.	—	-	—
	Cinema/ Video Hall Location: Condition:	NO.	—	-	—
	Assembly Polling Station Location: Condition:	YES. GOOD.	—	—	—
	Birth & Death Registration Office Location: Condition: — 05km	NO.	-		—

If any of the above Facility is not available in village than approx. distance from village: ..05...kms.

Suggestions if any:

N.	Other Facilities				
	Post-office	YES	✓	-	REQUIRED MORE SPACE
	Telecommunication Network/ STD booth	Yes	✓	—	.

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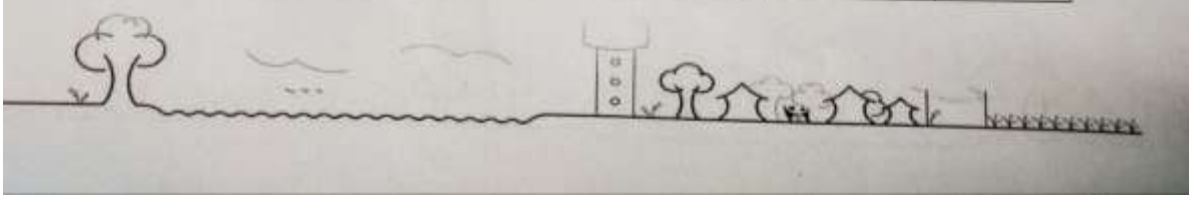
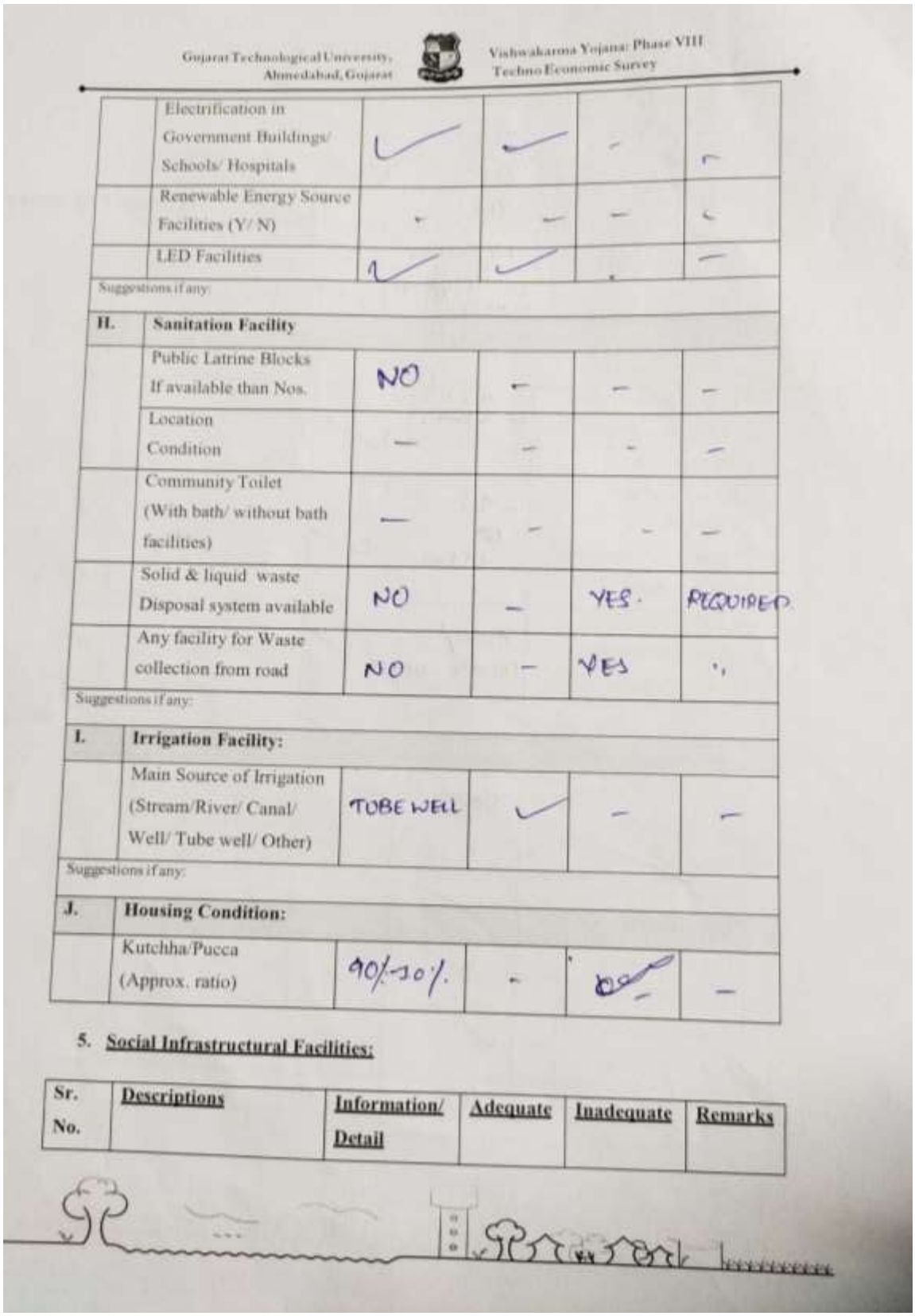
Vishwakarma Yojana: Phase VIII
Techno Economic Survey

K.	Health Facilities:				
	Sub center/ PHC/ CHC /Government Hospital/ Child welfare & Maternity Homes (If Yes than specify No. of Beds) Condition:	NO	-	✓	-
	Private Clinic/Private Hospital/ Nursing Home	YES	-	-	-
	If any of the above Facility is not available in village than approx. distance from village: 04....kms.				
Suggestions if any:					

L.	Education Facilities:				
	Aaganwadi/ Play group	YES	✓	-	-
	Primary School	NO	-	✓	-
	Secondary school	YES	✓	-	-
	Higher sec. School	NO	-	✓	-
	ITI college/ vocational Training Center	NO	-	-	-
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	NO	-	-	-
	If any of the above Facility is not available in village than approx. distance from village: 04....kms.				
Suggestions if any:					

M.	Socio- Culture Facilities				
	Community Hall (With or without TV) Location:	NO	-	✓	REQUIRED





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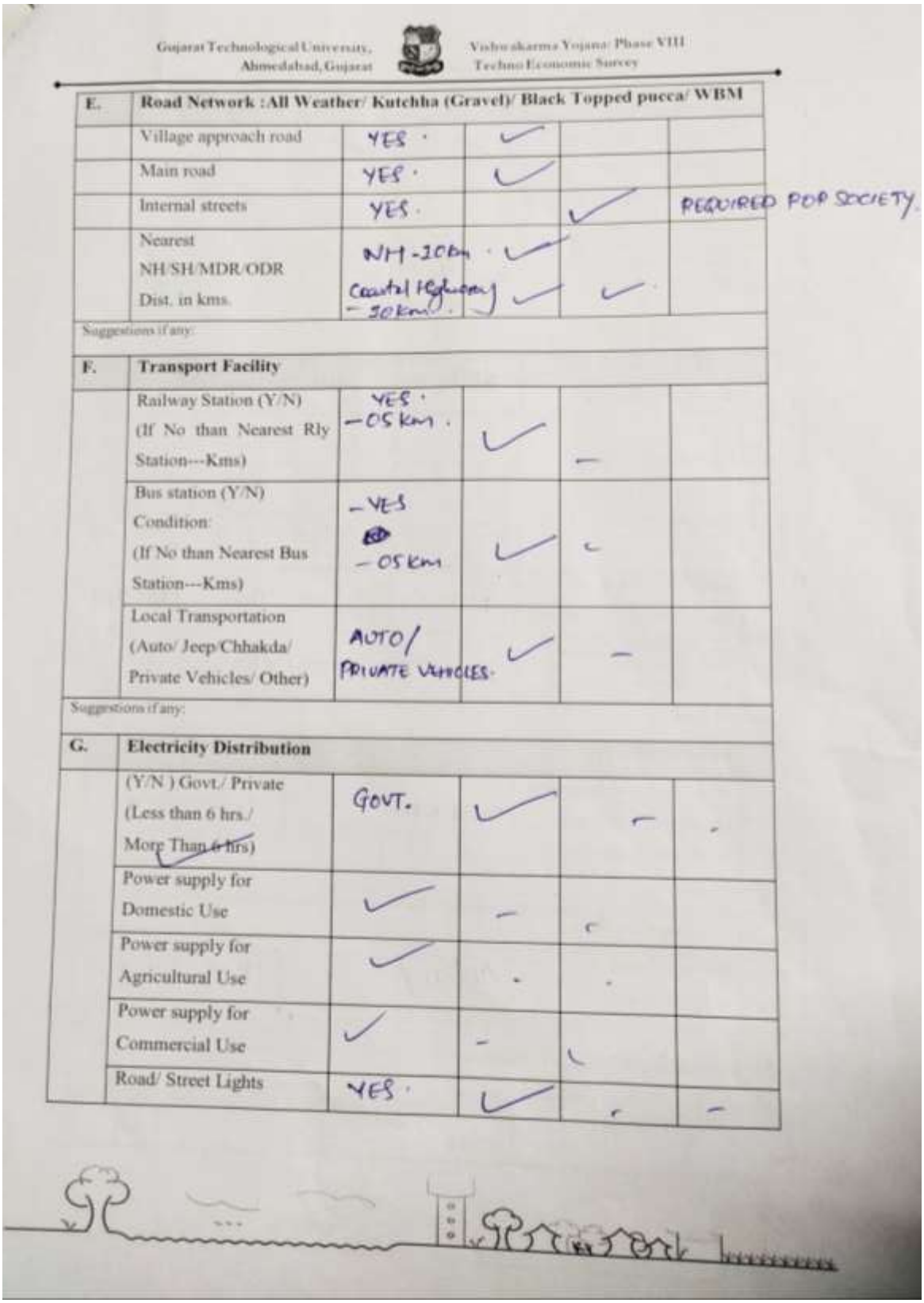
	Electrification in Government Buildings/ Schools/ Hospitals	✓	✓	-	-
	Renewable Energy Source Facilities (Y/ N)	-	-	-	-
	LED Facilities	✓	✓	-	-
Suggestions if any:					
H.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	NO	-	-	-
	Location Condition	-	-	-	-
	Community Toilet (With bath/ without bath facilities)	-	-	-	-
	Solid & liquid waste Disposal system available	NO	-	YES.	REQUIRED
	Any facility for Waste collection from road	NO	-	YES	-
Suggestions if any:					
I.	**Irrigation Facility:**				
	Main Source of Irrigation (Stream/River/ Canal/ Well/ Tube well/ Other)	TOBE WELL	✓	-	-
Suggestions if any:					
J.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	90%-10%	-	✓	-

5. Social Infrastructural Facilities:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks



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E.	Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM				
	Village approach road	YES.	✓		
	Main road	YES.	✓		
	Internal streets	YES.		✓	REQUIRED FOR SOCIETY.
	Nearest NH/SH/MDR/ODR Dist. in kms.	NH-10Km. Coastal Highway - 30km.	✓	✓	
Suggestions if any:					

F.	Transport Facility				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)	YES. -05 Km.	✓	–	
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)	-YES BD -05 Km	✓	✓	
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)	AUTO/ PRIVATE VEHICLES.	✓	–	
Suggestions if any:					

G.	Electricity Distribution				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	GOVT.	✓	–	.
	Power supply for Domestic Use	✓	–	✓	
	Power supply for Agricultural Use	✓	.	.	
	Power supply for Commercial Use	✓	–	✓	
	Road/ Street Lights	YES.	✓	.	–

Recent Projects going on for Development of Village	YES – WATER TANK CONSTRUCTION.
Any NGO working for village development	–

8. Additional Information/ Requirement:

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	Repair & Maintenance of Existing Public Infrastructure facilities(School Building, Health Center, Panchayat Building, Public Toilets & any other)	Average condition	Required Repair for Panchayat Building, School.
2.	Additional Information/ Requirement	–	–
	–	–	–
	–	–	–

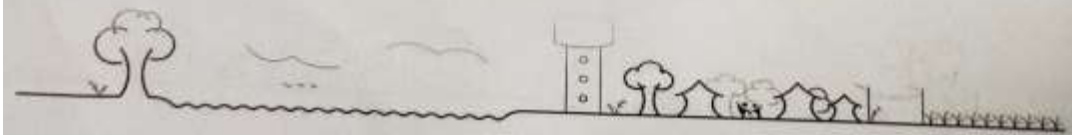
9. Smart Village Proposal Design

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	–	–	–

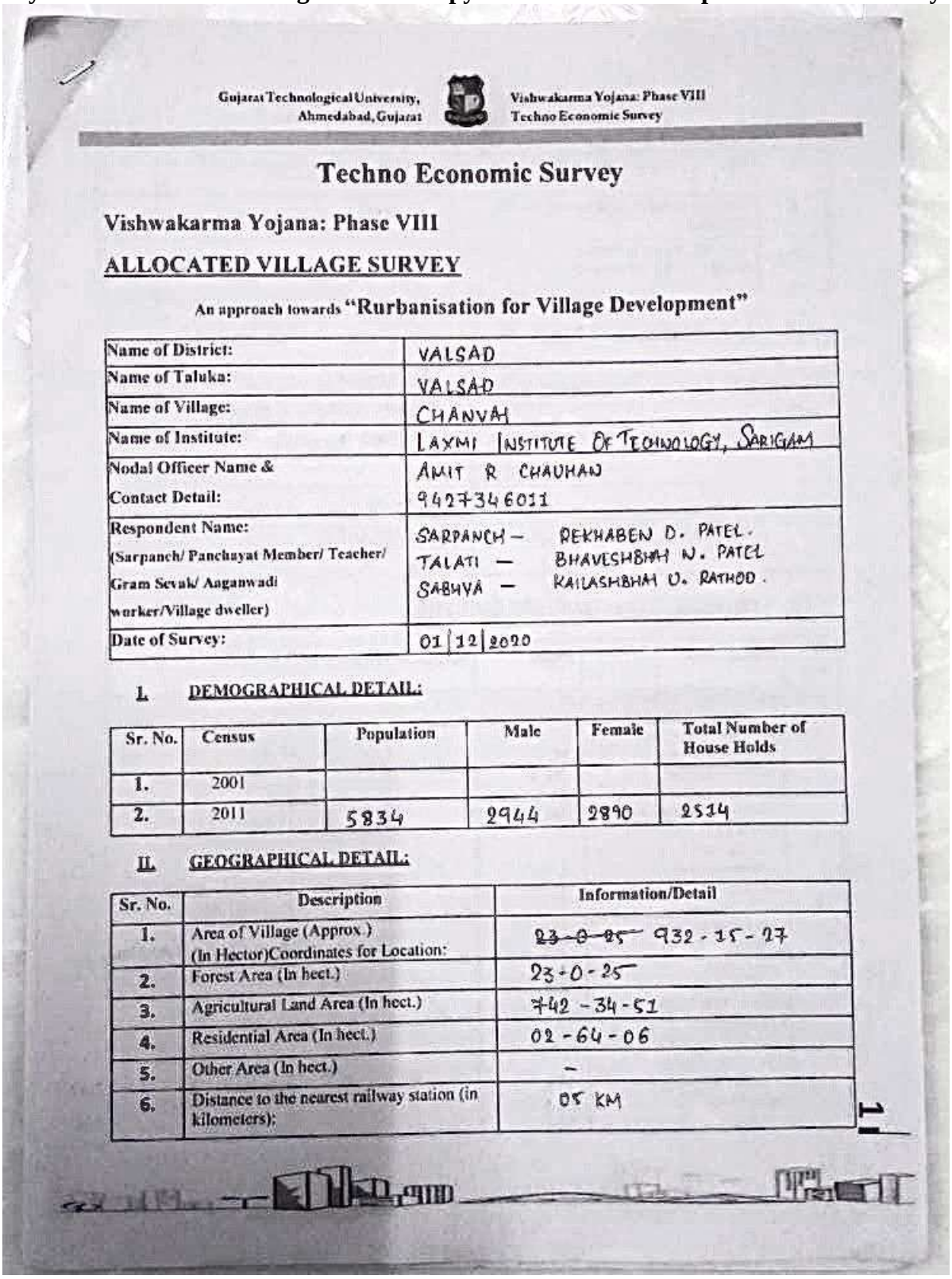
Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
GTU VY Section:
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

M. R. Patel.
[redacted]



Survey form of Allocated Village Scanned copy attachment in the report for Part-I Survey



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

Techno Economic Survey

Vishwakarma Yojana: Phase VIII

ALLOCATED VILLAGE SURVEY

An approach towards "Rurbanisation for Village Development"

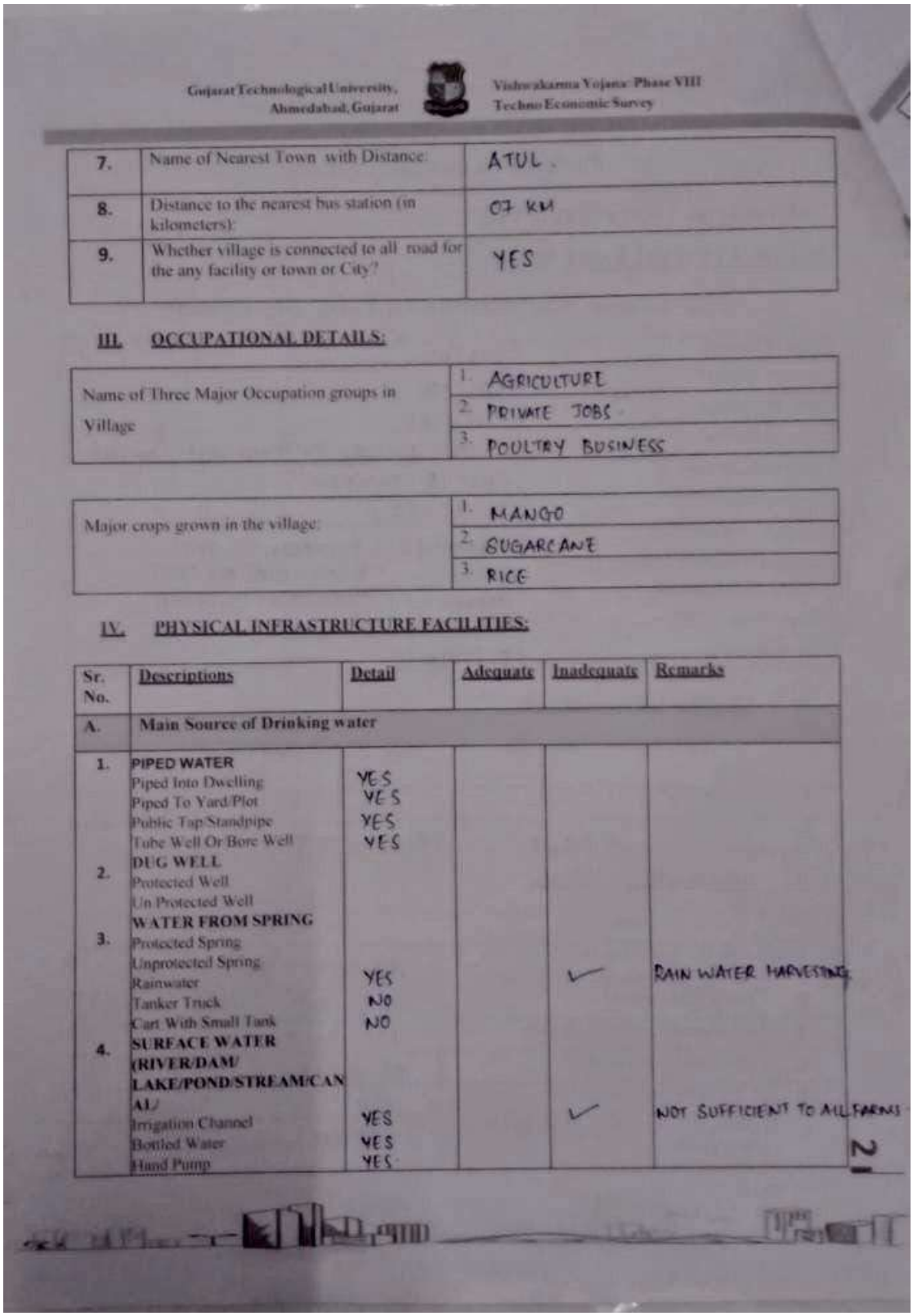
Name of District:	VALSAD
Name of Taluka:	VALSAD
Name of Village:	CHANVAI
Name of Institute:	LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM
Nodal Officer Name & Contact Detail:	AMIT R CHAUHAN 9427346011
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Anganwadi worker/Village dweller)	SARPANCH – REKHABEN D. PATEL. TALATI – BHAVESHBHAI N. PATEL SABHYA – KAILASHBHAI U. RATHOD.
Date of Survey:	01/12/2020

I. DEMOGRAPHICAL DETAIL:

Sr. No.	Census	Population	Male	Female	Total Number of House Holds
1.	2001				
2.	2011	5834	2944	2890	2514

II. GEOGRAPHICAL DETAIL:

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	~~23-0-25~~ 932-15-27
2.	Forest Area (In hect.)	23-0-25
3.	Agricultural Land Area (In hect.)	742-34-51
4.	Residential Area (In hect.)	02-64-06
5.	Other Area (In hect.)	-
6.	Distance to the nearest railway station (in kilometers):	05 KM



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

7.	Name of Nearest Town with Distance:	ATUL .
8.	Distance to the nearest bus station (in kilometers):	07 KM
9.	Whether village is connected to all road for the any facility or town or City?	YES

III. OCCUPATIONAL DETAILS:

Name of Three Major Occupation groups in Village	1. AGRICULTURE 2. PRIVATE JOBS 3. POULTRY BUSINESS

Major crops grown in the village:	1. MANGO 2. SUGARCANE 3. RICE

IV. PHYSICAL INFRASTRUCTURE FACILITIES:

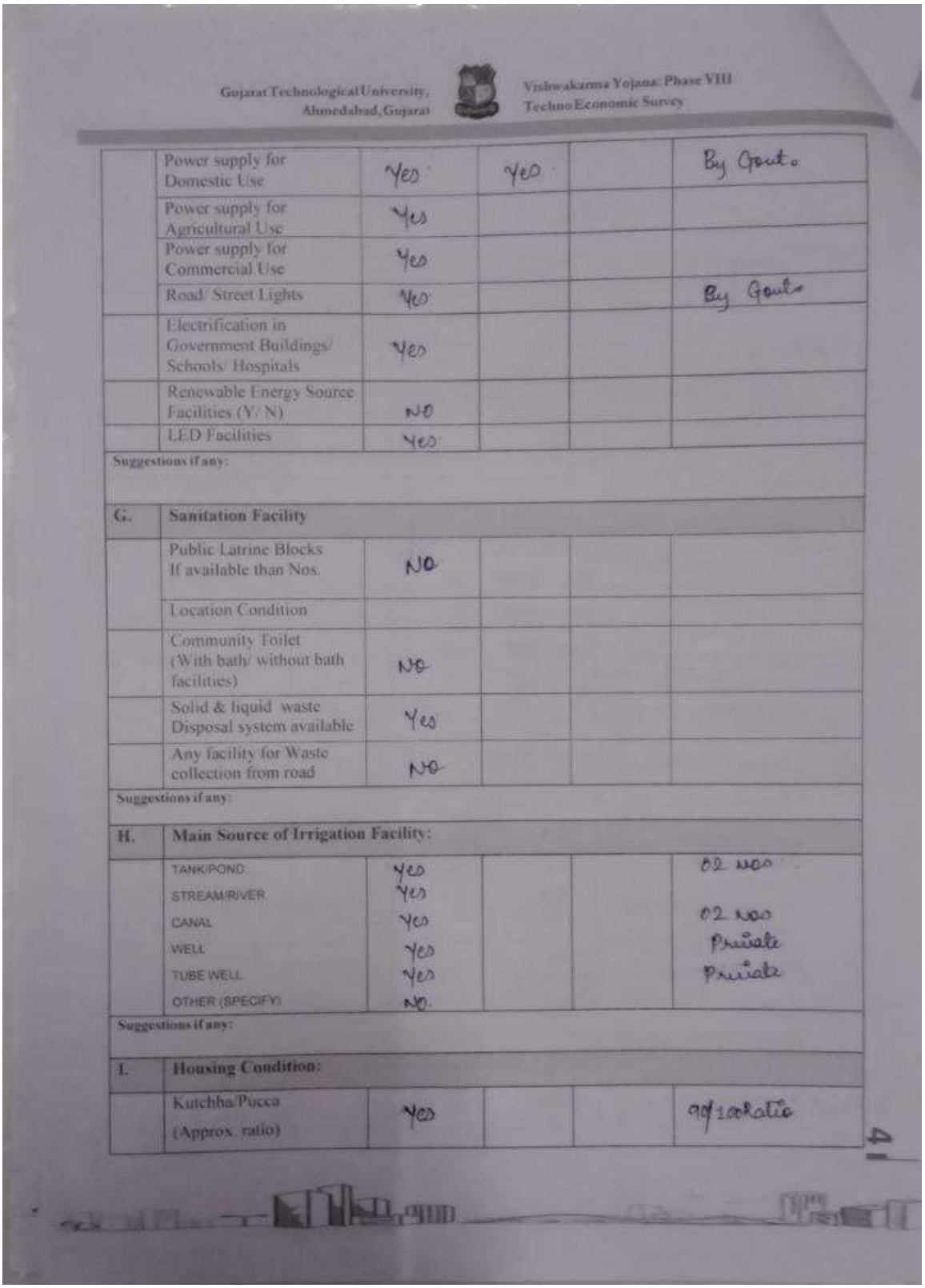
Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
1.	**PIPED WATER**				
	Piped Into Dwelling	YES			
	Piped To Yard/Plot	YES			
	Public Tap/Standpipe	YES			
	Tube Well Or Bore Well	YES			
2.	**DUG WELL**				
	Protected Well				
	Un Protected Well				
3.	**WATER FROM SPRING**				
	Protected Spring				
	Unprotected Spring				
	Rainwater	YES		✓	RAIN WATER HARVESTING
	Tanker Truck	NO			
	Cart With Small Tank	NO			
4.	**SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/**				
	Irrigation Channel	YES		✓	NOT SUFFICIENT TO ALL FARMS
	Bottled Water	YES			
	Hand Pump	YES			

2

Gujarat Technological University, Ahmedabad, Gujarat

Vishwakarma Yojana: Phase VIII
Techno Economic Survey

	Other(Specify)Lake/ Pond	YES -			
Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank	Capacity:	30,000 -	05 Nos.	
	Underground Sump	Capacity:	15,000 -	04 Nos.	
Suggestions if any:					
C.	**The Type of Drainage Facility**				
	A. UNDERGROUND DRAINAGE	YES			REQUIRED MORE
Suggestions if any:					
D.	**Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM**				
	Village approach road	ALL WEATHER	Yes		
	Main road	ALL WEATHER	Yes		
	Internal streets	Paver Block	Yes		
	Nearest NH/SH/MDR/ODR Dist. in kms.	N.H. 48			
Suggestions if any:					
E.	**Transport Facility**				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)	Yes	ATUL Railway Station	05 Km	
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)	Yes			
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)	Auto, Chhakda, Bus	Yes		
Suggestions if any:					
F.	**Electricity Distribution**				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	Yes	Yes	-	By Govt. More than 6 years



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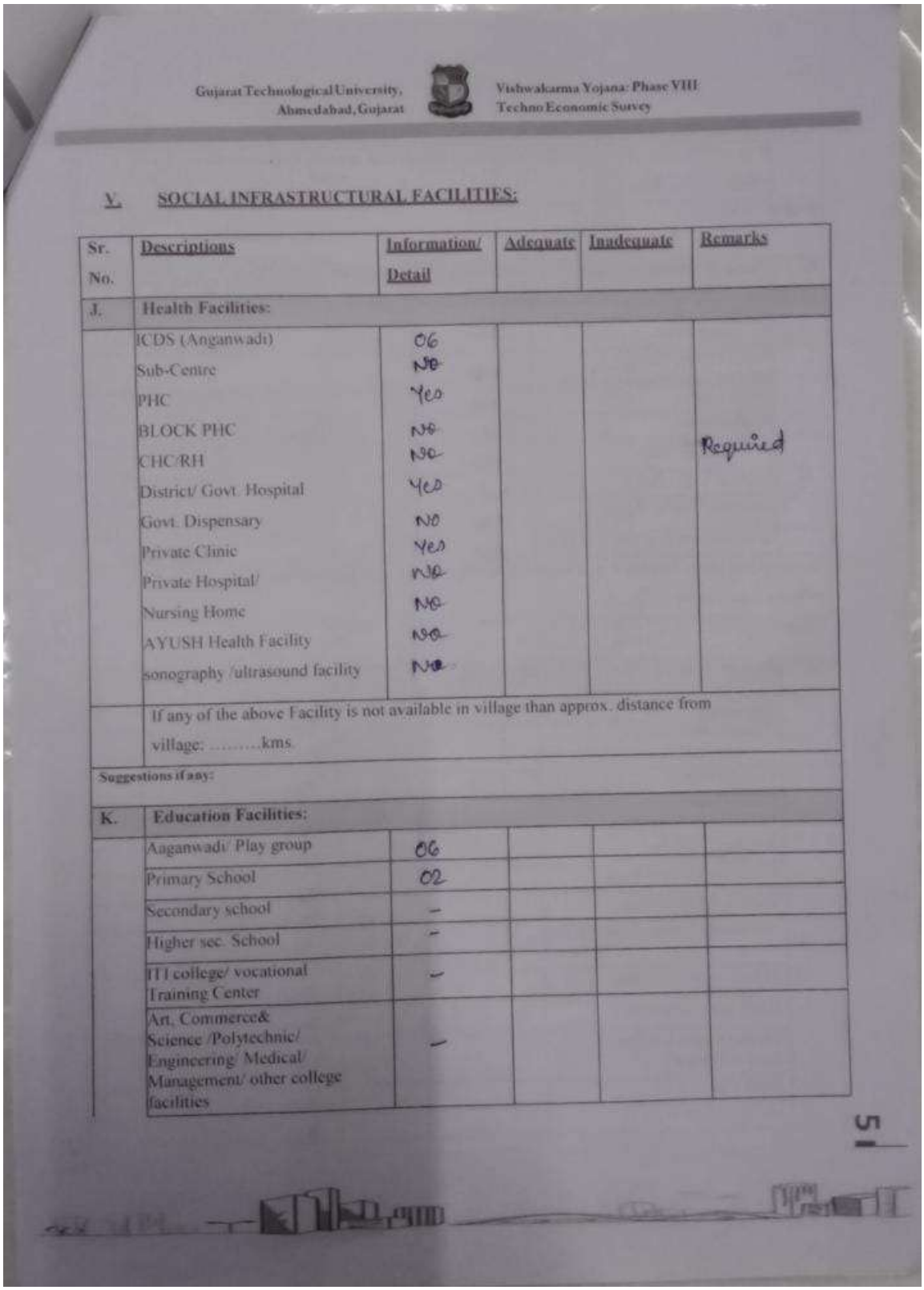
Vishwakarma Yojana: Phase VIII
Techno Economic Survey

	Power supply for Domestic Use	Yes	Yes		By Govt.
	Power supply for Agricultural Use	Yes			
	Power supply for Commercial Use	Yes			
	Road/ Street Lights	Yes			By Govt.
	Electrification in Government Buildings/ Schools/ Hospitals	Yes			
	Renewable Energy Source Facilities (Y/ N)	NO			
	LED Facilities	Yes			
Suggestions if any:					
G.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	NO			
	Location Condition				
	Community Toilet (With bath/ without bath facilities)	NO			
	Solid & liquid waste Disposal system available	Yes			
	Any facility for Waste collection from road	NO			
Suggestions if any:					
H.	**Main Source of Irrigation Facility:**				
	TANK/POND	Yes			02 Nos
	STREAM/RIVER	Yes			
	CANAL	Yes			02 Nos
	WELL	Yes			Private
	TUBE WELL	Yes			Private
	OTHER (SPECIFY)	NO			
Suggestions if any:					
I.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	Yes			90/10 ratio



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Vishwakarma Yojana: Phase VIII
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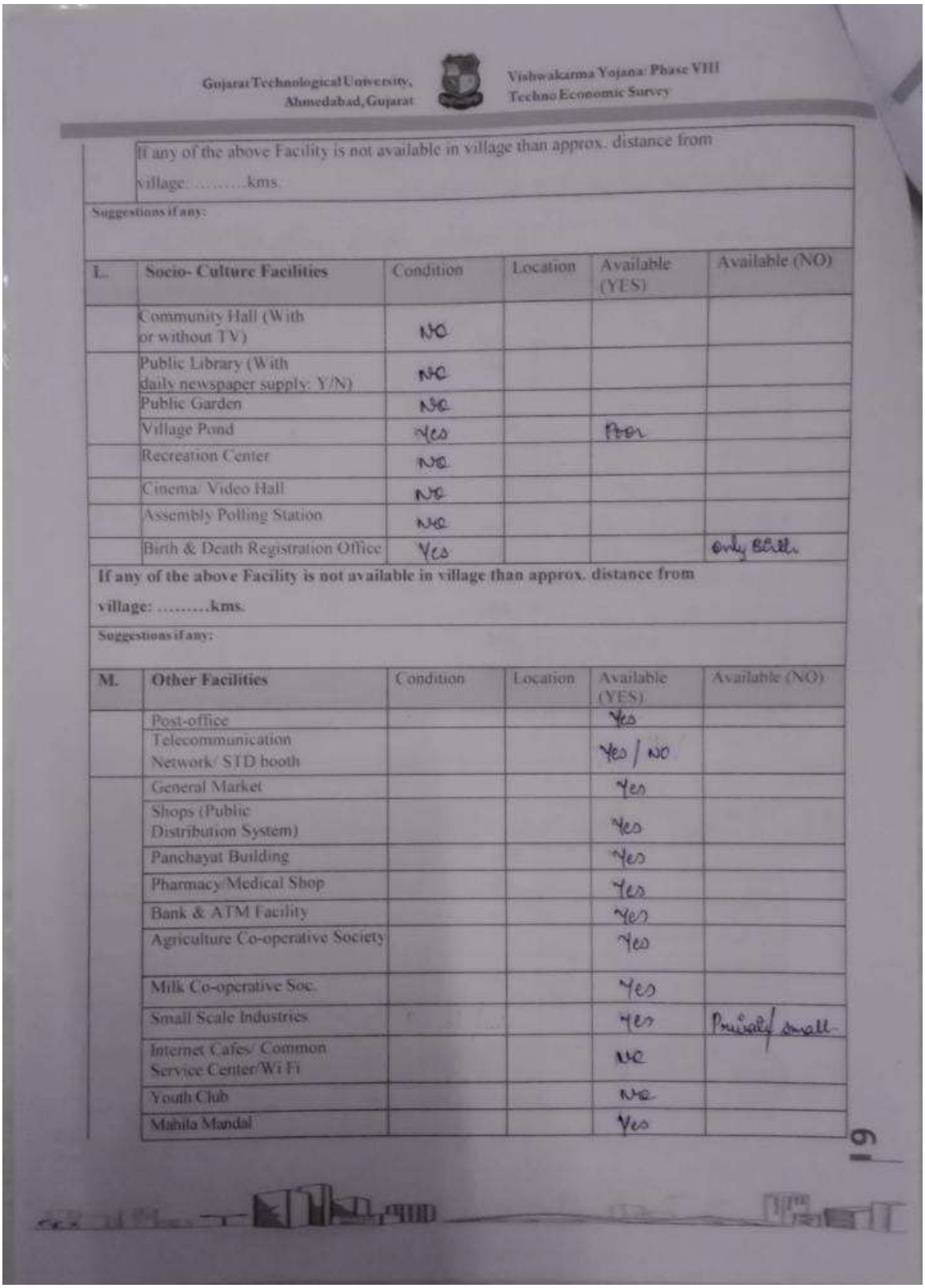
V. SOCIAL INFRASTRUCTURAL FACILITIES:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks
J.	**Health Facilities:**				
	ICDS (Anganwadi)	06			
	Sub-Centre	No			
	PHC	Yes			
	BLOCK PHC	No			
	CHC/RH	No			Required
	District/ Govt. Hospital	Yes			
	Govt. Dispensary	No			
	Private Clinic	Yes			
	Private Hospital/	No			
	Nursing Home	No			
	AYUSH Health Facility	No			
	sonography /ultrasound facility	No			
	If any of the above Facility is not available in village than approx. distance from village: .....kms				
Suggestions if any:					
K.	**Education Facilities:**				
	Aaganwadi/ Play group	06			
	Primary School	02			
	Secondary school	–			
	Higher sec. School	–			
	ITI college/ vocational Training Center	–			
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	–			

5



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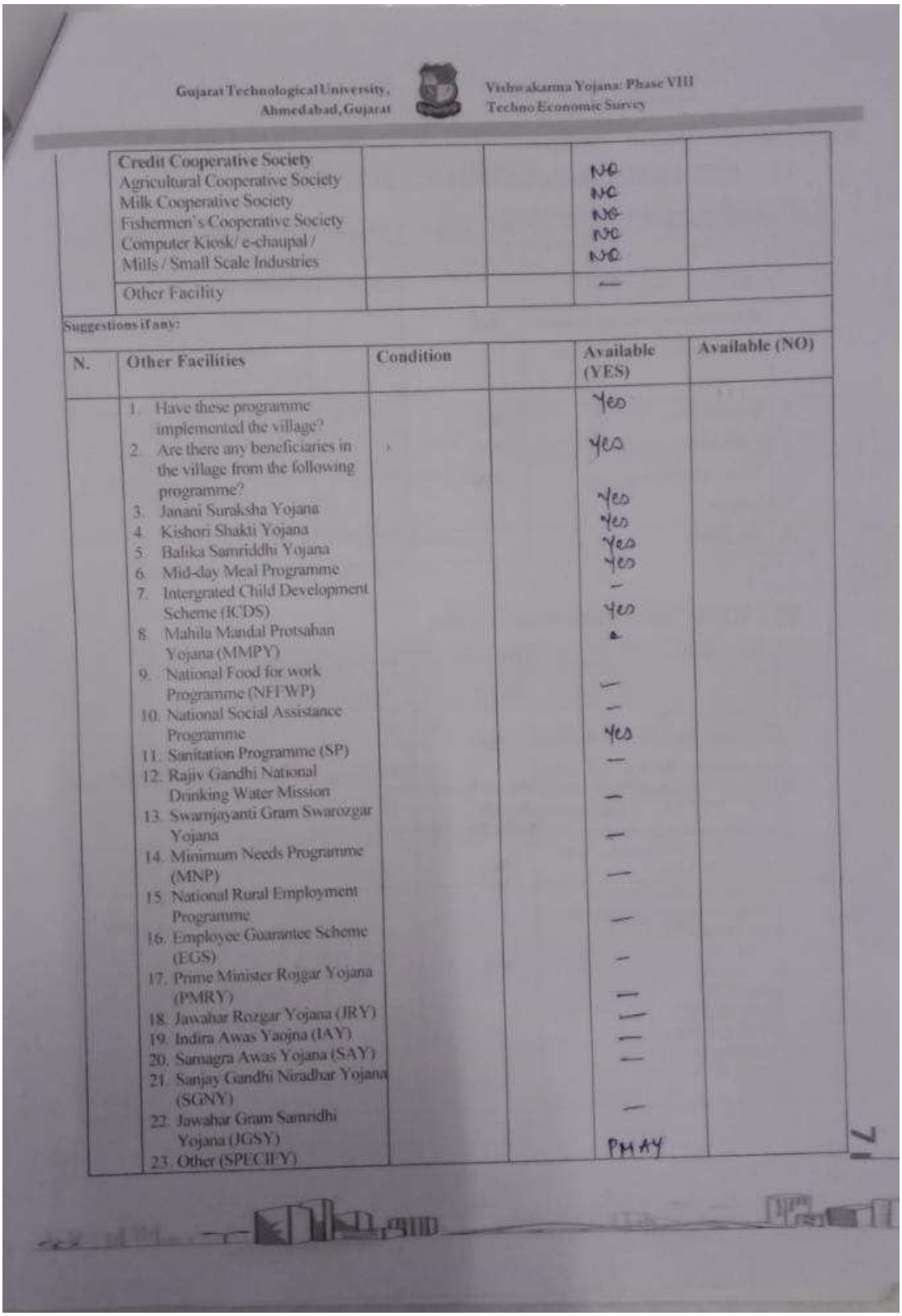
	If any of the above Facility is not available in village than approx. distance from village: .....kms.				
Suggestions if any:					
L.	**Socio- Culture Facilities**	Condition	Location	Available (YES)	Available (NO)
	Community Hall (With or without TV)	NO			
	Public Library (With daily newspaper supply: Y/N)	NO			
	Public Garden	NO			
	Village Pond	Yes		Poor	
	Recreation Center	NO			
	Cinema/ Video Hall	NO			
	Assembly Polling Station	NO			
	Birth & Death Registration Office	Yes			only Birth
If any of the above Facility is not available in village than approx. distance from village: .....kms.					
Suggestions if any:					
M.	**Other Facilities**	Condition	Location	Available (YES)	Available (NO)
	Post-office			Yes	
	Telecommunication Network/ STD booth			Yes / NO	
	General Market			Yes	
	Shops (Public Distribution System)			Yes	
	Panchayat Building			Yes	
	Pharmacy/Medical Shop			Yes	
	Bank & ATM Facility			Yes	
	Agriculture Co-operative Society			Yes	
	Milk Co-operative Soc.			Yes	
	Small Scale Industries			Yes	Privately small
	Internet Cafes/ Common Service Center/Wi Fi			NO	
	Youth Club			NO	
	Mahila Mandal			Yes	



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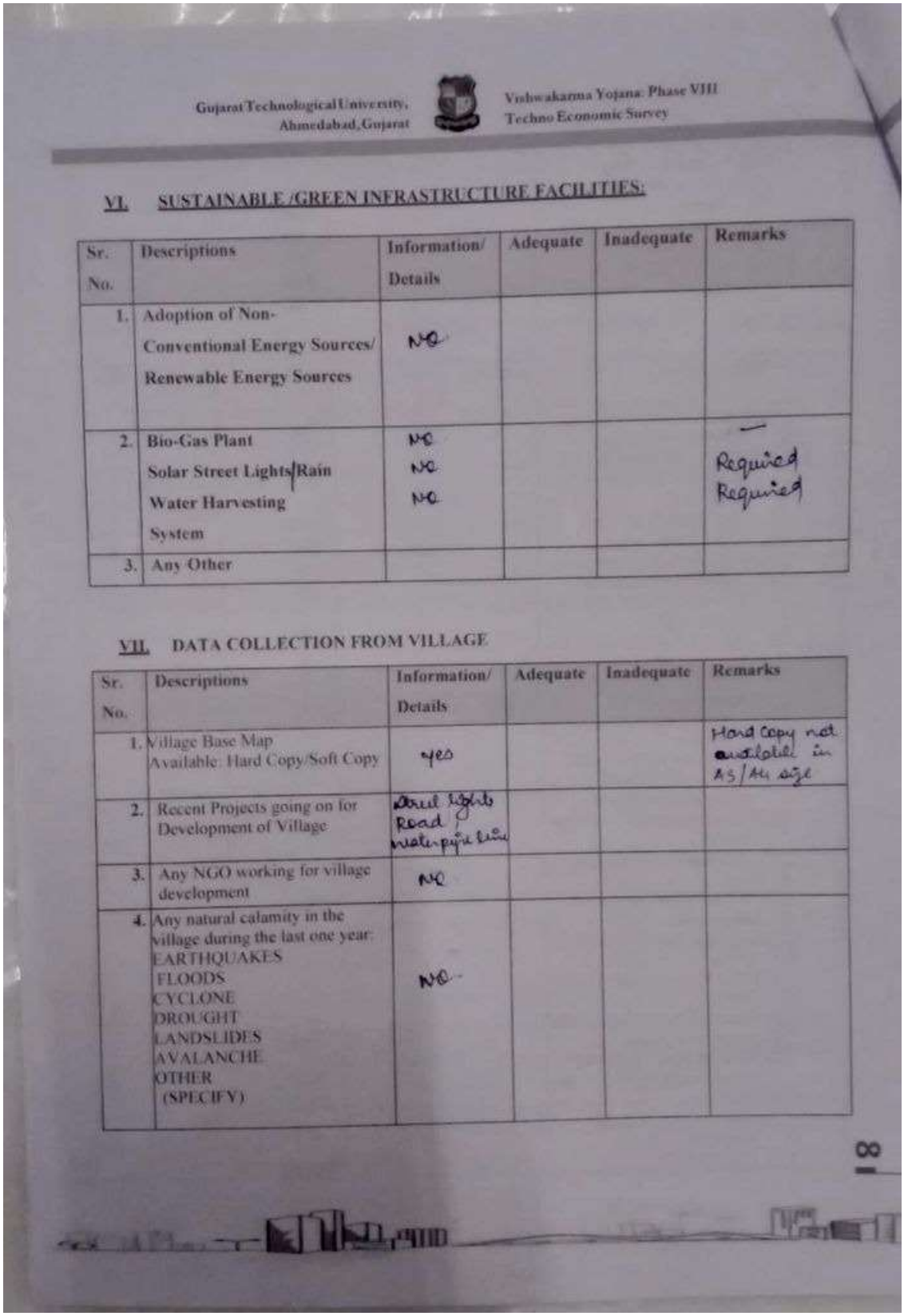
	Credit Cooperative Society Agricultural Cooperative Society Milk Cooperative Society Fishermen's Cooperative Society Computer Kiosk/ e-chaupal / Mills / Small Scale Industries			NO NO NO NO NO	
	Other Facility			—	

Suggestions if any:

N.	Other Facilities	Condition		Available (YES)	Available (NO)
	1. Have these programme implemented the village?			Yes	
	2. Are there any beneficiaries in the village from the following programme?			Yes	
	3. Janani Suraksha Yojana			Yes	
	4. Kishori Shakti Yojana			Yes	
	5. Balika Samriddhi Yojana			Yes	
	6. Mid-day Meal Programme			Yes	
	7. Intergrated Child Development Scheme (ICDS)			–	
	8. Mahila Mandal Protsahan Yojana (MMPY)			Yes	
	9. National Food for work Programme (NFFWP)			–	
	10. National Social Assistance Programme			–	
	11. Sanitation Programme (SP)			Yes	
	12. Rajiv Gandhi National Drinking Water Mission			–	
	13. Swarnjayanti Gram Swarozgar Yojana			–	
	14. Minimum Needs Programme (MNP)			–	
	15. National Rural Employment Programme			–	
	16. Employee Guarantee Scheme (EGS)			–	
	17. Prime Minister Rojgar Yojana (PMRY)			–	
	18. Jawahar Rozgar Yojana (JRY)			–	
	19. Indira Awas Yaojna (IAY)			–	
	20. Samagra Awas Yojana (SAY)			–	
	21. Sanjay Gandhi Niradhar Yojana (SGNY)			–	
	22. Jawahar Gram Samridhi Yojana (JGSY)			PMAY	
	23. Other (SPECIFY)				



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

VI. SUSTAINABLE /GREEN INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources	NO			
2.	Bio-Gas Plant Solar Street Lights/Rain Water Harvesting System	NO NO NO			— Required Required
3.	Any Other				

VII. DATA COLLECTION FROM VILLAGE

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Village Base Map Available: Hard Copy/Soft Copy	yes			Hard Copy not available in A5/A4 size
2.	Recent Projects going on for Development of Village	Street lights Road water pipe line			
3.	Any NGO working for village development	NO			
4.	Any natural calamity in the village during the last one year: EARTHQUAKES FLOODS CYCLONE DROUGHT LANDSLIDES AVALANCHE OTHER (SPECIFY)	NO			

8

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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

VIII. ADDITIONAL INFORMATION/ REQUIREMENT:

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	Repair & Maintenance of Existing Public Infrastructure facilities, School Building Health Center Panchayat Building Public Toilets & any other	BUS STOP, WATER TANK, — — — Public Toilet	
2.	Additional Information/ Requirement	old Awas Yojana Required New house	From New Yojana
3.	During the last six months how many times CLEANING ..... FOGGING..... Drive was undertaken in the village?	02 times	

IX. Smart Village / Heritage Details

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	IS THEIR ANY THING FOR THE VILLAGE ENHANCEMENT POSSIBLE ?	Playground / stadium	New.

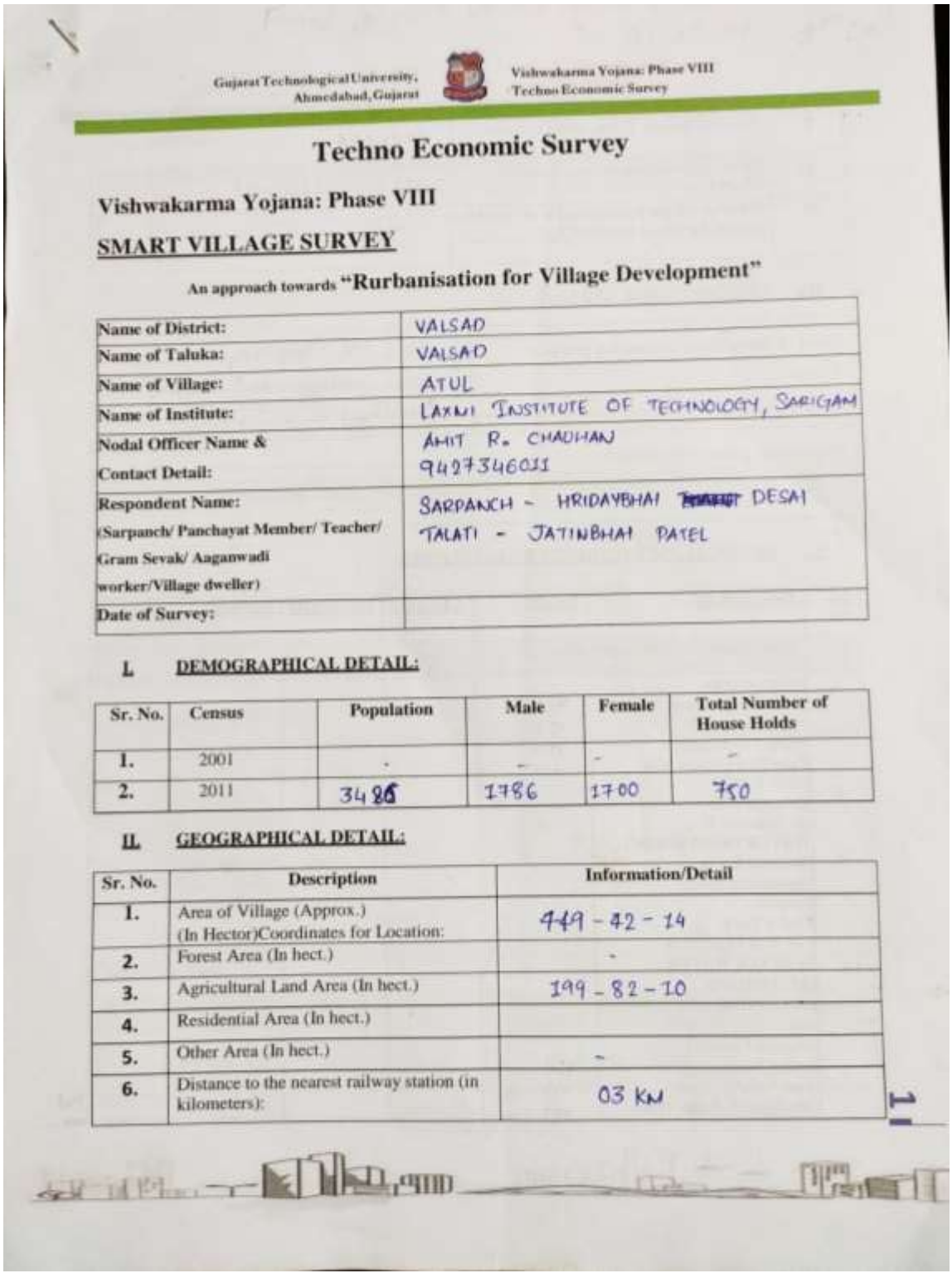
Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
GTU VY Section
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

RDPatel
સરપચશ્રી
ગ્રામ પંચાયત ચણવઇ
તા. જી. વલસાડ

16

Survey form of Smart Village Scanned copy attachment in the report for Part-ISurvey



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

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Vishwakarma Yojana: Phase VIII

SMART VILLAGE SURVEY

An approach towards **"Rurbanisation for Village Development"**

Name of District:	VALSAD
Name of Taluka:	VALSAD
Name of Village:	ATUL
Name of Institute:	LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM
Nodal Officer Name & Contact Detail:	AMIT R. CHAUHAN 9427346011
Respondent Name: (Sarpanch/ Panchayat Member/ Teacher/ Gram Sevak/ Aaganwadi worker/Village dweller)	SARPANCH - HRIDAYBHAI DESAI TALATI - JATINBHAI PATEL
Date of Survey:	

I. DEMOGRAPHICAL DETAIL:

Sr. No.	Census	Population	Male	Female	Total Number of House Holds
1.	2001	-	-	-	-
2.	2011	3486	1786	1700	750

II. GEOGRAPHICAL DETAIL:

Sr. No.	Description	Information/Detail
1.	Area of Village (Approx.) (In Hector)Coordinates for Location:	449 - 42 - 14
2.	Forest Area (In hect.)	-
3.	Agricultural Land Area (In hect.)	199 - 82 - 10
4.	Residential Area (In hect.)	
5.	Other Area (In hect.)	-
6.	Distance to the nearest railway station (in kilometers):	03 KM

1

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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

7.	Name of Nearest Town with Distance:	PARNERA
8.	Distance to the nearest bus station (in kilometers):	10 KM (VALSAD)
9.	Whether village is connected to all road for the any facility or town or City?	YES.

III. OCCUPATIONAL DETAILS:

Name of Three Major Occupation groups in Village	1. Steel ltd (Rang Rasayan) 2. waste management ext project 3. Private jobs
Major crops grown in the village:	1. 2. 3.

IV. PHYSICAL INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Detail	Adequate	Inadequate	Remarks
A.	**Main Source of Drinking water**				
1.	**PIPED WATER**				
	Piped Into Dwelling	YES			
	Piped To Yard/Plot	YES			
	Public Tap/Standpipe	YES			
	Tube Well Or Bore Well	YES			
2.	**DUG WELL**				
	Protected Well				
	Un Protected Well				
3.	**WATER FROM SPRING**				
	Protected Spring				
	Unprotected Spring				
	Rainwater				
	Tanker Truck				
	Cart With Small Tank				
4.	**SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/**				
	Irrigation Channel				
	Bottled Water	YES			
	Hand Pump	YES			
	Other(Specify)**Lake/ Pond**	YES	River		

21

Suggestions if any:					
B.	**Water Tank Facility**				
	Overhead Tank	Capacity:	YES		
	Underground Sump	Capacity:			
Suggestions if any:					
C.	**The Type of Drainage Facility**				
	A. UNDERGROUND DRAINAGE 1 2 B. OPEN WITH OUTLET C. OPEN WITHOUT OUTLET	YES NO NO			
Suggestions if any:					
D.	**Road Network :All Weather/ Kutchha (Gravel)/ Black Topped pucca/ WBM**				
	Village approach road	RCC / BITUMEN			
	Main road	RCC			
	Internal streets	BITUMINOUS.	Paver blocks for streets		
	Nearest NH/SH/MDR/ODR Dist. in kms.	NH			
Suggestions if any:					
E.	**Transport Facility**				
	Railway Station (Y/N) (If No than Nearest Rly Station---Kms)	YES			
	Bus station (Y/N) Condition: (If No than Nearest Bus Station---Kms)	VALSAD			
	Local Transportation (Auto/ Jeep/Chhakda/ Private Vehicles/ Other)	AUTO / PRIVATE VEHICLE			
Suggestions if any:					
F.	**Electricity Distribution**				
	(Y/N) Govt./ Private (Less than 6 hrs./ More Than 6 hrs)	GOVT. / PRIVATE			

3

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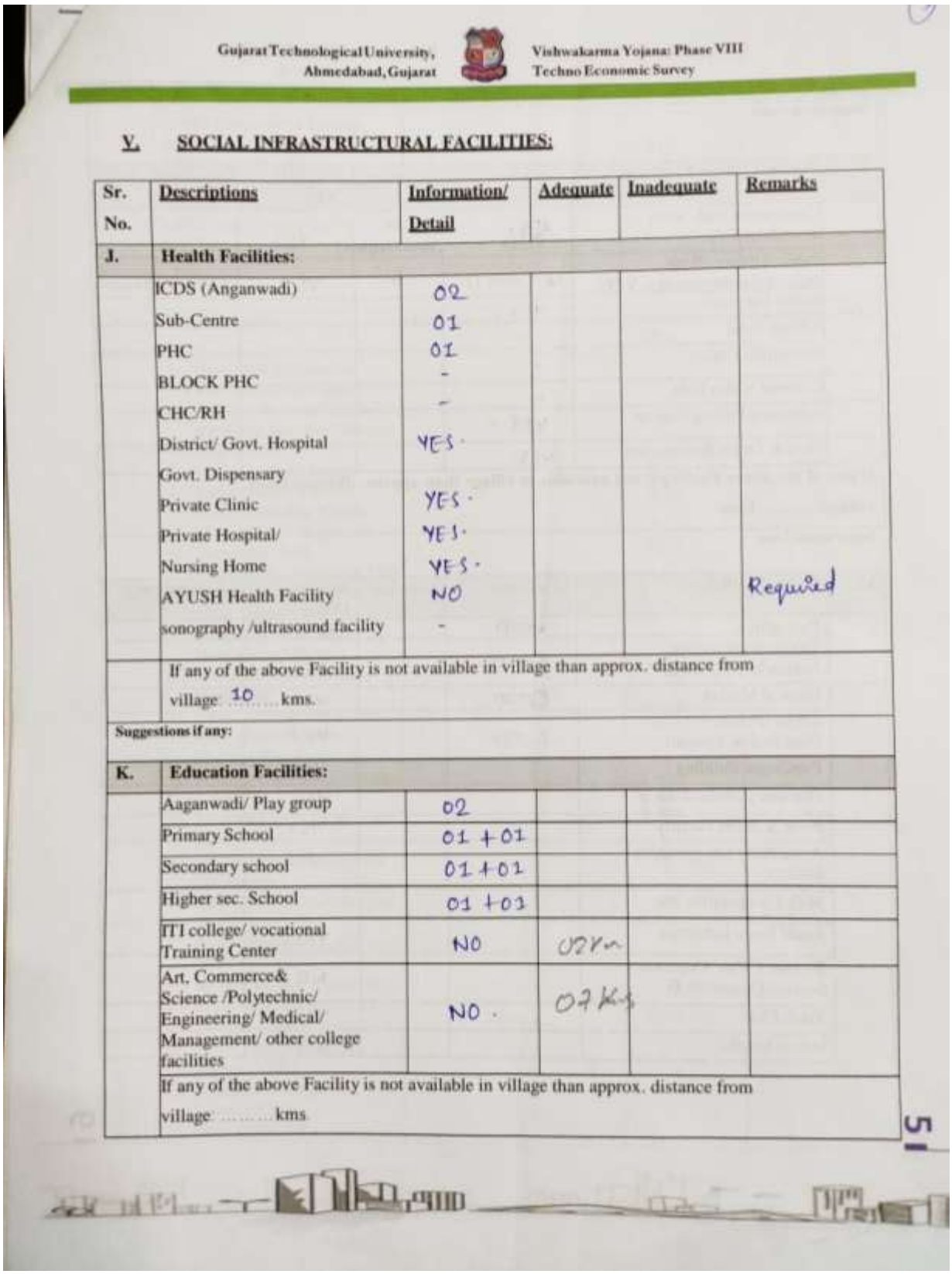
Vishwakarma Yojana: Phase VIII
Techno Economic Survey

	Power supply for Domestic Use	YES.			
	Power supply for Agricultural Use	YES.			
	Power supply for Commercial Use	YES.			
	Road/ Street Lights	YES.			
	Electrification in Government Buildings/ Schools/ Hospitals	YES.			
	Renewable Energy Source Facilities (Y/ N)				
	LED Facilities	YES.			
Suggestions if any:					
G.	**Sanitation Facility**				
	Public Latrine Blocks If available than Nos.	YES. 19			
	Location Condition				
	Community Toilet (With bath/ without bath facilities)	YES			WITHOOTH BATH
	Solid & liquid waste Disposal system available	YES.			
	Any facility for Waste collection from road	YES.			
Suggestions if any:					
H.	**Main Source of Irrigation Facility:**	NA	No farmers		
	TANK/POND	YES.			
	STREAM/RIVER	YES.			
	CANAL	-			
	WELL	YES			
	TUBE WELL	YES			
	OTHER (SPECIFY)				
Suggestions if any:					
I.	**Housing Condition:**				
	Kutchha/Pucca (Approx. ratio)	KUTCHHA / PUCCA.			

4



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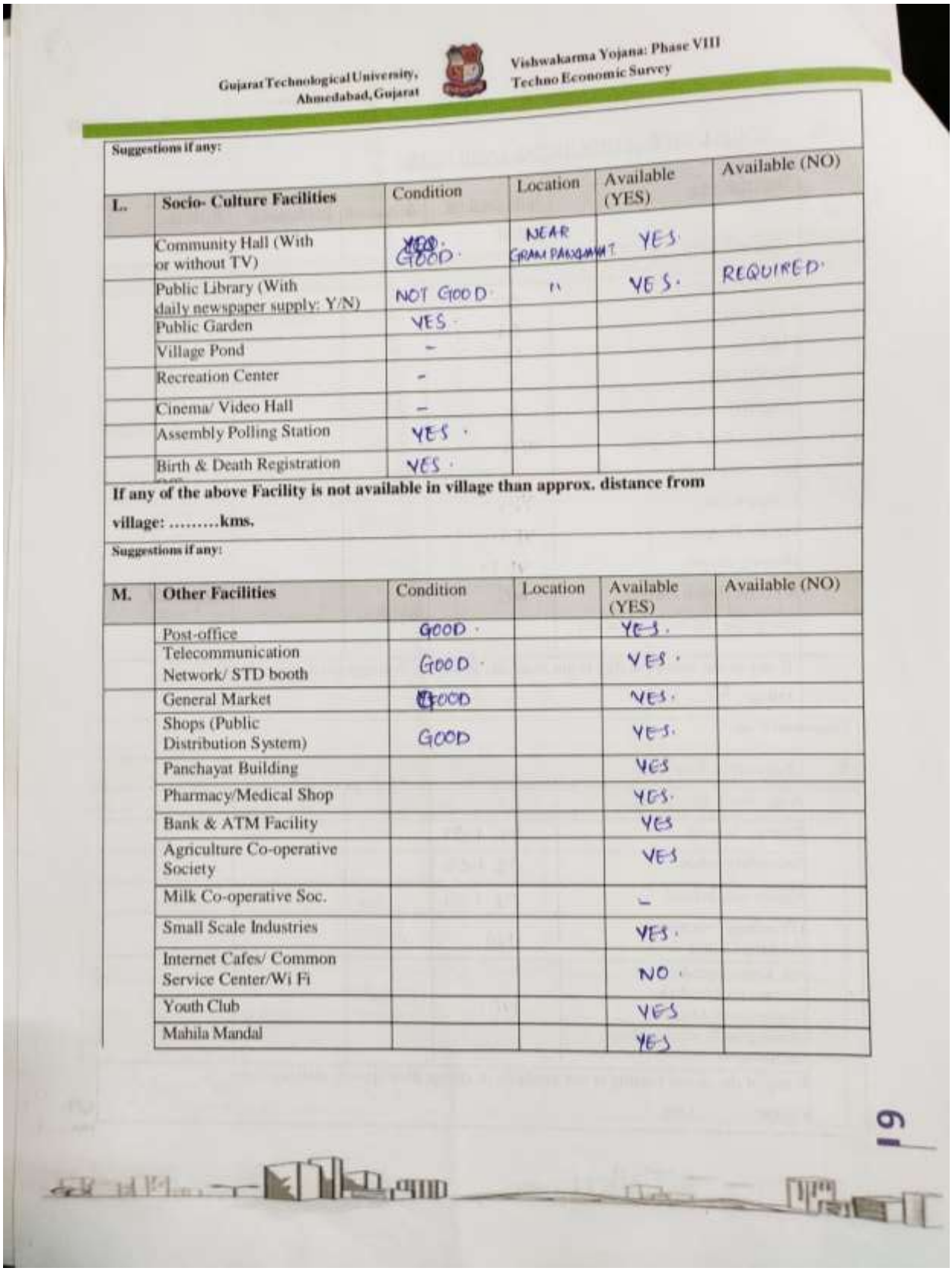
Vishwakarma Yojana: Phase VIII
Techno Economic Survey

V. SOCIAL INFRASTRUCTURAL FACILITIES:

Sr. No.	Descriptions	Information/ Detail	Adequate	Inadequate	Remarks
J.	**Health Facilities:**				
	ICDS (Anganwadi)	02			
	Sub-Centre	01			
	PHC	01			
	BLOCK PHC	-			
	CHC/RH	-			
	District/ Govt. Hospital	YES			
	Govt. Dispensary				
	Private Clinic	YES			
	Private Hospital/	YES			
	Nursing Home	YES			
	AYUSH Health Facility	NO			Required
	sonography /ultrasound facility	-			
	If any of the above Facility is not available in village than approx. distance from village 10 kms.				
Suggestions if any:					
K.	**Education Facilities:**				
	Aaganwadi/ Play group	02			
	Primary School	01 + 01			
	Secondary school	01 + 01			
	Higher sec. School	01 + 01			
	ITI college/ vocational Training Center	NO	07 Km		
	Art, Commerce& Science /Polytechnic/ Engineering/ Medical/ Management/ other college facilities	NO	07 Km		
	If any of the above Facility is not available in village than approx. distance from village ..... kms				

51



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Vishwakarma Yojana: Phase VIII
Techno Economic Survey

Suggestions if any:

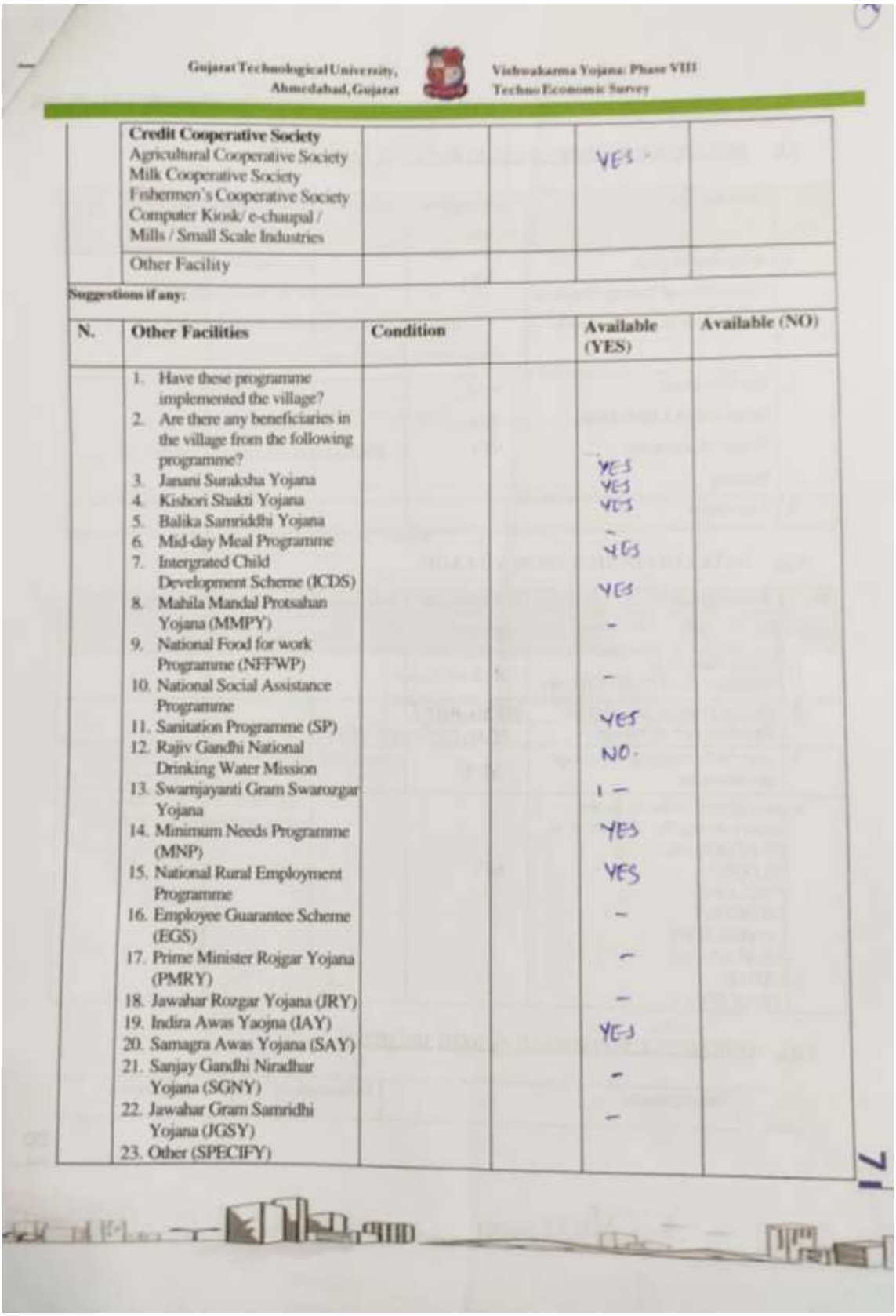
L.	Socio- Culture Facilities	Condition	Location	Available (YES)	Available (NO)
	Community Hall (With or without TV)	GOOD.	NEAR GRAM PANCHAYAT	YES.	
	Public Library (With daily newspaper supply: Y/N)	NOT GOOD	"	YES.	REQUIRED.
	Public Garden	YES.			
	Village Pond	-			
	Recreation Center	-			
	Cinema/ Video Hall	-			
	Assembly Polling Station	YES.			
	Birth & Death Registration	YES.			

If any of the above Facility is not available in village than approx. distance from village: .....kms.

Suggestions if any:

M.	Other Facilities	Condition	Location	Available (YES)	Available (NO)
	Post-office	GOOD.		YES.	
	Telecommunication Network/ STD booth	GOOD.		YES.	
	General Market	GOOD		YES.	
	Shops (Public Distribution System)	GOOD		YES.	
	Panchayat Building			YES	
	Pharmacy/Medical Shop			YES.	
	Bank & ATM Facility			YES	
	Agriculture Co-operative Society			YES	
	Milk Co-operative Soc.			-	
	Small Scale Industries			YES.	
	Internet Cafes/ Common Service Center/Wi Fi			NO.	
	Youth Club			YES	
	Mahila Mandal			YES	

19



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Techno Economic Survey

	Credit Cooperative Society Agricultural Cooperative Society Milk Cooperative Society Fishermen's Cooperative Society Computer Kiosk/ e-chaupal / Mills / Small Scale Industries			YES	
	Other Facility				

Suggestions if any:

N.	Other Facilities	Condition		Available (YES)	Available (NO)
	1. Have these programme implemented the village?				
	2. Are there any beneficiaries in the village from the following programme?				
	3. Janani Suraksha Yojana			YES	
	4. Kishori Shakti Yojana			YES	
	5. Balika Samriddhi Yojana			YES	
	6. Mid-day Meal Programme			-	
	7. Intergrated Child Development Scheme (ICDS)			YES	
	8. Mahila Mandal Protsahan Yojana (MMPY)			YES	
	9. National Food for work Programme (NFFWP)			-	
	10. National Social Assistance Programme			-	
	11. Sanitation Programme (SP)			YES	
	12. Rajiv Gandhi National Drinking Water Mission			NO	
	13. Swarnjayanti Gram Swarozgar Yojana			I -	
	14. Minimum Needs Programme (MNP)			YES	
	15. National Rural Employment Programme			YES	
	16. Employee Guarantee Scheme (EGS)			-	
	17. Prime Minister Rojgar Yojana (PMRY)			-	
	18. Jawahar Rozgar Yojana (JRY)			-	
	19. Indira Awas Yaojna (IAY)			YES	
	20. Samagra Awas Yojana (SAY)			-	
	21. Sanjay Gandhi Niradhar Yojana (SGNY)			-	
	22. Jawahar Gram Samridhi Yojana (JGSY)				
	23. Other (SPECIFY)				

VI. SUSTAINABLE /GREEN INFRASTRUCTURE FACILITIES:

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Adoption of Non-Conventional Energy Sources/ Renewable Energy Sources	YES.			
2.	Bio-Gas Plant Solar Street Lights Rain Water Harvesting System	YES. YES YES.			
3.	Any Other				

VII. DATA COLLECTION FROM VILLAGE

Sr. No.	Descriptions	Information/ Details	Adequate	Inadequate	Remarks
1.	Village Base Map Available: Hard Copy/Soft Copy	YES.			
2.	Recent Projects going on for Development of Village	DRAINAGE/ ROADS/STREET LIGHT			
3.	Any NGO working for village development	YES.	✓		
4.	Any natural calamity in the village during the last one year: EARTHQUAKES FLOODS CYCLONE DROUGHT LANDSLIDES AVALANCHE OTHER (SPECIFY)	NO.			

VIII. ADDITIONAL INFORMATION/ REQUIREMENT:

Sr. No.	Descriptions	Information/ Detail	Remarks

8

1.	Repair & Maintenance of Existing Public Infrastructure facilities, School Building Health Center Panchayat Building Public Toilets & any other	NO NO YES NO NO	
2.	Additional Information/ Requirement		
3.	During the last six months how many times CLEANING ..... FOGGING..... Drive was undertaken in the village?	DAILY.	

IX. Smart Village / Heritage Details

Sr. No.	Descriptions	Information/ Detail	Remarks
1.	IS THEIR ANY THING FOR THE VILLAGE ENHANCEMENT POSSIBLE ?		

Note: Photographs/ Video/ Drawings of all existing Infrastructure facilities & conditions should be taken by students of respective villages for their record and information.

For Any Administration queries/ Difficulties:
GTU VY Section
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

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survey form of Allocated Village Original copy attachment in the report for Part-II

12.4. Gap Analysis of the Allocated Village

Village Facilities	Planning commission	Village Name:		CHANVAI	
		Population:		5834	
		Existing	Required as per Norms	Smart village/ cities/heritage future project design	Gap
Social Infrastructure Facilities					
Education Facilities					
Anganwadi	Each or per 2500 Population	6	2		+2
Primary School	Each or per 2500 Population	2	2		0
Secondary School	For 7,500 Population	0	0		0
Higher Secondary school	Per 15,000 Population	0	0		0
College	Per 125,000 Population	0	0		0
Tech. Training institute	Per 100,000 Population	0	0		0
Agriculture Research Centre	Per 100,000 Population	0	0		0
Skill Development Centre	Per 100,000 Population	0	0		0
Health facilities					
Govt./Panchayat Dispensary or sub PHC or health center	Each Village	1	1		0
PHC & CHC	Per 20,000 Village	1	0		+1
Child Welfare and	Per 10,000	0	0		0

Maternity Home	Population				
MultispecialyHospital	Per 10,000 Population	0	0		0
Physical Infrastructure Facilities					
Transportation		Adequate	Inadequate		
Pucca Village Approach Road	Each Village	Yes			Adequate
`Bus/Auto Stand Provision	All villages connected by PT (ST Bus or Auto)	Adequate			Adequate
Drinking Water		Adequate	Inadequate		
Over Head Tank	1/3 For Demand	Yes			Need maintenance & Repair Work
U/G Sump	2/3 For Demand		Yes		Inadequate
Drainage Network	Each Village	Yes			Adequate
Waste Management system	Each Village	Yes			Adequate
Socio-Cultural Infrastructure Facilities					
Post Office	For 10,000 Population	1	0		+1
Gram Panchayat Building	Each individual/group Panchayat	1	1		0
APMC	Per 100,000 Population	0	0		0
Fire Station	Per 100,000 Population	0	0		0
Police Station	Per 15,000 Population	0	0		0
Community Hall	Per 10,000 Population	0	0		0
Community Hall&	Per 15,000	0	0		0

Library	Population				
Shopping Mall		No Mall Onlu Village Market			+1
Electrical Design					
Electricity Network					Adequate
Any Smart Village Facilities					
Technology					No Other Technology
		ESR cap	0		
		Sump cap	0		
		Lat	0		

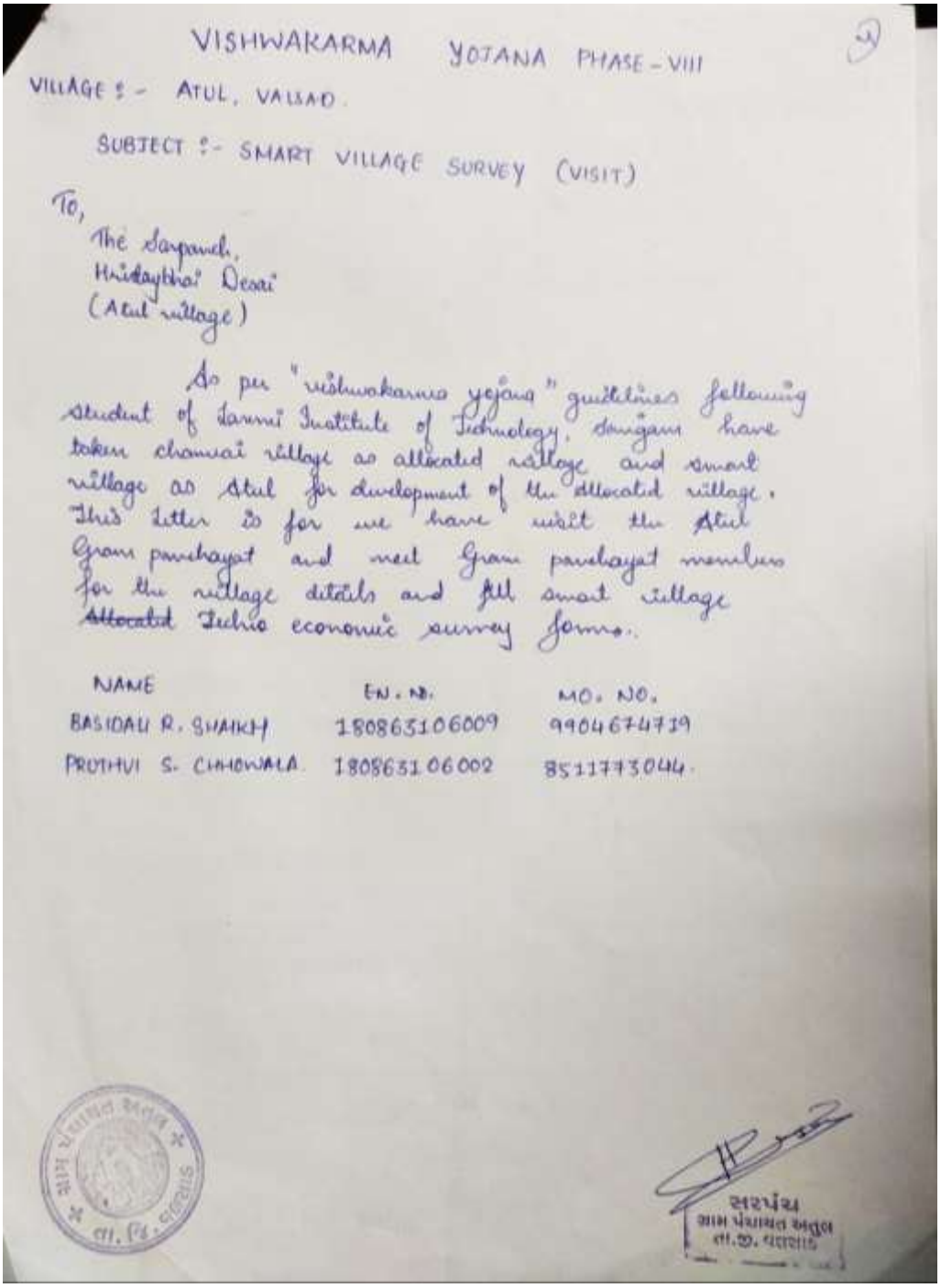
Table16.Gap Analysis

12.5 Summary Details of All the Villages Designs in Table form as Part-I and Part-II

Design	
Sr.No.	Part-1
1	Darinage line
2	Public Library
3	Bus Stop Design and Maintenance
4	Community Hall
5	Roads
6	Maternity Home
Part-2	
1	Anganvadi design
2	Village market
3	Public Garden
4	Cricket ground
5	Vocational training centre
6	Pond development

Table17. Summary Of Design

Sarpanch Letter giving information about the village



VISHWAKARMA YOJANA PHASE - VIII

VILLAGE :- ATUL, VALSAD.

SUBJECT :- SMART VILLAGE SURVEY (VISIT)

To,
The Sarpanch,
Hridaybhai Desai
(Atul village)

As per "vishwakarma yojana" guidelines following student of Sanmi Institute of Technology, Sonigam have taken chanvai village as allocated village and smart village as Atul for development of the allocated village. This letter is for we have visit the Atul Gram panchayat and met Gram panchayat members for the village details and fill smart village ~~Allocated~~ Techo economic survey forms.

NAME	EN. NO.	MO. NO.
BASIDALI R. SHAIKH	180863106009	9904674739
PRUTHVI S. CHHOWALA	180863106002	8511773044

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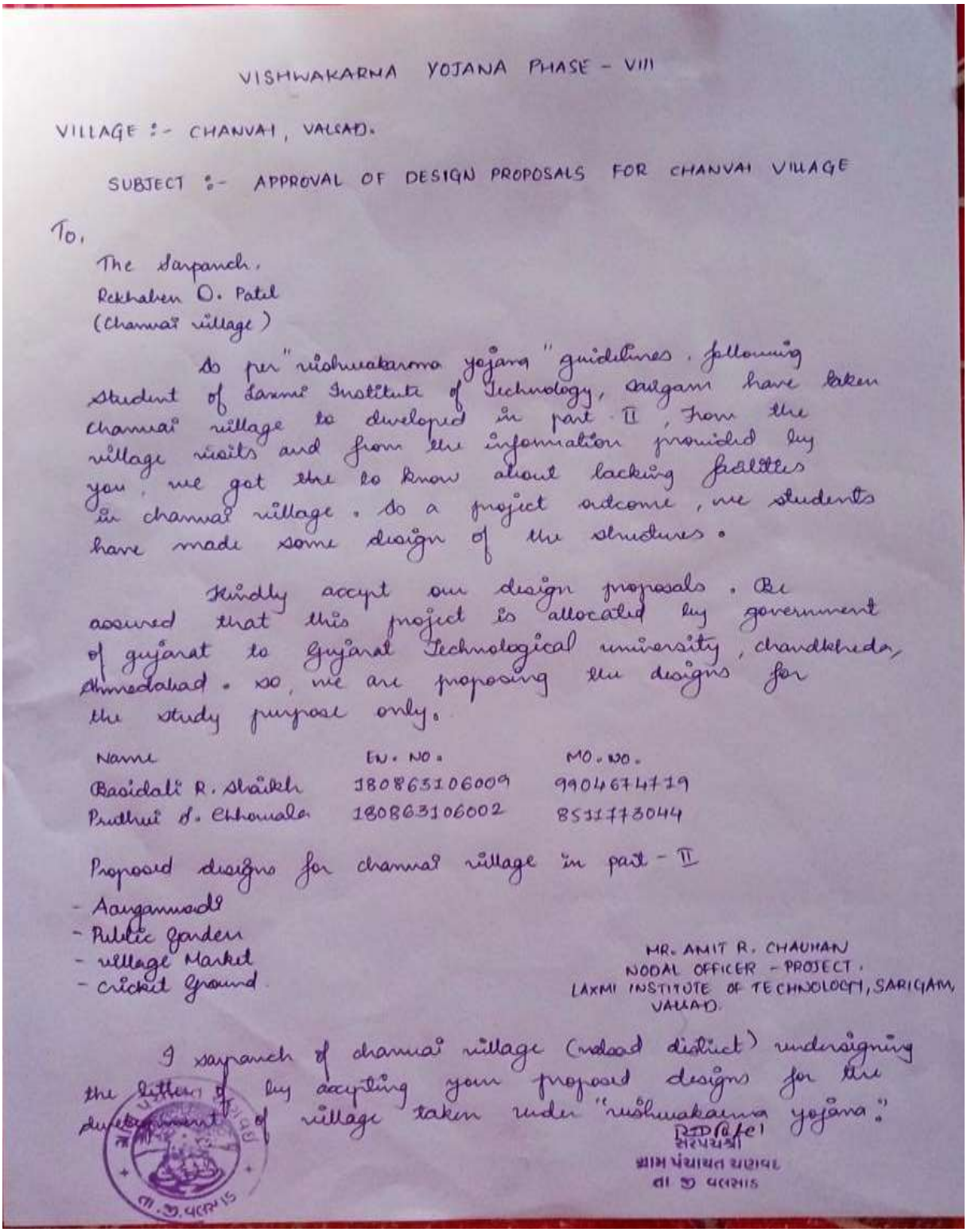
તા.જી. વલસાડ

Fig. 56 Photo with sarpanch

Sarpanch Letter giving information about the village development



VISHWAKARMA YOJANA PHASE - VIII

VILLAGE :- CHANVAI, VALSAD.

SUBJECT :- APPROVAL OF DESIGN PROPOSALS FOR CHANVAI VILLAGE

To,

The Sarpanch,
Rekhaben O. Patel
(Chanvai village)

As per "vishwakarma yojana" guidelines, following student of Laxmi Institute of Technology, Sarigam have taken Chanvai village to developed in part II, From the village visits and from the information provided by you, we got the to know about lacking facilities in chanvai village. As a project outcome, we students have made some design of the structures.

Kindly accept our design proposals. Be assured that this project is allocated by government of gujarat to Gujarat Technological university, Chandkheda, Ahmedabad. so, we are proposing the designs for the study purpose only.

Name	EN. NO.	MO. NO.
Basidali R. Shaikh	180863106009	9904674719
Prathmi d. Chhonala	180863106002	8511778044

Proposed designs for chanvai village in part - II

- Aanganwadi
- Public Garden
- village Market
- cricket ground

MR. AMIT R. CHAUHAN
NODAL OFFICER - PROJECT.
LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM, VALSAD.

I sarpanch of chanvai village (valsad district) undersigning the letter of by accepting your proposed designs for the development of village taken under "vishwakarma yojana."

RDPatel
સરપંચશ્રી
ગ્રામ પંચાયત ચણવઇ
તા. જી. વલસાડ

VISHWAKARMA YOJANA PHASE - VIII

VILLAGE :- TITHAL, VALSAD

SUBJECT :- IDEAL VILLAGE SURVEY (VISIT)

To,

The Sarpanch,
Artiben R. Patel
(TITHAL VILLAGE)

As per "vishwakarma yojana" Guidelines following Student of Laxmi Institute of Technology, Sarigam have taken chanvai village as Allotted; Atul as smart and Tithal as Ideal village, for development of the allocated village, This letter is for we have visit the Tithal village Gram panchayat and meet Gram panchayat members for the village details and fill ideal village techno economic survey form.

NAME	EN. NO.	MO. NO.
BASIDALI R. SHAIKH	180863106009	9904674719.
PRUTHVI S. CHHOWALA.	180863106002	8511773044.

A.R. Patel.

VISHWAKARMA YOJANA PHASE - VIII

VILLAGE :- ATUL, VALSAD.

SUBJECT :- SMART VILLAGE SURVEY (VISIT)

To,

The Sarpanch,
Hridaykhai Desai
(Atul village)

As per "vishwakarma yojana" guidelines following student of Sarvajanik Institute of Technology, Dungam have taken chanvai village as allocated village and smart village as Atul for development of the allocated village. This letter is for we have visit the Atul Gram panchayat and meet Gram panchayat members for the village details and fill smart village ~~Allocated~~ Techno economic survey forms.

NAME	EN. NO.	MO. NO.
BASIDALI R. SHAIKH	180863106009	9904674719
PRUTHVI S. CHHOWALA	180863106002	8511773044.

ગ્રામ પંચાયત અતુલ તા.જિ. વલસાડ

સરપંચ
ગ્રામ પંચાયત અતુલ
તા.જી. વલસાડ

FIG.57 GRAM PANCHAYAT

FIG.61 ROAD

FIG.65EARTHEN ROAD 1

FIG.58 VILLAGE ENTRANCE

FIG.62 ROADS

FIG.66 EARTHEN ROAD 2

FIG.59MAIN ROAD

FIG.63 ROAD

FIG.67 INTERNAL ROAD 2

FIG. 60ROAD

FIG. 64INTERNAL ROAD 1

FIG.68 INTERNAL ROAD 3

FIG.69 INTERNAL ROAD 4

FIG.73 SCHOOL GARDEN

FIG.77 KATCHCHA HOUSE

FIG.70 PRIMARY SCHOOL

FIG.74 PRIMARY SCHOOL

FIG.78 WATER TANK

FIG.71 PRIMARY SCHOOL

FIG.75 KATCHCHA HOUSE

FIG.79 ANGADVADI

FIG.72 PRIMARY SCHOOL

FIG.76 WATER TANK 1

FIG.80 BUS STOP

FIG.81 BUS STOP

FIG.83 CANAL

FIG.82 ELECTRIC POLE

FIG.84 PHC CENTRE

PART-II

Chapter: 13 Future Development of the Village (from the PART-I chapter-8) detail implementation of the future scope of work Sustainable Design Planning Proposal (Prototype Design) - Part- II

13.1 Design Proposals

1. Anganvadi design
2. Public Garden
3. Village Market
4. Cricket Ground
5. Vocational training centre
6. Pond Development

13.2Recommendations of the Design

13.2.1 Physical Design

Anganvadi design

Vocational training centre

13.2.2 Social Design

Village market

13.2.3 Socio-cultural design

Cricket ground

13.2.4 Smart Design

Public Garden

Pond development

DESIGN -1 ANGANVADI DESIGN

Anganvadi design

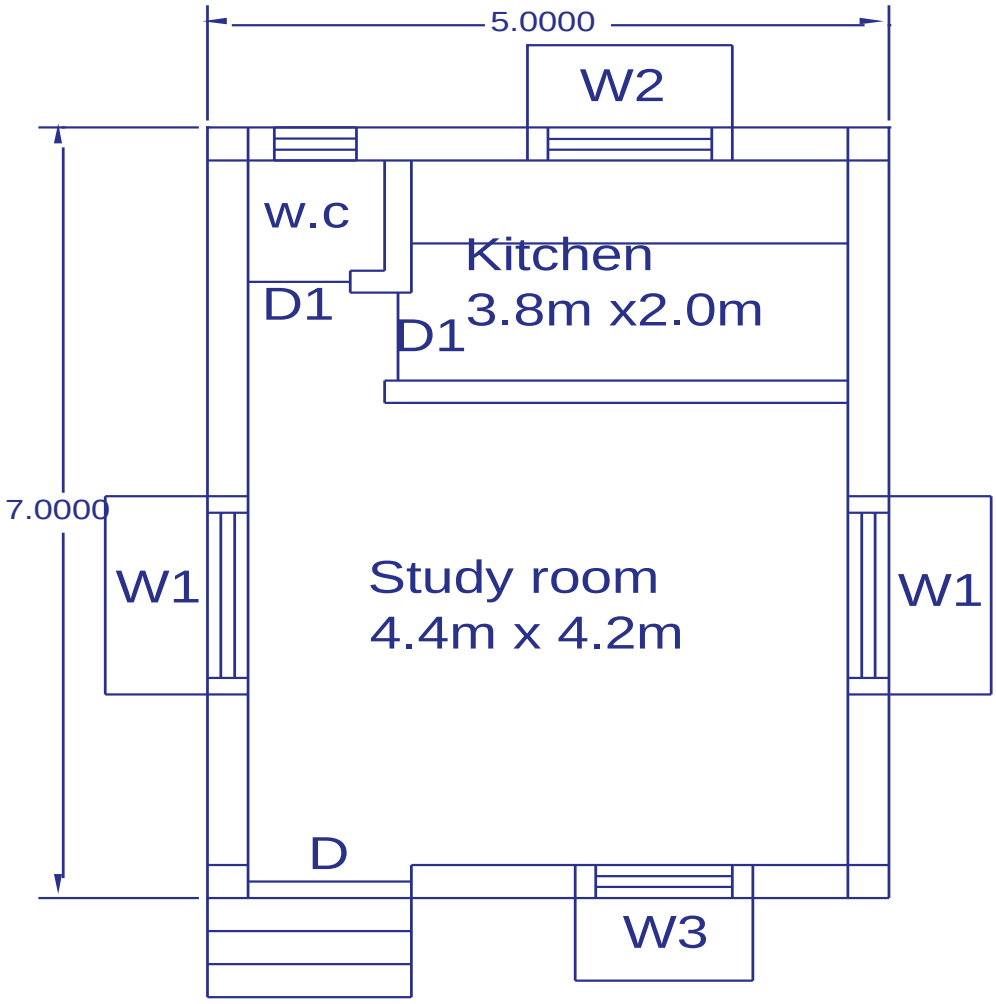
Details of anganvadi

Area 7m x5m = 35sq.m

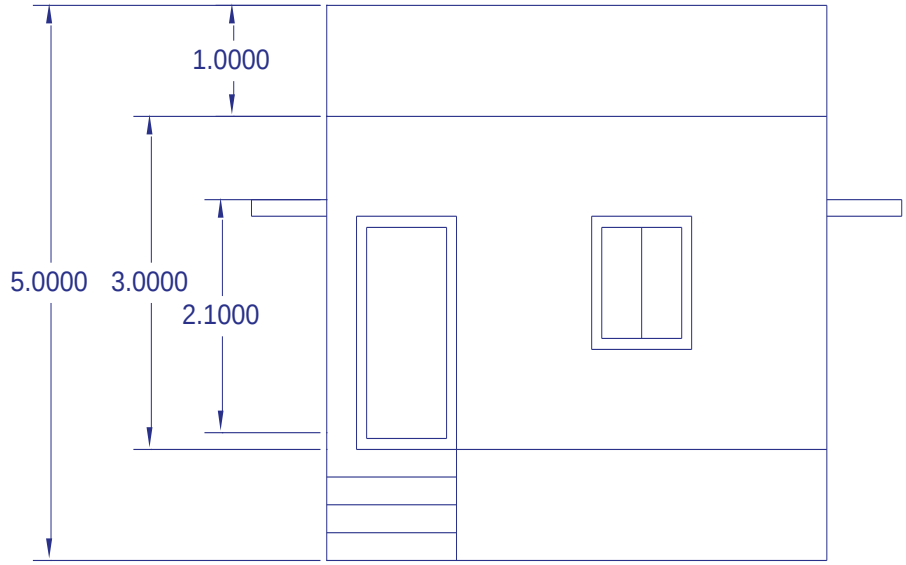
Study area 4.4m x 4.2m =18.48 sq.m

Kitchen 3.8m x 2.0m

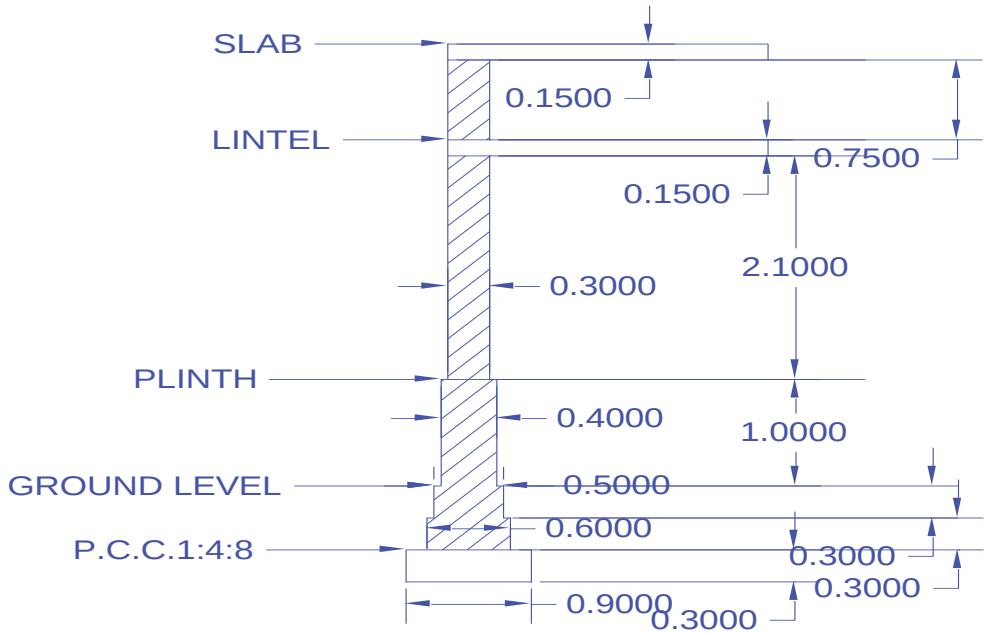
W.C. 1.2m x 1.2m



PLAN 1 ANGANVADI



ELEVATION 1 ANGANVADI



SECTION 1 ANGANVADI

Door and Window schedule

	Dimension	Nos
D1	(1.2m x2.1m)	1
D2	(0.75m x2.1m)	2
W1	(1.5m x1.2m)	2
W2	(1.2m x 1.2m)	1
W3	(1.0m x1.2m)	1

Quantity sheet:-

SR no.	Item Description	No	Length m	Width m	H/D m	Quantity
1	Excavation In foundation Long Walls: L= 6.4+2 x0.15+2 x 0.45 L= 7.60 m.	2	7.6	0.9	0.9	12.312
	Short Walls L= (4.4 +2 x 0.15 -2 x0.45) L=3.8 m	3	3.8	0.9	0.9	6.156
					Total QTY	18.468 cu.m.
2	Plain Cement Concrete Long Walls Short Walls Type 1	2 3	7.6 3.8	0.9 0.9	0.3 0.3 Total QTY	4.104 2.052 6.156 Cu.m
3	Brick Work in foundation upto Plinth Long Wall First step L= 7.6-2x0.15, L=7.3 m	2	7.3	0.6	0.3	2.628

	Second step L=7.3-2x0.05, L= 7.2m	2	7.2	0.5	0.3	2.160
	Third step L= 7.2-2x0.05, L=7.1m	2	7.1	0.4	1.0	5.680
	Short Walls					
	First step L=3.8-2x0.15, L=3.5m	2	3.5	0.6	0.3	1.260
	Second step L= 3.5-2x0.05, L=3.4m	2	3.4	0.5	0.3	1.020
	Third step L= 3.4-2x0.05, L=3.3m	2	3.3	0.4	1.0	2.640
	Total brickwork in foundation					15.388 cu.m
4	Brick work in super structure					
	Upto slab					
	Long Wall L=7.6m	2	7.6	0.3	3	13.68
	Short wall L=3.8m	3	3.8	0.3	3	6.84
	Partition wall-1)=3.8m	1	3.8	0.2	3	2.28
	Partition wall-2)=2.0m	1	2.0	0.2	3	1.20
	For Parapet Wall					
	Long Wall L= 10m	2	7	0.3	1	4.2
	Short Wall L= 6.4m	2	4.4	0.3	1	2.64
					Total	46.228
					QTY	Cu.m
	Deduction					
	For Door/window					
	D(1.2x2.1)	1	1.2	0.3	2.1	0.756
	D1(0.75x2.1)	2	0.75	0.3	2.1	0.945
	W1(1.5x1.2)	2	1.5	0.3	1.2	1.08
	W2(1.2x1.2)	1	1.2	0.3	1.2	0.432
					Total	(-)3.213 cu.m
	Deduction for lintel 15cm thick					
	D1(1.2x2.1)	1	1.2	0.3	0.15	0.054
	D3(0.75x2.1)	2	0.75	0.3	0.15	0.0675

	W1(1.5x1.2) W2(1.2x1.2) W3(1.0 x 1.2)	2 1 1	1.5 1.2 1	0.3 0.3 0.3	0.15 0.15 0.15 Total QTY	0.135 0.54 0.045 (-)0.8415 Cu.m
	Net Quantity of Brick work = 46.228-3.213-0.8415					42.2140cu.m.
5	R.C.C. work in slab,chajja and lintel R.C.C. Slab:L=7.0m,B=5.0m R.C.C. chajja: W1 W2 W3 Stair =1.5 x 0.3 x0.25	 1 2 1 1 3	 7 1.8 1.5 1.3 1.5	 5 0.6 0.6 0.6 0.3	 0.15 0.15 0.15 0.15 0.25 Total QTY	 5.25 0.324 0.135 0.045 0.3375 6.0915 Cu.m
6	Earth filiing H=1-0.075-0.025 H=0.9m L=7-0.3-0.2-0.2-0.3 L=6m B=5-0.3-0.3-0.2 B=4.2m	 1	 6	 4.2	 0.9	 22.68 Cu.m
7	Plaster work External plaster Long wall L=7m Short wall L=5m	 2 2	 7 5	 - -	 5 5	 70sq.m. 50sq.m.
	Internal plaster For Cealing Study room kitchen Open space	 1 1 1	 4.4 3.8 1.2	 4.2 2 2	 - - -	 18.48sq.m. 7.6sq.m. 2.4sq.m.

						148.48sq.m.
	Internal wall					
	Study room					
	Long wall L= 4.4	2	4.4	-	3	26.4 sq.m.
	Short wall L=4.2	2	4.2	-	3	25.2 sq.m.
	kitchen					
	Long wall L= 3.8	2	3.8	-	3	22.8 sq.m.
	Short wall L=2.0	2	2.0	-	3	12 sq.m.
	W.C					
	Long wall L= 1.2	2	1.2	-	3	7.2 sq.m.
	Short wall L=1.2	2	1.2	-	3	7.2 sq.m.
					Total QTY	249.28 sq.m.
	Deduction for plaster work					
	D1(1.2x2.1)	1	1.2	2.1	-	2.52 sq.m
	D3(0.75x2.1)	2	0.75	2.1	-	3.15 sq.m
	W1(1.5x1.2)	2	1.5	1.2	-	3.60 sq.m
	W2(1.2x1.2)	1	1.2	1.2	-	1.44 sq.m
	W3(1.0 x 1.2)	1	1.0	1.2	-	1.20 sq.m
					Total QTY	(-)11.91 sq.m
	Net Quantity of Plaster work					
	=249.28-11.91					237.37 sq.m.
8	Flooring					
	Maerble flooring 2cm thick					
	Study room	1	4.4	4.2	-	18.48 sq.m.
	kitchen	1	3.8	2.0	-	5.60 sq.m.
	Open area and wc	1	2.0	1.2	-	2.40 sq.m.
	Door sills D1	1	1.2	0.3	-	0.36 sq.m.

	Door sills D2 Stair	2 3	0.75 1.5	0.3 0.3	- Total QTY	0.45 sq.m. 1.35 27.74 sq.m.

Rate Analysis Sheet :

SR No.	Particular of item	Quantity	Per	Rate	Amount Rs
1	Excavation for foundation	18.486	Cu.m	350	6470.10
2	P.C.C.In foundation	6.125	Cu.m	4850	29706.25
3	Brick work in foundation	15.388	Cu.m	6720	103407.36
4	Brick work in super structure	26.826	Cu.m	6720	180270.72
5	R.C.C. Work in Slab	6.915	Cu.m	14050	97155.75
6	Earth filling	22.68	Cu.m	350	7938
7	Plaster work	237.37	Sq.m	450	106816.50
8	Flooring	27.74	Sq.m	1550	42997
				Total	5,74,761.68

DESIGN -2 VILLAGE MARKET

Village market Details

Length – 35.0m

Width – 35.0m

Area - 1225 sq.m

(1)Shop Details

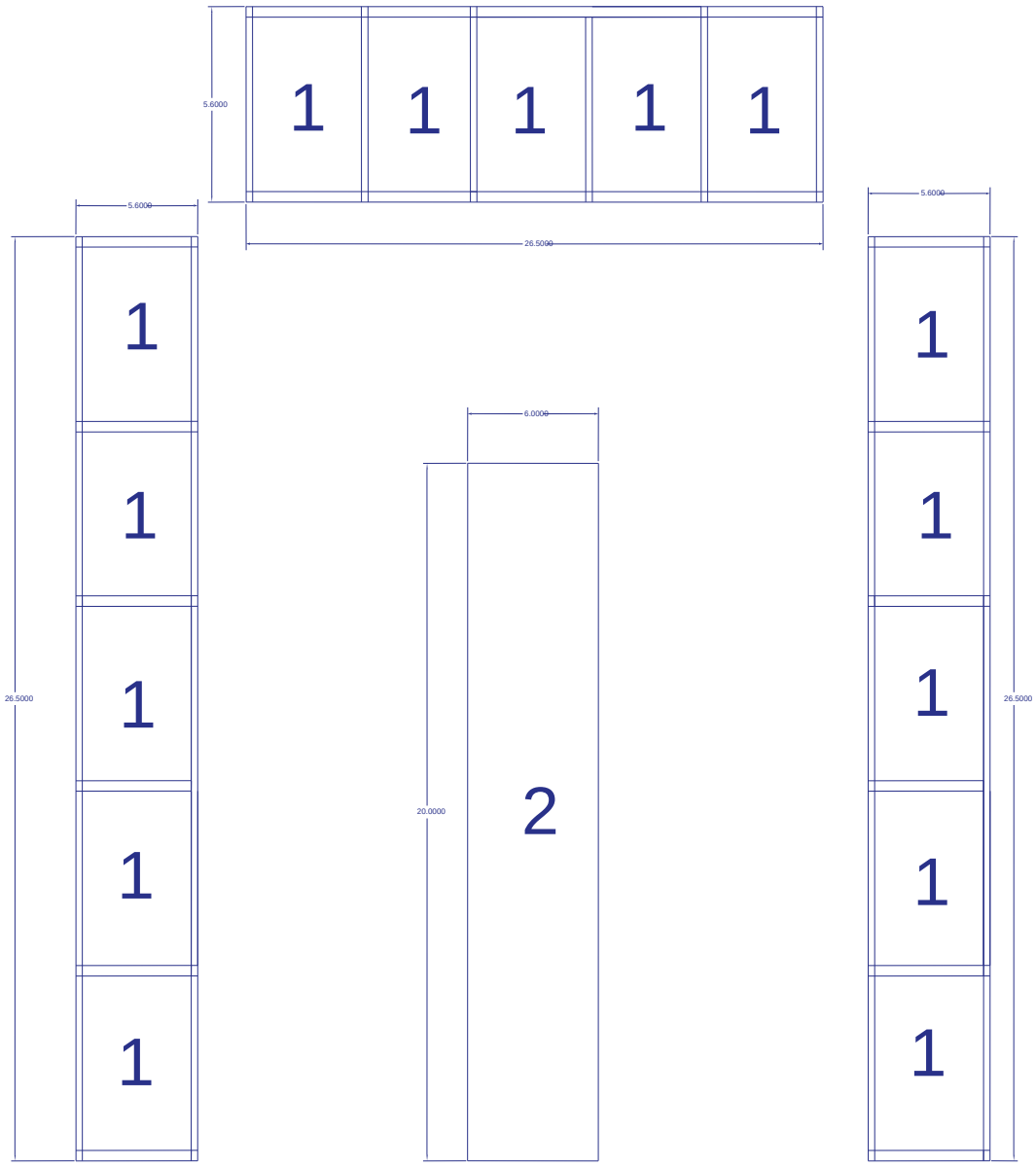
No. Of Shop – 15

Shop dimension – 5.0 m X5.0 m Each

Area – 25 sq.m

(2)Parking dimension- 6.0 m X 20.0 m

Parking area – 120 sq.m

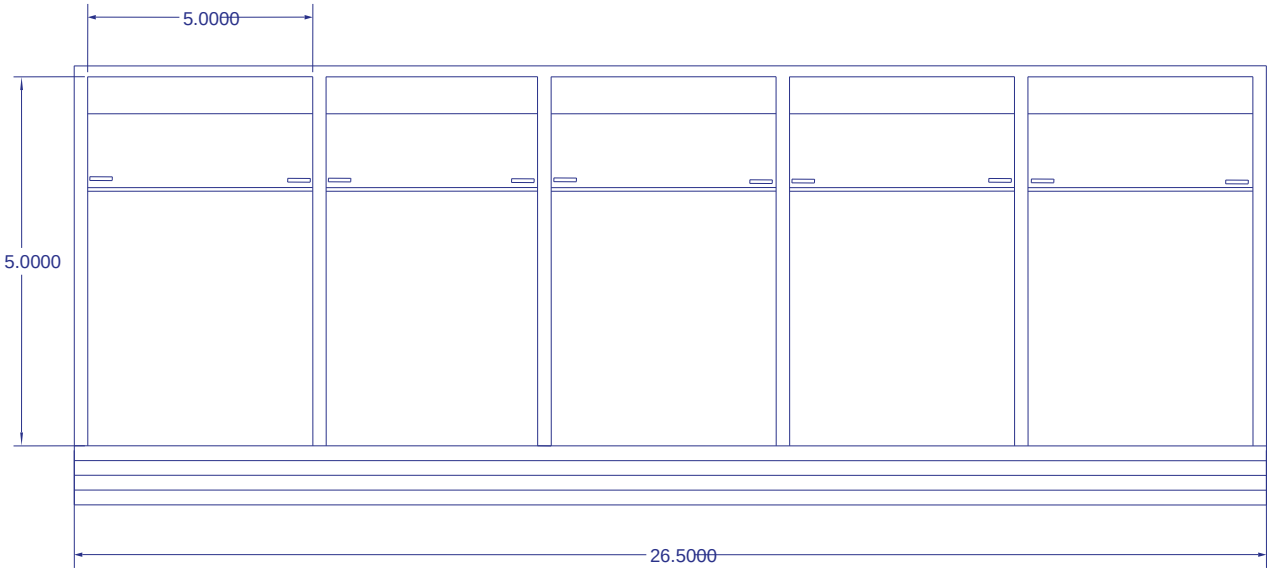


PLAN 2 VILLAGE MARKET

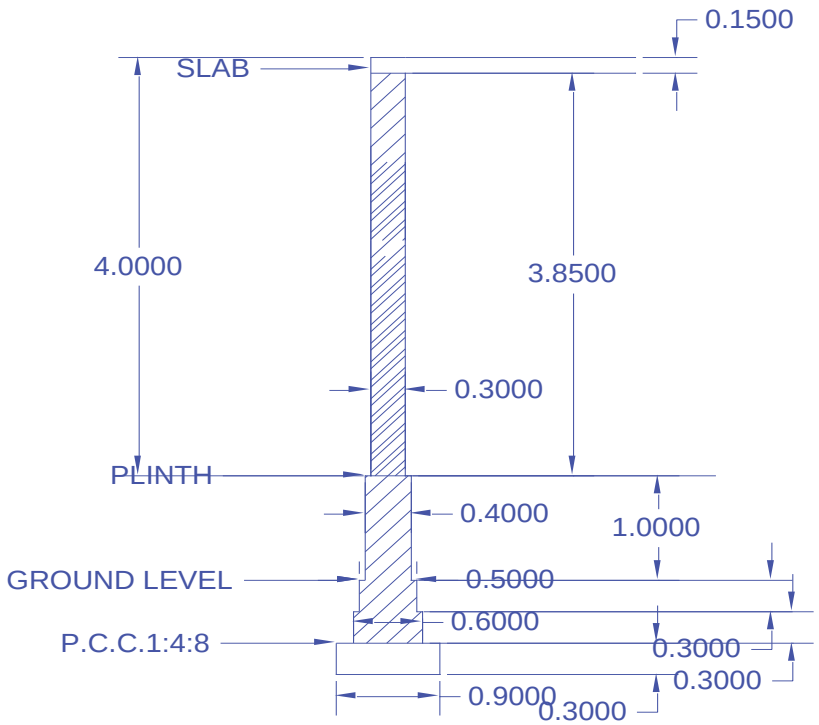
1- SHOPE Dimension 5.0m x5.0m each

Total shope 15 nos

2- Parking area – 6.0m x 20.0m



ELEVATION 2 VILLAGE MARKET



SECTION 2 VILLAGE MARKET

Quantity sheet:-

SR no.	Item Description	No	Length m	Width m	H/D m	Quantity
1	Excavation In foundation All walls are same L= 4.4+2 x0.15+2 x 0.45 L= 5.60 m. For 1 building	11	5.6	0.9	0.9	49.896
	For all building = 49.896 x 3 =149.688 cu.m.					149.688
					Total QTY	149.688 cu.m.
2	Plain Cement Concrete L=5.6 For 1 building =11 And for 3 building =33	33	5.6	0.9	0.3 Total QTY	49.896 49.896 Cu.m
3	Brick Work in foundation upto Plinth Long Wall First step L= 5.6-2x0.15, L=5.3 m Second step L=5.3-2x0.05, L= 5.2m Third step L= 5.2-2x0.05, L=5.1m Total brickwork in foundation	 33 33 33	 5.3 5.2 5.1	 0.6 0.5 0.4	 0.3 0.3 1.0 Total QTY	 31.482 25.740 67.320 124.542 Cu.m
4	Brick work in super structure Upto slab L=5.6m	33	5.6	0.3	3	221.76
	Net Quantity of Brick work					

	= 124.542+221.76					346.302 cu.m.
5	R.C.C. work in slab,chajja and lintel R.C.C. Slab:L=25.0m,B=5.0m Stair =1.5 x 0.3 x0.25	 3 9	 25 25	 5 0.3	 0.15 0.25 Total QTY	 56.250 16.875 73.125 Cu.m
6	Earth filiing H=1-0.075-0.025 H=0.9m L=25-(6 x 0.3) L=23.2m B=5-0.3-0.3-B=4.4m	 3	 23.2	 4.4	 0.9	 276.616 Cu.m
7	Plaster work External plaster Long wall L=25m Short wall L=5m	 1 2	 25 5	 - -	 5 5 Total QTY	 125sq.m. 50sq.m. 175 sq.m
	Internal plaster For Cealing Shope-1 = 4.4 x 4.7	 15	 4.4	 4.7	 -	 310.2sq.m.
	Internal wall Shope 1 Long wall L= 4.7 Short wall L=4.4	 2 1	 4.7 4.4	 - -	 4 4	 37.6sq.m. 17.6 sq.m. 55.2 sq.m
	For 15 shope =15 x 55.20 =828.00					 828.00sq.m

	Net Quantity of Plaster work =175+310.2+828				Total QTY	1313.20 sq.m.
8	Flooring Maerble flooring 2cm thick Shope -1 =4.4 x 4.7 Stair =25 x 0.3	 15 3	 4.4 25	 4.7 0.3	 - - Total QTY	 310.20sq.m. 22.5 sq.m. 332.70 sq.m.

Rate Analysis Sheet :

SR No.	Particular of item	Quantity	Per	Rate	Amount Rs
1	Excavation for foundation	149.688	Cu.m	350	52,390.80
2	P.C.C.In foundation	49.896	Cu.m	4850	2,41,995.60
3	Brick work in foundation	124.542	Cu.m	6720	8,36,922.24
4	Brick work in super structure	221.76	Cu.m	6720	14,90,227.20
5	R.C.C. Work in Slab	73.125	Cu.m	14050	10,27,406.25
6	Earth filling	276.616	Cu.m	350	9,6815.60
7	Plaster work	1313.20	Sq.m	450	5,90,940.00
8	Flooring	332.70	Sq.m	1550	5,15,685.00
				Total	48,52,383.09

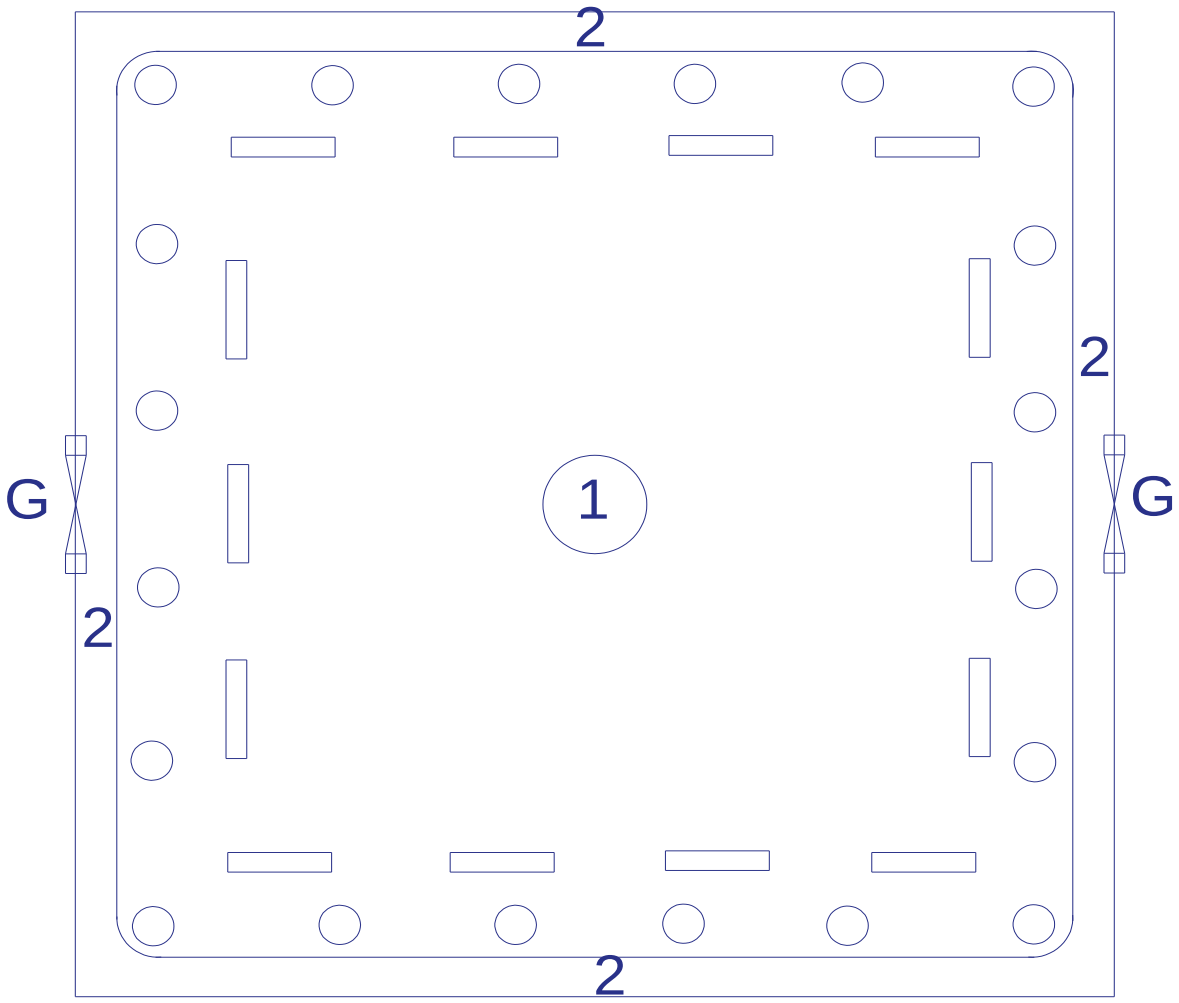
DESIGN -3 PUBLIC GARDEN

PUBLIC GARDEN DETAILS

AREA – 50m x 50m = 2500 sq.m

Walkway – 50m each side of garden

1- fountain 1 nos at centre
2- jogging track 200m and 3 m wide
3- trees 20 nos
4- seating area /bench 14 nos
5- entry/exit gate 2 nos



PLAN 3 PUBLIC GARDEN

Quantity sheet:-

Sr.no	Item discription	No.	Qty.
1	Site clearance	1	2500sq.m
2	Compound	4side	190 m
3	Gates 5m	2nos	10m
4	Fountain	1 nos	2m dia.
5	Trees	20nos	20 nos
6	Bench	14nos	14nos
7	Lone grass	1	2500sq.m
8	Walk way	1	200m

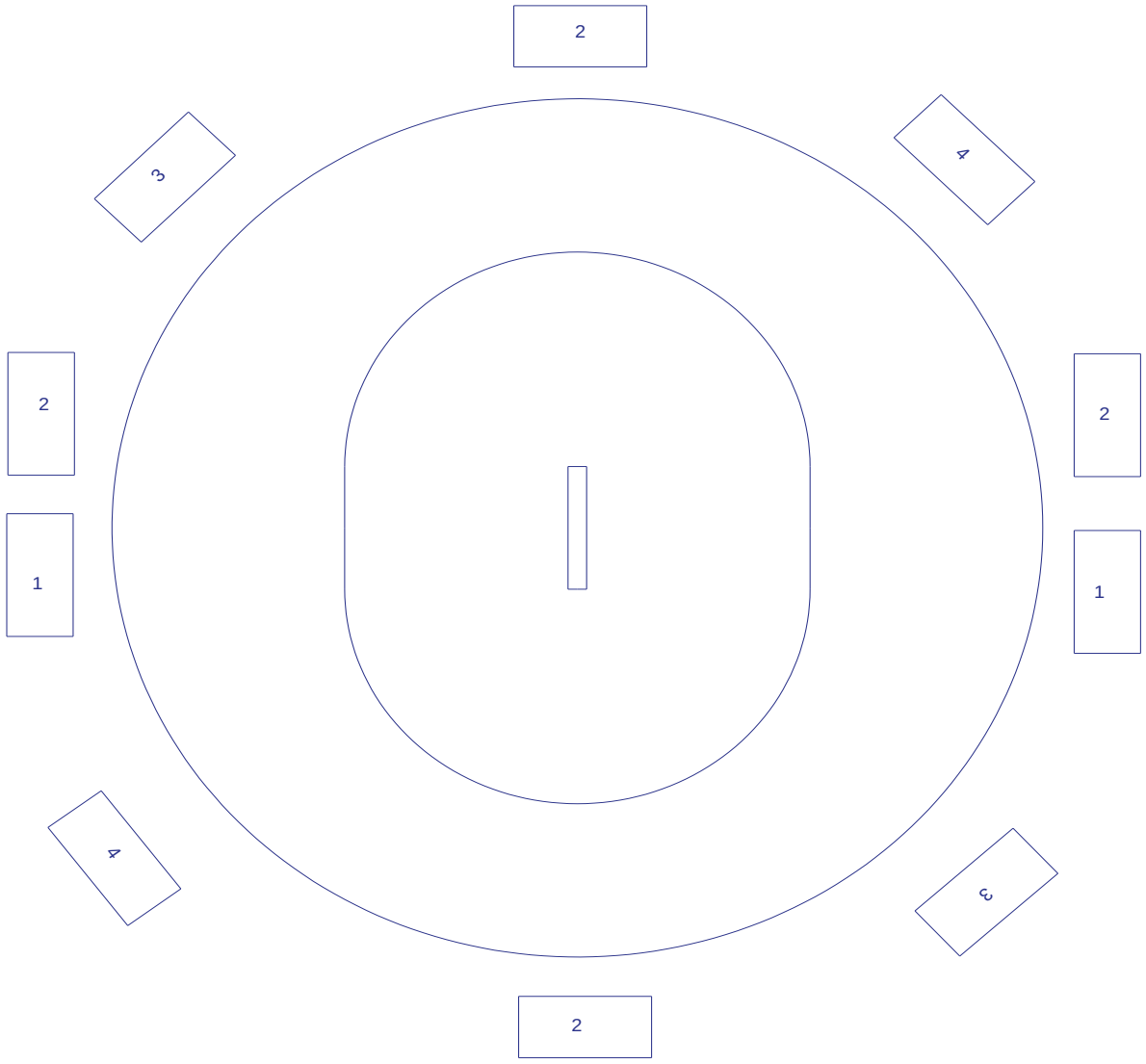
Rate Analysis Sheet :

Sr.no.	Perticular of item	Qty	Unit Rate (Rs)	Amount
1	Micro leel Site clearance	2500sq.m	14	35,000
2	Compound (chain link fencing)	190 m	350	66,500
3	Gates 5m (10 x 1.8=18sq.m)	2 nos (18sq.m)	3500	63,000
4	Fountain	1 nos	75000	75,000
5	Trees	20 nos	500	10,000
6	Bench	14nos	12000	1,68,000
7	Lone grass	2500sq.m	120	3,00,000
8	Paver block walk way	600 sq.m	600	3,60,000
			Total amount	10,77,500

DESIGN -4 CRICKET GROUND

Cricket ground details

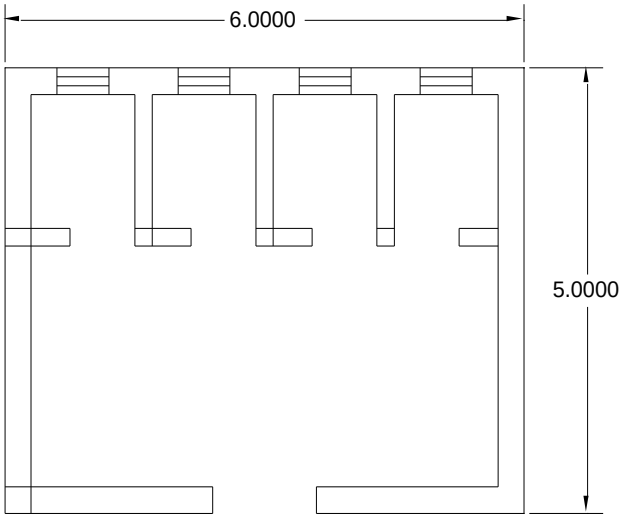
Ground diameter – 140 m
Area – 15394 sq.m
Pitch size - Length- 20.0 m , Width – 2.80 m
Seating Area (1)- Length- 10.0 m ,Width – 5.0 m
Area – 50 sq.m
Total 4 nos pf seating area
Total seating area is 200sq.m



Plan 4 CRICKET GROUND

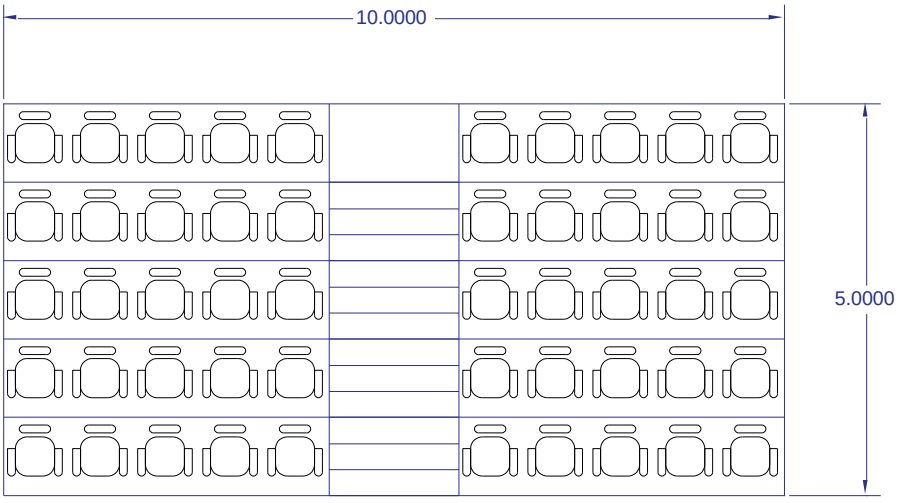
Total structure available on cricket ground

1- Changing room for team member – 2 nos
2- Seating area – 4 nos
3- Toilet block for men – 2 nos
4- Toilet block for woman- 2 nos



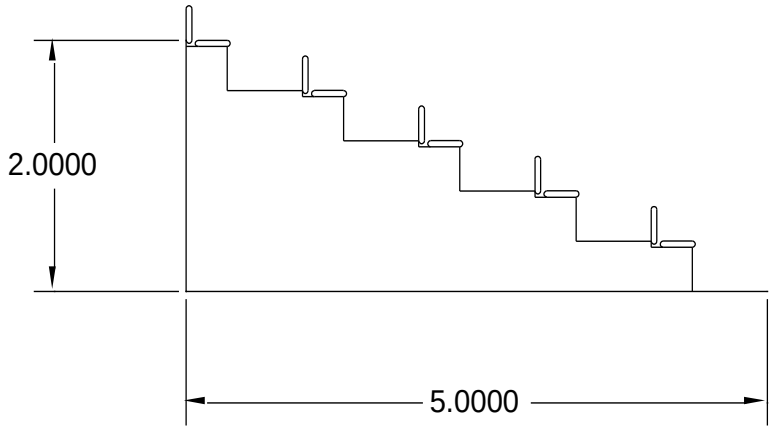
NO. 1 CHANGIMG ROOM BLOCK FOR TEAM MEMBER

ROOM DIMENSION – 6.0 mtr X 5.0mtr
Changing room dimension- 1.20 mtr x 1.50mtr
Total changing room in 1 block is 4 nos
Total Changing room block on the ground is 2 nos

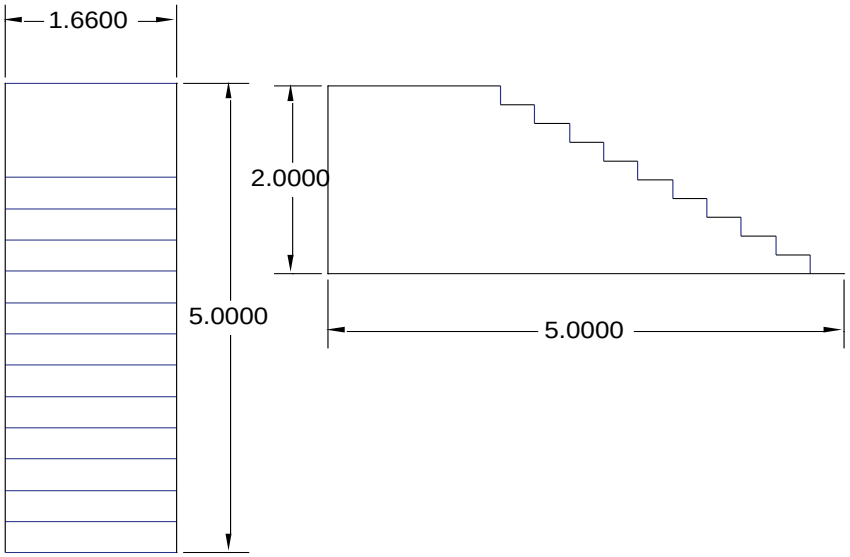


NO. 2 SEATING AREA

SIZEOF SEATING AREA - 10mtr X 5 Mtr
Toal seats in 1 block of seating area is 50 nos
Staircase size is 5mtr X 1.66mtr
Total height of staircase is 2mtr

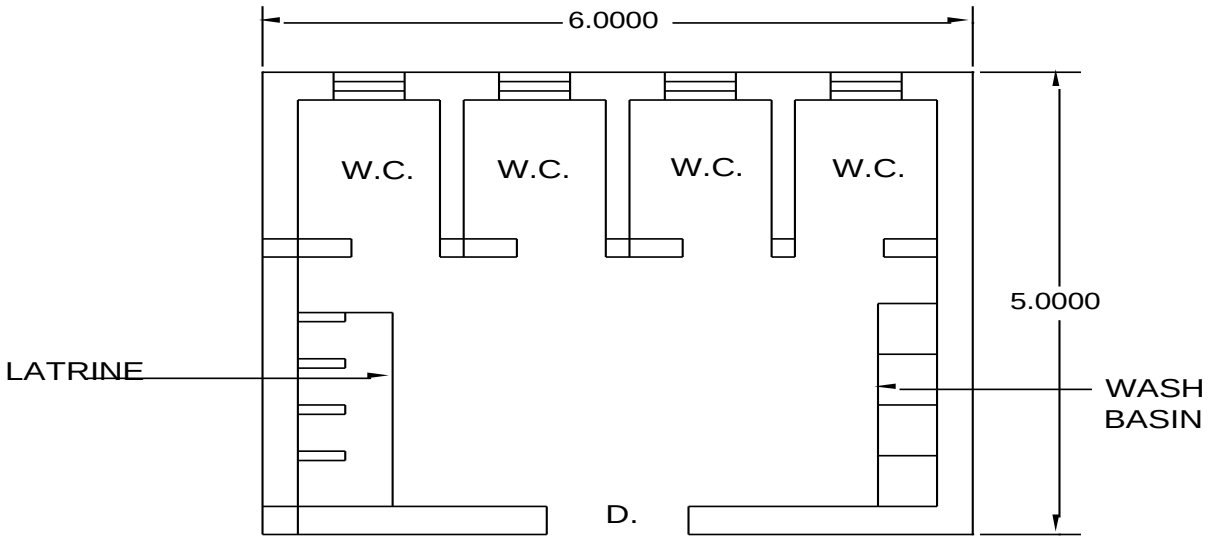


SIDEVIEW OF SEATING AREA



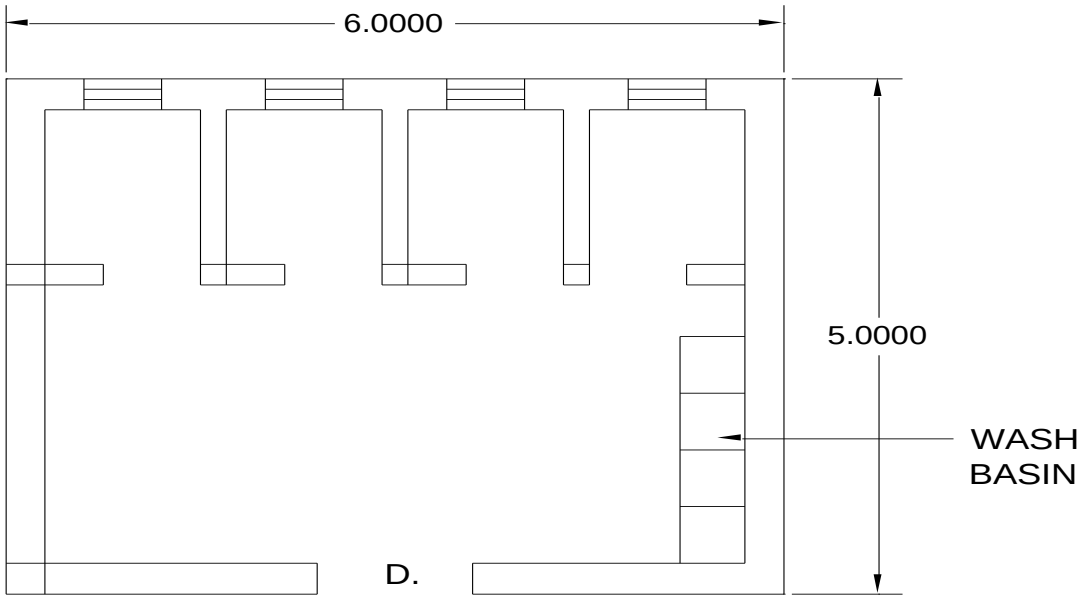
STAIR ON SEATING BLOCK

STAIRCASE DETAIL-
Size of staircase – 1.66mtr X 5 mtr
Total height of staircase – 2 mtr
Total steps – 10 nos
Riser – 0.20mtr
Tread – 0.33 mtr



NO. 3 TOILET BLOCK FOR MEN

TOILET BLOCK SIZE 6mtr X 5mtr
Latrine / urinalblock for men – 4 nos
w.c (water closet) – 4 nos
wash basin – 4 nos size 0.5mtr x 2.2 mtr
total toilet block for man is – 2 nos

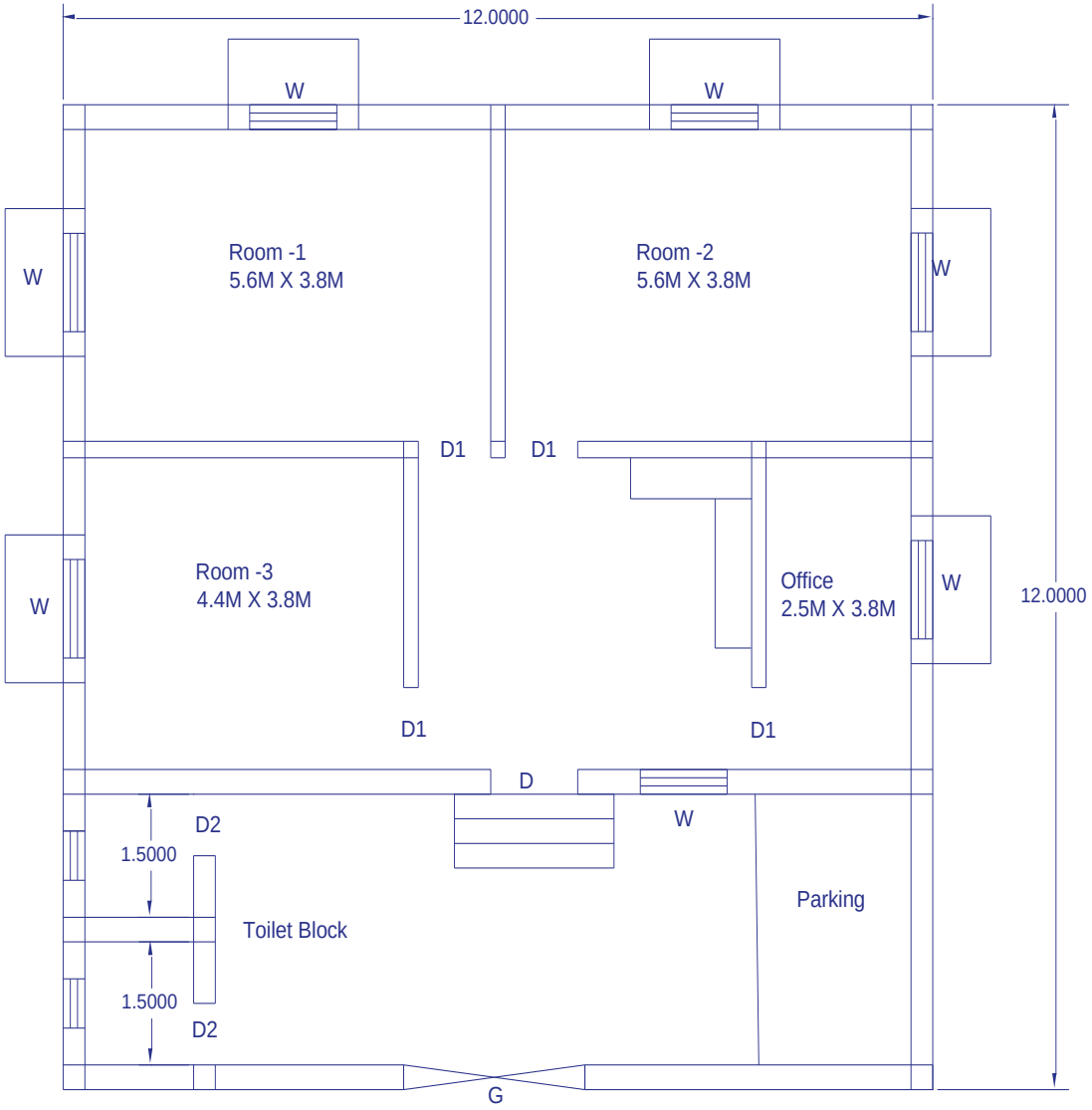


NO. 4 TOILET BLOCK FOR WOMAN

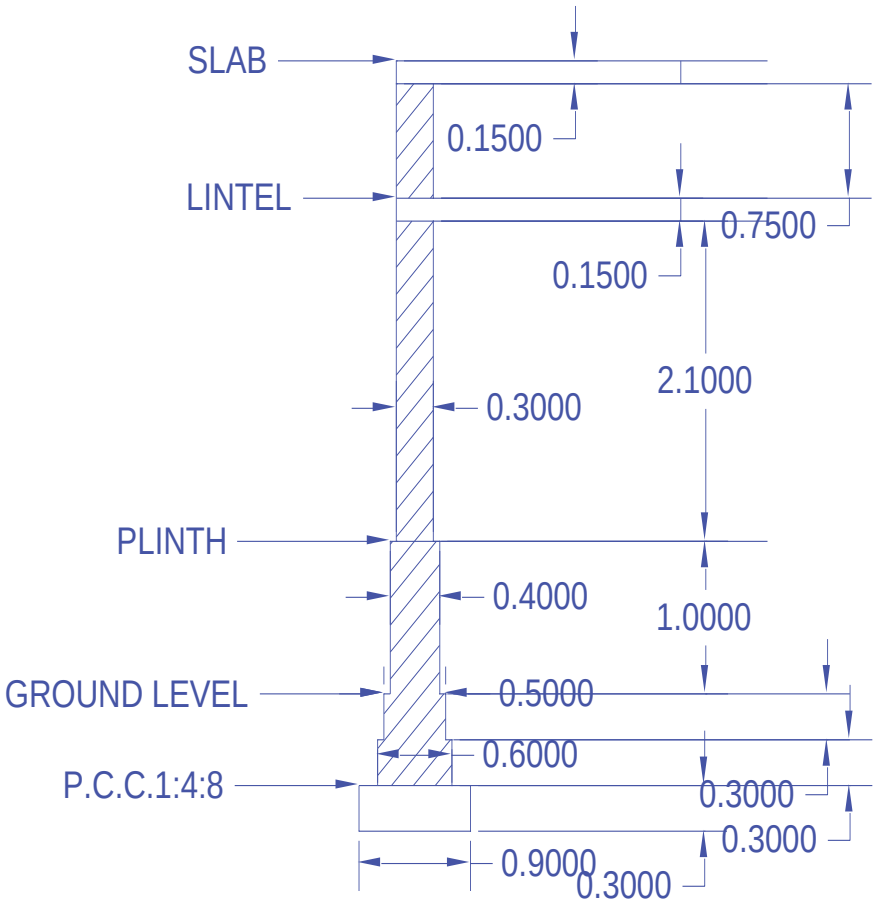
TOILET BLOCK SIZE 6mtr X 5mtr
Latrine / urinalblock for men – 4 nos
w.c (water closet) – 4 nos
wash basin – 4 nos size 0.5mtr x 2.2 mtr
total toilet block for woman is – 2 nos

DESIGN -5 Vocational Training Center

Area – 12m X 12m
Room-1 & Room-2 size – 5.6m x 3.8m
Room –3 size - 4.4m x 3.8m
Office – 2.5m x 3.8m
Toilet block -2 nos
Parking -1nos
Main Gate -1 size 2.5m X 1.5m



PLAN 5 VOCATIONAL TRAINING CENTRE



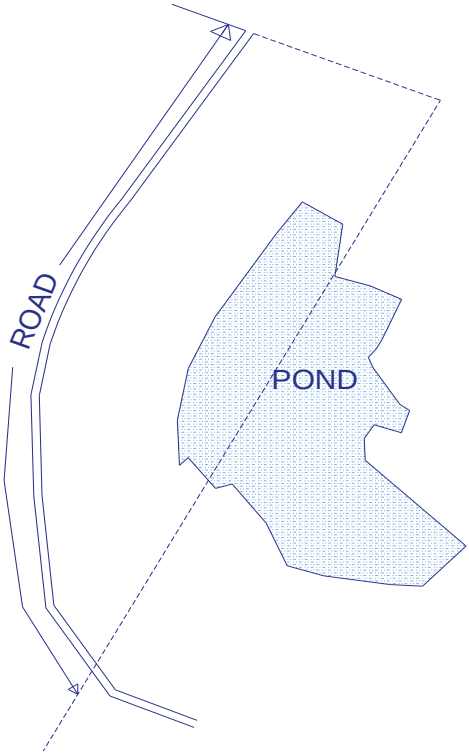
SECTION 5 VOCATIONAL TRAINING CENTRE

Door and Window schedule

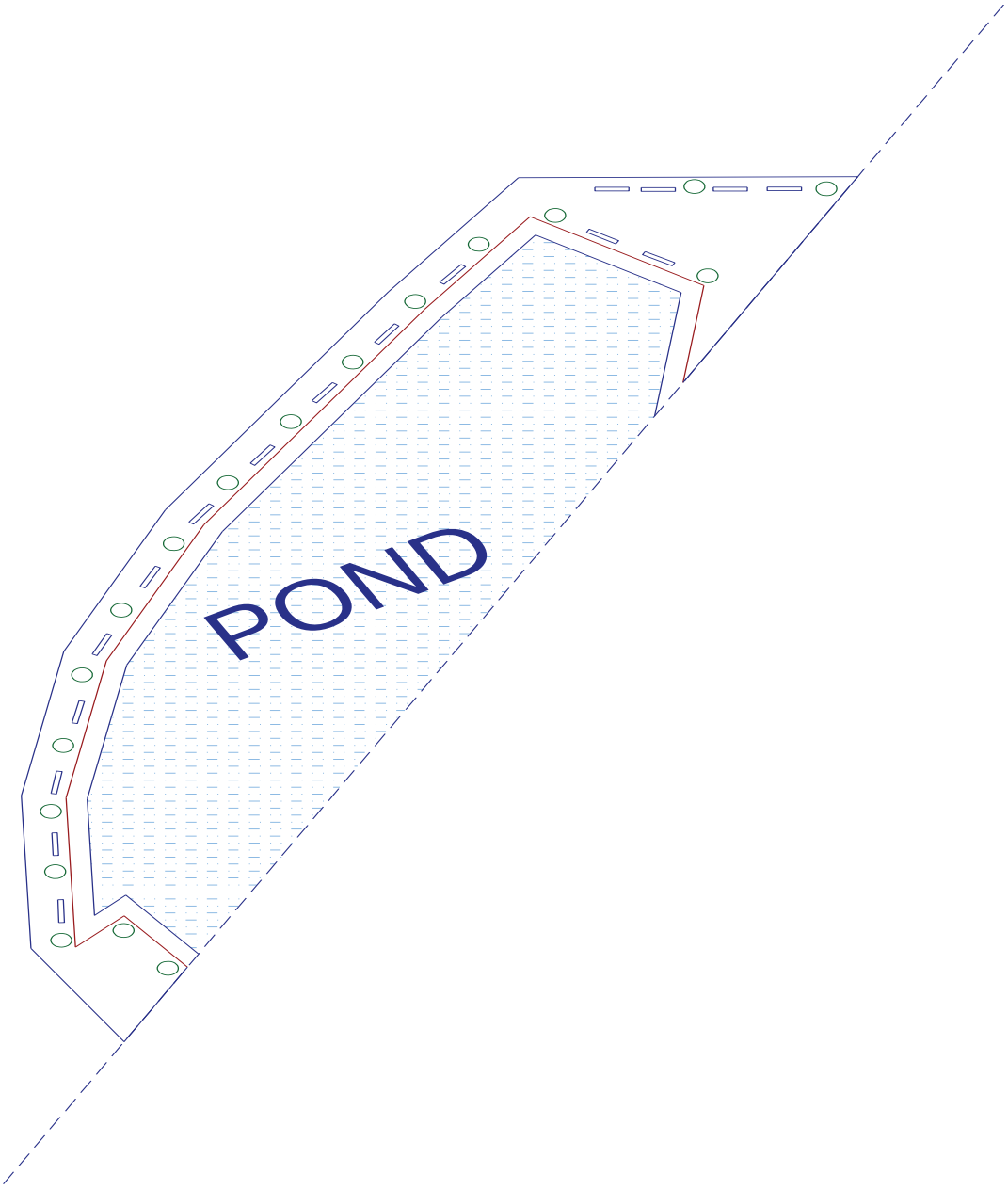
	Dimension	Nos
G	(2.5m x 1.5m)	1
D	(1.2m X 2.1m)	1
D1	(1.2m x2.1m)	4
D2	(0.75m x2.1m)	2
W	(1.2m x 1.2m)	7
V	(0.6m x0.6m)	2

DESIGN -6 Pond Development

Land Details Of Pond



PLAN 6 POND



PLAN 7 DEVELOPMENT OF POND

development of pond -1/3 part of pond

Red line - chain fancing around pond

Green Circle -trees -18 nos

Blue rectangle -benches- 17 nos

paver block – 5m width

13.2 Reason for Students Recommending this Design

As we have done Various surveys of the villages, Interactions with the villagers, Interactions with the Sarpanch and Grampanchayat members, and after discussed with our guide we have finalized the design as per Requirement found in the Survey report, as well as Requirement of the villagers and for the Development of the village we give Following designs.

As per the various design aspects we have finalized the design for the better Development of the allocated village.

13.3 About designs Suggestions / Benefit of the villagers

About design suggestions and benefits of the village

As per detailed mentioned in the Chapter 13.2 in which we gave reasons for recommending the design. Design suggestions are also part of reasons recommending this design.

Benefits of the villagers

As design are finalized after various studies and Interactions by the villagers, they definitely will get the benefits from them.

As various facilities are available in the village they took advantage from it and they do not want to go out from the village. The Transportation facilities are get easier and also life of the villagers are become easier.

Chapter: 14. Technical Options with Case Studies

14.1 Civil Engineering

14.1.1 Advanced Earthquake Resistant

- Earthquake-resistant structures are structures designed to protect buildings from earthquakes. While no structure can be entirely immune to damage from earthquakes, the goal of earthquake-resistant construction is to erect structures that fare better during seismic activity than their conventional counterparts.
- According to building codes, earthquake-resistant structures are intended to withstand the largest earthquake of a certain probability that is likely to occur at their location.Currently, there are several design philosophies in earthquake engineering, making use of experimental results, computer simulations and observations from past earthquakes to offer the required performance for the seismic threat at the site of interest.
- These range from appropriately sizing the structure to be strong and ductile enough to survive the shaking with an acceptable damage. The conventional approach to earthquake resistant design of buildings depends upon providing the building with strength, stiffness and inelastic deformation capacity which are great enough to withstand a given level of earthquake-generated force.
- This is generally accomplished through the selection of an appropriate structural configuration and the careful detailing of structural members, such as beams and columns, and the connections between them. But more advanced techniques for earthquake resistance is not to strengthen the building, but to reduce the earthquake-generated forces acting upon it
- Among the most important advanced techniques of earthquake resistant design and construction are
  1.Base Isolation
  2.Energy Dissipation Devices

1. Base Isolation Method of Earthquake Resistant Design

A base isolated structure is supported by a series of bearing pads which are placed between the building and the building's foundation. A variety of different types of base isolation bearing pads have now been developed.The bearing is very stiff and strong in the vertical direction, but flexible in the horizontal direction

2.Energy Dissipation Devices

- The second of the major new techniques for improving the earthquake resistance of buildings also relies upon damping and energy dissipation, but it greatly extends the damping and energy dissipation provided by lead-rubber bearings. As we've said, a certain amount of vibration energy is transferred to the building by earthquake ground motion.
- Buildings themselves do possess an inherent ability to dissipate, or damp, this energy. However, the capacity of buildings to dissipate energy before they begin to suffer deformation and damage is quite limited.
- The building will dissipate energy either by undergoing large scale movement or sustaining increased internal strains in elements such as the building's columns and beams. Both of these eventually result in varying degrees of damage.
- So, by equipping a building with additional devices which have high damping capacity, we can greatly decrease the seismic energy entering the building, and thus decrease building damage. Accordingly, a wide range of energy dissipation devices have been developed and are now being installed in real buildings. Energy dissipation devices are also often called damping devices.
- The large number of damping devices that have been developed can be grouped into three broad categories:
- Friction Dampers: these utilize frictional forces to dissipate energy
- Metallic Dampers : utilize the deformation of metal elements within the damper
- Viscoelastic Dampers : utilize the controlled shearing of solids and utilized the forced movement (orificing) of fluids within the dampe

Construction Methods

1. Base-isolation are designed in buildings . It is a building designed to reduce amount of energy that reaches the building during earthquake.
2. Flexible joints and automatic shut off valves can be installed. Protecting Against Earthquake Damage Prepare a Seismic Risk Map for the globe which identifies rock types, liquefaction potential, landslide potential. Extensive geological surveying has to be done to identify all active faults, including hidden faults. Earthquake Resistant Design of Structures Enact building codes to design and build earthquake-resistant structures in high seismic risk areas. wood, steel and reinforced concrete are preferred as they tend to move with the shaking ground (unreinforced

concrete and heavy masonry tend to move independently and in opposition to the shaking, battering one another until the structure collapses)

GUIDELINES FOR EARTHQUAKE RESISTANT CONSTRUCTION

- In addition to the main earthquake design code 1893 the BIS(Bureau of Indian Standards)has published other relevant earthquake design codes for earthquake resistant construction Masonry structures (IS-13828 ,1993)
- Horizontal bands should be provided at plinth ,lintel and roof levels as per code • Providing vertical reinforcement at important locations such as corners, internal and external wall junctions as per code. • Grade of mortar should be as per codes specified for different earthquake zones. • Irregular shapes should be avoided both in plan and vertical configuration.
- Quality assurance and proper workmanship must be ensured at all cost without any compromise. In RCC framed structures (IS-13920) • In RCC framed structures the spacing of lateral ties should be kept closer as per the code
- The hook in the ties should be at 135 degree instead of 90 degree for better anchoragement.
- The arrangement of lateral ties in the columns should be as per code and must be continued through the joint as well.

14.1.2 Seismic Retrofitting of Buildings

- Seismic retrofitting is the modification of existing structures to make them more resistant to seismic activity, ground motion, or soil failure due to earthquakes. With better understanding of seismic demand on structures and with our recent experiences with large earthquakes near urban centers, the need of seismic retrofitting is well acknowledged.
- Prior to the introduction of modern seismic codes in the late 1960s for developed countries (US, Japan etc.) and late 1970s for many other parts of the world (Turkey, China etc.),many structures were designed without adequate detailing and reinforcement for seismic protection.
- In view of the imminent problem, various research work has been carried out. State-of-the-art technical guidelines for seismic assessment, retrofit and rehabilitation have been published around the world – such as the ASCE-SEI 41and the New Zealand Society for Earthquake Engineering (NZSEE)'s guidelines.
- These codes must be regularly updated; the 1994 Northridge earthquake brought to light the brittleness of welded steel frames, for example.

- The retrofit techniques outlined here are also applicable for other natural hazards such as tropical cyclones, tornadoes, and severe winds from thunderstorms. Whilst current practice of seismic retrofitting is predominantly concerned with structural improvements to reduce the seismic hazard of using the structures, it is similarly essential to reduce the hazards and losses from non-structural elements.
- It is also important to keep in mind that there is no such thing as an earthquake-proof structure, although seismic performance can be greatly enhanced through proper initial design or subsequent modifications

14.1.3 Advance Practices in Construction field in Modern Material, Techniques and Equipment's

The equipment with proven utility in building construction may be as listed below

1) Chain and pulley block.
2) Grouting pumps.
3) Sprayers for painting work.
4) Tile cutters.
5) Portable hand drilling machines.
6) Horizontal trolleys, wheelbarrows.
7) Pumps.
8) Vibrators for compaction of concrete, surface vibrators.
9) Auto ramming concrete block machine.
10) Sand washing machine.
11) Vertical lifts, hoists, winches.
12) M.S. tubular scaffolding, and formwork.
13) Concrete mixers.

Advantages of construction equipments. :-

1. Timely completion of projects: Usually we see construction projects witnessing delays in execution. The main reason behind project delays is usage of less advanced machines. Hence, works in construction field can get smoother and faster with the help of equipment fitted with cutting-edge technologies, which can ensure project completion in given deadline.

2. Enhances brand value: If projects are completed on time using highly advanced equipment, the brand value of business increases in the market, which in turn can help in getting new clientele.

3. Improves quality of work: Employing CE with latest technology also allows contractors to complete work with minimal quality defects.

4. Cost savings and profitability- Increased productivity and the reliability of the advanced CE also translates into higher profitability from fewer defect-related claims and the avoidance of delay penalties.

5. Performs multiple tasks: An old equipment may not be capable of doing all the work but machine embedded with advanced technology can do similar work and may be few other tasks as well smoothly in less time.

6. Ensures environmental friendliness: Generally CE equipped with latest technology are environment friendly and highly fuel efficient. Thus, they help in reducing CO2 considerably and help companies put their greener foot forward.

7. Reduces maintenance cost: Last but not the least, CE equipped with latest technologies require less maintenance. They are designed in such a way that they can work for long without major wear and tear.

Modern Construction Techniques in Construction field

1) 3D Volumetric Construction

Using this modular construction technology, 3D units are produced in controlled factory settings using needful construction and building materials.
Finished units are transported to site in various modules, basic structural blocks or final touched up units with all amenities installed, for assembly. Blocks can be erected rapidly at site and properties of concrete like fire retardant, sound resistivity, thermal mass etc. are retained.

2) Precast Flat Panel Modules

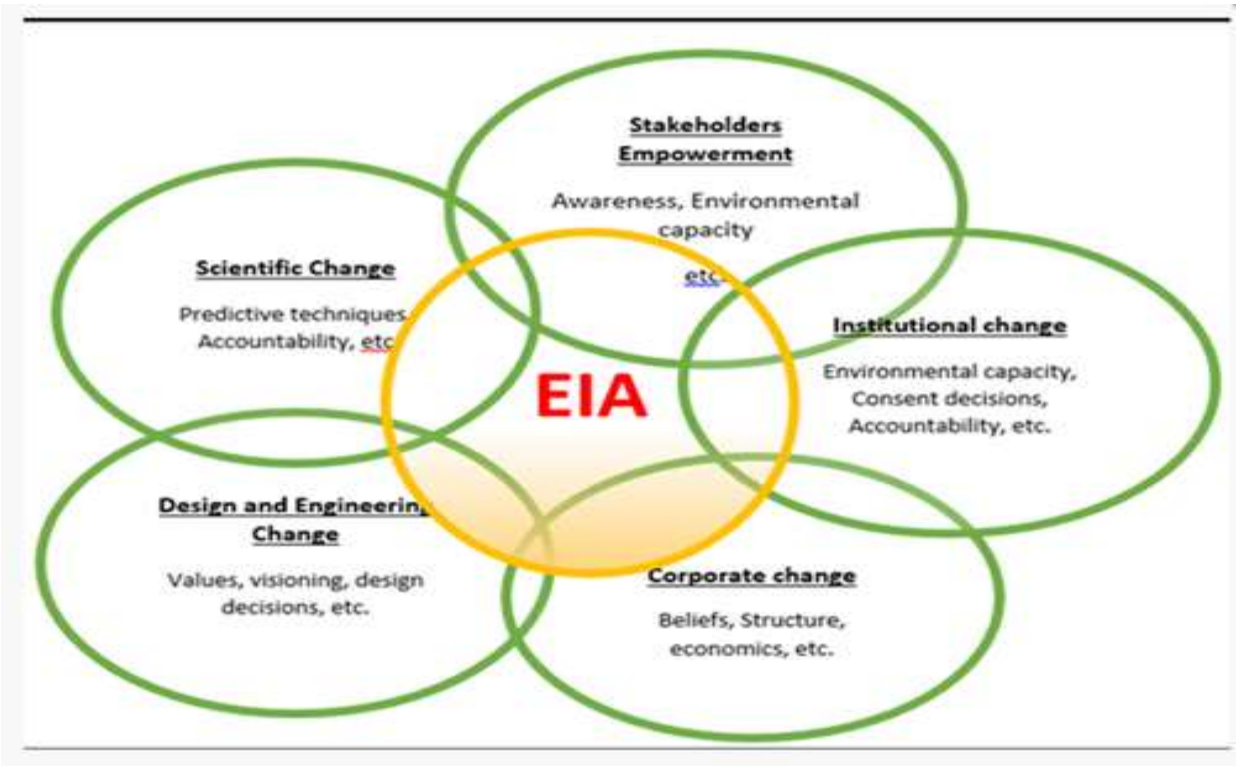
These are primarily wall and floor modules which are manufactured away from the actual site and then transported to site for erection. Load bearing components like decorative cladding and insulation panels can also be produced.
Also called cross-wall construction, the technology has gained momentum due to seamless adherence to specifications and ease as well as swiftness of construction.

3) Tunnel Formwork System

With this tunnel technique, construction is paced up for cellular structures of repetitive patterns through the building of monolithic walls or units in a single operation per day.
Expeditious work is achieved by deploying formwork and readily mixed concrete with the convenience and agility of factory conditions. Formworks in tunnel form are stacked and used at the site with cranes.

Fig. of various techniques, Equipment and their Advantages in building construction

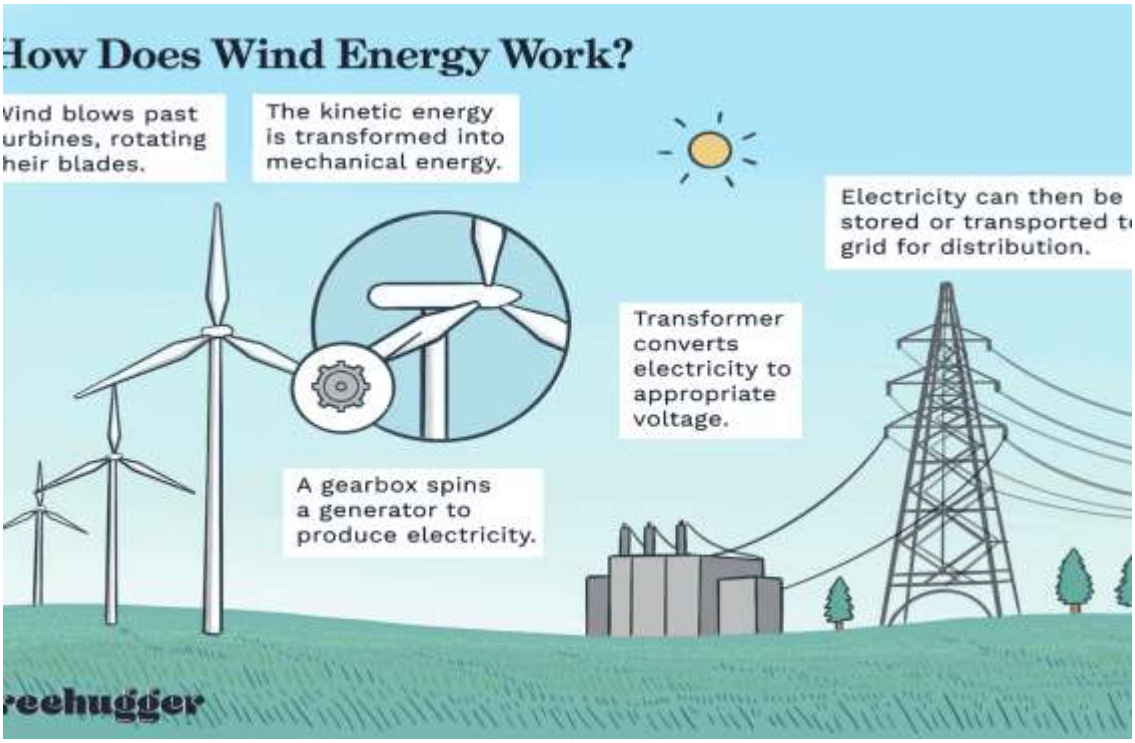
14.1.4 Engineering Aspects Of Soil mechanics - Environmental Impact Assessment

- The study involved environmental impact assessment of upgrading of existing flow station dealing with different civil engineering works such as road network, housing, water supply, to name a few Data was collected from Federal Environmental Protection Agency (FEPA), Department of Petroleum Resources (DPR) Port Harcourt, Nigerian Meteorological Department (NMD), Lagos, Rivers State Ministry of Environment and Natural Resources (RSMENR), Port Harcourt, Ahoada West Local Government Area (AWLGA), Akinima, Rivers State and the Internet. Data collected was used to get an overview of the existing Environment.
- All these were done with the aim of assessing the impact the infrastructure had on the environment, and projection of the likely impact of the upgrading exercise. The study revealed that civil engineering infrastructure development projects impacted greatly on the environment especially in areas of noise pollution, water pollution, decrease in size of available land, etcetera. Based on the findings, recommendations were made for the elimination of the negative effects in some cases; and for amelioration of the effects in situations where it will be impossible to completely eradicate such effects.
- 

14.1.5 Water Supply-Sewerage system-Waste Water- Sustainable development techniques Sustainable Development techniques

- Wind Energy

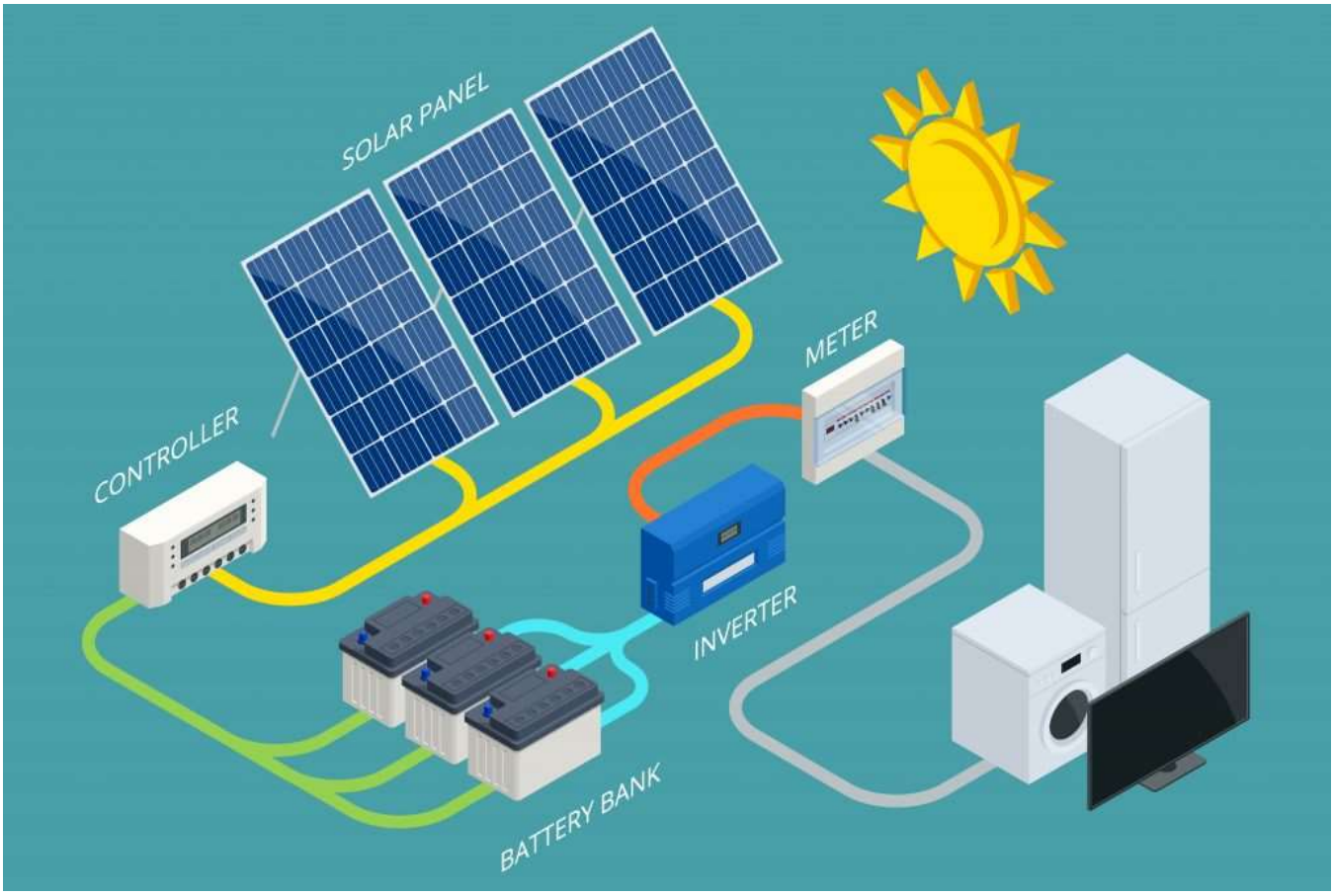
Wind energy is energy harnessed from the motion of wind using wind turbines or windmills. Wind energy is renewable, which means it's never-ending and can be used to substitute energy at the grid. This makes it a good sustainable development practice.



- Solar Energy

This is energy harnessed from the sun using solar panels. It's advantageous since it's absolutely free and its supply is infinite. These factors make it beneficial to consumers and good for Mother Nature because it doesn't contribute to the emission of greenhouse gasses.

The potential for solar energy is enormous, since about 200,000 times the world's total daily electric-generating capacity is received by Earth every day in the form of solar energy. Unfortunately, though solar energy itself is free, the high cost of its collection, conversion, and storage still limits its exploitation in many places. Solar radiation can be converted either into thermal energy (heat) or into electrical energy, though the former is easier to accomplish.



- Green spaces

Green spaces are locations where plants and animals are left to flourish. Parks also fall into the category of green spaces. Green spaces provide people a remarkable opportunity to take pleasure in outdoor recreation, more so in big cities, where resting space is hard to come by.

Green spaces also help regulate climate and quality of air, insulate rivers and streams from polluted runoff and lowers energy usage by dealing with the warming impacts of paved surfaces.

- Crop Rotation

Crop rotation is the practice of planting different crops in the same farm to enhance soil fertility and assist control diseases and insects. Crop rotation is beneficial in many ways; most importantly, it's chemical-free. This means using this farming practice maintains the integrity of your soil, making it a sustainable development practice.

Chapter:15 Smart and/or Sustainable features of Chapter 8 & 13 designs, Impact on society.(For Allocated village development, villagers happiness, comfortable and for enhancementof the village) (With the Smart village development Concept As Per Your Idea And Village Visit, modern technology with innovation).

- **IMAPCT ON SOCIETY.**(For Allocated village development, villagers happiness, comfortable and for enhancementof the village)
- All villagers are happy with the design finalized for the allocated village for the Development process.
- As all the design are confirmed on the basis of villagers & many other members Interactions.
- We have done various surveys and Interactions..
- We have study the details before giving the following designs
- So if any structures in allocated village required only Repair and maintenance. Then we had tried to do repair only. From this we can easily saves the new construction cost of the project.
- From that money we can give anything else..

In our design chapter...

We can give repair and maintenance of bus stop and Roads. And road solar street lighting system.Which is beneficial for the villagers.

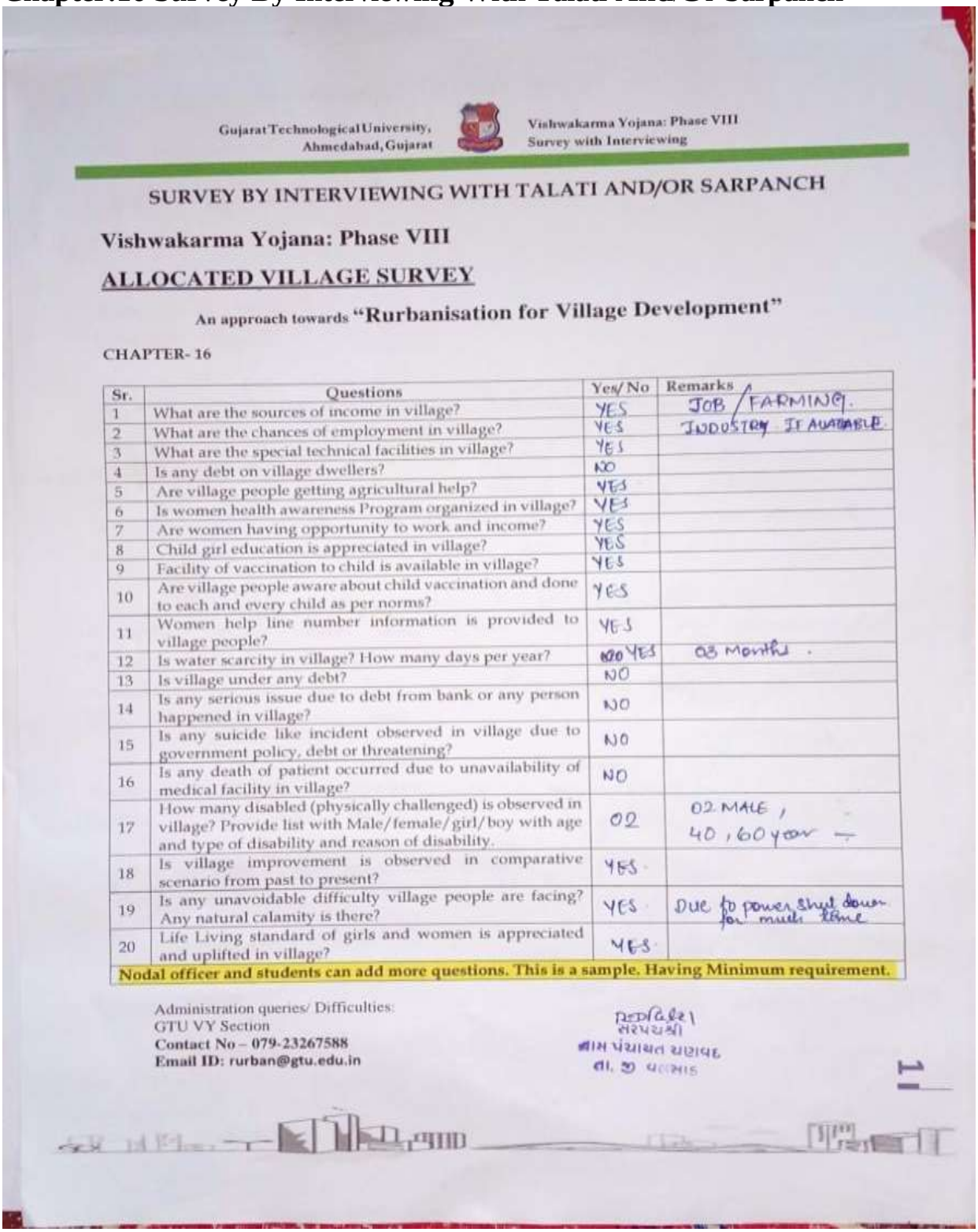
-with the smart village Development concept

We have finalized the designs of library, Community hall, Village market, Public garden, Cricket ground, and Aanganwadi.

For better improvements in the Development of the village..

Sr.no.	Proposed Design Name	period	Available fund	Estimated cost
1	Anganvadi	Immediately within 6 month	-	5,74,761.68
2	Village market	Within 1 year	-	48,52,383.09
3	Public garden	Long term along with estimate	-	10,77,500.00
4	Cricket ground	Long term along with estimate	-	17,85,700.00
5	Vocational training centre	Within 1 year	-	8,55,500.00
6	Pond developement	Long term along with estimate	-	11,35.000.00

Chapter:16 Survey By Interviewing With Talati And/Or Sarpanch



Gujarat Technological University, Ahmedabad, Gujarat

Vishwakarma Yojana: Phase VIII
Survey with Interviewing

SURVEY BY INTERVIEWING WITH TALATI AND/OR SARPANCH

Vishwakarma Yojana: Phase VIII

ALLOCATED VILLAGE SURVEY

An approach towards "Rurbanisation for Village Development"

CHAPTER- 16

Sr.	Questions	Yes/ No	Remarks
1	What are the sources of income in village?	YES	JOB / FARMING.
2	What are the chances of employment in village?	YES	INDUSTRY IT AVAILABLE
3	What are the special technical facilities in village?	YES	
4	Is any debt on village dwellers?	NO	
5	Are village people getting agricultural help?	YES	
6	Is women health awareness Program organized in village?	YES	
7	Are women having opportunity to work and income?	YES	
8	Child girl education is appreciated in village?	YES	
9	Facility of vaccination to child is available in village?	YES	
10	Are village people aware about child vaccination and done to each and every child as per norms?	YES	
11	Women help line number information is provided to village people?	YES	
12	Is water scarcity in village? How many days per year?	~~NO~~ YES	03 Months.
13	Is village under any debt?	NO	
14	Is any serious issue due to debt from bank or any person happened in village?	NO	
15	Is any suicide like incident observed in village due to government policy, debt or threatening?	NO	
16	Is any death of patient occurred due to unavailability of medical facility in village?	NO	
17	How many disabled (physically challenged) is observed in village? Provide list with Male/female/girl/boy with age and type of disability and reason of disability.	02	02 MALE, 40, 60 year —
18	Is village improvement is observed in comparative scenario from past to present?	YES	
19	Is any unavoidable difficulty village people are facing? Any natural calamity is there?	YES	Due to power shut down for much time
20	Life Living standard of girls and women is appreciated and uplifted in village?	YES	

Nodal officer and students can add more questions. This is a sample. Having Minimum requirement.

Administration queries/ Difficulties:
GTU VY Section
Contact No – 079-23267588
Email ID: rurban@gtu.edu.in

Chapter:17. Irrigation / Agriculture Activites And Agro Industry, Altenate Technics And Solution

Buried Clay Pot Irrigation

- One of the most studied, and very effective systems uses a buried clay pot full of water to irrigate plants
- The capillary flow of water through the clay walls of the pot is regulated by demand - so little water is wasted
- Highly recommended! For restoration, gardens, landscaping, farming
- Clay pots worked well even in the lowest, hottest desert
- Excellent for seedlings or for starting seeds or cuttings
- Pot rim painted white to reduce evaporation

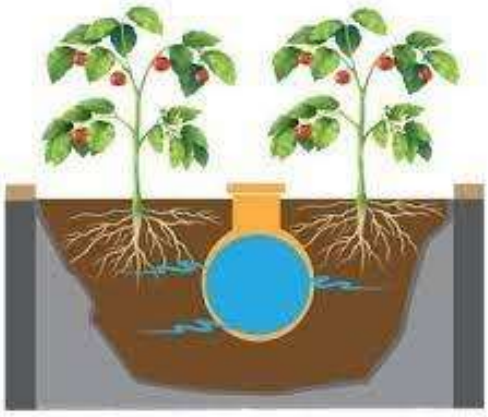


Figure 85 Buried Clay Pot Irrigation

Getting Started

- Regular red clay pots work well
- Seal the bottom hole with a cork or sealant
- Use a lid with a small hole drilled in it to capture rainwater
- Set the pot in the soil so the rim is above ground
- You don’t want the dirt and leaves to wash in
- Firm the soil around the pot -- and plant

Fewer Weeds

- Another great advantage of buried clay pots (and other deep watering systems) is reduced weed growth
- In one study weeds were cut 87%
- Less work - and less wasted water

- Buried clay pots have also proved to be very effective when saline water must be used - or when salt is a

problem in the soil

- The steady moisture reduces salt buildup in the root zone and damage

Starting Cuttings

- Double clay pots are ideal for starting cuttings
- The inner pot is sealed and filled with water
- The moisture is maintained in the soil at an ideal level
- BCP are good for starting cuttings in the field as well

Deep Pipe Irrigation

- This method of irrigation was suggested by a traditional system from India - where water was placed in the hollow stem of a dead plant to water deeper in the soil
- Subsequent research found one study and one report from India
- This has been our best system for restoration work -- cheap, durable and very effective

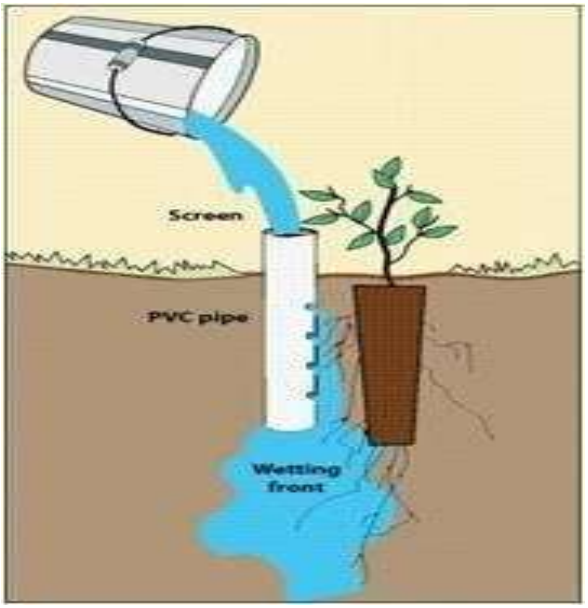


Figure 85 Deep Pipe Irrigation

Deep pipe installation

- The pipe may be about 14-16” long, 2” diameter, set vertically
- Small holes are drilled on the plant side below soil level

- A screen lid is glued on to protect wildlife

Deep pipe drip

- Where a drip system can be set up it can also be used in a deep pipe
- Smaller pipes can be used with the emitter inserted in the pipe

No waste

- Little water evaporates because the water is placed in the deep soil
- Little time is wasted because it is fast and easy to fill the pipe
- It works very well on slopes
- It develops large root systems

Excellent Results

- Survival can be good with very little water
- Mesquite trees were started with a total of only 5 gallons of water in the first year
- Not five gallons a week or two gallons an hour

Wick Irrigation

- Wick systems were also described in reports from India
- Wicks were traditionally combined with clay pots to water orchard trees
- After trying several types of wick systems I think this may be the next great thing!

Figure 86 Wick Irrigation

Wick options

- Wicks can be used in a capillary form, where water is wicked from a reservoir to the plant through a raised section by capillary forces (as little as 20 ml day)
- Or in a gravity feed form, with the reservoir above the wick (a hose clamp can be used to adjust the flow rate)
- Wick with clay pot
- With a riser tube in bottom hole
- Capillary wick from buried bottle in plastic tube

More wick options

- Half inch diameter gravity wick with large reservoir
- Installed with treeshelter and wire cages for jack rabbit protection
- Seedlings topped treeshelter at 3 weeks!

Wick Material

- The best material has been old, used woven nylon rope (1/4”-1/2”)
- Fresh woven nylon rope can be used if it is washed with detergent to remove oils - but it is not as good as old rope
- Cotton is used in India, but tended to mold in my early tests

Porous Hose

- This system uses a vertically placed leaky or porous hose section
- It performs a bit like a clay pot--only it is cheaper and smaller
- These hoses are made of recycled rubber and hold up well
- This can be fed by a bottle
- Or attached to a drip type line
- Both have worked reasonably well
- A fast rate hose is needed to work at low pressure

Figure 86 Porous Hose Irrigation

Tree shelter

- Watering into a tree shelter is also effective if the base is sealed into the soil
- This can be done by hand from a hose, water jugs or using a drip type system

Perforated Pipe

- Sub-irrigation can also be done with slotted drain pipe
- The pipe is laid deep in the soil and filled with water using a water truck
- Best for lines of plants - good for landscaping

Figure 87 Perforated Pipe irrigation

Porous Capsules

- A modern adaptation of buried clay pot irrigation was developed in Brazil
- The clay is formed into a capsule that can be placed on a water line
- These worked well -- but were more costly to make

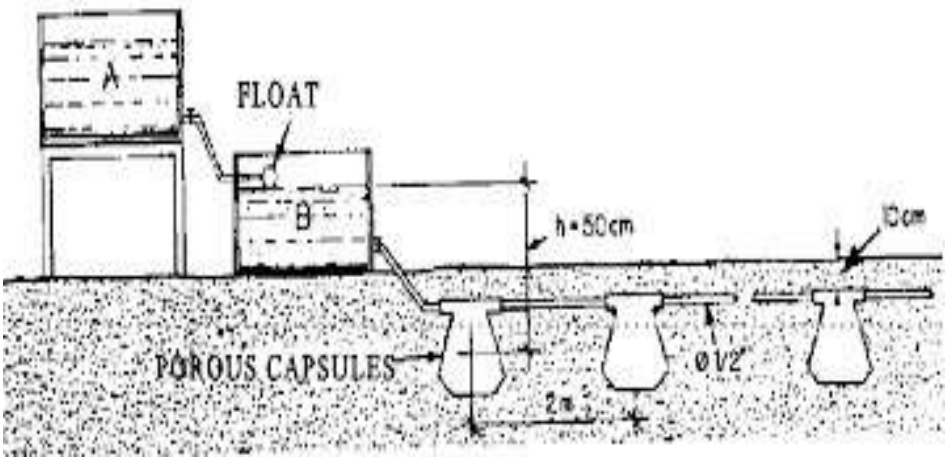


Figure 88 Porous Capsules

Types

- Porous capsule made by gluing two red clay pots together (I would use Gorilla glue now)
- Porous capsules made by a staffer using a beer bottle for a mold
- These are easy to plumb in a system
- Or they can be gravity fed from a bottle or tank
- These are very efficient
- A range of smaller porous irrigation systems are sold for container plants

Microcatchments

- A microcatchment is a specially contoured area with slopes and berms designed to increase runoff and concentrate it
- Rain falling on the catchment area drains into a planting basin where it infiltrates and is effectively "stored" in the soil profile
- Used for millennia - very effective if it rains! *But can be easily filled from a water truck if it doesn't*
- Microcatchments can be shaped to look more natural, but do entail disturbing the soil surface
- More appropriate in agriculture - but has worked well on restoration projects.

Figure 89 Microcatchments irrigation

Chapter:18. Social Activities – Any Activates Planned By Students

No any such activities with village people gathered are done in villages by the students
But basiccally some of the basic knowledge to the villagers are done by us.
By giving correct information by providing importance about use of atm, Proper use of fertilizer, use of drip irrigation system.

USE OF ATM
Use of atm is a easiest way of withdraw money using debit/ATM card.

But many of the people are not able to use the card in machine. So we give them knowledge about use of atm in ATM machine nearest to the village.

PROPER USE OF FERTILIZER
Proper use of fertilizer is very important for the agricultural uses. So we guided farmers in the villages for better growth in the field of agriculture.

USE OF DRIP IRRIGATION SYSTEM
Use of drip irrigation system is very best methods for irrigation purpose.

Also from the Grampanchayat people getting help like Ration kit distribution activity, Sanitation of whole village by tanker, and give instructions like do not go outside if you do not have any urgent work, Regularly washing of your hands, wear masks, Sanitized your hands, Take bath if come from outsides,. Drink boiled water,etc

So this could be also a part of activities which helps village people's in other way.

Figure 92 People follow guideline

Figure 93 Senitize whole village

Figure 94 Blood donation Camp Organised by villagers

Figure 95 Blood donation by villagers

Chapter:19.<<ALLOCATED VILLAGE>> SAGY Questionnaire Survey form **with the Sarpanch Signature** (Scanned copy attachment in the soft copy report and Original copy in hardbound report)

SAANSAD ADARSH GRAM YOJANA (SAGY) Baseline Household Survey Questionnaire

Village: CHANVAI Gram Panchayat: CHANVAI Ward No. (10)

Block: VALSAD District: VALSAD

State: GUJARAT L S Constituency: VALSAD

1. Family Identity and Size

Name of Head of Household	KAILASH UDESINGH RATHOD							Male/ Female	
SECC Survey ID:		Family Size	03	Over 18	03	6 to 18	–	Under 6	–

2. Category & Entitlement Details (Tick as appropriate)

Social Category[1]	SC	Life Insurance	1. All Adults 2. Some Adults 3. None	AABY	1. Yes 2. No	Kisan Credit Card	Yes / No
Poverty Status Year[2]:	1. BPL 2. APL	Health Insurance	1. All Adults 2. Some Adults 3. None	RSBY	1. Yes 2. No	MGNREGS Job Card Number	YES
PDS (If NFSA is not implemented)		Annapurna	Antyodaya	BPL	APL	Is any woman in the family member of an SHG? Yes / No	
PDS (If NFSA is implemented)		Annapurna	Antyodaya	Priority	Other		

2. Adults (above 18 years)

Name	Age	Sex M/F/O	Disability Status Y/N	Marital Status[3]	Education Status[4]	Adhaar Card (Y/N)	Bank A/C (Y/N)	Social Security Pension[5]
KAILASH UDESINGH RATHOD	52	M	N	Married	B.COM	Y	Y	–
SHARDA KAILASH RATHOD	48	F	N	Married	B.COM	Y	Y	–
HARSH KAILASH RATHOD	23	M	N	Unmarried	12th	Y	Y	–

3. Children from 6 years and up to 18 years

Name	Age	Sex M/F/O	Disability Y/N	Marital Code*	Level of Education: Code#	Going to School /College (Y/N)	Current Class	Computer Literate Y/N
–								
–								
–								

4. Children below 6 years

Name	Age	Sex M/F/O	Disability Yes/No	Going to School (Y/N)	Going to AWC Y/N	De-worming Done	Fully Immu-nised Y/N	Mother's Age at the time of Child's Birth
–								
–								
–								

[1] Scheduled Caste 1, Scheduled Tribe 2, Other Backward Castes 3, Other 4
[2] Enter the BPL Survey round being used in the Gram Panchayat for identification of BPL Families (e g 1997/2002/2011)
[3] *Marital Status: Not Married – 1, Married – 2, Widowed – 3, Divorced/Separated – 4*
[4] *Level of Education: Not Literate – 01, Literate – 02, Completed Class 5 - 03, Class 8th – 04, Class 10th -05, Class 12th -06, ITI Diploma-07, Graduate-08, Post Graduate/Professional – 09 (write the highest level applicable)*
[5] No Pension – 0, Old Age Pension – 1, Widow Pension – 2, Disability Pension – 3, Other Pension – 4 (mention)

SAANSAD ADARSH GRAM YOJANA (SAGY) Baseline Household Survey Questionnaire

5. Hand washing

	Always		Sometimes		Never
After use of Toilet	Soap ✓	Other	Soap	Other ✓	–
Before Eating	Soap ✓	Other	Soap	Other ✓	

6. Use of Mosquito Net
Children: Yes / No Adults: Yes / No

7. Do members take Regular Physical Exercise

	Yoga	Games	Other Exercises
Adults	Yes / No	Yes / No	Yes / No
Children	Yes / No	Yes / No	Yes / No

8. Consumption of Tobacco

	Smoking	Chewing
Adults	–	–
Children	–	

9. House & Homestead Data

Own House: Yes / No	No. of Rooms: 02
Type: Kutcha / Semi Pucca / Pucca	
Toilet: Private / Community / Open Defecation	
Drainage linked to House: Covered / Open / None	
Waste Collection System	Door Step / Common Point / No Collection System
Homestead Land: Yes / No	Kitchen Garden : Yes / No
Compost Pit: Individual/ Group/ None	Biogas Plant: Individual/ Group/ None

10. Source of Water (Distance from source in KMs)

Source of Water		Distance
Piped Water at Home	Yes / No	0
Community Water Tap	Yes / No	0
Hand Pump (Public / Private)	Yes / No	0
Open Well(Public / Private)	Yes / No	0
Other (mention):		–

11. Source of Lighting and Power

Electricity Connection to Household: Yes / No
Lighting: Electricity/Kerosene/Solar Power
Mention if Any Other: –
Cooking: LPG/Biogas/Kerosene/Wood/Electricity
Mention if Any Other:
If cooking in Chullah: Normal/ Smokeless

12. Landholding (Acres)

1. Total	2 vigha.	2. Cultivable Area	–
3. Irrigated Area	2vigha.	4. Uncultivable Area	–

13. Principal Occupations in the Household

Livelihood	Tick if applicable
Farming on own Land	✓
Sharecropping /Farming Leased Land	–
Animal Husbandry	–
Pisciculture	–
Fishing	–
Skilled Wage Worker	–
Unskilled Wage Worker	–
Salaried Employment in Government	✓
Salaried Employment - Private Sector	
Weaving	
Other Artisan(mention)	
Other Trade & Business (mention) IT Consultant	

14. Migration Status
Does any member of the household migrate for Work: Yes / No If Yes Entire Year / Seasonal
Does anyone below 18 years migrate for work: Y/N

15. Agriculture Inputs

Do you use Chemical Fertilisers	Yes/No
Do you use Chemical Insecticides	Yes/No
Do you use Chemical Weedicide	Yes/No
Do you have Soil Health Card	Yes/No
Irrigation: None/ Canal/ Tank/ Borewell/Other	
Drip or Sprinkler Irrigation: Drip /Sprinkler /None	

16. Agricultural Produce in a normal year (Top 3)

Name	Unit	Quantity
Mango tree.	kg	– Growing.
Mango tree	kg	–
tree.	kg.	–

17. Livestock Numbers

Cows: NO	Bullocks: NO	Calves: NO
Female Buffalo: NO	Male Buffalo: NO	Buffalo Calves: NO
Goats/ Sheep: NO	Poultry/ Ducks: NO	Pigs: NO
Any other: Type –	No. –	
Shelter for Livestock: Pucca / Kutcha / None		
Average Daily Production of Milk(Litres): NO.		

18. What games do Children Play
–

19. Do children play musical instrument (mention)

Schedule Filled By:
Principal Respondent:
Date of Survey:

Saansad Adarsh Gram Yojana (SAGY) Panchayat Details Survey Questionnaire

(Note: Please aggregate information from village level questionnaires wherever relevant)

I. Basic Information

a. Gram Panchayat: CHANVAI

b. Block: VALSAD

c. District: VALSAD

d. State: GUJARAT

e. Lok Sabha Constituency: VALSAD

f. Number of Wards in the Gram Panchayat: 10

g. Number of Villages in the Gram Panchayat: 01

h. Names of Villages:
CHANVAI

Demographic Information

Number of Households 2514 Total Population 5834 Male 2944 Female 2890

SC HHs 12 ST HHs 1948 OBC HHs 50 Other HHs 504

I. Access to Infrastructure / Facilities / Services

	Infrastructure Facilities / Services	Located within the GP Yes (Y)/No (N)	If located elsewhere (N), distance from the GP office
a	ANM/ Health Sub Centre	N	-
b	Nearest Primary Health Centre (PHC)	✓	-
c	Nearest Community Health Centre (CHC)	N	-
d	Nearest Post Office	✓	-
e	Nearest Bank Branch (Any)	SBI ✓	-
f	Nearest Bank with CBS Facility	SBI ✓	-
g	Nearest ATM	SBI ✓	-
h	Nearest Primary School	✓	-
i	Nearest Middle School	X	05 km
j	Nearest Secondary School	X	05 km
k	Nearest Higher Secondary School / +2 College	X	05 km.
l	Nearest Graduate College	X	10 km.
m	Nearest ITI / Polytechnic Centre	X	05 km.
n	Kisan Seva Kendra	X	10 km

1

Saansad Adarsh Gram Yojana (SAGY) Panchayat Details Survey Questionnaire

(Note: Please aggregate information from village level questionnaires wherever relevant)

	Infrastructure Facilities / Services	Located within the GP Yes (Y)/No (N)	If located elsewhere (N), distance from the GP office
o	Agriculture Credit Cooperative Society	N	05 Km.
p	Nearest Agro Service Centre	N	05 Km.
p	MSP based Government Procurement Centre	N	05 Km.
q	Milk Cooperative /Collection Centre	✓	
r	Veterinary Care Centre	✓	
s	Ayurveda Centre	X	10 Km.
t	E – Seva Kendra	X	10 Km
u	Bus Stop	✓	
v	Railway Station	X	05 Km.
w	Library	X	
x	Common Service Centre	X	

IV. Sports Facilities in the Gram Panchayat

a. Number of Play Grounds in the GP: Total 0 Public 0 Private 0

b. Mini Stadium : NO Yes(Y) (No (N) *(Playground with equipment and sitting arrangement)*

V. Education, ICDS

a. Number of Angan Wadi Centres: 05

b. Number of villages without Angan Wadi Centres: –

Names of such villages: –

c. Schools (Number)

Primary Private: – Primary Govt: 01

Middle Private: – Middle Govt: –

Secondary Private: – Secondary Govt: –

Higher Secondary Private: – Higher Secondary Govt: –

VI. Public Distribution System

	Item	Private Contractor	Women's SHG	Gram Panchayat	Cooperative	Other (Mention)	Location in GP (mention Location)	If outside GP, Location & distance from GP HQrs)
a	Cereal (Rice/ Wheat/ Millets)	–	–	–	YES.	–	YES	–
b	Kerosene	–	–	–	–	–	NO	05 Km.
c.	Other (mention)	–	–	–	–	–	–	–

Saansad Adarsh Gram Yojana (SAGY) Panchayat Details Survey Questionnaire

(Note: Please aggregate information from village level questionnaires wherever relevant)

VII. Coverage of Villages under different Facilities & Services

	Parameter	Villages Status[1]	Names of Villages Covered	Names of Villages not Covered
a	Piped Water Supply Coverage to Villages	Covered ✓ / Not Covered -	01 CHANVAI	-
b	Hand Pump Coverage in Villages	Covered ✓ / Not Covered -	01 CHANVAI	-
c	Coverage under Covered Drains	Covered ✓ / Not Covered -	CHANVAI.	-
d	Coverage under Open Drains	Covered ✓ / Not Covered -	CHANVAI	-
e	Villages with Household Electricity Connection (Numbers)	Connected ✓ / Not Connected -	CHANVAI	-

VIII. Land and Irrigation

	Private Land	Area in Acres		Common Land	Area in Acres		Irrigation Structure	No.
a	Cultivable Land	-	d	Pasture / Grazing Land	-	g	Check Dam	05
b	Irrigated Land	-	e	Forests/ Plantations	-	h	Wells/Bore Wells	100
c	Un-irrigated Land	-	f	Other Common Land	-	i	Tanks /Ponds	02

[1] Mention the number of Villages Covered and Not Covered

Saansad Adarsh Gram Yojana (SAGY) Panchayat Details Survey Questionnaire

(Note: Please aggregate information from village level questionnaires wherever relevant)

IX. Parameters relating to Households & Institutions

		Number
a)	Number of eligible Households for pension (old age, widow, disability)	—
b)	Number of Households receiving pension (old age, widow, disability)	—
c)	Number of eligible Households who are not receiving pension	-
d)	Number of Households eligible for Ration Card	-
e)	Number of eligible HHs having ration cards	-
f)	Number of households covered under RSBY (Rashtriya Swasthya Bima Yojana)	—
g)	Number of HHs covered under AABY (Aam Aadmi Bima Yojana)	—
h)	Number of active Job Card holders under MGNREGA	—
i)	Number of Job Card holders who completed 100 days of work during 2013-14	—
j)	Number of shops selling alcohol	—
k)	Number of BPL families	-
l)	Number of landless households	-
m)	Number of IAY beneficiaries	-
n)	Number of FRA[2] beneficiaries	—
o)	Number of Community Sanitary Complexes	—
p)	Number of Households headed by single women	
q)	Number of Households headed by physically handicapped persons	02
r)	Total number of Persons with Disability in the village	02
s)	Number of SHGs	-
t)	Number of active SHGs	—
u)	Number of SHG Federations	—
v)	Number of Youth Clubs	—
w)	Number of Bharat Nirman Volunteers	—

Name and Signature of Surveyor and Respondent'

BASID ALI SHAIKH PRUTHVI CHHOTALA Surveyor	KAILASH UDESINGH RATHOD PRI Respondent (Preferably Gram Panchayat Chairperson)	સરપંચશ્રી ગ્રામ પંચાયત ચણવઇ તા. જી વલસાડ Official Respondent (Preferably seniormost Government official in the Gram Panchayat)	2/06/2021 Date of Survey

[2] The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

4

SAANSAD ADARSH GRAM YOJANA (SAGY) Village Details Survey Questionnaire

This questionnaire should be filled for each of the villages in the selected Gram Panchayat[1]

I. Basic Information

(There is only one village in Grampandayat)

a. Village: CHANVAI (CHANVAI)

b. Ward Number: 01

c. Gram Panchayat: CHANVAI

d. Block: VALSAD

e. District: VALSAD

f. State: GUJARAT

g. Lok Sabha Constituency: VALSAD

h. Number of Habitations / Hamlets in the Gram Panchayat: -

i. Names of Habitations / Hamlets
-

Demographic Information

Number of Households: _____ Total Population: _____ Male: _____ Female: _____

SC HHs: _____ ST HHs: _____ OBC HHs: _____ Other HHs: _____

II. Access to Infrastructure/Amenities etc.

i.	Access to Infrastructure / Facilities / Services	Located in the Village Yes (Y)/No(N)	If located elsewhere (N), distance in kms from the village
a	Nearest Primary School	-	-
b	Nearest Middle School	-	
c	Nearest Secondary School	-	
d	Kisan Seva Kendra	-	
e	Milk Cooperative /Collection Centre	-	
g	Health Sub Centre	-	
h	Bank	-	
i	ATM	-	
j	Bus Stop	-	
k	Railway Station	-	

[1] While filling this the surveyor must collect the information from the Ward Member/s and relevant government officials

1

SAANSAD ADARSH GRAM YOJANA (SAGY) Village Details Survey Questionnaire

i.	Access to Infrastructure / Facilities / Services	Located in the Village Yes (Y)/No(N)	If located elsewhere (N), distance in kms from the village
l	Library	-	
m	Common Service Centre	-	
n	Veterinary Care Centre	-	

ii. Road Connectivity

a. Habitations connected by All-weather Roads *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations where not available _____

iii. Drinking Water Facilities

a Piped Water Supply Coverage to Habitations _____ *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

b Hand Pump Coverage in Habitations _____ *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

iv. Coverage of Habitations under Waste Management System

a Coverage under Covered Drains _____ *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

b Coverage under Open Drains _____ *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

c Coverage under Doorstep Waste Collection *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

v. Coverage of Habitations under Electrification

a Coverage under Household Connections *(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

b Coverage under Street Lighting All*(1-All 2-None 3-Some)*

If 3 mention the name of the habitations not covered _____

vi. Sports Facilities in the Village

a Number of Play Grounds in the Village (minimum size 200 square meters) _____

b Mini Stadium _____ Yes(Y) /No (N)

vii. Education, ICDS

a Number of Anganwadi Centres _____

c Schools (Number)

Primary Private _____ Primary Govt _____

Middle Private _____ Middle Govt _____

Secondary Private _____ Secondary Govt _____

Higher Secondary Private _____ Higher Secondary Govt _____

2

SAANSAD ADARSH GRAM YOJANA (SAGY) Village Details Survey Questionnaire

viii. Land Category		Area in Acres		Land Category	Area in Acres		Irrigation Structure	No.
a	Cultivable Land	-	d	Pasture / Grazing Land	-	g	Check Dam	-
b	Irrigated Land	-	e	Forests/ Plnatations	-	h	Wells/Bore Wells	-
c	Un-irrigated Land	-	f	Other Common Land	-	i	Tanks /Ponds	-

ix. Entitlement Related Parameters		
1	Number of active Job Card holders under MGNREGA	-
2	Number of active Job Card holders who have completed 100 days of work	-
3	Number of shops selling alcohol	-
4	Number of BPL families	-
5	Number of landless households	-
6	Number of IAY beneficiaries	-
7	Number of FRA beneficiaries	-
8	Number of common sanitation complexes	-
9	Number of SHGs	-
10	Number of active SHGs	-
11	Existence of SHG Federation in the Village (Yes / No)	-
12	Number of Youth Clubs	-
13	Number of Bharat Nirman Volunteers	-

Name and Signature of Surveyor and Respondent'

BASIDALI R. SHAIKH PRUTHVI S CHHOWALA Surveyor	KAILASH UDESINGH RATHOD PRI Respondent (Preferably a ward member from a ward that is fully or partially covered under the Village)	RD Patel સરપચશ્રી ગ્રામ પંચાયત ચણવઇ તા જી વલસાડ Official Respondent (Preferably seniormost Government official in the Gram Panchayat)	02/06/2021 Date of Survey

3

Sarpanch Letter giving information about the village and Approval of Design Proposal for village

VISHWAKARNA YOJANA PHASE - VIII

VILLAGE :- CHANVAI, VALSAD.

SUBJECT :- APPROVAL OF DESIGN PROPOSALS FOR CHANVAI VILLAGE

To,

The Sarpanch.
Rekhaben O. Patel
(Chanvai village)

As per "vishwakarma yojana" guidelines. following student of Laxmi Institute of Technology, Sarigam have taken Chanvai village to developed in part II, From the village visits and from the information provided by you, we got the to know about lacking facilities in chanvai village. As a project outcome, we students have made some design of the structures.

Kindly accept our design proposals. Be assured that this project is allocated by government of gujarat to Gujarat Technological university, Chandkheda, Ahmedabad. so, we are proposing the designs for the study purpose only.

Name	EN. NO.	MO. NO.
Basidali R. Shaikh	180863106009	9904674719
Pruthvi J. Chhavada	180863106002	8511773044

Proposed designs for chanvai village in part - II

- Aanganwadi
- Public Garden
- village Market
- Cricket Ground

MR. AMIT R. CHAUHAN
NODAL OFFICER - PROJECT.
LAXMI INSTITUTE OF TECHNOLOGY, SARIGAM, VALSAD.

I sarpanch of chanvai village (valsad district) undersigning the letter of by accepting your proposed designs for the development of village taken under "vishwakarma yojana".

સરપંચશ્રી
ગ્રામ પંચાયત ચણવઇ
તા જી વલસાડ

21. Comprehensive report for the entire village

Vishwakarma Yojana provides a special scheme for village development of villages by GTU and Government of Gujarat in which students work together and collect data and information regarding village development with the help of gram panchayats and stakeholders. Villages have some basic facilities like Drainage line, library,Repair & maintenance of bus stop, community hall, road design, maternity hall, Aanganwadi, public garden, village market, cricket garden, vacational training centre, village pond Development are sufficient so that village can develop. So, we will give proposals regarding sustainable energy sources and solutions related to infrastructure problems. Efforts have been made in this project to identify and plan some of the below facilities for sustainable development of the village and to meet the needs of the future population.

Vishwakarma Yojana is one of the initiatives towards Rurbanization that is village development by the government of Gujarat, which was allotted as a real time situation type project provided to GTU.

It is one of the strategies to reduce urban city pressure and lower the migration rate by developing villages with a “rural soul” but with all urban amenities that a city may have. In this project the students meet the relevant citizens of the village and survey the existing facilities. Then design of the sustainable infrastructure which is to be modified is carried out for the village. This includes implementation of engineering skills to prepare detailed project reports for the village as a part of the final year project work. By this project certain experiences recreates a real work and need of application of an individual technical knowledge on any existing problems. Based on the survey we tried to give the design of basic facilities to fulfil their needs. By providing these basic facilities to villages to reduce urban city pressure and decrease migration rate, which is the aim of Vishwakarma Yojana.