

**GIS-Based Flood Shelter Accessibility and Population Risk Assessment
in Gangachara Upazila, Rangpur**

**Submitted By
Md. Redoy Babu**

A Thesis Submitted to the Department of Civil Engineering, Daffodil International
University in Partial Fulfillment of the academic Requirements for the Degree of
Bachelor of Science in Civil Engineering



**Department of Civil Engineering
Daffodil International University**

September 2025

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DECLARATION

It is hereby declared that the thesis “**GIS-Based Flood Shelter Accessibility and Population Risk Assessment in Gangachara Upazila, Rangpur**” has been conducted under the guidance of **Mr. Md. Masud Alom**, Assistant Professor, Department of Civil Engineering, Daffodil International University.

To the best of our knowledge, this research is original and has not been submitted elsewhere or published previously, except where proper citations have been given.



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The thesis entitled “GIS-Based Flood Shelter Accessibility and Population Risk Assessment in Gangachara Upazila, Rangpur” submitted by Md. Redoy Babu (192-47-1031, Session: Summer 2019) has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Bachelor of Science in Civil Engineering on September - 2025.

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DEDICATION

This thesis is dedicated to my dear family. Their love, care and support gave me the courage to complete this work. I am also thankful to my teachers and mentors for their helpful advice and guidance throughout the journey.

ABSTRACT

This thesis focuses on assessing flood shelter accessibility and population risk in Gangachara Upazila, Rangpur using Geographic Information System (GIS) tools. The main objective of the study is to support better transportation planning during flood events and help reduce disaster-related risks for local people. OpenStreetMap (OSM) and satellite images were used to identify household locations and roads. QuickOSM and other tools in QGIS were used to map buildings and connect them to the nearest flood shelters. Manual measurements were taken to find the travel distance from each house to its assigned shelter. A database was created that includes house numbers, population per household, and travel distance. Although individual coordinates for each house were not used in the beginning, this limitation has been acknowledged. Still, the analysis provides valuable insights about the existing road network and how people can reach shelters during floods. This work contributes to the field of transportation engineering by offering a clear, data-based view of emergency accessibility, which can help future planning and improve local disaster response systems.

ACKNOWLEDGEMENT

At the very beginning, we express our heartfelt gratitude to Almighty God, whose infinite mercy, blessings, and guidance have enabled us to reach this stage of academic accomplishment. Without His grace, it would not have been possible to complete this research work successfully.

We are deeply grateful to our respected supervisor, **Md. Masud Alom, (Assistant professor) Department of Civil Engineering, Daffodil International University**, for his continuous guidance, thoughtful feedback, and unwavering encouragement throughout the entire course of our thesis. His valuable suggestions and support helped shape this study in a meaningful direction.

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CHAPTER I

INTRODUCTION

1.1 Background

Bangladesh is highly vulnerable to natural disasters, especially floods, which occur almost every year in different regions of the country. Northern districts like Rangpur, particularly areas surrounding the Teesta River, face repeated flooding due to the river's transboundary nature and upstream water control by India's Gajoldoba Barrage. Gangachara Upazila, located near the Teesta, is frequently affected by flash floods, which arrive quickly and leave very little time for warning or organized evacuation.

In such emergency situations, proper transportation planning and shelter accessibility are critical. Unfortunately, many people living in flood-prone villages cannot reach flood shelters quickly, either due to long distances or poor road connectivity. Roads often become unusable during floods, making it difficult for people to move to safety. In this context, Geographic Information System (GIS) tools can help identify the accessibility of flood shelters and highlight gaps in evacuation routes. A transportation-focused GIS approach allows for assessing whether people can reach shelters on foot within a reasonable distance — such as 1 km — during a flood event.

This study focuses on analyzing shelter accessibility and population exposure to flood risks in Gangachara Upazila using GIS-based methods. The goal is to provide reliable spatial insights that can help improve emergency transportation planning and disaster management.

1.2 Objective

The major objective of this study is as follow:

- To identify the flood-affected areas of Gangachara Upazila and assess whether people can safely and quickly reach flood shelters during flood events.

1.3 Scope of the Thesis

This study focuses on evaluating the accessibility of flood shelters in Gangachara Upazila, an area that remains highly vulnerable to seasonal flooding due to its proximity to the Teesta River. The analysis centers around household-level and infrastructure-level data to determine how effectively people can reach nearby shelters in times of disaster.

- Identifying and mapping the location of flood shelters using spatial data from OpenStreetMap and satellite imagery.
- Analyzing road networks, population clusters, and shelter accessibility using QGIS tools to evaluate distance, travel feasibility, and infrastructure conditions during flood scenarios.
- Applying GIS-based spatial techniques to classify accessibility zones and highlight areas with poor connectivity or high vulnerability.

While the study addresses a specific flood-prone region, the methods and insights may inform broader disaster management planning, particularly for rural or riverine communities in Bangladesh.

1.4 Thesis organization

- Chapter 1 _____ Introduction
- Chapter 2 _____ Literature review
- Chapter 3 _____ Methodology
- Chapter 4 _____ Result and discussion
- Chapter 5 _____ Conclusion and recommendation

CHAPTER II

LITERATURE REVIEW

2.1 General Introduction

The conceptual foundation of each study is a thorough analysis of appropriate research. It defines the methodological framework, confirms the study's importance, and helps find information gaps. This chapter reviews previous studies on flood risk analysis, shelter accessibility, road classification, and GIS-based mapping techniques. These reviews serve as a foundation for the current study, which focuses on flood shelter accessibility and transportation network analysis in Gangachara Upazila, an area in northern Bangladesh that is prone to flooding occurs.

2.2 Review of Existing Studies on Flood Shelter Accessibility

Ahmed et al. (2021): GIS-Based Flood Shelter Accessibility in Kurigram Ahmed et al. conducted a detailed GIS-based study in the Kurigram District, one of the most flood-prone areas in northern Bangladesh. Their research focused on mapping existing flood shelters and assessing accessibility levels during the monsoon season. They used spatial buffer analysis to calculate catchment areas around shelters and combined this with population density data to estimate household exposure. The study highlighted that many communities remain outside the safe walking zone of 1 km, indicating urgent needs for new shelter planning and road improvements. This study closely aligns with the objectives of the present research in Gangachara.

Rahman & Kabir (2020): Road Conditions and Flood Vulnerability in Northern Bangladesh Rahman and Kabir examined flood vulnerability by classifying road types using satellite imagery and field data. Their study revealed that many evacuation routes become unusable during flood events due to poor road conditions and lack of maintenance. The researchers emphasized the significance of road infrastructure in flood preparedness, recommending the upgrading of key access roads to enhance shelter reachability. Their methodology supports the current research's use of road classification (residential, unclassified, secondary, tertiary) to assess evacuation feasibility.

Islam & Hossain (2019): Barriers to Shelter Access in Rural Areas This study evaluated the effectiveness of early warning systems and shelter location strategies in Gaibandha District. The researchers found that walking distance, poor road quality, and lack of public transportation were the main barriers to accessing shelters. Their use of participatory mapping

and household surveys provided a ground-level understanding of flood response challenges. The findings validate the current study's emphasis on spatial accessibility and the critical role of infrastructure in emergency planning.

Saha et al. (2017): Shelter Capacity and Evacuation Time Analysis in Jamalpur Using ArcGIS network analysis, Saha et al. assessed shelter capacity relative to population pressure and travel time during flood events. They found that some shelters were either overcrowded or unreachable due to road obstructions. The study recommended relocating or constructing additional shelters in under-served areas. Their approach inspired the current research's use of service area mapping and shelter catchment analysis in Gangachara Upazila.

Haque & Zaman (2015): Flood Behavior and Evacuation Delays in the Teesta Basin This research focused on flood behavior in the Teesta Basin, identifying key factors causing delays in evacuation. The findings showed that poor road connectivity, inadequate early warnings, and low community awareness were responsible for late shelter-seeking behavior. The authors recommended community-based awareness programs and improved transport planning. Their insights into behavioral responses to flood threats provide qualitative context to the spatial analysis in the present study.

UNDRR (2019): GIS in Disaster Preparedness: Global Perspectives The United Nations Office for Disaster Risk Reduction highlighted the role of GIS in building flood resilience across developing nations. The report included Bangladesh as a key example of successful community-based flood response. GIS was used to model hazard zones, plan infrastructure, and simulate evacuation routes. This global perspective supports the integration of spatial tools in the current thesis to create actionable disaster mitigation strategies at the local level.

Sphere Handbook (2018): Humanitarian Standards for Shelter Planning The Sphere Handbook provides global guidelines for emergency shelter design, advocating a maximum walking distance of 1 km to shelters in rural areas. It stresses equitable access, especially for vulnerable populations. These standards have been adopted widely in disaster management programs, including those in South Asia. The present study uses this 1 km benchmark to delineate service areas around shelters, evaluate population coverage, and identify accessibility gaps.

Efrimidou & Spiliotis (2024): In their recent study conducted in Greece, Efrimidou and Spiliotis (2024) introduced an integrated GIS-DEMATEL-based flood risk assessment model. Their work focused on identifying and categorizing flood-vulnerable zones by combining expert input and spatial data layers. This methodology not only helped in evaluating flood-prone areas but also provided a scientific basis for prioritizing flood mitigation efforts and infrastructure planning. The study demonstrates how decision-making tools can be effectively

coupled with GIS for strategic disaster resilience.

Nakhon Si Thammarat Province, Thailand (2023): A 2023 GIS-based spatial analysis in Nakhon Si Thammarat Province, Thailand, applied evacuation modeling to assess shelter accessibility under flood conditions. The researchers mapped existing flood shelters, identified safe pedestrian routes, and evaluated distance and connectivity across the urban-rural interface. Their findings suggested that shelter location optimization and transportation planning are key factors in reducing evacuation time. The study serves as a strong example of regional-scale disaster preparedness using spatial tools in Southeast Asia.

AHP-GIS Shelter Suitability Study (2023): Another notable global contribution came from a 2023 study that combined Analytic Hierarchy Process (AHP) with GIS to assess shelter site suitability. This multicriteria decision-making approach incorporated factors such as elevation, proximity to roads, population density, and land use. The resulting suitability maps were designed to guide urban planners in selecting optimal shelter locations in flood-prone zones. The integration of AHP with GIS highlights an evolving global trend in using spatial intelligence for more resilient infrastructure planning.

2.3 GIS Applications in Flood Risk Mapping

Flood risk assessments have been transformed by Geographic Information System (GIS) tools, which enable infrastructure vulnerability analysis and spatial modeling. QGIS and OpenStreetMap have become widely used in Bangladesh due to their open-source availability and precision. Previous studies (e.g., UNDRR, BWDB) used these tools to identify flood-prone zones, evacuation routes, and shelter coverage areas. In this study, GIS is used to perform shelter buffer analysis, road accessibility mapping, and population exposure estimation.

2.4 Road Network Classification and Evacuation Efficiency

Evacuation efficiency during flood emergencies depends significantly on road type and condition. For this study, roads are classified into four categories:

- **Secondary Roads** (regional or union-level roads with moderate traffic flow)
- **Tertiary Roads** (major local roads that connect rural areas to towns)
- **Residential Roads** (typically narrow, often paved or semi-paved)
- **Unclassified Roads** (often earthen paths or informal routes)

This classification serves as critical for determining which roads are more likely to sustain damage or become inaccessible during floods and which others remain available. The map-based analysis shows that unclassified and residential roads are particularly vulnerable during flood periods.

2.5 Walking Distance and Shelter Accessibility Thresholds

Many studies, including Sphere Handbook (2018), propose a 1 km maximum walking distance to shelters in rural settings to ensure timely access. In this study, 1 km buffer zones are created around flood shelters to determine how many households lie within or outside the safe walking threshold. This requirement is especially relevant when preparing for reasonable shelter access in times of require.

2.6 Population Risk Assessment and Vulnerability Mapping

Flood impacts do not affect all populations equally. The level of risk varies depending on factors such as location, mobility, and access to infrastructure. In particular, the distance from flood shelters, the condition and classification of roads, and the demographic distribution of the population play a significant role in determining vulnerability.

In order to identify places at increased risk, prior research has combined transportation networks, shelter locations, and population distribution based on spatial data. Following a similar approach, this study applies spatial vulnerability analysis by overlaying population data with road infrastructure and buffer zones around flood shelters. The goal is to identify zones with heightened flood exposure that should receive priority in evacuation and disaster response planning.

2.7 Overview and Research Gaps Identified

While existing studies provide a strong foundation, few have assessed rural areas like Gangachara with an integrated GIS-based approach that includes road classification, shelter accessibility, and population distribution. This study aims to bridge that gap by creating 15 map-based outputs that illustrate the flood-time accessibility of shelters and help identify infrastructural and demographic weaknesses. The findings will direct future construction plans and flood preparedness measures in similar rural flood-prone locations.

CHAPTER III

METHODOLOGY

3.1 Research Approach

This study uses Geographic Information System (GIS) modern technologies and a quantitative, spatial analysis-based methodology. It aims to assess flood shelter accessibility in Gangachara Upazila by integrating demographic data, road networks, flood zones, and shelter locations. The research applies mapping, classification, buffer analysis, and modeling of population exposure to obtain applicable expertise for disaster preparations.

3.2 Flow diagram of Methodology

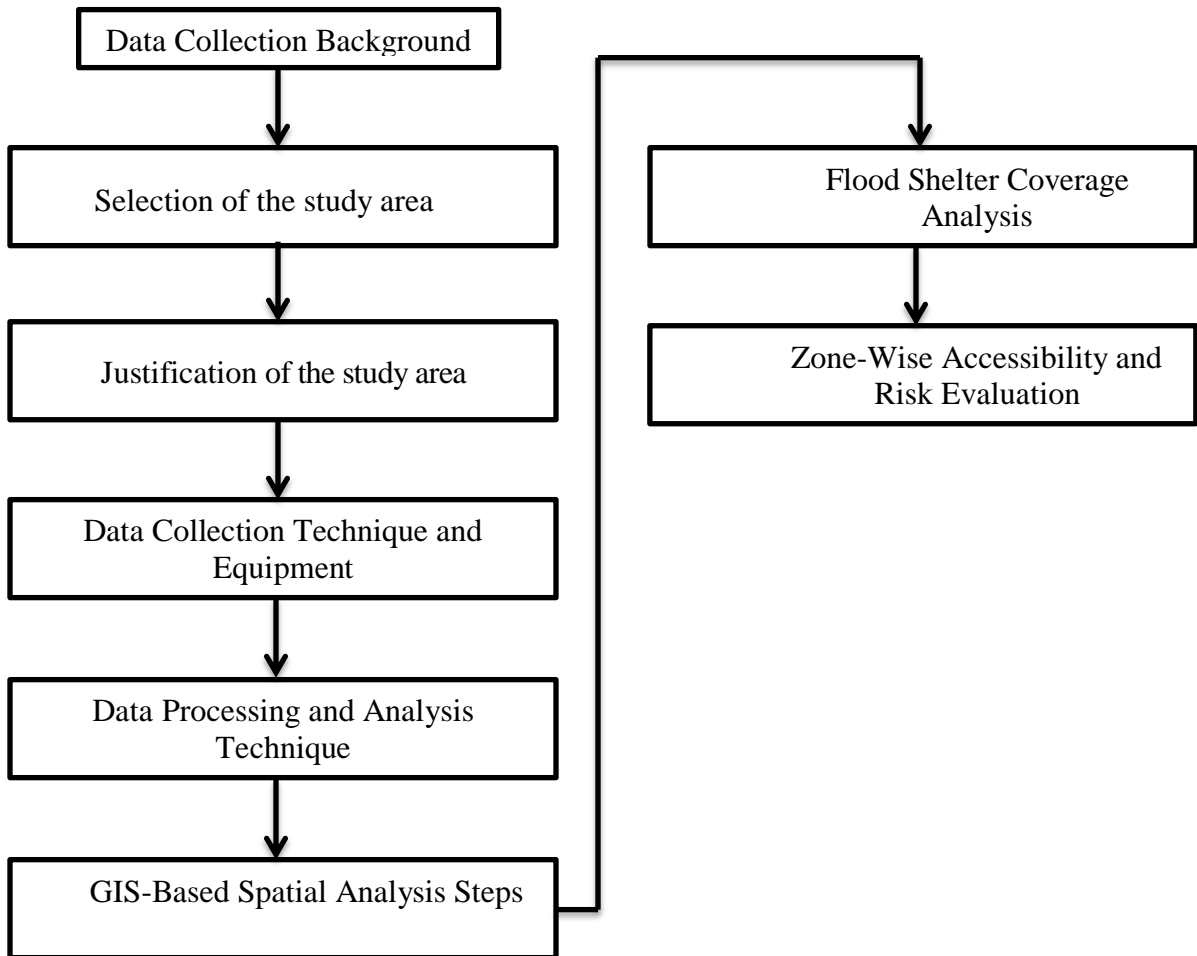


Figure 3.2: Flow Chart

3.3 Data Collection Background

The research was conducted in Gangachara Upazila, located in the Rangpur district, which is a flood-prone area along the Teesta River. The sources of the data were OpenStreetMap, Google Map, and Google Satellite Map. QGIS 3.34.1 was used for the entire geographical study.

The key data used in the analysis included:

- a) Residential building locations
- b) Locations of flood shelters
- c) Road network
- d) Buffer analysis
- e) Population estimates
- f) Distance and risk-based zone classification

3.4 Selection of the study area

These figure presents the selected study area located in Gangachara Upazila, Rangpur Division, beside the Teesta River. To provide a comprehensive understanding of the landscape, three different base maps have been used: Google Map imagery, Google Satellite imagery, and OpenStreetMap.

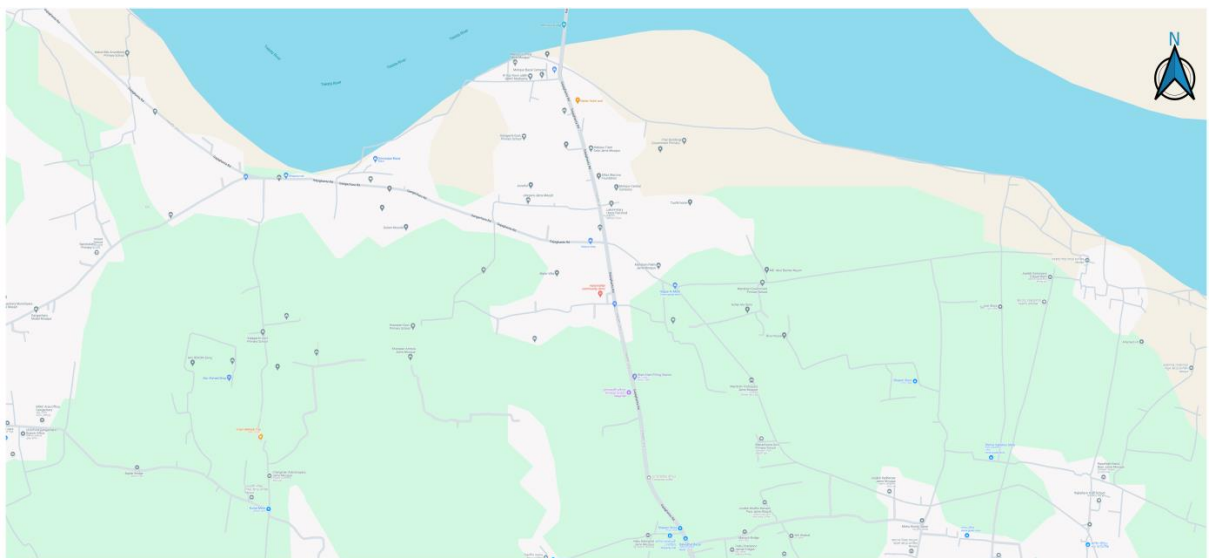


Figure 3.4.1: Displayed with Google Map Imagery

Scale: 1:22000

On the Google Map base layer, (**Figure: 3.4.1**) a clear top-down view of the study area region is visible, where key features such as main roads, settlements, public service buildings, and infrastructure layouts can be easily identified.

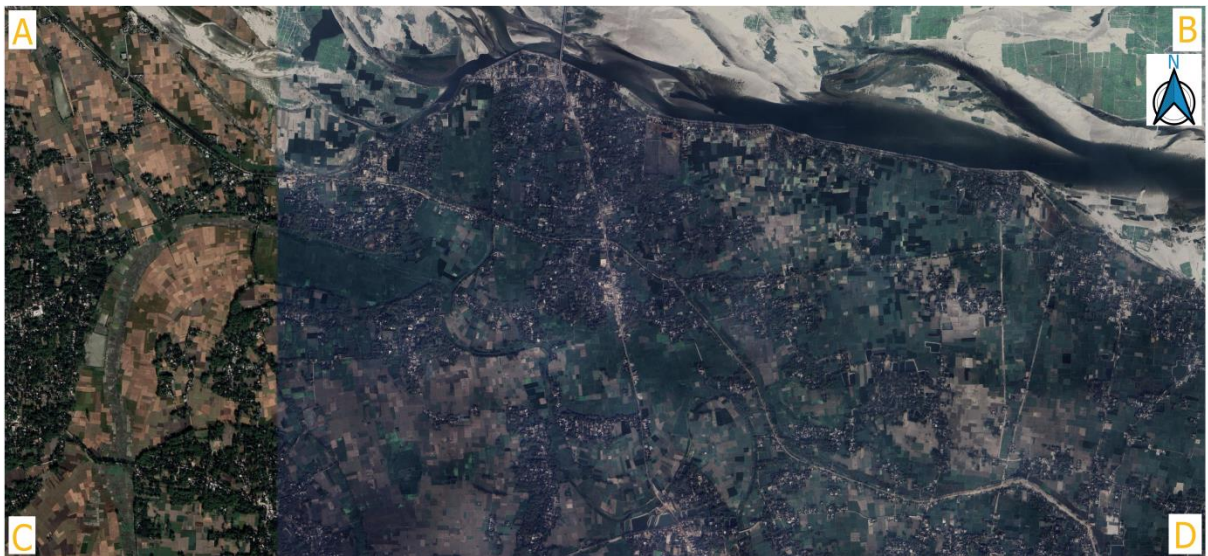


Figure 3.4.2: Displayed with Google Satellite Imagery

Scale: 1:22000

The Google Satellite imagery (**Figure: 3.4.2**) provides high-resolution visuals of study area land features, such as vegetation cover, observation of high and low places, flood shelter center selection, river morphology, settlement clustering, and agricultural fields, enhancing the spatial perception of the terrain. This map also present by the geographical extent of the study area is consistently defined by a quadrilateral boundary, marked by four coordinate points: A (9932661, 2982731), B (9939192, 2982742), C (9932696, 2980006), and D (9939174, 2980006). All visualizations use this fixed border to provide spatial coherence throughout the analysis. For visual comparison, the maps are produced at an equivalent scale of 1:22000.

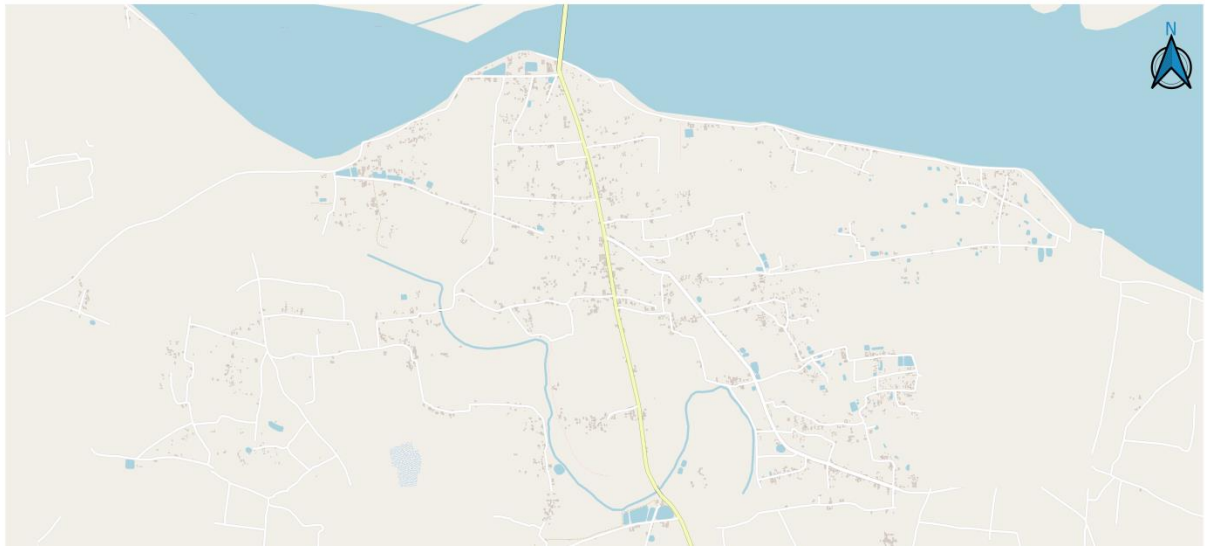


Figure 3.4.3: Displayed OpenStreetMap Imagery

Scale: 1:22000

The default base map (**Figure 3.4.3**) for additional geospatial analysis is the OpenStreetMap (OSM) version. It is useful for overlaying other data layers including home locations, flood shelter locations, and road classifications as it clearly delineates roads, buildings, water bodies, and other man-made or natural objects.

This composite representation, displaying the same research area using multiple map sources, benefits in the verifying of the geographical data and facilitates precise and contextually aware spatial decision-making for flood resilience and transportation planning.

3.5 Justification of the study area

Why Gangachara Upazila was selected:

Gangachara Upazila in Rangpur District was chosen as the study area due to its frequent and severe flooding, especially caused by the Teesta River. This region experiences recurrent seasonal and flash floods, riverbank erosion, and repeated displacement of its population. These factors make it a perfect location for utilizing GIS technologies to evaluate flood shelters' spatial accessibility.

According to reports, in July 2023, over 50,000 people were stranded in the upazila as the Teesta River crossed the danger level by 20 cm, flooding more than 30 villages (**The Daily Star, 2023**). Similarly, in June 2022, approximately 45,000 people across 36 villages were affected due to breaches in embankments and heavy rainfall (**Dhaka Tribune, 2022**).

Additionally, flash floods in October 2021 left over 136,000 people waterlogged within 24 hours, highlighting the region's extreme flood sensitivity (**bdnews24.com, 2021**).

Frequent riverbank erosion threatens roads, embankments, and infrastructure. News reports document collapsed roads, damaged flood protection structures, and tilted electricity poles, especially in villages such as Alambiditor and Laxmitari.

Moreover, flood-affected areas in Gangachara become geographically isolated due to submerged and damaged roads, limiting access to emergency shelters and safe transport. Therefore, Gangachara was chosen as the most pertinent and pressing the situation to evaluate flood shelter accessibility from the standpoint of transportation planning.

3.6 Data Collection Technique and Equipment

In this study, spatial data was collected primarily using QGIS software and openly available geospatial data sources. The base map and features—such as roads, buildings, rivers, and open lands—were extracted from OpenStreetMap (OSM). To determine spatial accuracy and completeness, these facets were additionally manually checked and then optimized using QGIS. The entire study followed the WGS 84 (EPSG:4326) coordinate reference system for consistency across all layers.

Google Satellite imagery and Google Maps were extensively used for visual verification and contextual interpretation. Google Maps helped identify the layout of buildings, the names and positions of public facilities (e.g., schools and mosques), and accurate road alignments. Additionally, satellite imagery was used to locate flood-prone areas and potential empty lands suitable for flood shelters.

Residential and public buildings were identified using QGIS's QuickOSM plugin by running spatial queries. Building polygons were further classified manually using visual inspection of Google Maps and satellite imagery. Each house was assigned a unique ID number and its location was confirmed using QGIS tools.

Household population estimates were based on data from the Bangladesh Demographic and Health Survey (**BDHS, 2022**), which states that rural households typically consist of 4.4 to 5.2 persons. Based on visible building sizes, 2 to 10 persons were assumed per household. Union- and village-level population data from the Bangladesh Bureau of Statistics (**BBS, 2022**) was used to validate the demographic distribution of the study area.

In summary, multiple sources such as OSM, Google Maps, Google Satellite, BDHS, and BBS were integrated using QGIS to ensure accurate spatial data acquisition for the study.

3.7 Data Processing and Analysis Technique

That follows data collection, a number of QGIS processing procedures was conducted to get the data ready for spatial analysis. First, all raw spatial layers—including buildings, roads,

rivers, and open lands—were cleaned and topologically corrected to avoid duplication and overlap. Building footprints were reviewed to ensure that no structures were misclassified, and public service buildings were tagged separately.

A field was added to the attribute database and manually filled in with the projected household size based on building area in order to estimate the number of persons per building. This made easier to do population-weighted geographical analysis, including calculating buffer zones and estimating flood shelter requirements.

Distances between each household and the nearest identified shelter were calculated using the “Measure Line” tool in QGIS. To analyze shelter coverage, a 1-kilometer buffer was created around each shelter location. Any buildings located outside these buffer zones were flagged as needing additional transportation support during emergencies.

To figure out the percentage people with acceptable walking access (within 1 km) against those without, numbers of people around each buffer zone has been added in motion.

3.8 GIS-Based Spatial Analysis Steps

GIS tools were used in a methodical way to do detailed geographic analysis :

- a) Digitization and Layer Preparation: All spatial features (roads, buildings, rivers, open lands) were digitized or extracted using OSM, Google Maps, and Satellite imagery.
- b) Zone Division Based on Natural Barriers: The study area was divided into three zones using major road alignments as natural dividing lines. The road closest to the Teesta River (Line 1) was considered a potential flood barrier and separated Zone 1 (riverside) from Zone 2. A second elevated road (Line 2) separated Zone 2 from Zone 3. These divisions were made based on flood direction, elevation, and the physical structure of the roads.
- c) Shelter Site Selection: Three potential shelter sites were identified based on satellite image interpretation. Key selection criteria included proximity to main roads, availability of open land, and distance from dense settlements.
- d) Accessibility Assessment: Road classifications (residential, unclassified, and secondary/tertiary) were used to assess flood-time connectivity to shelters. Map 13 visualizes these roads and their functionality under flood conditions.
- e) Population Accessibility Evaluation: A 1-kilometer buffer was applied around shelters. Spatial join tools were used to analyze how many people fell inside or outside these buffers.

3.9 Flood Shelter Coverage Analysis

This section analyzes the coverage of the identified flood shelters using spatial buffer techniques. A buffer of 1 kilometer radius was created around each shelter to assess how many households fall within the acceptable walking distance during emergencies, as suggested by **Chakraborty and Kar (2023)**.

Using QGIS, all residential buildings were overlaid with the buffer zones. The total number of houses covered within the buffers was calculated, and their estimated population (based on household size) was summed. The findings clarified that although some of the population is included inside the 1 km coverage, a number of housing layers are still outside the buffer zones.

These uncovered areas represent a gap in shelter accessibility. Residents of such regions may face difficulties reaching the nearest shelter on foot during flood events. Therefore, these areas have been marked as high-priority zones for transportation planning or the construction of additional shelters in future.

3.10 Zone-Wise Accessibility and Risk Evaluation

To better understand spatial vulnerabilities, the study area was divided into three zones using two main roads as natural boundaries (Line 1 and Line 2). These roadways' relative elevation makes them natural embankments, running on top of to the Teesta River.

- Zone 1 is most vulnerable to flooding because its location is close to the river.
- Zone 2 is located between Line 1 and Line 2. It is moderately vulnerable and may be flooded if Line 1 fails
- Zone 3 lies beyond Line 2, which is comparatively safer unless both embankments (roads) are breached.

Each zone was analyzed for the number of houses, population, and accessibility to the nearest shelter. Road classifications (residential, tertiary, secondary and unclassified) were used to understand mobility patterns during floods. It was found that Zone 1 has fewer reliable roads and higher flood risk, while Zone 3 has better connectivity and lower exposure.

During flood events, this zoning benefits in optimizing transportation demands, shelter distribution and response preparation.

CHAPTER IV

RESULT AND DISCUSSION

4.1 Introduction

This chapter presents the core findings of the spatial analysis carried out to assess flood shelter accessibility in Gangachara Upazila. Many thematic maps have been generated using QGIS and geospatial tools to examine household distribution, shelter locations, road networks, service facilities, and flood-prone zones.

From the perspective of transportation engineering, the focus is on evaluating connectivity between households and flood shelters, identifying network gaps, and analyzing access routes during flood scenarios. The process displays how emergency mobility and evacuation planning are impacted by spatial infrastructure.

The supporting data tables, included in the appendix, provide detailed insights into population, road classification, and household-to-shelter connectivity.

4.2 Building Footprint and Household Pattern

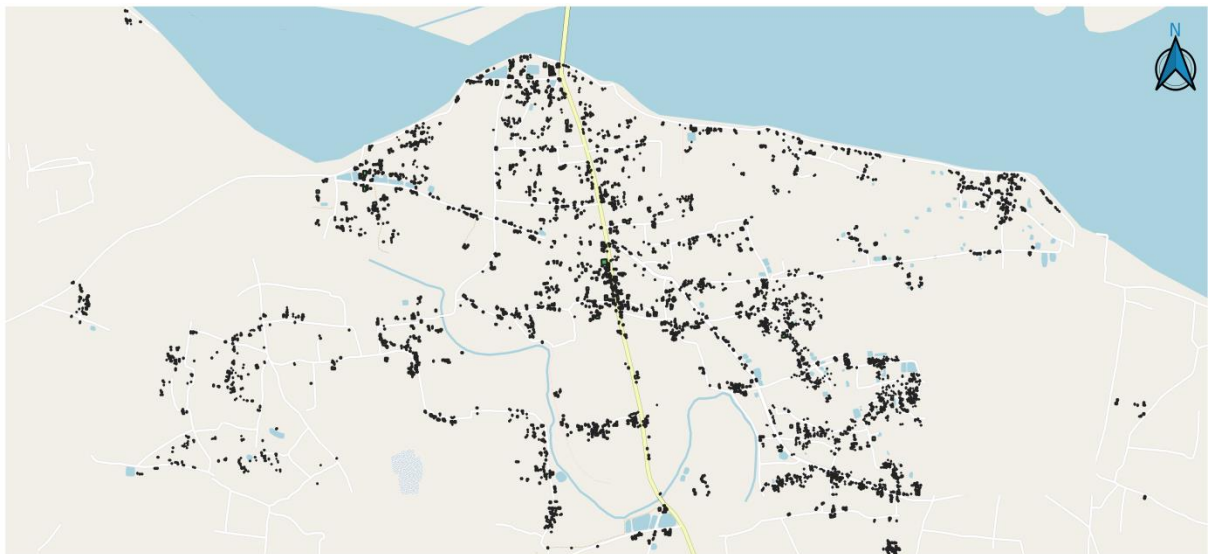



Figure 4.2.1 Building footprints within the study area Source: OpenStreetMap 
Scale: 1:22000

This part examines the buildings spatial distribution in the research area for explanation household density and settlement concentration. Through the analysis of satellite data and building footprints taken from OpenStreetMap, the study identifies areas with clustered housing patterns that are potentially more vulnerable during floods due to higher population density and limited access to shelters.

4.3 Zonal Division and Thematic Mapping

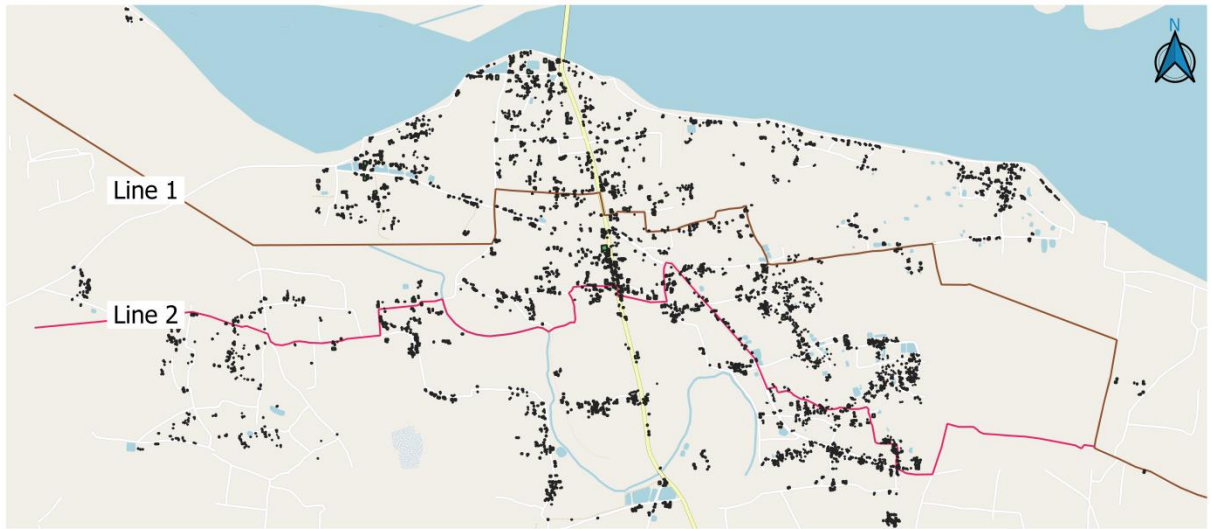


Figure 4.3.1 Zonal division of study area

Source: OpenStreetMap 
Scale: 1:22000

This map (**Figure: 4.3.1**) presents a comprehensive zonal classification of the study area in Gangachara based on both administrative demarcations and natural flood-related barriers. The division is guided by two prominent boundary lines: **Line 1** (chocolate-colored) and **Line 2** (pink-colored), which follow major road alignments assumed to function as natural constraints to floodwater flow. Accordingly, the area is divided into three thematic zones.

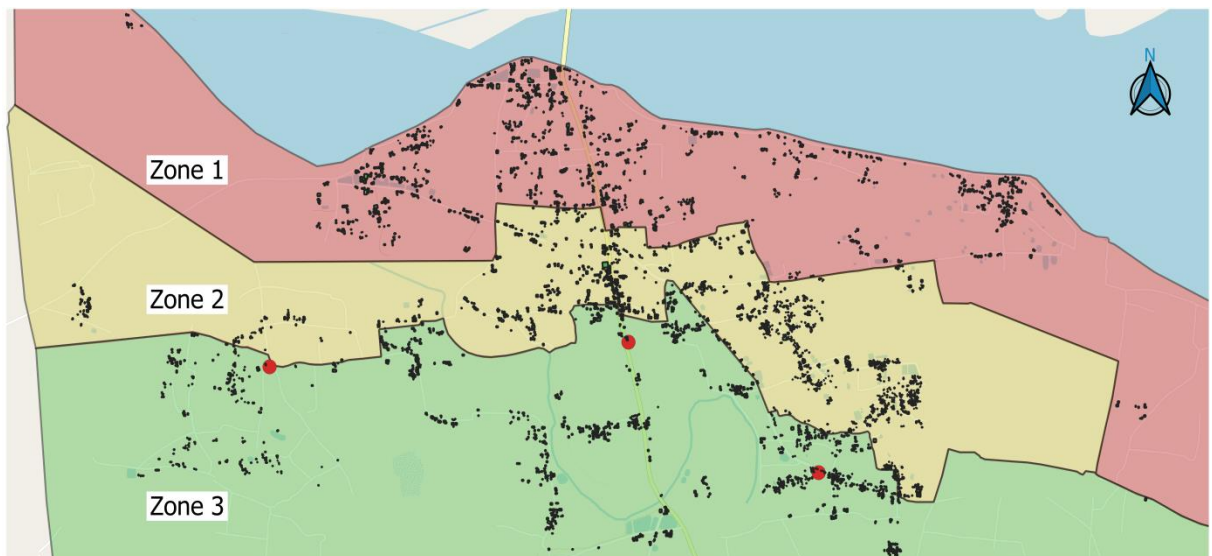


Figure 4.3.2 Zonal Mapping With Color-coded Polygons

Source: OpenStreetMap 
Scale: 1:22000

The visual separation (**Figure 4.3.2**) between zones enhances by color-coded polygons making it simple to identify vulnerability, shelter accessibility, and population distribution. This zonation makes planning or flood preparedness specific to a destination easier by arranging shelter building according to easy access to hazard zones and existing infrastructure.

Zone 1 (Red): Geographically, Zone 1 is low-lying because of its location near to the Teesta River. Every monsoon season, the Teesta River's water level rises, making this area along the riverbanks in danger of flooding. This makes the area more vulnerable to flooding than other areas. The close distance to the river also increases the risk of erosion or flash floods. In addition, roadways are frequently submerged during floods, making it more difficult to get to shelters, putting residents at further risk.

Zone 2 (Yellow): Zone 2 is a transitional risk zone since it is located between Lines 1 and 2. Because it is almost higher in elevation than Zone 1 but yet close enough to the river to be harmed during active monsoon storms, it faces moderate levels of flood and erosion risk. Flooding is less common area than in Zone 1, but it can still be affected by heavy rainfall and rising water levels. Extreme weather conditions can sometimes make accessibility difficult, however the risk is usually less than in Zone 1.

Zone 3 (Green): The safest of the three zones with the least risk of erosion and flooding is Zone 3, which is situated beyond Line 2. Because of its higher level and farther separation from the riverbanks, it is safe even during severe monsoon seasons. The area is ideally situated for building flood shelters because it is generally accessible. Since the region is still less impacted by waterlogging and rising water levels, founding shelters here would give residents from Zones 1 and 2 a safe haven during emergencies. Additionally, because of the stable ground conditions, building is safer and more environmentally friendly over time.

4.4 Identification of Suitable Flood Shelter Locations:

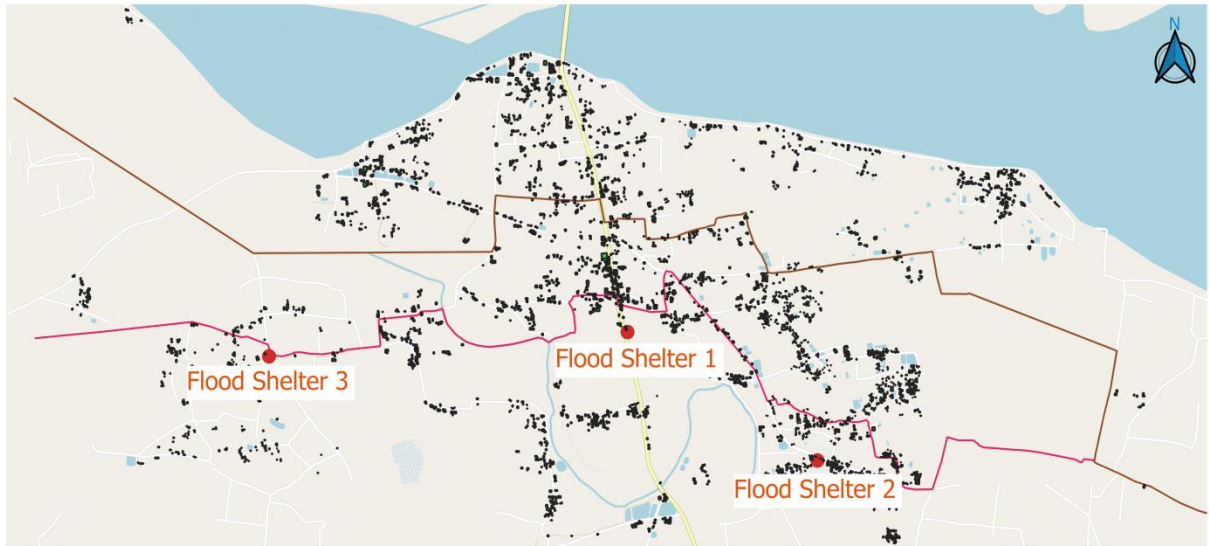


Figure 4.4.1 Proposed location for flood shelters

Source: OpenStreetMap

Scale: 1:22000

This map highlights three proposed flood shelter locations within the study area of Gangachara Upazila. Each site is marked with a red circular symbol and strategically placed within the green zone, which given its elevation and distance from the Teesta River, is regarded as mainly safe. The site selection was based on a combination of spatial criteria, including:

- High population density in surrounding areas.
- Absence or long distance from existing shelters.
- Proximity to accessible roads for efficient evacuation.
- Safety considerations based on natural barriers and flood vulnerability.

These proposed locations aim to strengthen disaster preparedness and address current gaps in shelter coverage. The specific geographic coordinates for each shelter are as follows:

- Shelter 1: 9936076.2, 2981244.6
- Shelter 2: 9937120.37, 2980560.61
- Shelter 3: 9934104.7, 2981115.8

This map reflects a practical application of spatial analysis to inform infrastructure planning and enhance resilience in flood-prone regions.

4.5 Household-Shelter Connectivity and Distribution

This section evaluates the spatial relationship between households and nearby flood shelters for three selected shelter sites. The maps give information about shelter accessibility in terms of walking distance and spatial coverage, as well as the concentration of households nearby each shelter. This helps assess the real-time effectiveness of each shelter under emergency scenarios.

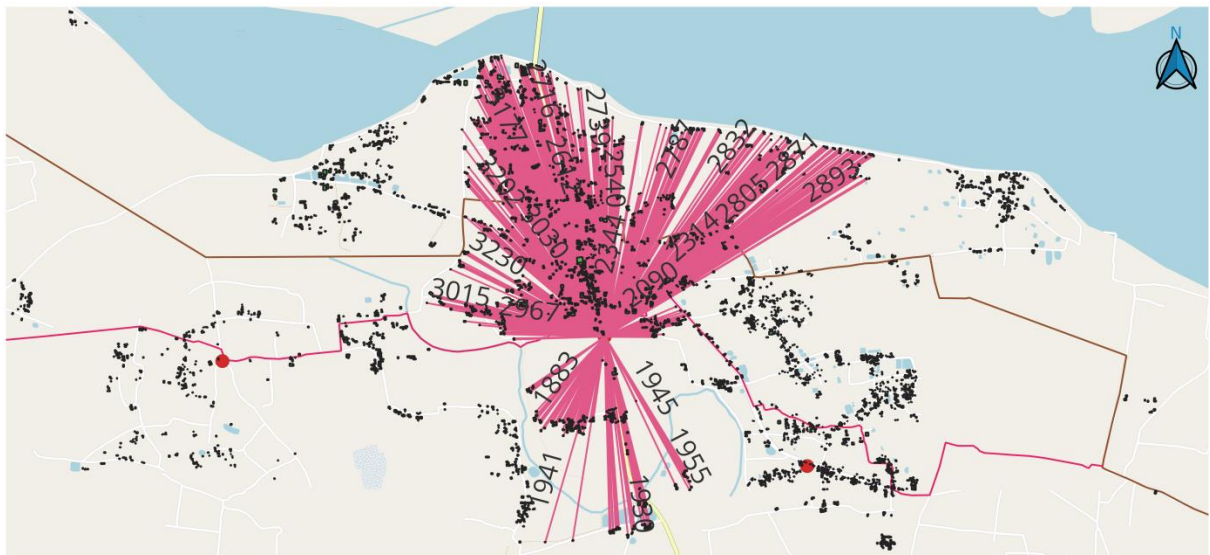


Figure 4.5.1: Shelter 1 – Household distribution and accessibility

Scale: 1:22000

This map (**Figure:4.5.1**) visualizes the spatial linkage between households and Shelter 1 through pink access lines, representing individual routes from House Nos. 2573 to 4084—a total of 1512 households. The estimated population served by this shelter is 6,757 (Appendix A: Table 1), based on an average household size of 4.47, in alignment with the standard provided by the **Bangladesh Bureau of Statistics (BBS)**. The distance from households to the shelter varies from 0.035 km to 3.15 km, indicating different accessibility levels.

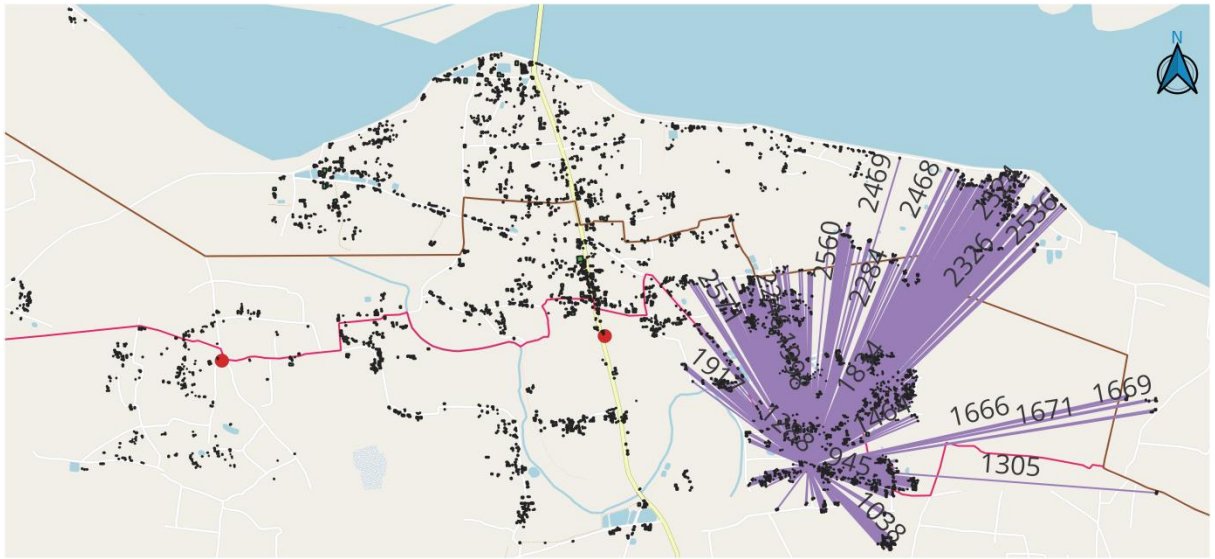


Figure 4.5.2: Shelter 2 – Household distribution and accessibility

Scale: 1:22000

This map (**Figure:4.5.2**) visualizes the spatial linkage between households and Shelter 2 through purple access lines, representing individual routes from House Nos. 848 to 2572—a total of 1725 households. The estimated population served by this shelter is 7753 (Appendix B: Table 2), based on an average household size of 4.49, in alignment with the standard provided by the **Bangladesh Bureau of Statistics (BBS)**. Different accessibility levels are shown by the range of 0.01 km to 3.45 km between homes and the shelter.

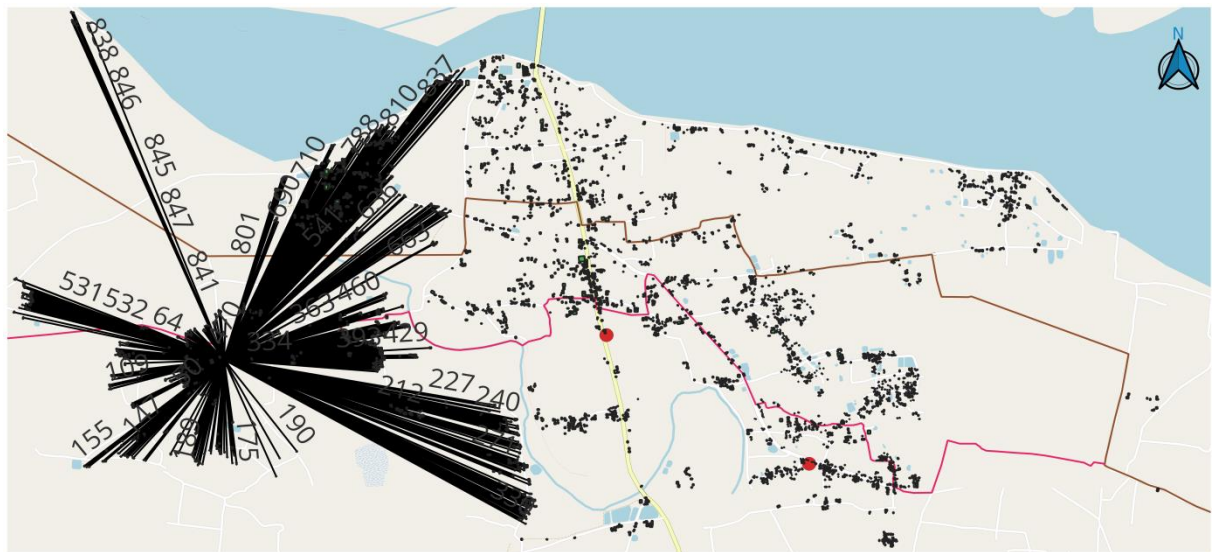


Figure 4.5.3: Shelter 3 – Household distribution and accessibility

Scale: 1:22000

This map (**Figure:4.5.3**) visualizes the spatial linkage between households and Shelter 3 through black access lines, representing individual routes from House Nos. 01 to 847—a total of 847 households.

The estimated population served by this shelter is 4024 (Appendix C: Table 3), based on an average household size of 4.75, in alignment with the standard provided by the **Bangladesh Bureau of Statistics (BBS)**. Accessibility varies as the distance between homes and the shelter ranges from 0.011 km to 3.98 km.

The spatial linkage analyses between households and the three proposed shelters (Shelter 1, 2, and 3) are supported by detailed three attribute tables, which are included in the **Appendix A, B and C** for further review. These tables offer organized data on important factors that go into emergency response assessment and transportation planning.

Specifically, each table presents:

- House number ranges served by each shelter
- Total population per household
- Distance between each household and the assigned shelter
- Identification of households that require transportation support
- Origin zone (Zone 1, 2, or 3) of each household

4.6 Identified Public Service Buildings

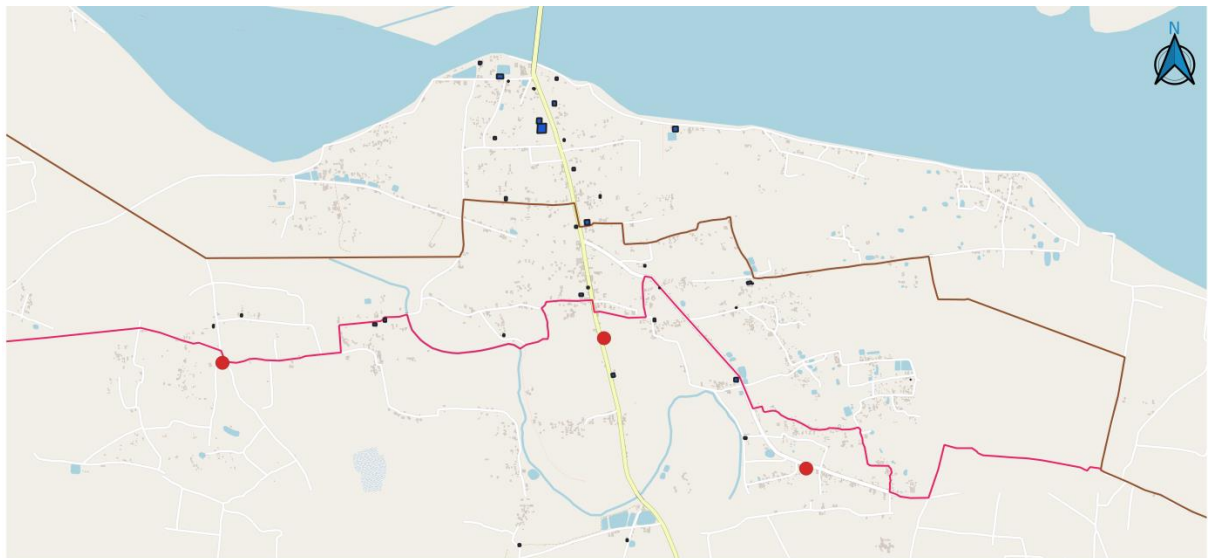


Figure 4.6.1: Public service building map in the study area

Scale: 1:22000

This map mainly takes use of geo-location data obtained from Google Maps to identify public service facilities in the study area. A total of 35 public structures have been marked, including 11 schools, 12 mosques, and 12 other facilities such as local shops and commonly used local structures. Each category of building is symbolized distinctly to ensure visual clarity.

The buildings have been represented using blue-colored polygons, which are clearly visible on the map. This color-coded visualization provides a clear understanding of the spatial distribution and presence of key public buildings across the area.

The availability and possible usability of public infrastructure in flood situations can be better understood by using the geographical analysis of these facilities. These structures may serve as temporary shelters, communication hubs, or logistical support centers in emergencies. Additionally, the map helps assess the proximity of households to these public resources, which supports their integration into disaster management planning.

4.7 Comprehensive Shelter Analysis

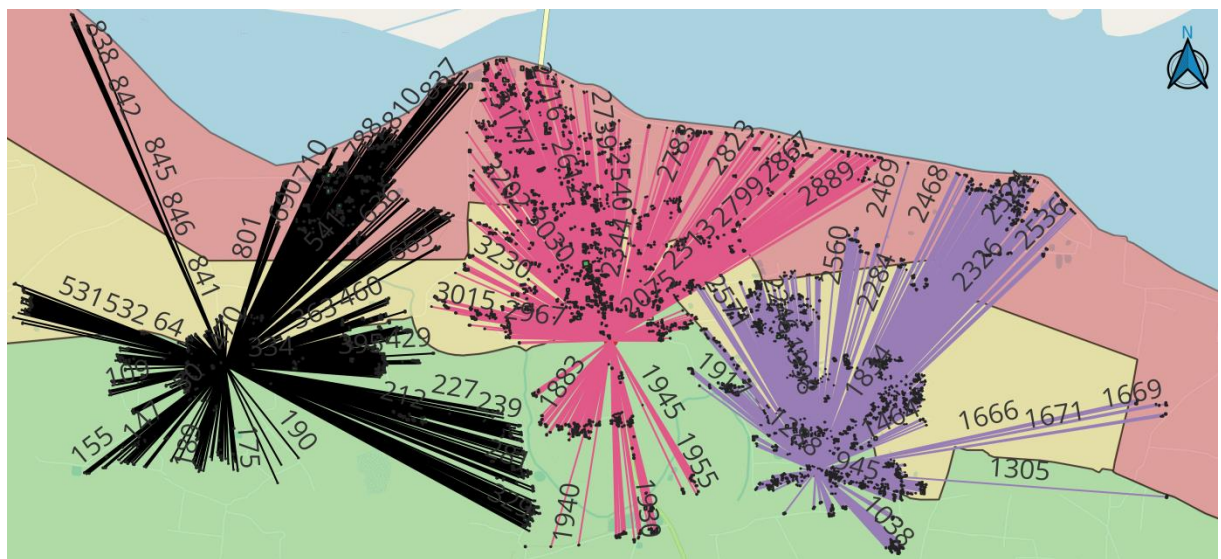


Figure 4.7.1: Comprehensive zonal and shelter analysis map

Scale: 1:22000

This map aggregates all previously analyzed spatial data, including zonal divisions, building footprints, designated shelter locations, and household-to-shelter linkages.

Based on the spatial analysis, we obtained the following results:

- Total study area: 16.89 sq.km
- Land area (excluding river): 16.16 sq.km
- Total number of shelters considered: 3
- Total number of households: 4,084
- Total population served: 18,534
- Average household size: 4.54 persons per household

The population ratio was calculated using the formula:

$$\text{Average Household Size} = \text{Total Population} \div \text{Total Households} \quad [\text{i.e., } 18,534 \div 4,084 = 4.54]$$

All household-to-shelter connections are designed to fall within a maximum distance of 4 kilometers, ensuring timely access during flood emergencies.

4.8 Buffer Analysis for Shelter Accessibility

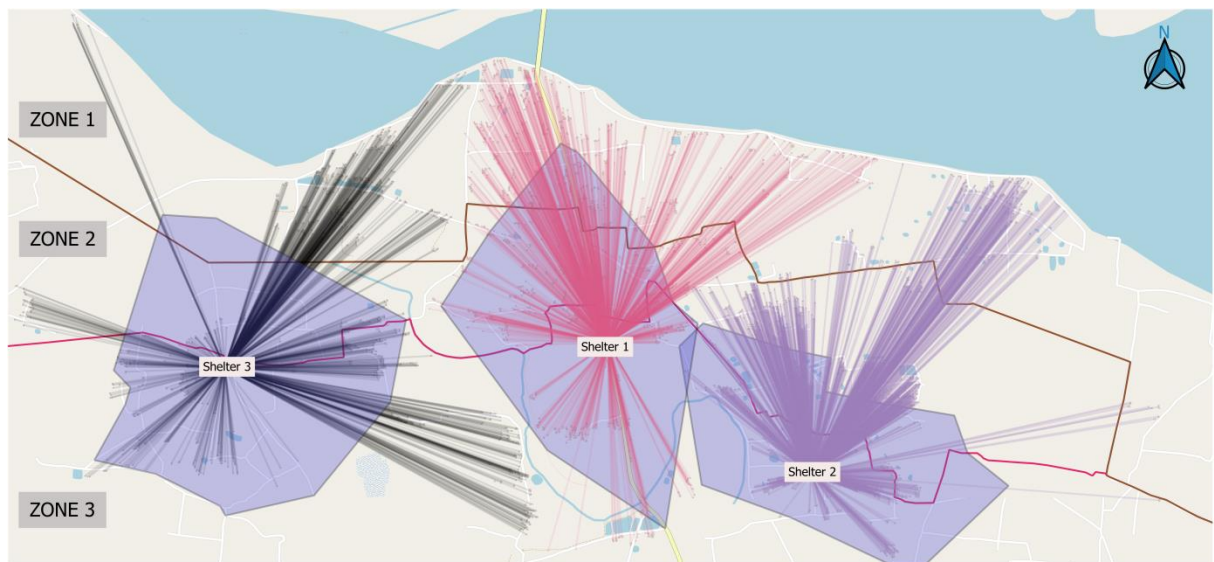


Figure 4.8.1: Accessibility to flood shelters within 1 km buffer zone

Scale: 1:22000

This section presents a 1-kilometer buffer analysis around the three designated flood shelters to evaluate walking accessibility. Using QGIS, circular zones were generated around each shelter, symbolized with purple polygons, to represent the feasible walking area under emergency conditions.

The rationale for choosing a 1 km buffer stems from accessibility studies which suggest that walking 1 km typically takes 12–15 minutes—suitable for urgent evacuations during flood emergencies. These zones include important details about which families are accessible by foot and which might require assistance with transportation.

Households that are farther than the 1-kilometer buffer are at higher risk because they are not within walking distance. In flood scenarios, especially those with fast-onset surges like those observed from the Teesta River (BWDB, 2019), early evacuation becomes a challenge for such areas.

This spatial assessment helps disaster managers and transportation engineers prioritize resources and develop contingency plans for vulnerable zones.

4.8.2 Population Coverage and Risk Estimation

To quantify the effectiveness of shelter coverage, population distribution within and beyond the buffer zones was analyzed based on population density.

We got,

- ✓ Total Study Area (Land only): 16.16 sq.km
- ✓ Total Population: 18,534 people
- ✓ Area within 1 km Buffer (Shelter 1): 4.52 sq.km
- ✓ Area within 1 km Buffer (Shelter 2): 4.38 sq.km
- ✓ Area within 1 km Buffer (Shelter 3): 4.55 sq.km
- ✓ Area within 1 km Buffer (combined): 13.45 sq.km

Average Population Density = $18,534 \div 16.16 = \text{approx } 1,147$ people/sq.km

Estimated Population within Buffer = $13.45 \times 1,147 = \text{approx } 15,427$ people

Population at Risk (outside buffer) = $18,534 - 15,427 = 3,107$ people

This means that around **83%** of residents can reach a shelter on foot under normal flood conditions, while **17%** are potentially at risk and require transportation or early warning support for evacuation.

4.9 Road Network Classification and Flood-Time Access

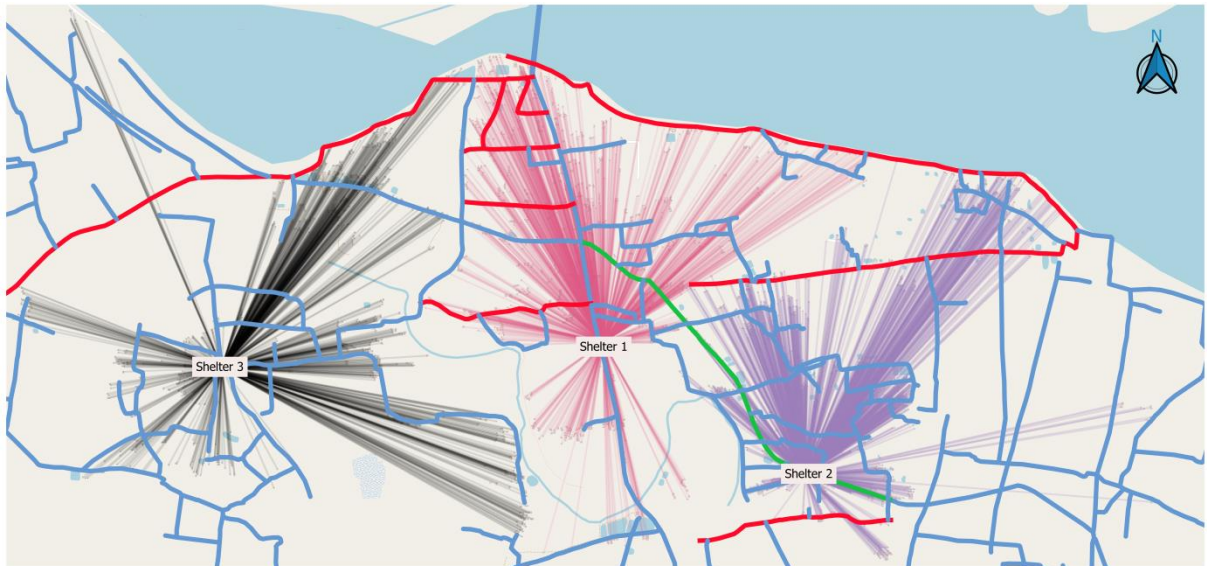


Figure 4.9.1: Road network classification during flood events

Scale: 1:22000

This section provides a detailed classification of the road network in the study area based on their functional hierarchy and flood-time accessibility. As the core of this thesis lies in transportation engineering, the aim is to determine which roads remain usable and safe during flood emergencies. The road data was collected from OpenStreetMap (OSM) and processed using the QuickOSM plugin in QGIS. Roads were categorized into four classes: secondary, tertiary, residential, and unclassified.

Each class is represented using specific colors for visual clarity in **(Figure 4.9.1)**:

- Secondary and Tertiary Roads – Green
- Residential Roads – Blue
- Unclassified Roads – Red

This classification is aligned with global OSM tagging standards and helps transportation engineers and disaster planners identify the most reliable routes for emergency evacuation.

4.9.2 Description of Road Types and Flood-Time Usability

Road Type	Color Code	Flood-Time Usability	Characteristics
Secondary Roads	Green	High	Bituminous or concrete; connect major centers; suitable for emergency vehicles.
Tertiary Roads	Green	Moderate to High	Often paved; link unions, markets; moderately resilient.
Residential Roads	Blue	Variable	Located near populated areas; paved or unpaved; some may submerge.
Unclassified Roads	Red	Very Low	Dirt paths or informal tracks; vulnerable to waterlogging, erosion.

Table 4.9.2: Road Types and Flood-Time Usability

The usability of these roads is critical for determining feasible evacuation routes to flood shelters. Roads with poor drainage, low elevation, or informal structure are likely to become inaccessible, making them unreliable during emergency response operations.

4.9.3 Summary of Road Length and Improvement Priorities

Road Type	Total Length (~ km)	Improvement Needed	Recommendation
Secondary Roads	2.7	Low	Generally accessible, but some potholes exist – periodic maintenance required.
Tertiary Roads	2.0	Moderate	Useful for access but narrow in some areas – widening may improve efficiency.
Residential Roads	45.0	Moderate to high	Many segments are unpaved or lack culverts – urgent repair and paving are needed.
Unclassified Roads	13.0	Very High	Mostly earthen roads, unusable during floods – should be prioritized for paving.

Table 4.9.3 Road Length and Improvement Priorities

The road network in the study area measures approximately 62.7 kilometers in total length. These classifications were extracted from OpenStreetMap and refined using QGIS 3.34.1, The These high proportion of residential and unclassified routes indicates that the transportation system has structural weaknesses, which may impede emergency response and shelter access during floods.

4.9.4 Strategic Significance for Transportation Engineering

The purpose of this map is not only to classify roads but also to identify their functional viability during flood events. The following key implications are derived:

- ❖ **Evacuation Planning:** Identifies safe and unsafe roads for reaching shelters.
- ❖ **Infrastructure Prioritization:** Highlights roads needing urgent upgrades for disaster resilience.
- ❖ **Disaster Preparedness:** Supports strategic planning by NGOs and government agencies.
- ❖ **Inequality Detection:** Reveals spatial disparities in access routes, especially in peripheral or low-lying areas.

This map (**Figure 4.9.1**) is crucial for establishing a connection between evacuation logistics and infrastructure flaws. It shows that while some areas are well-connected with elevated and paved roads, others rely on vulnerable paths, thus requiring additional support during emergencies.

This analysis is essential for transportation engineers who design, upgrade, or maintain infrastructure in flood-prone areas. Ensuring resilient road connectivity can drastically improve evacuation efficiency and reduce disaster-related casualties.

4.10 Integrated Flood Shelter Accessibility Map

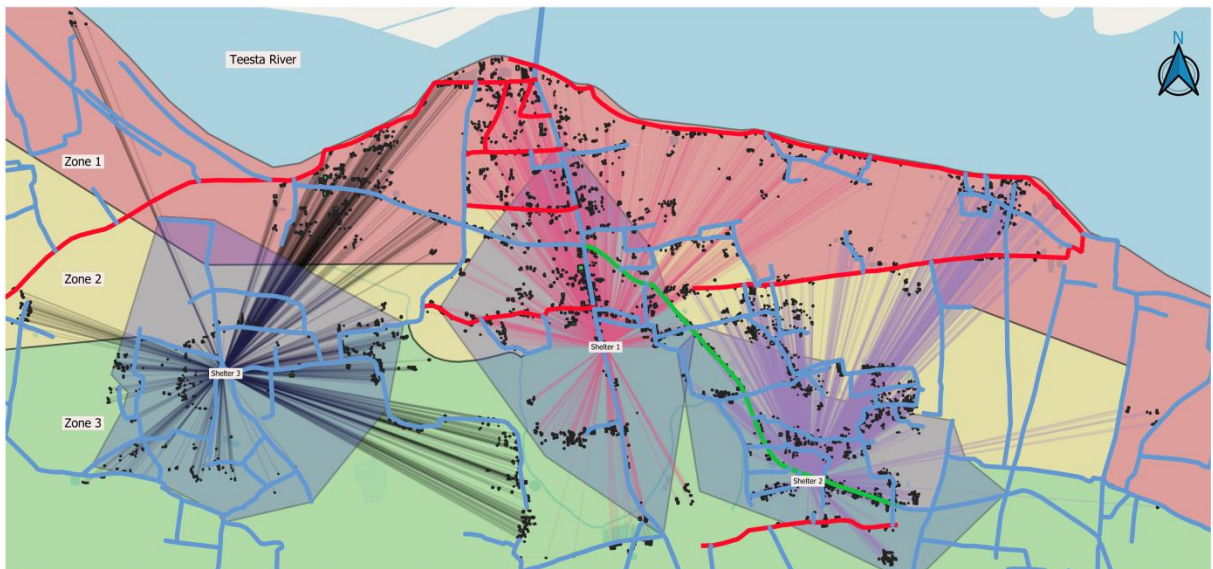


Figure 4.10.1 Integrated summary map of the study area

Source: OpenStreetMap

Scale: 1:22000

This final map is the most thorough and consistent spatial visualization that was created during the course of this study. Built using OpenStreetMap as the base and processed through QGIS, it combines all prior spatial data layers into one consolidated map for assessing flood preparedness and accessibility within the study area.

Key elements visualized in this map include:

- ❖ The precise location of all residential buildings
- ❖ The positions of three designated flood shelters
- ❖ Connection lines from each household to its nearest shelter, representing potential evacuation paths
- ❖ Zone lines (Zone Line 1 and Zone Line 2)
- ❖ A 1-kilometer walking buffer zone around each shelter (highlighted with purple boundaries)
- ❖ Risk-based area categorization: Red= High-risk zone, Yellow= Low-risk zone and Green= Safe zone
- ❖ Road classification: Secondary and Tertiary Roads = reliable (Green), Residential Roads = moderately reliable (Blue) and Unclassified Roads = vulnerable (Red)

The primary objective of this map is to evaluate the accessibility of shelters during flood events, identify vulnerable areas, and analyze the emergency transportation needs of the local population.

Particularly notable is the use of the 1 km buffer zone to identify which areas can be accessed on foot within approximately 12–15 minutes, based on an average walking speed of 5 km/h. This provides a realistic estimate of how many residents are within safe reach of shelters without requiring motorized support.

This integrated map acts as a decision-support tool for disaster preparedness. By combining all essential spatial factors into one visual output, it effectively supports emergency planning, risk mitigation, and community-level disaster resilience. It represents the geographical realities of flood risk as well as the logistical preparation required for quick shelter access in an emergency.

4.11 Summary of Results

This section summarizes all spatial analyses presented in Chapter 4 of the study. It highlights key findings related to flood-time shelter management and transportation accessibility within the study area.

- ✓ Total study area: 16.89 sq. km
- ✓ Land area (excluding river): 16.16 sq. km
- ✓ Total number of households: 4,084
- ✓ Average household size: 4.54 persons
- ✓ Total population: 18,534
- ✓ population density \approx 1,147 people per sq. km
- ✓ Number of flood shelters considered: 3
- ✓ Estimated population within 1 km buffer zone: 15,427 people (approximately 83%)
- ✓ Population at risk beyond 1 km buffer: 3,107 people (approximately 16.76%)
- ✓ There are approximately 62.7 kilometers of roads in the study area
- ✓ Secondary and tertiary roads were identified as safe during floods
- ✓ Residential (~45 km) and unclassified roads (~13 km) require urgent improvement for flood-time access.

4.11.1 Key Analytical Insights:

- ✓ Household-to-shelter connectivity analysis
- ✓ Identification of transportation support requirements
- ✓ Evaluation of road usability based on classification
- ✓ Spatial assessment of households falling under Zone 1, Zone 2, and Zone 3

These results reflect how GIS-based spatial analysis can be used to realistically assess preparedness and guide effective flood response planning. The findings serve as a strong foundation for future disaster management strategies and policy recommendations.

4.12 Discussion on Access Gaps

The study revealed that 3,107 people residing outside the 1 km buffer zone are at risk. The main reasons contributing to this risk are:

- a) Limited number of flood shelters
- b) Narrow, unpaved, and poorly maintained roads
- c) Complete absence of roads in certain areas
- d) Isolation of communities near the river due to limited access
- e) emergency transportation services

Urgent action is required to address these gaps.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 General

This final chapter brings together the key insights from the previous chapters and provides a comprehensive closure to the research. It highlights the core findings, discusses the limitations, and offers future research directions. This chapter aims to reflect on the study's overall significance and its potential applicability in real-world disaster preparedness and planning efforts.

5.2 Research Conclusion

This study analyzed the accessibility of flood shelters and emergency road infrastructure in flood-prone areas of Gangachara Upazila. Using QGIS 3.34.1 and open-source spatial data, several critical insights were generated:

- Identification of families that can enter flood shelters during an emergency in the designated study area in Gangachara Upazila.
- Unclassified and residential roads require infrastructure development and Zone 1 is designated as a red zone as a high-risk area in case of emergency flood situations.
- Clear categorization of roads and risk zones based on buffer analysis and spatial risk mapping.

The study demonstrates that with the correct application of spatial analysis, disaster risk management can be significantly improved. The methodology adopted in this research offers a structured way to plan shelter accessibility and emergency support for vulnerable communities.

5.3 Research Limitations

Although this study was well-structured and made significant use of GIS tools, it had a number of limitations. Identifying these limits is necessary for accurate interpretation of the results and for directing future developments.

- a) **Absence of precise geographic coordinates for individual households:** Although each household was uniquely numbered and marked on the map, specific geographic coordinates (latitude and longitude) could not be obtained. As a result, while visual analysis was possible in QGIS, advanced location-based modeling or real-time spatial analysis could not be performed.

- b) **Dependence on open-source data without field verification:** The road network, building locations, rivers, and open land data used in this study were collected from Google Maps, Google Satellite Maps, and OpenStreetMap. Although these sources are accessible and useful, they may be incomplete or outdated, particularly in rural areas. Since no field validation was conducted, there may be discrepancies between mapped data and actual ground conditions.
- c) **Household population estimates based on assumptions:** Population estimations were made using the average household size reported in the Bangladesh Bureau of Statistics (BBS) report. As no direct household survey was conducted, the actual distribution of population might not be fully reflected in the analysis.
- d) **Lack of elevation or historical flood data in flood risk assessment:** Flood-prone areas were identified primarily based on river proximity, road locations, and visible spatial patterns. However, important data sources such as Digital Elevation Models (DEMs) and historical flood records were not used, which could have enhanced the precision of flood risk analysis.
- e) **Exclusion of dynamic flood simulations and rescue planning:** The study did not include time-based flood simulations, emergency rescue planning, or transportation capacity assessments—elements that are crucial for realistic disaster response analysis.

In summary, while the GIS-based analysis of flood shelter accessibility was appropriately conducted, these limitations should be carefully taken into consideration while analyzing the findings and determining on future guidelines.

5.4 Recommendations for Improved Shelter Allocation

Based on the research findings, the following recommendations are proposed:

- a) Establish temporary or mobile shelters in high-risk, remote areas and regions near rivers.
- b) Enhance the capacity and safety of existing shelters to accommodate more people during emergencies.
- c) Ensure road connectivity to shelters, especially in flood-prone zones.
- d) Prepare portable emergency ramps or boats in designated locations for quick evacuation and shelter access during floods.

5.5 Policy-Based Recommendations for Local Government and Planners

The following policy recommendations are applicable for local government authorities and disaster management planners:

- a) Develop GPS-based location maps for each household
- b) Invest in building durable, elevated roads in rural areas
- c) Prioritize roads connecting to shelters for maximum accessibility
- d) Implement a spatial data-driven (GIS) decision-making system
- e) Establish timely early warning and transportation assistance systems

Develop data-driven disaster risk reduction strategies to address spatial inequalities

5.6 Recommendations for Future Research

The following areas are suggested for more research in order to address the limitations noted and improve the precision of subsequent studies:

- a) Field-level GPS data collection and verification for all household locations.
- b) Multi-seasonal flood analysis to account for variations in flooding patterns.
- c) Inclusion of local community feedback and practical experiences.
- d) Mapping and integration of additional critical facilities such as schools, markets, and healthcare centers.
- e) Development of mobile applications or GIS-based dashboards for local governments to support real-time, visual, and user-friendly planning tools.

5.7 Final Remarks

This research offers applications for actual disaster preparedness in Bangladesh's flood-prone areas, going beyond academic exploration. The spatial analysis-based methodology presents a scalable and adaptive model that can guide local governments, urban planners, and authority in charge of disaster management toward better shelter design and community resilience development.

References

- ❖ Ahmed, S., Rahman, M. M., & Haque, A. N. (2021). *Community accessibility to flood shelters: A GIS-based buffer analysis in Northern Bangladesh*. International Journal of Disaster Risk Reduction, 62, 102407. <https://doi.org/10.1016/j.ijdrr.2021.102407>
- ❖ Asian Disaster Preparedness Center (ADPC). (2021). *Community-based disaster risk management in Bangladesh: Best practices and lessons learned*. Bangkok: ADPC.
- ❖ Bangladesh Bureau of Statistics (BBS). (2022). *Population and housing census 2022*. Statistics and Informatics Division, Ministry of Planning, Government of Bangladesh.
- ❖ Bangladesh Demographic and Health Survey (BDHS). (2022). *Key indicators report*. National Institute of Population Research and Training (NIPORT), Dhaka.
- ❖ Bangladesh Water Development Board (BWDB). (2019). *Teesta basin flood risk management report*. Dhaka: BWDB.
- ❖ bdnews24.com. (2021, October 20). *Teesta flash floods hit north*. <https://bdnews24.com>
- ❖ Chakraborty, A., & Kar, B. (2023). *Spatial accessibility to disaster shelters in flood-prone zones: A GIS-based approach*. International Journal of Disaster Risk Reduction, 95, Article 104902. <https://doi.org/10.1016/j.ijdrr.2023.104902>
- ❖ Dhaka Tribune. (2022, June 22). *Flood in Rangpur affects thousands*. <https://www.dhakatribune.com>
- ❖ Google Maps. (2024). *Study area and infrastructure overview*. <https://maps.google.com>
- ❖ Google Satellite Imagery. (2024). *High-resolution terrain and settlement view*. <https://earth.google.com>
- ❖ International Organization for Migration (IOM). (2021). *Disaster risk reduction and rural connectivity in flood-prone areas of Bangladesh*. Dhaka: IOM Bangladesh.
- ❖ Japan International Cooperation Agency (JICA). (n.d.). *Rural road development study in Bangladesh: Technical report*. Tokyo: JICA.
- ❖ OpenStreetMap Contributors. (2024). *Base map and road data extracted using QuickOSM plugin in QGIS*. <https://www.openstreetmap.org>
- ❖ QGIS Documentation Team. (2023). *QuickOSM plugin guide: OSM data processing in QGIS*. <https://plugins.qgis.org/plugins/QuickOSM>
- ❖ QGIS. (2023). *Buffer analysis guide*. [https:// docs.qgis.org](https://docs.qgis.org)

- ❖ QGIS Development Team. (2023). *QGIS Geographic Information System* (Version 3.34.1). Open Source Geospatial Foundation Project. <https://qgis.org>
- ❖ Smith, K., & Petley, D. (2009). *Environmental hazards: Assessing risk and reducing disaster* (5th ed.). Routledge.
- ❖ The Daily Star. (2023, July 10). *Teesta floods leave 50,000 marooned*. <https://www.thedailystar.net>
- ❖ United Nations Office for Disaster Risk Reduction (UNDRR). (2019). *Shelter planning and risk analysis guidelines*. Geneva: UNDRR.
- ❖ World Health Organization (WHO). (2021). *Guidance on health emergency and disaster risk management*. Geneva: WHO.

Appendix-A

Table 01: Household to Flood Shelter 1 Mapping Data

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1	2573	5	1	0.035	No	3
2	2574	4	1	0.04	No	3
3	2575	4	1	0.04	No	3
4	2576	4	1	0.05	No	3
5	2577	5	1	0.055	No	3
6	2578	5	1	0.057	No	3
7	2579	4	1	0.06	No	3
8	2580	3	1	0.06	No	3
9	2581	4	1	0.093	No	3
10	2582	3	1	0.1	No	3
11	2583	3	1	0.1	No	3
12	2584	5	1	0.13	No	3
13	2585	2	1	0.13	No	3
14	2586	4	1	0.13	No	3
15	2587	3	1	0.14	No	3
16	2588	6	1	0.14	No	3
17	2589	6	1	0.16	No	3
18	2590	3	1	0.2	No	3
19	2591	4	1	0.2	No	3
20	2592	4	1	0.21	No	3
21	2593	6	1	0.21	No	3
22	2594	5	1	0.21	No	3
23	2595	5	1	0.25	No	3
24	2596	4	1	0.25	No	3
25	2597	4	1	0.25	No	3
26	2598	3	1	0.25	No	3
27	2599	6	1	0.38	No	3
28	2600	5	1	0.38	No	3
29	2601	4	1	0.38	No	3
30	2602	4	1	0.38	No	3
31	2603	7	1	0.37	No	3
32	2604	3	1	0.37	No	3
33	2605	4	1	0.37	No	3
34	2606	4	1	0.37	No	3
35	2607	4	1	0.37	No	3
36	2608	3	1	0.37	No	3
37	2609	7	1	0.37	No	3
38	2610	3	1	0.36	No	3
39	2611	4	1	0.36	No	3
40	2612	4	1	0.36	No	3
41	2613	4	1	0.36	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
42	2614	4	1	0.35	No	3
43	2615	5	1	0.37	No	3
44	2616	6	1	0.35	No	3
45	2617	3	1	0.35	No	3
46	2618	4	1	0.33	No	3
47	2619	4	1	0.33	No	3
48	2620	3	1	0.32	No	3
49	2621	4	1	0.32	No	3
50	2622	5	1	0.31	No	3
51	2623	3	1	0.32	No	3
52	2624	4	1	0.36	No	3
53	2625	6	1	0.36	No	3
54	2626	6	1	0.36	No	3
55	2627	4	1	0.49	No	3
56	2628	3	1	0.14	No	3
57	2629	4	1	0.15	No	3
58	2630	4	1	0.2	No	3
59	2631	3	1	0.21	No	3
60	2632	4	1	0.23	No	3
61	2633	3	1	0.25	No	3
62	2634	4	1	0.44	No	3
63	2635	4	1	0.37	No	3
64	2636	3	1	0.37	No	3
65	2637	5	1	0.38	No	3
66	2638	4	1	0.38	No	3
67	2639	4	1	0.39	No	3
68	2640	3	1	0.4	No	3
69	2641	3	1	0.4	No	3
70	2642	3	1	0.4	No	3
71	2643	5	1	0.4	No	3
72	2644	5	1	0.41	No	3
73	2645	5	1	0.41	No	3
74	2646	3	1	0.42	No	3
75	2647	3	1	0.43	No	3
76	2648	5	1	0.43	No	3
77	2649	7	1	0.44	No	3
78	2650	4	1	0.46	No	3
79	2651	5	1	0.47	No	3
80	2652	8	1	0.47	No	3
81	2653	5	1	0.47	No	3
82	2654	4	1	0.47	No	3
83	2655	5	1	0.48	No	3
84	2656	5	1	0.47	No	3
85	2657	4	1	0.48	No	3
86	2658	3	1	0.42	No	3
87	2659	3	1	0.42	No	3
88	2660	3	1	0.42	No	3
89	2661	3	1	0.43	No	3
90	2662	8	1	0.43	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
91	2663	6	1	0.43	No	3
92	2664	3	1	0.43	No	3
93	2665	3	1	0.43	No	3
94	2666	4	1	0.43	No	3
95	2667	4	1	0.43	No	3
96	2668	7	1	0.44	No	3
97	2669	9	1	0.44	No	3
98	2670	4	1	0.42	No	3
99	2671	4	1	0.42	No	3
100	2672	4	1	0.43	No	3
101	2673	4	1	0.44	No	3
102	2674	5	1	0.5	No	3
103	2675	3	1	0.5	No	3
104	2676	3	1	0.5	No	3
105	2677	3	1	0.5	No	3
106	2678	6	1	0.51	No	3
107	2679	4	1	0.51	No	3
108	2680	4	1	0.51	No	3
109	2681	3	1	0.53	No	3
110	2682	7	1	0.53	No	3
111	2683	4	1	0.53	No	3
112	2684	3	1	0.53	No	3
113	2685	4	1	0.53	No	3
114	2686	3	1	0.54	No	3
115	2687	7	1	0.55	No	3
116	2688	4	1	0.55	No	3
117	2689	4	1	0.57	No	3
118	2690	3	1	0.57	No	3
119	2691	3	1	0.58	No	3
120	2692	6	1	0.6	No	3
121	2693	5	1	0.58	No	3
122	2694	5	1	0.59	No	3
123	2695	3	1	0.59	No	3
124	2696	3	1	0.58	No	3
125	2697	4	1	0.59	No	3
126	2698	3	1	0.59	No	3
127	2699	4	1	0.6	No	3
128	2700	5	1	0.6	No	3
129	2701	5	1	0.64	No	3
130	2702	4	1	0.64	No	3
131	2703	7	1	0.63	No	3
132	2704	3	1	0.63	No	3
133	2705	5	1	0.63	No	3
134	2706	3	1	0.62	No	3
135	2707	4	1	0.6	No	3
136	2708	3	1	0.61	No	3
137	2709	3	1	0.61	No	3
138	2710	4	1	0.61	No	3
139	2711	4	1	0.62	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
140	2712	3	1	0.62	No	3
141	2713	5	1	0.63	No	3
142	2714	7	1	0.64	No	3
143	2715	5	1	0.65	No	3
144	2716	4	1	0.65	No	3
145	2717	4	1	0.65	No	3
146	2718	3	1	0.66	No	3
147	2719	5	1	0.63	No	3
148	2720	5	1	0.64	No	3
149	2721	5	1	0.66	No	3
150	2722	4	1	0.68	No	3
151	2723	4	1	0.68	No	3
152	2724	5	1	0.69	No	3
153	2725	6	1	0.7	No	3
154	2726	5	1	0.7	No	3
155	2727	5	1	0.72	No	3
156	2728	6	1	0.75	No	3
157	2729	6	1	0.76	No	3
158	2730	6	1	0.75	No	3
159	2731	4	1	0.75	No	3
160	2732	4	1	0.76	No	3
161	2733	3	1	0.77	No	3
162	2734	5	1	0.8	No	3
163	2735	5	1	0.78	No	3
164	2736	3	1	0.78	No	3
165	2737	2	1	0.78	No	3
166	2738	4	1	0.78	No	3
167	2739	4	1	0.78	No	3
168	2740	3	1	0.77	No	3
169	2741	4	1	0.79	No	3
170	2742	5	1	0.8	No	3
171	2743	4	1	0.95	No	3
172	2744	4	1	0.95	No	3
173	2745	3	1	0.94	No	3
174	2746	4	1	0.93	No	3
175	2747	3	1	0.91	No	3
176	2748	4	1	0.91	No	3
177	2749	5	1	0.9	No	3
178	2750	6	1	0.9	No	3
179	2751	6	1	0.5	No	3
180	2752	5	1	0.53	No	3
181	2753	5	1	0.56	No	3
182	2754	5	1	0.58	No	3
183	2755	4	1	0.77	No	3
184	2756	4	1	0.8	No	3
185	2757	3	1	0.81	No	3
186	2758	5	1	0.81	No	3
187	2759	5	1	0.82	No	3
188	2760	3	1	0.82	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
189	2761	4	1	0.82	No	3
190	2762	3	1	0.83	No	3
191	2763	4	1	0.82	No	3
192	2764	6	1	0.83	No	3
193	2765	4	1	1	Yes	3
194	2766	6	1	1.02	Yes	3
195	2767	2	1	1.03	Yes	3
196	2768	3	1	1.04	Yes	3
197	2769	4	1	1.05	Yes	3
198	2770	4	1	1.03	Yes	3
199	2771	5	1	1.04	Yes	3
200	2772	4	1	1.08	Yes	3
201	2773	5	1	1.1	Yes	3
202	2774	3	1	1.12	Yes	3
203	2775	5	1	1.13	Yes	3
204	2776	4	1	1.15	Yes	3
205	2777	5	1	1.16	Yes	3
206	2778	6	1	1.18	Yes	3
207	2779	7	1	1.2	Yes	3
208	2780	4	1	1.22	Yes	3
209	2781	5	1	1.22	Yes	3
210	2782	4	1	1.22	Yes	3
211	2783	5	1	1.37	Yes	3
212	2784	5	1	1.52	Yes	3
213	2785	5	1	0.97	No	3
214	2786	5	1	0.97	No	3
215	2787	3	1	1.05	Yes	3
216	2788	4	1	1.05	Yes	3
217	2789	5	1	1.04	Yes	3
218	2790	5	1	1.04	Yes	3
219	2791	4	1	1.03	Yes	3
220	2792	4	1	1	Yes	3
221	2793	5	1	1.01	Yes	3
222	2794	3	1	1.02	Yes	3
223	2795	4	1	1.02	Yes	3
224	2796	5	1	1.03	Yes	3
225	2797	5	1	1.05	Yes	3
226	2798	4	1	1.05	Yes	3
227	2799	6	1	0.38	No	3
228	2800	5	1	0.42	No	3
229	2801	3	1	0.42	No	3
230	2802	4	1	0.42	No	3
231	2803	4	1	0.42	No	3
232	2804	3	1	0.43	No	3
233	2805	4	1	0.43	No	3
234	2806	3	1	0.44	No	3
235	2807	3	1	0.42	No	3
236	2808	5	1	0.44	No	3
237	2809	4	1	0.46	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
238	2810	4	1	0.47	No	3
239	2811	3	1	0.47	No	3
240	2812	5	1	0.47	No	3
241	2813	3	1	0.48	No	3
242	2814	5	1	0.48	No	3
243	2815	4	1	0.48	No	3
244	2816	2	1	0.48	No	3
245	2817	3	1	0.48	No	3
246	2818	5	1	0.48	No	3
247	2819	8	1	0.5	No	3
248	2820	4	1	0.51	No	3
249	2821	5	1	0.52	No	3
250	2822	4	1	0.52	No	3
251	2823	4	1	0.53	No	3
252	2824	3	1	0.53	No	3
253	2825	4	1	0.53	No	3
254	2826	4	1	0.43	No	3
255	2827	4	1	0.44	No	3
256	2828	5	1	0.45	No	3
257	2829	4	1	0.45	No	3
258	2830	6	1	0.49	No	3
259	2831	4	1	0.5	No	3
260	2832	3	1	0.5	No	3
261	2833	5	1	0.5	No	3
262	2834	5	1	0.51	No	3
263	2835	4	1	0.53	No	3
264	2836	4	1	0.53	No	3
265	2837	4	1	0.53	No	3
266	2838	4	1	0.53	No	3
267	2839	4	1	0.54	No	3
268	2840	3	1	0.54	No	3
269	2841	3	1	0.54	No	3
270	2842	4	1	0.54	No	3
271	2843	5	1	0.54	No	3
272	2844	3	1	0.55	No	3
273	2845	3	1	0.55	No	3
274	2846	3	1	0.56	No	3
275	2847	7	1	0.56	No	3
276	2848	4	1	0.57	No	3
277	2849	4	1	0.57	No	3
278	2850	5	1	0.57	No	3
279	2851	4	1	0.57	No	3
280	2852	5	1	0.58	No	3
281	2853	3	1	0.58	No	3
282	2854	4	1	0.61	No	3
283	2855	5	1	0.61	No	3
284	2856	5	1	0.68	No	3
285	2857	4	1	0.72	No	3
286	2858	5	1	0.65	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
287	2859	4	1	0.65	No	2
288	2860	4	1	0.64	No	2
289	2861	2	1	0.64	No	2
290	2862	5	1	0.64	No	2
291	2863	7	1	0.3	No	2
292	2864	7	1	0.34	No	2
293	2865	5	1	0.35	No	2
294	2866	3	1	0.36	No	2
295	2867	3	1	0.37	No	2
296	2868	4	1	0.38	No	2
297	2869	5	1	0.5	No	2
298	2870	3	1	0.48	No	2
299	2871	3	1	0.48	No	2
300	2872	5	1	0.48	No	2
301	2873	4	1	0.47	No	2
302	2874	4	1	0.47	No	3
303	2875	5	1	0.48	No	3
304	2876	5	1	0.48	No	3
305	2877	4	1	0.45	No	3
306	2878	4	1	0.47	No	3
307	2879	5	1	0.47	No	3
308	2880	5	1	0.48	No	3
309	2881	4	1	0.48	No	3
310	2882	3	1	0.48	No	3
311	2883	3	1	0.48	No	3
312	2884	4	1	0.49	No	3
313	2885	4	1	0.5	No	3
314	2886	4	1	0.51	No	3
315	2887	4	1	0.51	No	3
316	2888	4	1	0.51	No	3
317	2889	4	1	0.51	No	3
318	2890	5	1	0.52	No	3
319	2891	2	1	0.52	No	3
320	2892	4	1	0.53	No	3
321	2893	4	1	0.53	No	3
322	2894	4	1	0.54	No	3
323	2895	3	1	0.54	No	3
324	2896	5	1	0.55	No	3
325	2897	5	1	0.55	No	3
326	2898	4	1	0.62	No	3
327	2899	4	1	0.67	No	3
328	2900	4	1	0.67	No	3
329	2901	7	1	0.68	No	3
330	2902	4	1	0.69	No	3
331	2903	4	1	0.69	No	3
332	2904	6	1	0.69	No	3
333	2905	4	1	0.7	No	3
334	2906	4	1	0.7	No	3
335	2907	4	1	0.71	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
336	2908	3	1	0.72	No	3
337	2909	3	1	0.72	No	3
338	2910	3	1	0.73	No	3
339	2911	4	1	0.73	No	3
340	2912	5	1	0.73	No	3
341	2913	4	1	0.74	No	3
342	2914	4	1	0.74	No	3
343	2915	4	1	0.74	No	3
344	2916	3	1	0.71	No	3
345	2917	3	1	0.71	No	3
346	2918	4	1	0.72	No	3
347	2919	4	1	0.72	No	3
348	2920	4	1	0.73	No	3
349	2921	3	1	0.74	No	3
350	2922	3	1	0.78	No	3
351	2923	3	1	0.78	No	3
352	2924	4	1	0.79	No	3
353	2925	4	1	0.79	No	3
354	2926	5	1	0.8	No	3
355	2927	3	1	0.8	No	3
356	2928	3	1	0.79	No	3
357	2929	5	1	0.8	No	3
358	2930	3	1	0.8	No	3
359	2931	3	1	0.8	No	3
360	2932	4	1	0.81	No	3
361	2933	4	1	0.81	No	3
362	2934	4	1	0.82	No	3
363	2935	4	1	0.82	No	3
364	2936	6	1	0.82	No	3
365	2937	5	1	0.83	No	3
366	2938	5	1	0.83	No	3
367	2939	5	1	0.84	No	3
368	2940	3	1	0.84	No	3
369	2941	6	1	0.84	No	3
370	2942	6	1	0.85	No	3
371	2943	5	1	0.85	No	3
372	2944	5	1	0.85	No	2
373	2945	3	1	0.27	No	2
374	2946	3	1	0.27	No	2
375	2947	4	1	0.3	No	2
376	2948	3	1	0.25	No	2
377	2949	4	1	0.25	No	2
378	2950	3	1	0.24	No	2
379	2951	4	1	0.24	No	2
380	2952	3	1	0.24	No	2
381	2953	3	1	0.25	No	2
382	2954	3	1	0.25	No	2
383	2955	3	1	0.14	No	2
384	2956	4	1	0.14	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
385	2957	4	1	0.16	No	2
386	2958	5	1	0.16	No	2
387	2959	4	1	0.17	No	2
388	2960	4	1	0.17	No	2
389	2961	3	1	0.17	No	2
390	2962	3	1	0.18	No	2
391	2963	4	1	0.18	No	2
392	2964	5	1	0.18	No	2
393	2965	3	1	0.2	No	2
394	2966	6	1	0.2	No	2
395	2967	3	1	0.21	No	2
396	2968	3	1	0.22	No	2
397	2969	5	1	0.24	No	2
398	2970	4	1	0.23	No	2
399	2971	5	1	0.22	No	2
400	2972	5	1	0.23	No	2
401	2973	3	1	0.22	No	2
402	2974	3	1	0.21	No	2
403	2975	3	1	0.2	No	2
404	2976	3	1	0.2	No	2
405	2977	4	1	0.26	No	2
406	2978	5	1	0.27	No	2
407	2979	6	1	0.21	No	2
408	2980	6	1	0.24	No	2
409	2981	7	1	0.25	No	2
410	2982	6	1	0.21	No	2
411	2983	5	1	0.22	No	2
412	2984	3	1	0.22	No	2
413	2985	5	1	0.23	No	2
414	2986	3	1	0.24	No	2
415	2987	3	1	0.24	No	2
416	2988	3	1	0.24	No	2
417	2989	3	1	0.24	No	2
418	2990	4	1	0.25	No	2
419	2991	2	1	0.25	No	2
420	2992	3	1	0.25	No	2
421	2993	3	1	0.25	No	2
422	2994	8	1	0.26	No	2
423	2995	4	1	0.26	No	2
424	2996	3	1	0.26	No	2
425	2997	3	1	0.26	No	2
426	2998	4	1	0.24	No	3
427	2999	3	1	0.25	No	2
428	3000	3	1	0.26	No	2
429	3001	4	1	0.26	No	2
430	3002	4	1	0.27	No	2
431	3003	5	1	0.27	No	2
432	3004	3	1	0.27	No	2
433	3005	3	1	0.28	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
434	3006	3	1	0.28	No	2
435	3007	4	1	0.28	No	2
436	3008	4	1	0.28	No	2
437	3009	6	1	0.29	No	2
438	3010	5	1	0.29	No	2
439	3011	7	1	0.29	No	2
440	3012	6	1	0.3	No	2
441	3013	4	1	0.29	No	2
442	3014	5	1	0.3	No	2
443	3015	2	1	0.29	No	2
444	3016	2	1	0.3	No	2
445	3017	4	1	0.3	No	2
446	3018	4	1	0.31	No	2
447	3019	5	1	0.31	No	2
448	3020	4	1	0.31	No	2
449	3021	4	1	0.31	No	2
450	3022	4	1	0.32	No	2
451	3023	5	1	0.32	No	2
452	3024	7	1	0.32	No	3
453	3025	3	1	0.32	No	2
454	3026	3	1	0.33	No	2
455	3027	3	1	0.33	No	2
456	3028	4	1	0.33	No	2
457	3029	4	1	0.34	No	2
458	3030	4	1	0.34	No	2
459	3031	4	1	0.33	No	2
460	3032	5	1	0.35	No	2
461	3033	5	1	0.35	No	2
462	3034	4	1	0.36	No	2
463	3035	5	1	0.36	No	2
464	3036	3	1	0.37	No	2
465	3037	9	1	0.37	No	2
466	3038	3	1	0.37	No	2
467	3039	3	1	0.38	No	2
468	3040	4	1	0.36	No	2
469	3041	3	1	0.36	No	2
470	3042	3	1	0.36	No	2
471	3043	3	1	0.36	No	2
472	3044	4	1	0.37	No	2
473	3045	6	1	0.37	No	2
474	3046	5	1	0.37	No	2
475	3047	5	1	0.38	No	2
476	3048	4	1	0.38	No	2
477	3049	3	1	0.38	No	2
478	3050	9	1	0.38	No	2
479	3051	3	1	0.43	No	2
480	3052	3	1	0.43	No	2
481	3053	3	1	0.43	No	2
482	3054	3	1	0.43	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
483	3055	4	1	0.4	No	2
484	3056	4	1	0.4	No	2
485	3057	4	1	0.4	No	2
486	3058	4	1	0.39	No	2
487	3059	4	1	0.4	No	2
488	3060	3	1	0.42	No	2
489	3061	4	1	0.42	No	2
490	3062	3	1	0.43	No	2
491	3063	2	1	0.43	No	2
492	3064	4	1	0.43	No	2
493	3065	3	1	0.44	No	2
494	3066	3	1	0.44	No	2
495	3067	4	1	0.45	No	2
496	3068	3	1	0.45	No	2
497	3069	3	1	0.46	No	2
498	3070	4	1	0.46	No	2
499	3071	4	1	0.46	No	2
500	3072	4	1	0.46	No	2
501	3073	4	1	0.46	No	2
502	3074	5	1	0.47	No	2
503	3075	10	1	0.48	No	2
504	3076	3	1	0.48	No	2
505	3077	4	1	0.48	No	2
506	3078	3	1	0.48	No	2
507	3079	4	1	0.57	No	2
508	3080	4	1	0.57	No	2
509	3081	4	1	0.56	No	2
510	3082	5	1	0.56	No	2
511	3083	4	1	0.55	No	2
512	3084	5	1	0.56	No	2
513	3085	3	1	0.57	No	2
514	3086	4	1	0.57	No	2
515	3087	3	1	0.55	No	2
516	3088	5	1	0.55	No	2
517	3089	4	1	0.54	No	2
518	3090	5	1	0.54	No	2
519	3091	4	1	0.53	No	2
520	3092	5	1	0.52	No	2
521	3093	4	1	0.6	No	2
522	3094	3	1	0.6	No	2
523	3095	3	1	0.61	No	2
524	3096	4	1	0.6	No	2
525	3097	5	1	0.68	No	2
526	3098	4	1	0.7	No	2
527	3099	4	1	0.7	No	2
528	3100	5	1	0.7	No	2
529	3101	3	1	0.75	No	2
530	3102	4	1	0.74	No	2
531	3103	4	1	0.8	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
532	3104	4	1	0.8	No	2
533	3105	4	1	0.8	No	2
534	3106	3	1	0.8	No	2
535	3107	3	1	0.8	No	2
536	3108	4	1	0.81	No	2
537	3109	4	1	0.81	No	2
538	3110	3	1	0.82	No	2
539	3111	5	1	0.8	No	2
540	3112	4	1	0.83	No	2
541	3113	4	1	0.96	No	2
542	3114	6	1	1.05	yes	2
543	3115	4	1	1.04	Yes	2
544	3116	3	1	1.03	Yes	2
545	3117	4	1	1.02	Yes	2
546	3118	4	1	1.06	Yes	2
547	3119	6	1	1	Yes	2
548	3120	8	1	0.6	No	2
549	3121	3	1	0.59	No	2
550	3122	5	1	0.58	No	2
551	3123	6	1	0.57	No	2
552	3124	6	1	0.62	No	2
553	3125	6	1	0.62	No	2
554	3126	5	1	0.6	No	2
555	3127	3	1	0.66	No	2
556	3128	3	1	0.65	No	2
557	3129	5	1	0.65	No	2
558	3130	4	1	0.64	No	2
559	3131	3	1	0.63	No	2
560	3132	4	1	0.62	No	2
561	3133	6	1	1.04	Yes	2
562	3134	5	1	1.05	Yes	2
563	3135	5	1	1.12	Yes	2
564	3136	5	1	1.12	Yes	2
565	3137	3	1	1.11	Yes	2
566	3138	3	1	1.11	Yes	2
567	3139	3	1	1.11	Yes	2
568	3140	4	1	1.11	Yes	2
569	3141	5	1	1.1	Yes	2
570	3142	5	1	1.1	Yes	2
571	3143	4	1	1.1	Yes	2
572	3144	4	1	1.09	Yes	2
573	3145	3	1	1.09	Yes	2
574	3146	4	1	1.09	Yes	2
575	3147	7	1	1.09	Yes	2
576	3148	3	1	1.13	Yes	2
577	3149	7	1	1.11	Yes	2
578	3150	3	1	1.18	Yes	2
579	3151	9	1	1.18	Yes	2
580	3152	4	1	1.19	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
581	3153	4	1	1.19	Yes	2
582	3154	5	1	1.2	Yes	2
583	3155	4	1	1.21	Yes	2
584	3156	4	1	1.24	Yes	2
585	3157	7	1	1.25	Yes	2
586	3158	3	1	1.23	Yes	2
587	3159	5	1	1.57	Yes	2
588	3160	4	1	1.53	Yes	2
589	3161	5	1	1.5	Yes	2
590	3162	6	1	1.5	Yes	2
591	3163	5	1	1.42	Yes	2
592	3164	4	1	1.42	Yes	2
593	3165	3	1	1.41	Yes	2
594	3166	4	1	1.43	Yes	1
595	3167	5	1	1.43	Yes	1
596	3168	5	1	1.6	Yes	2
597	3169	5	1	1.6	Yes	2
598	3170	5	1	1.59	Yes	2
599	3171	5	1	1.58	Yes	2
600	3172	5	1	1.55	Yes	2
601	3173	5	1	1.55	Yes	2
602	3174	4	1	1.52	Yes	2
603	3175	5	1	1.5	Yes	2
604	3176	4	1	1.55	Yes	2
605	3177	5	1	0.68	No	1
606	3178	5	1	0.7	No	1
607	3179	4	1	0.71	No	1
608	3180	5	1	0.86	No	3
609	3181	6	1	0.95	No	3
610	3182	4	1	0.96	No	3
611	3183	3	1	0.97	No	3
612	3184	4	1	0.97	No	3
613	3185	7	1	0.8	No	3
614	3186	5	1	0.8	No	3
615	3187	5	1	0.8	No	3
616	3188	4	1	0.8	No	3
617	3189	3	1	0.79	No	3
618	3190	4	1	0.79	No	3
619	3191	2	1	0.8	No	3
620	3192	4	1	0.82	No	3
621	3193	3	1	0.82	No	3
622	3194	4	1	0.82	No	3
623	3195	5	1	0.85	No	3
624	3196	6	1	0.85	No	3
625	3197	4	1	0.91	No	3
626	3198	4	1	0.92	No	3
627	3199	5	1	0.93	No	3
628	3200	5	1	0.93	No	3
629	3201	5	1	0.93	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
630	3202	4	1	0.96	No	3
631	3203	4	1	0.97	No	3
632	3204	4	1	1	Yes	3
633	3205	8	1	1	Yes	3
634	3206	4	1	1	Yes	3
635	3207	4	1	1.01	Yes	3
636	3208	6	1	1.02	Yes	3
637	3209	6	1	1.02	Yes	3
638	3210	5	1	1.03	Yes	3
639	3211	6	1	1.03	Yes	3
640	3212	4	1	1.03	Yes	3
641	3213	5	1	1.05	Yes	3
642	3214	3	1	1.05	Yes	3
643	3215	6	1	1.05	Yes	3
644	3216	5	1	1.05	Yes	3
645	3217	4	1	1.06	Yes	3
646	3218	2	1	1.05	Yes	3
647	3219	3	1	1.05	Yes	3
648	3220	5	1	1.05	Yes	3
649	3221	5	1	1.05	Yes	3
650	3222	4	1	1.04	Yes	3
651	3223	4	1	1.06	Yes	3
652	3224	4	1	1	Yes	3
653	3225	3	1	1	Yes	3
654	3226	4	1	0.82	No	3
655	3227	8	1	0.82	No	3
656	3228	5	1	0.86	No	3
657	3229	3	1	0.86	No	3
658	3230	3	1	0.86	No	3
659	3231	6	1	0.87	No	3
660	3232	4	1	0.87	No	3
661	3233	3	1	0.87	No	3
662	3234	5	1	0.68	No	3
663	3235	4	1	0.68	No	3
664	3236	4	1	0.68	No	3
665	3237	5	1	0.68	No	3
666	3238	4	1	0.68	No	3
667	3239	3	1	0.7	No	3
668	3240	5	1	0.68	No	3
669	3241	4	1	0.69	No	3
670	3242	6	1	0.69	No	3
671	3243	6	1	0.69	No	3
672	3244	4	1	0.69	No	3
673	3245	5	1	0.7	No	3
674	3246	4	1	0.7	No	3
675	3247	3	1	0.71	No	3
676	3248	5	1	0.72	No	3
677	3249	4	1	0.72	No	3
678	3250	7	1	0.72	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
679	3251	4	1	0.73	No	3
680	3252	3	1	0.73	No	3
681	3253	4	1	0.73	No	3
682	3254	3	1	0.73	No	3
683	3255	4	1	0.74	No	3
684	3256	4	1	0.35	No	2
685	3257	4	1	0.35	No	2
686	3258	5	1	0.35	No	2
687	3259	4	1	0.36	No	2
688	3260	4	1	0.36	No	2
689	3261	5	1	0.36	No	2
690	3262	4	1	0.37	No	2
691	3263	5	1	0.37	No	2
692	3264	3	1	0.37	No	2
693	3265	3	1	0.37	No	2
694	3266	4	1	0.37	No	2
695	3267	4	1	0.37	No	2
696	3268	4	1	0.38	No	2
697	3269	6	1	0.4	No	2
698	3270	4	1	0.4	No	2
699	3271	6	1	0.4	No	2
700	3272	4	1	0.41	No	2
701	3273	3	1	0.47	No	2
702	3274	4	1	0.47	No	2
703	3275	6	1	0.48	No	2
704	3276	3	1	0.48	No	2
705	3277	3	1	0.49	No	2
706	3278	4	1	0.5	No	2
707	3279	4	1	0.54	No	2
708	3280	5	1	0.54	No	2
709	3281	5	1	0.56	No	2
710	3282	4	1	0.57	No	2
711	3283	4	1	0.57	No	2
712	3284	4	1	0.57	No	2
713	3285	5	1	0.55	No	2
714	3286	4	1	0.55	No	2
715	3287	5	1	0.62	No	2
716	3288	3	1	0.6	No	2
717	3289	3	1	0.61	No	2
718	3290	5	1	0.61	No	2
719	3291	3	1	0.62	No	2
720	3292	4	1	0.6	No	2
721	3293	5	1	0.62	No	2
722	3294	4	1	0.61	No	2
723	3295	3	1	0.62	No	2
724	3296	3	1	0.76	No	2
725	3297	5	1	0.77	No	2
726	3298	4	1	0.78	No	2
727	3299	5	1	0.78	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
728	3300	6	1	0.8	No	2
729	3301	4	1	0.58	No	2
730	3302	4	1	0.78	No	2
731	3303	6	1	0.78	No	2
732	3304	4	1	0.78	No	1
733	3305	3	1	0.8	No	1
734	3306	5	1	0.8	No	1
735	3307	3	1	0.75	No	1
736	3308	4	1	0.75	No	1
737	3309	3	1	0.74	No	1
738	3310	4	1	0.74	No	1
739	3311	4	1	0.72	No	1
740	3312	8	1	0.7	No	1
741	3313	3	1	0.7	No	1
742	3314	3	1	0.7	No	1
743	3315	7	1	0.68	No	1
744	3316	6	1	0.68	No	1
745	3317	3	1	0.68	No	1
746	3318	3	1	0.68	No	1
747	3319	3	1	0.68	No	1
748	3320	6	1	0.68	No	1
749	3321	4	1	0.69	No	1
750	3322	5	1	0.69	No	1
751	3323	5	1	0.72	No	1
752	3324	6	1	0.75	No	1
753	3325	3	1	0.75	No	1
754	3326	3	1	0.75	No	1
755	3327	5	1	0.75	No	1
756	3328	4	1	0.76	No	1
757	3329	4	1	0.76	No	1
758	3330	7	1	0.76	No	1
759	3331	4	1	0.76	No	1
760	3332	5	1	0.76	No	1
761	3333	3	1	0.76	No	1
762	3334	4	1	0.76	No	1
763	3335	4	1	0.76	No	1
764	3336	4	1	0.76	No	1
765	3337	2	1	0.78	No	1
766	3338	3	1	0.78	No	1
767	3339	4	1	0.78	No	1
768	3340	6	1	0.78	No	1
769	3341	4	1	0.87	No	1
770	3342	4	1	0.87	No	1
771	3343	5	1	0.87	No	1
772	3344	6	1	0.88	No	1
773	3345	5	1	0.88	No	1
774	3346	4	1	0.76	No	1
775	3347	5	1	0.76	No	1
776	3348	5	1	0.76	No	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
777	3349	5	1	0.77	No	1
778	3350	5	1	0.77	No	3
779	3351	5	1	0.79	No	1
780	3352	6	1	0.8	No	1
781	3353	6	1	0.8	No	1
782	3354	4	1	0.85	No	1
783	3355	6	1	0.83	No	1
784	3356	4	1	0.83	No	1
785	3357	5	1	0.82	No	1
786	3358	7	1	0.82	No	1
787	3359	4	1	0.85	No	1
788	3360	6	1	0.85	No	1
789	3361	7	1	0.85	No	1
790	3362	7	1	0.85	No	1
791	3363	5	1	0.87	No	1
792	3364	4	1	0.88	No	1
793	3365	4	1	0.88	No	1
794	3366	3	1	0.88	No	1
795	3367	3	1	0.89	No	1
796	3368	4	1	0.85	No	1
797	3369	6	1	0.85	No	1
798	3370	5	1	0.9	No	1
799	3371	4	1	0.91	No	1
800	3372	3	1	0.93	No	1
801	3373	5	1	0.93	No	1
802	3374	4	1	0.93	No	1
803	3375	5	1	0.93	No	1
804	3376	5	1	0.94	No	1
805	3377	6	1	0.95	No	1
806	3378	4	1	0.96	No	1
807	3379	4	1	0.96	No	1
808	3380	3	1	0.96	No	1
809	3381	5	1	0.98	No	1
810	3382	3	1	0.98	No	1
811	3383	4	1	0.98	No	1
812	3384	3	1	1	Yes	1
813	3385	6	1	1	Yes	1
814	3386	6	1	1.08	Yes	1
815	3387	3	1	1.08	Yes	1
816	3388	4	1	1.09	Yes	1
817	3389	3	1	1.09	Yes	1
818	3390	4	1	1.18	Yes	1
819	3391	5	1	1.18	Yes	1
820	3392	3	1	1.18	Yes	1
821	3393	4	1	1.18	Yes	1
822	3394	5	1	1.19	Yes	1
823	3395	7	1	1.19	Yes	1
824	3396	6	1	1.13	Yes	1
825	3397	6	1	1.32	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
826	3398	5	1	1.33	Yes	1
827	3399	5	1	1.22	Yes	1
828	3400	4	1	1.2	Yes	1
829	3401	6	1	1.18	Yes	1
830	3402	6	1	1.18	Yes	1
831	3403	6	1	1.19	Yes	1
832	3404	6	1	1.19	Yes	1
833	3405	5	1	1.21	Yes	1
834	3406	3	1	1.21	Yes	1
835	3407	4	1	1.22	Yes	1
836	3408	6	1	1.23	Yes	1
837	3409	6	1	1.22	Yes	1
838	3410	5	1	1.23	Yes	1
839	3411	3	1	1.23	Yes	1
840	3412	3	1	1.23	Yes	1
841	3413	5	1	1.23	Yes	1
842	3414	3	1	1.2	Yes	1
843	3415	5	1	1.11	Yes	1
844	3416	5	1	1.11	Yes	1
845	3417	3	1	1.12	Yes	1
846	3418	4	1	1.2	Yes	1
847	3419	3	1	1.07	Yes	1
848	3420	4	1	1.07	Yes	1
849	3421	3	1	1.07	Yes	1
850	3422	5	1	1.09	Yes	1
851	3423	3	1	1.09	Yes	1
852	3424	4	1	1.09	Yes	1
853	3425	3	1	1.1	Yes	1
854	3426	3	1	1.1	Yes	1
855	3427	4	1	1.1	Yes	1
856	3428	5	1	1.06	Yes	1
857	3429	3	1	1	Yes	1
858	3430	3	1	1.04	Yes	1
859	3431	4	1	1.02	Yes	1
860	3432	4	1	1.04	Yes	1
861	3433	4	1	1.06	Yes	1
862	3434	9	1	1.07	Yes	1
863	3435	4	1	1.07	Yes	1
864	3436	5	1	1.13	Yes	1
865	3437	4	1	1.1	Yes	1
866	3438	6	1	1.12	Yes	1
867	3439	4	1	1.12	Yes	1
868	3440	3	1	1.13	Yes	1
869	3441	3	1	1.13	Yes	1
870	3442	5	1	1.14	Yes	1
871	3443	4	1	1.18	Yes	1
872	3444	4	1	1.13	Yes	1
873	3445	3	1	1.14	Yes	1
874	3446	4	1	1.2	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
875	3447	4	1	1.2	Yes	1
876	3448	3	1	1.2	Yes	1
877	3449	4	1	1.2	Yes	1
878	3450	5	1	1.03	Yes	1
879	3451	6	1	1.03	Yes	1
880	3452	3	1	1.03	Yes	1
881	3453	3	1	1.03	Yes	1
882	3454	6	1	1.03	Yes	1
883	3455	3	1	1.03	Yes	1
884	3456	3	1	1.04	Yes	1
885	3457	5	1	1.04	Yes	1
886	3458	4	1	1.03	Yes	1
887	3459	4	1	1.03	Yes	1
888	3460	4	1	1.04	Yes	1
889	3461	5	1	1.1	Yes	1
890	3462	5	1	1.1	Yes	1
891	3463	5	1	1.13	Yes	1
892	3464	5	1	1.14	Yes	1
893	3465	3	1	1.15	Yes	1
894	3466	6	1	1.15	Yes	1
895	3467	4	1	1.13	Yes	1
896	3468	4	1	1.14	Yes	1
897	3469	4	1	1.15	Yes	1
898	3470	6	1	1.15	Yes	1
899	3471	5	1	1.16	Yes	1
900	3472	3	1	1.17	Yes	1
901	3473	5	1	0.82	No	2
902	3474	4	1	0.85	No	2
903	3475	6	1	0.87	No	2
904	3476	4	1	0.85	No	1
905	3477	3	1	0.86	No	1
906	3478	3	1	0.87	No	1
907	3479	3	1	0.87	No	1
908	3480	5	1	0.89	No	1
909	3481	3	1	0.91	No	1
910	3482	6	1	0.91	No	1
911	3483	3	1	0.93	No	1
912	3484	6	1	0.93	No	1
913	3485	3	1	1.18	Yes	1
914	3486	4	1	1.18	Yes	1
915	3487	5	1	1.2	Yes	1
916	3488	3	1	1.22	Yes	1
917	3489	4	1	1.25	Yes	1
918	3490	3	1	1.25	Yes	1
919	3491	3	1	1.25	Yes	1
920	3492	3	1	1.25	Yes	1
921	3493	4	1	1.26	Yes	1
922	3494	5	1	1.23	Yes	1
923	3495	5	1	1.26	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
924	3496	4	1	1.26	Yes	1
925	3497	3	1	1.27	Yes	1
926	3498	3	1	1.28	Yes	1
927	3499	3	1	1.29	Yes	1
928	3500	3	1	1.29	Yes	1
929	3501	2	1	1.3	Yes	1
930	3502	5	1	1.32	Yes	1
931	3503	4	1	1.32	Yes	1
932	3504	5	1	1.32	Yes	1
933	3505	4	1	1.33	Yes	1
934	3506	6	1	1.2	Yes	1
935	3507	4	1	1.2	Yes	1
936	3508	5	1	1.23	Yes	1
937	3509	3	1	1.25	Yes	1
938	3510	5	1	1.25	Yes	1
939	3511	8	1	1.22	Yes	1
940	3512	4	1	1.22	Yes	1
941	3513	7	1	1.23	Yes	1
942	3514	5	1	1.25	Yes	1
943	3515	6	1	1.25	Yes	1
944	3516	7	1	1.3	Yes	1
945	3517	4	1	1.3	Yes	1
946	3518	5	1	1.3	Yes	1
947	3519	4	1	1.3	Yes	1
948	3520	4	1	1.3	Yes	1
949	3521	3	1	1.3	Yes	1
950	3522	4	1	1.5	Yes	1
951	3523	3	1	1.5	Yes	1
952	3524	5	1	1.45	Yes	1
953	3525	5	1	1.45	Yes	1
954	3526	3	1	1.45	Yes	1
955	3527	4	1	1.43	Yes	1
956	3528	8	1	1.42	Yes	1
957	3529	4	1	1.43	Yes	1
958	3530	4	1	1.43	Yes	1
959	3531	6	1	1.4	Yes	1
960	3532	4	1	1.4	Yes	1
961	3533	5	1	1.4	Yes	1
962	3534	4	1	1.42	Yes	1
963	3535	6	1	1.42	Yes	1
964	3536	4	1	1.37	Yes	1
965	3537	5	1	1.37	Yes	1
966	3538	5	1	1.36	Yes	1
967	3539	3	1	1.36	Yes	1
968	3540	4	1	1.36	Yes	1
969	3541	4	1	1.35	Yes	1
970	3542	4	1	1.36	Yes	1
971	3543	4	1	1.36	Yes	1
972	3544	10	1	1.34	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
973	3545	3	1	1.34	Yes	1
974	3546	3	1	1.35	Yes	1
975	3547	4	1	1.38	Yes	1
976	3548	4	1	1.34	Yes	1
977	3549	3	1	1.35	Yes	1
978	3550	5	1	1.35	Yes	1
979	3551	4	1	1.35	Yes	1
980	3552	4	1	1.36	Yes	1
981	3553	5	1	1.38	Yes	1
982	3554	4	1	1.38	Yes	1
983	3555	3	1	1.38	Yes	1
984	3556	3	1	1.38	Yes	1
985	3557	4	1	1.38	Yes	1
986	3558	5	1	1.38	Yes	1
987	3559	3	1	1.4	Yes	1
988	3560	4	1	1.4	Yes	1
989	3561	3	1	1.4	Yes	1
990	3562	4	1	1.4	Yes	1
991	3563	10	1	1.43	Yes	1
992	3564	5	1	1.35	Yes	1
993	3565	5	1	1.35	Yes	1
994	3566	4	1	1.35	Yes	1
995	3567	4	1	1.35	Yes	1
996	3568	3	1	1.35	Yes	1
997	3569	5	1	1.35	Yes	1
998	3570	4	1	1.25	Yes	1
999	3571	4	1	1.25	Yes	1
1000	3572	4	1	1.26	Yes	1
1001	3573	4	1	1.48	Yes	1
1002	3574	3	1	1.48	Yes	1
1003	3575	3	1	1.46	Yes	1
1004	3576	5	1	1.45	Yes	1
1005	3577	3	1	1.45	Yes	1
1006	3578	3	1	1.43	Yes	1
1007	3579	5	1	1.42	Yes	1
1008	3580	5	1	1.36	Yes	1
1009	3581	5	1	1.38	Yes	1
1010	3582	4	1	1.4	Yes	1
1011	3583	4	1	1.43	Yes	1
1012	3584	5	1	1.54	Yes	1
1013	3585	4	1	1.58	Yes	1
1014	3586	3	1	1.59	Yes	1
1015	3587	3	1	1.6	Yes	1
1016	3588	5	1	1.9	Yes	1
1017	3589	4	1	1.9	Yes	1
1018	3590	4	1	1.89	Yes	1
1019	3591	3	1	1.89	Yes	1
1020	3592	4	1	1.89	Yes	1
1021	3593	3	1	1.88	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1022	3594	3	1	1.88	Yes	1
1023	3595	5	1	1.87	Yes	1
1024	3596	5	1	1.87	Yes	1
1025	3597	4	1	1.87	Yes	1
1026	3598	3	1	1.87	Yes	1
1027	3599	3	1	1.85	Yes	1
1028	3600	4	1	1.85	Yes	1
1029	3601	3	1	1.96	Yes	1
1030	3602	4	1	1.96	Yes	1
1031	3603	5	1	1.96	Yes	1
1032	3604	5	1	2	Yes	1
1033	3605	3	1	2.07	Yes	1
1034	3606	3	1	2.21	Yes	1
1035	3607	5	1	2.21	Yes	1
1036	3608	4	1	2.21	Yes	1
1037	3609	4	1	2.21	Yes	1
1038	3610	4	1	2.2	Yes	1
1039	3611	3	1	2.2	Yes	1
1040	3612	4	1	2.16	Yes	1
1041	3613	3	1	2.1	Yes	1
1042	3614	4	1	2.1	Yes	1
1043	3615	5	1	2.1	Yes	1
1044	3616	4	1	2.16	Yes	1
1045	3617	4	1	2.16	Yes	1
1046	3618	5	1	2.2	Yes	1
1047	3619	6	1	2.2	Yes	1
1048	3620	4	1	2.2	Yes	1
1049	3621	4	1	2.2	Yes	1
1050	3622	4	1	2.2	Yes	1
1051	3623	4	1	2.19	Yes	1
1052	3624	7	1	2.18	Yes	1
1053	3625	6	1	2.17	Yes	1
1054	3626	5	1	2.16	Yes	1
1055	3627	5	1	2.16	Yes	1
1056	3628	4	1	2.16	Yes	1
1057	3629	4	1	2.22	Yes	1
1058	3630	5	1	2.22	Yes	1
1059	3631	5	1	2.22	Yes	1
1060	3632	7	1	2.22	Yes	1
1061	3633	4	1	2.22	Yes	1
1062	3634	3	1	2.22	Yes	1
1063	3635	3	1	2.32	Yes	1
1064	3636	6	1	2.32	Yes	1
1065	3637	4	1	2.32	Yes	1
1066	3638	5	1	2.61	Yes	1
1067	3639	5	1	2.63	Yes	1
1068	3640	3	1	2.63	Yes	1
1069	3641	5	1	2.63	Yes	1
1070	3642	4	1	2.72	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1071	3643	3	1	2.72	Yes	1
1072	3644	4	1	2.72	Yes	1
1073	3645	3	1	2.72	Yes	1
1074	3646	4	1	2.72	Yes	1
1075	3647	5	1	2.71	Yes	1
1076	3648	5	1	2.7	Yes	1
1077	3649	4	1	2.63	Yes	1
1078	3650	5	1	2.62	Yes	1
1079	3651	4	1	2.7	Yes	1
1080	3652	5	1	2.73	Yes	1
1081	3653	6	1	2.6	Yes	1
1082	3654	5	1	2.6	Yes	1
1083	3655	5	1	2.6	Yes	1
1084	3656	4	1	2.6	Yes	1
1085	3657	5	1	2.6	Yes	1
1086	3658	6	1	2.5	Yes	1
1087	3659	4	1	2.5	Yes	1
1088	3660	5	1	2.5	Yes	1
1089	3661	5	1	2.5	Yes	1
1090	3662	4	1	2.5	Yes	1
1091	3663	4	1	2.5	Yes	1
1092	3664	5	1	2.5	Yes	1
1093	3665	6	1	2.42	Yes	1
1094	3666	5	1	2.42	Yes	1
1095	3667	4	1	2.43	Yes	1
1096	3668	5	1	2.42	Yes	1
1097	3669	6	1	2.42	Yes	1
1098	3670	6	1	2.42	Yes	1
1099	3671	5	1	2.53	Yes	1
1100	3672	5	1	2.53	Yes	1
1101	3673	8	1	2.65	Yes	1
1102	3674	3	1	2.62	Yes	1
1103	3675	3	1	2.62	Yes	1
1104	3676	4	1	2.61	Yes	1
1105	3677	5	1	2.56	Yes	1
1106	3678	4	1	2.5	Yes	1
1107	3679	4	1	2.5	Yes	1
1108	3680	5	1	2.62	Yes	1
1109	3681	3	1	2.65	Yes	1
1110	3682	3	1	2.68	Yes	1
1111	3683	4	1	2.68	Yes	1
1112	3684	3	1	2.68	Yes	1
1113	3685	4	1	2.7	Yes	1
1114	3686	4	1	2.7	Yes	1
1115	3687	4	1	2.75	Yes	1
1116	3688	3	1	2.75	Yes	1
1117	3689	8	1	2.75	Yes	1
1118	3690	4	1	2.75	Yes	1
1119	3691	9	1	2.75	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1120	3692	3	1	2.73	Yes	1
1121	3693	4	1	2.74	Yes	1
1122	3694	3	1	2.74	Yes	1
1123	3695	3	1	2.74	Yes	1
1124	3696	4	1	2.75	Yes	1
1125	3697	4	1	2.75	Yes	1
1126	3698	5	1	2.76	Yes	1
1127	3699	4	1	2.77	Yes	1
1128	3700	3	1	2.75	Yes	1
1129	3701	4	1	2.77	Yes	1
1130	3702	3	1	2.77	Yes	1
1131	3703	4	1	2.78	Yes	1
1132	3704	3	1	2.78	Yes	1
1133	3705	5	1	2.8	Yes	1
1134	3706	5	1	2.87	Yes	1
1135	3707	5	1	2.87	Yes	1
1136	3708	5	1	2.62	Yes	1
1137	3709	5	1	2.64	Yes	1
1138	3710	5	1	2.64	Yes	1
1139	3711	6	1	2.64	Yes	1
1140	3712	5	1	2.65	Yes	1
1141	3713	5	1	2.75	Yes	1
1142	3714	3	1	2.85	Yes	1
1143	3715	4	1	2.85	Yes	1
1144	3716	6	1	3	Yes	1
1145	3717	5	1	2.85	Yes	1
1146	3718	6	1	2.86	Yes	1
1147	3719	6	1	2.87	Yes	1
1148	3720	5	1	2.87	Yes	1
1149	3721	7	1	2.87	Yes	1
1150	3722	5	1	2.87	Yes	1
1151	3723	6	1	2.87	Yes	1
1152	3724	6	1	2.91	Yes	1
1153	3725	4	1	2.93	Yes	1
1154	3726	6	1	2.93	Yes	1
1155	3727	5	1	2.93	Yes	1
1156	3728	6	1	2.95	Yes	1
1157	3729	6	1	2.95	Yes	1
1158	3730	5	1	2.99	Yes	1
1159	3731	4	1	2.99	Yes	1
1160	3732	4	1	2.99	Yes	1
1161	3733	4	1	3.16	Yes	1
1162	3734	5	1	3.15	Yes	1
1163	3735	5	1	3.15	Yes	1
1164	3736	4	1	3.15	Yes	1
1165	3737	8	1	3.15	Yes	1
1166	3738	6	1	3.15	Yes	1
1167	3739	5	1	3.15	Yes	1
1168	3740	5	1	3.15	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1169	3741	6	1	3.15	Yes	1
1170	3742	6	1	3.15	Yes	1
1171	3743	6	1	3.15	Yes	1
1172	3744	6	1	3.15	Yes	1
1173	3745	5	1	3.15	Yes	1
1174	3746	4	1	3.15	Yes	1
1175	3747	5	1	3.04	Yes	1
1176	3748	4	1	3.02	Yes	1
1177	3749	5	1	3.06	Yes	1
1178	3750	7	1	3.06	Yes	1
1179	3751	4	1	3.07	Yes	1
1180	3752	5	1	3.07	Yes	1
1181	3753	3	1	0.5	No	2
1182	3754	4	1	0.5	No	2
1183	3755	8	1	0.5	No	2
1184	3756	4	1	0.5	No	2
1185	3757	5	1	0.52	No	2
1186	3758	5	1	0.55	No	2
1187	3759	5	1	0.55	No	2
1188	3760	4	1	0.54	No	2
1189	3761	5	1	0.54	No	2
1190	3762	6	1	0.54	No	2
1191	3763	6	1	0.54	No	2
1192	3764	4	1	0.58	No	2
1193	3765	5	1	0.58	No	2
1194	3766	5	1	0.58	No	2
1195	3767	5	1	0.58	No	2
1196	3768	7	1	0.58	No	2
1197	3769	3	1	0.59	No	2
1198	3770	4	1	0.6	No	2
1199	3771	6	1	0.6	No	2
1200	3772	4	1	0.6	No	2
1201	3773	4	1	0.6	No	2
1202	3774	5	1	0.6	No	2
1203	3775	6	1	0.62	No	2
1204	3776	2	1	0.62	No	2
1205	3777	4	1	0.63	No	2
1206	3778	4	1	0.63	No	2
1207	3779	6	1	0.65	No	2
1208	3780	5	1	0.65	No	2
1209	3781	4	1	0.65	No	2
1210	3782	5	1	0.65	No	2
1211	3783	4	1	0.65	No	2
1212	3784	4	1	0.66	No	2
1213	3785	5	1	0.67	No	2
1214	3786	5	1	0.68	No	2
1215	3787	4	1	0.66	No	2
1216	3788	5	1	0.66	No	2
1217	3789	4	1	0.67	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1218	3790	6	1	0.68	No	2
1219	3791	5	1	0.75	No	2
1220	3792	4	1	0.75	No	2
1221	3793	4	1	0.75	No	2
1222	3794	4	1	0.75	No	2
1223	3795	5	1	0.75	No	2
1224	3796	5	1	0.75	No	2
1225	3797	6	1	0.75	No	2
1226	3798	4	1	0.75	No	2
1227	3799	4	1	0.75	No	2
1228	3800	6	1	0.97	No	2
1229	3801	5	1	0.97	No	2
1230	3802	5	1	0.9	No	2
1231	3803	3	1	0.9	No	2
1232	3804	4	1	0.9	No	2
1233	3805	4	1	0.9	No	2
1234	3806	5	1	0.9	No	2
1235	3807	3	1	0.9	No	2
1236	3808	4	1	0.91	No	2
1237	3809	4	1	0.91	No	2
1238	3810	4	1	0.9	No	2
1239	3811	5	1	0.9	No	2
1240	3812	6	1	0.9	No	2
1241	3813	4	1	0.89	No	2
1242	3814	9	1	0.89	No	2
1243	3815	4	1	0.88	No	2
1244	3816	4	1	0.88	No	2
1245	3817	4	1	0.88	No	2
1246	3818	3	1	0.88	No	2
1247	3819	4	1	0.87	No	2
1248	3820	4	1	0.87	No	2
1249	3821	5	1	0.8	No	2
1250	3822	3	1	0.8	No	2
1251	3823	4	1	0.8	No	2
1252	3824	7	1	0.8	No	2
1253	3825	3	1	0.8	No	2
1254	3826	5	1	0.81	No	2
1255	3827	5	1	0.81	No	2
1256	3828	4	1	0.81	No	2
1257	3829	5	1	0.8	No	2
1258	3830	4	1	0.82	No	2
1259	3831	3	1	0.81	No	2
1260	3832	3	1	0.82	No	2
1261	3833	4	1	0.81	No	2
1262	3834	4	1	0.68	No	2
1263	3835	4	1	0.67	No	2
1264	3836	6	1	0.68	No	2
1265	3837	5	1	0.73	No	2
1266	3838	5	1	0.77	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1267	3839	4	1	0.77	No	2
1268	3840	7	1	0.77	No	2
1269	3841	7	1	0.78	No	2
1270	3842	5	1	0.78	No	2
1271	3843	3	1	0.8	No	2
1272	3844	4	1	0.8	No	2
1273	3845	3	1	0.8	No	2
1274	3846	8	1	0.78	No	2
1275	3847	3	1	0.8	No	2
1276	3848	4	1	0.8	No	2
1277	3849	4	1	0.8	No	2
1278	3850	5	1	0.85	No	2
1279	3851	5	1	0.85	No	2
1280	3852	6	1	0.85	No	2
1281	3853	8	1	0.86	No	2
1282	3854	6	1	0.9	No	2
1283	3855	5	1	0.95	No	2
1284	3856	7	1	0.96	No	2
1285	3857	5	1	0.98	No	2
1286	3858	5	1	0.99	No	2
1287	3859	6	1	1	Yes	2
1288	3860	9	1	1	Yes	3
1289	3861	5	1	1.04	Yes	2
1290	3862	4	1	0.66	No	2
1291	3863	4	1	0.66	No	2
1292	3864	8	1	0.77	No	2
1293	3865	4	1	0.78	No	2
1294	3866	6	1	0.78	No	2
1295	3867	6	1	0.95	No	2
1296	3868	5	1	0.95	No	1
1297	3869	5	1	0.95	No	1
1298	3870	3	1	0.97	No	1
1299	3871	3	1	0.98	No	1
1300	3872	4	1	0.98	No	1
1301	3873	5	1	0.98	No	1
1302	3874	5	1	0.98	No	1
1303	3875	3	1	0.94	No	1
1304	3876	5	1	0.91	No	1
1305	3877	4	1	0.94	No	1
1306	3878	5	1	0.9	No	1
1307	3879	6	1	0.9	No	1
1308	3880	6	1	0.88	No	1
1309	3881	7	1	0.88	No	1
1310	3882	5	1	0.88	No	1
1311	3883	5	1	0.88	No	1
1312	3884	8	1	0.89	No	1
1313	3885	3	1	0.9	No	1
1314	3886	5	1	0.9	No	1
1315	3887	7	1	0.9	No	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1316	3888	6	1	0.9	No	1
1317	3889	4	1	0.9	No	1
1318	3890	4	1	0.91	No	1
1319	3891	5	1	1	Yes	1
1320	3892	4	1	1	Yes	1
1321	3893	3	1	1	Yes	1
1322	3894	5	1	1.03	Yes	1
1323	3895	4	1	1.04	Yes	1
1324	3896	7	1	1.05	Yes	1
1325	3897	7	1	1.06	Yes	1
1326	3898	6	1	1.07	Yes	1
1327	3899	5	1	1.07	Yes	1
1328	3900	4	1	1.07	Yes	1
1329	3901	5	1	1	Yes	1
1330	3902	4	1	1.06	Yes	1
1331	3903	6	1	1.08	Yes	1
1332	3904	5	1	1.08	Yes	1
1333	3905	6	1	1.14	Yes	1
1334	3906	5	1	1.14	Yes	1
1335	3907	4	1	1.16	Yes	1
1336	3908	4	1	1.18	Yes	1
1337	3909	5	1	1.18	Yes	1
1338	3910	3	1	1.17	Yes	1
1339	3911	5	1	1.5	Yes	1
1340	3912	3	1	1.5	Yes	1
1341	3913	5	1	1.5	Yes	1
1342	3914	6	1	1.5	Yes	1
1343	3915	7	1	1.5	Yes	1
1344	3916	6	1	1.5	Yes	1
1345	3917	5	1	1.5	Yes	1
1346	3918	4	1	1.5	Yes	1
1347	3919	4	1	1.5	Yes	1
1348	3920	9	1	1.48	Yes	1
1349	3921	3	1	1.48	Yes	1
1350	3922	4	1	1.48	Yes	1
1351	3923	4	1	1.47	Yes	1
1352	3924	5	1	1.47	Yes	1
1353	3925	4	1	1.45	Yes	1
1354	3926	2	1	1.45	Yes	1
1355	3927	5	1	1.45	Yes	1
1356	3928	3	1	1.45	Yes	1
1357	3929	4	1	1.45	Yes	1
1358	3930	3	1	1.45	Yes	1
1359	3931	4	1	1.48	Yes	1
1360	3932	4	1	1.5	Yes	1
1361	3933	5	1	1.45	Yes	1
1362	3934	4	1	1.5	Yes	1
1363	3935	9	1	1.51	Yes	1
1364	3936	4	1	1.51	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1365	3937	4	1	1.53	Yes	1
1366	3938	5	1	1.55	Yes	1
1367	3939	4	1	1.55	Yes	1
1368	3940	6	1	1.52	Yes	1
1369	3941	5	1	1.53	Yes	1
1370	3942	5	1	1.52	Yes	1
1371	3943	4	1	1.52	Yes	1
1372	3944	3	1	1.53	Yes	1
1373	3945	4	1	1.53	Yes	1
1374	3946	3	1	1.52	Yes	1
1375	3947	4	1	1.57	Yes	1
1376	3948	3	1	1.57	Yes	1
1377	3949	3	1	1.57	Yes	1
1378	3950	5	1	1.58	Yes	1
1379	3951	5	1	1.59	Yes	1
1380	3952	3	1	1.59	Yes	1
1381	3953	4	1	1.6	Yes	1
1382	3954	3	1	1.58	Yes	1
1383	3955	4	1	1.52	Yes	1
1384	3956	3	1	1.52	Yes	1
1385	3957	4	1	1.52	Yes	1
1386	3958	5	1	1.52	Yes	1
1387	3959	10	1	1.53	Yes	1
1388	3960	7	1	1.55	Yes	1
1389	3961	8	1	1.55	Yes	1
1390	3962	7	1	1.5	Yes	1
1391	3963	6	1	1.51	Yes	1
1392	3964	5	1	1.52	Yes	1
1393	3965	4	1	1.55	Yes	1
1394	3966	5	1	1.55	Yes	1
1395	3967	4	1	1.56	Yes	1
1396	3968	3	1	1.58	Yes	1
1397	3969	5	1	1.58	Yes	1
1398	3970	4	1	1.59	Yes	1
1399	3971	5	1	1.6	Yes	1
1400	3972	10	1	1.64	Yes	1
1401	3973	5	1	1.64	Yes	1
1402	3974	4	1	1.65	Yes	1
1403	3975	5	1	1.55	Yes	1
1404	3976	7	1	1.55	Yes	1
1405	3977	4	1	1.55	Yes	1
1406	3978	6	1	1.53	Yes	1
1407	3979	7	1	1.53	Yes	1
1408	3980	6	1	1.52	Yes	1
1409	3981	6	1	1.52	Yes	1
1410	3982	5	1	1.5	Yes	1
1411	3983	3	1	1.5	Yes	1
1412	3984	5	1	1.5	Yes	1
1413	3985	6	1	1.3	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1414	3986	3	1	1.3	Yes	1
1415	3987	4	1	1.3	Yes	1
1416	3988	5	1	1.3	Yes	1
1417	3989	5	1	1.27	Yes	1
1418	3990	6	1	1.26	Yes	1
1419	3991	10	1	1.25	Yes	1
1420	3992	4	1	1.35	Yes	1
1421	3993	4	1	1.35	Yes	1
1422	3994	5	1	1.35	Yes	1
1423	3995	7	1	1.35	Yes	1
1424	3996	5	1	1.35	Yes	1
1425	3997	3	1	1.4	Yes	1
1426	3998	6	1	1.4	Yes	1
1427	3999	3	1	1.4	Yes	1
1428	4000	6	1	1.42	Yes	1
1429	4001	6	1	1.44	Yes	1
1430	4002	6	1	1.42	Yes	1
1431	4003	5	1	1.41	Yes	1
1432	4004	6	1	1.42	Yes	1
1433	4005	5	1	1.42	Yes	1
1434	4006	5	1	1.43	Yes	1
1435	4007	6	1	1.44	Yes	1
1436	4008	6	1	1.4	Yes	1
1437	4009	5	1	1.42	Yes	1
1438	4010	7	1	1.42	Yes	1
1439	4011	3	1	1.42	Yes	1
1440	4012	4	1	1.42	Yes	1
1441	4013	5	1	1.42	Yes	1
1442	4014	6	1	1.42	Yes	1
1443	4015	5	1	1.43	Yes	1
1444	4016	5	1	1.44	Yes	1
1445	4017	6	1	1.44	Yes	1
1446	4018	5	1	1.45	Yes	1
1447	4019	4	1	1.46	Yes	1
1448	4020	4	1	1.46	Yes	1
1449	4021	4	1	1.46	Yes	1
1450	4022	5	1	1.68	Yes	1
1451	4023	6	1	1.68	Yes	1
1452	4024	4	1	1.69	Yes	1
1453	4025	3	1	1.72	Yes	1
1454	4026	6	1	1.72	Yes	1
1455	4027	6	1	1.73	Yes	1
1456	4028	5	1	1.48	Yes	1
1457	4029	9	1	1.4	Yes	1
1458	4030	5	1	1.55	Yes	1
1459	4031	3	1	1.55	Yes	1
1460	4032	5	1	1.55	Yes	1
1461	4033	5	1	1.54	Yes	1
1462	4034	6	1	1.54	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1463	4035	5	1	1.54	Yes	1
1464	4036	4	1	1.54	Yes	1
1465	4037	5	1	1.54	Yes	1
1466	4038	5	1	1.54	Yes	1
1467	4039	7	1	1.54	Yes	1
1468	4040	6	1	1.54	Yes	1
1469	4041	7	1	1.25	Yes	1
1470	4042	6	1	1.26	Yes	1
1471	4043	6	1	1.27	Yes	1
1472	4044	4	1	1.27	Yes	1
1473	4045	4	1	1.27	Yes	1
1474	4046	4	1	1.31	Yes	1
1475	4047	5	1	1.31	Yes	1
1476	4048	5	1	1.33	Yes	1
1477	4049	4	1	1.33	Yes	1
1478	4050	5	1	1.54	Yes	2
1479	4051	5	1	1.53	Yes	2
1480	4052	5	1	1.5	Yes	2
1481	4053	6	1	1.5	Yes	2
1482	4054	9	1	1.5	Yes	2
1483	4055	6	1	1.5	Yes	2
1484	4056	6	1	1.5	Yes	2
1485	4057	5	1	1.5	Yes	2
1486	4058	7	1	1.5	Yes	2
1487	4059	6	1	1.46	Yes	2
1488	4060	6	1	1.46	Yes	2
1489	4061	5	1	1.42	Yes	2
1490	4062	4	1	1.42	Yes	2
1491	4063	5	1	1.42	Yes	2
1492	4064	8	1	1.42	Yes	2
1493	4065	6	1	1.42	Yes	2
1494	4066	7	1	1.42	Yes	2
1495	4067	5	1	1.38	Yes	2
1496	4068	7	1	1.32	Yes	2
1497	4069	7	1	1.32	Yes	2
1498	4070	5	1	1.32	Yes	2
1499	4071	6	1	1.32	Yes	2
1500	4072	6	1	1.32	Yes	2
1501	4073	6	1	1.28	Yes	2
1502	4074	7	1	1.45	Yes	2
1503	4075	6	1	1.45	Yes	2
1504	4076	5	1	1.45	Yes	2
1505	4077	4	1	1.45	Yes	2
1506	4078	5	1	1.5	Yes	2
1507	4079	7	1	1.5	Yes	2
1508	4080	5	1	1.5	Yes	2
1509	4081	6	1	1.5	Yes	2
1510	4082	6	1	1.48	Yes	2
1511	4083	6	1	1.48	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 1 (km)	Transport Required	Origin Zone
1512	4084	5	1	1.53	Yes	2
	Shelter 1 Total Household = 1512	Shelter 1 Total Population = 6757				

Appendix-B

Table 02: Household to Flood Shelter 2 Mapping Data

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1	848	4	2	0.01	No	3
2	849	5	2	0.01	No	3
3	850	4	2	0.02	No	3
4	851	8	2	0.03	No	3
5	852	6	2	0.04	No	3
6	853	9	2	0.05	No	3
7	854	4	2	0.087	No	3
8	855	3	2	0.09	No	3
9	856	4	2	0.09	No	3
10	857	4	2	0.09	No	3
11	858	6	2	0.09	No	3
12	859	7	2	0.085	No	3
13	860	5	2	0.089	No	3
14	861	7	2	0.09	No	3
15	862	3	2	0.09	No	3
16	863	6	2	0.09	No	3
17	864	4	2	0.09	No	3
18	865	5	2	0.1	No	3
19	866	6	2	0.1	No	3
20	867	5	2	0.1	No	3
21	868	5	2	0.09	No	3
22	869	7	2	0.09	No	3
23	870	3	2	0.09	No	3
24	871	3	2	0.09	No	3
25	872	4	2	0.09	No	3
26	873	4	2	0.09	No	3
27	874	4	2	0.1	No	3
28	875	5	2	0.1	No	3
29	876	6	2	0.09	No	3
30	877	4	2	0.09	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
31	878	4	2	0.09	No	3
32	879	4	2	0.09	No	3
33	880	5	2	0.1	No	3
34	881	6	2	0.1	No	3
35	882	6	2	0.1	No	3
36	883	5	2	0.1	No	3
37	884	5	2	0.1	No	3
38	885	5	2	0.1	No	3
39	886	6	2	0.1	No	3
40	887	4	2	0.1	No	3
41	888	5	2	0.1	No	3
42	889	5	2	0.1	No	3
43	890	6	2	0.1	No	3
44	891	3	2	0.12	No	3
45	892	3	2	0.12	No	3
46	893	5	2	0.12	No	3
47	894	4	2	0.2	No	3
48	895	4	2	0.2	No	3
49	896	4	2	0.2	No	3
50	897	4	2	0.2	No	3
51	898	5	2	0.2	No	3
52	899	7	2	0.09	No	3
53	900	4	2	0.09	No	3
54	901	3	2	0.09	No	3
55	902	4	2	0.09	No	3
56	903	6	2	0.1	No	3
57	904	5	2	0.1	No	3
58	905	5	2	0.1	No	3
59	906	4	2	0.12	No	3
60	907	6	2	0.12	No	3
61	908	8	2	0.12	No	3
62	909	4	2	0.12	No	3
63	910	5	2	0.15	No	3
64	911	6	2	0.17	No	3
65	912	6	2	0.17	No	3
66	913	5	2	0.17	No	3
67	914	5	2	0.17	No	3
68	915	4	2	0.2	No	3
69	916	6	2	0.2	No	3
70	917	6	2	0.2	No	3
71	918	9	2	0.2	No	3
72	919	5	2	0.2	No	3
73	923	3	2	0.2	No	3
74	921	5	2	0.24	No	3
75	920	4	2	0.24	No	3
76	922	4	2	0.24	No	3
77	924	4	2	0.24	No	3
78	925	5	2	0.24	No	3
79	926	6	2	0.24	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
80	927	5	2	0.24	No	3
81	928	6	2	0.25	No	3
82	929	6	2	0.25	No	3
83	930	5	2	0.27	No	3
84	931	6	2	0.27	No	3
85	932	6	2	0.27	No	3
86	933	6	2	0.27	No	3
87	934	6	2	0.27	No	3
88	935	4	2	0.27	No	3
89	936	5	2	0.27	No	3
90	937	4	2	0.28	No	3
91	938	4	2	0.3	No	3
92	939	3	2	0.3	No	3
93	941	4	2	0.28	No	3
94	942	4	2	0.3	No	3
95	940	3	2	0.3	No	3
96	943	3	2	0.31	No	3
97	944	3	2	0.31	No	3
98	945	4	2	0.31	No	3
99	946	4	2	0.31	No	3
100	946	5	2	0.31	No	3
101	947	4	2	0.33	No	3
102	948	4	2	0.33	No	3
103	949	5	2	0.33	No	3
104	950	5	2	0.35	No	3
105	951	3	2	0.35	No	3
106	952	4	2	0.35	No	3
107	953	3	2	0.35	No	3
108	954	7	2	0.36	No	3
109	955	4	2	0.36	No	3
110	956	3	2	0.36	No	3
111	957	3	2	0.36	No	3
112	958	5	2	0.37	No	3
113	959	4	2	0.36	No	3
114	960	4	2	0.36	No	3
115	961	4	2	0.36	No	3
116	962	5	2	0.37	No	3
117	963	6	2	0.37	No	3
118	964	9	2	0.37	No	3
119	965	5	2	0.37	No	3
120	966	5	2	0.37	No	3
121	967	4	2	0.36	No	3
122	968	7	2	0.37	No	3
123	971	3	2	0.37	No	3
124	972	4	2	0.37	No	3
125	973	4	2	0.37	No	3
126	974	3	2	0.37	No	3
127	969	5	2	0.38	No	3
128	975	4	2	0.4	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
129	976	3	2	0.4	No	3
130	977	4	2	0.37	No	3
131	978	4	2	0.4	No	3
132	979	4	2	0.4	No	3
133	980	3	2	0.39	No	3
134	981	5	2	0.4	No	3
135	982	5	2	0.41	No	3
136	983	4	2	0.41	No	3
137	984	6	2	0.43	No	3
138	985	5	2	0.44	No	3
139	986	4	2	0.42	No	3
140	987	4	2	0.43	No	3
141	988	7	2	0.44	No	3
142	989	5	2	0.45	No	3
143	990	5	2	0.53	No	3
144	991	6	2	0.55	No	3
145	992	5	2	0.55	No	3
146	993	5	2	0.6	No	3
147	994	6	2	0.6	No	3
148	995	5	2	0.8	No	3
149	996	5	2	0.8	No	3
150	997	4	2	0.8	No	3
151	998	4	2	0.8	No	3
152	999	7	2	0.8	No	3
153	1000	4	2	0.85	No	3
154	1001	4	2	0.85	No	3
155	1002	4	2	0.85	No	3
156	1003	6	2	0.85	No	3
157	1004	4	2	0.85	No	3
158	1005	6	2	0.85	No	3
159	1006	6	2	0.84	No	3
160	1007	5	2	0.85	No	3
161	1008	5	2	0.85	No	3
162	1009	6	2	0.85	No	3
163	1010	7	2	0.85	No	3
164	1011	6	2	0.85	No	3
165	1012	3	2	0.85	No	3
166	1013	4	2	0.9	No	3
167	1014	5	2	0.9	No	3
168	1015	4	2	0.9	No	3
169	1016	5	2	0.9	No	3
170	1017	3	2	0.7	No	3
171	1018	4	2	0.7	No	3
172	1019	3	2	0.7	No	3
173	1020	7	2	0.7	No	3
174	1021	3	2	0.71	No	3
175	1022	3	2	0.7	No	3
176	1023	5	2	0.71	No	3
177	1024	4	2	0.71	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
178	1025	3	2	0.7	No	3
179	1026	4	2	0.71	No	3
180	1027	4	2	0.72	No	3
181	1028	5	2	0.72	No	3
182	1029	10	2	0.73	No	3
183	1030	8	2	0.73	No	3
184	1035	9	2	0.75	No	3
185	1032	7	2	0.75	No	3
186	1031	4	2	0.75	No	3
187	1034	6	2	0.75	No	3
188	1033	6	2	0.75	No	3
189	1036	5	2	0.75	No	3
190	1037	5	2	0.75	No	3
191	1039	8	2	0.76	No	3
192	1046	3	2	0.75	No	3
193	1047	3	2	0.75	No	3
194	1048	4	2	0.72	No	3
195	1040	5	2	0.75	No	3
196	1038	5	2	0.77	No	3
197	1041	5	2	1.06	yes	3
198	1042	5	2	0.021	No	3
199	1043	7	2	0.038	No	3
200	1044	8	2	0.046	No	3
201	1045	4	2	0.045	No	3
202	1049	5	2	0.065	No	3
203	1050	4	2	0.055	No	3
204	1051	3	2	0.054	No	3
205	1052	2	2	0.053	No	3
206	1053	3	2	0.057	No	3
207	1054	4	2	0.065	No	3
208	1055	8	2	0.057	No	3
209	1056	4	2	0.053	No	3
210	1057	4	2	0.12	No	3
211	1058	4	2	0.13	No	3
212	1059	5	2	0.13	No	3
213	1060	4	2	0.12	No	3
214	1061	5	2	0.12	No	3
215	1062	4	2	0.13	No	3
216	1063	4	2	0.13	No	3
217	970	4	2	0.14	No	3
218	1064	4	2	0.14	No	3
219	1065	5	2	0.13	No	3
220	1066	6	2	0.14	No	3
221	1067	6	2	0.15	No	3
222	1068	5	2	0.17	No	3
223	1069	5	2	0.2	No	3
224	1070	4	2	0.2	No	3
225	1071	4	2	0.2	No	3
226	1072	6	2	0.21	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
227	1073	3	2	0.22	No	3
228	1074	5	2	0.22	No	3
229	1075	4	2	0.22	No	3
230	1076	4	2	0.22	No	3
231	1077	8	2	0.23	No	3
232	1078	7	2	0.23	No	3
233	1079	5	2	0.23	No	3
234	1080	4	2	0.24	No	3
235	1081	5	2	0.24	No	3
236	1082	4	2	0.24	No	3
237	1083	3	2	0.24	No	3
238	1084	5	2	0.25	No	3
239	1085	5	2	0.25	No	3
240	1086	5	2	0.26	No	3
241	1087	5	2	0.26	No	3
242	1088	3	2	0.26	No	3
243	1089	4	2	0.26	No	3
244	1090	6	2	0.26	No	3
245	1091	5	2	0.26	No	3
246	1092	6	2	0.27	No	3
247	1939	4	2	0.27	No	3
248	1093	5	2	0.27	No	3
249	1094	6	2	0.27	No	3
250	1095	3	2	0.27	No	3
251	1096	5	2	0.28	No	3
252	1097	3	2	0.27	No	3
253	1098	4	2	0.28	No	3
254	1099	3	2	0.28	No	3
255	1100	5	2	0.28	No	3
256	1101	4	2	0.28	No	3
257	1102	5	2	0.28	No	3
258	1103	5	2	0.28	No	3
259	1104	4	2	0.28	No	3
260	1105	6	2	0.28	No	3
261	1106	7	2	0.28	No	3
262	1107	6	2	0.28	No	3
263	1108	5	2	0.28	No	3
264	1109	6	2	0.28	No	3
265	1110	5	2	0.28	No	3
266	1111	6	2	0.28	No	3
267	1112	3	2	0.28	No	3
268	1113	5	2	0.28	No	3
269	1114	4	2	0.28	No	3
270	1115	4	2	0.28	No	3
271	1116	5	2	0.28	No	3
272	1117	8	2	0.28	No	3
273	1118	5	2	0.28	No	3
274	1119	9	2	0.31	No	3
275	1120	3	2	0.35	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
276	1121	4	2	0.35	No	3
277	1122	6	2	0.35	No	3
278	1123	4	2	0.35	No	3
279	1124	4	2	0.32	No	3
280	1125	4	2	0.33	No	3
281	1126	5	2	0.34	No	3
282	1127	5	2	0.35	No	3
283	1128	5	2	0.35	No	3
284	1129	6	2	0.35	No	3
285	1130	6	2	0.35	No	3
286	1131	5	2	0.15	No	3
287	1132	5	2	0.15	No	3
288	1133	5	2	0.25	No	3
289	1134	4	2	0.25	No	3
290	1135	4	2	0.25	No	3
291	1136	5	2	0.25	No	3
292	1137	4	2	0.25	No	3
293	1138	4	2	0.3	No	3
294	1139	5	2	0.3	No	3
295	1140	5	2	0.3	No	3
296	1141	5	2	0.35	No	3
297	1142	5	2	0.35	No	3
298	1143	4	2	0.35	No	3
299	1144	4	2	-0.35	No	3
300	1145	5	2	0.35	No	3
301	1146	6	2	0.35	No	3
302	1148	4	2	0.31	No	3
303	1149	3	2	0.31	No	3
304	1150	3	2	0.17	No	3
305	1151	5	2	0.17	No	3
306	1152	4	2	0.18	No	3
307	1153	4	2	0.2	No	3
308	1154	3	2	0.25	No	3
309	1155	7	2	0.25	No	3
310	1156	4	2	0.38	No	3
311	1157	3	2	0.38	No	3
312	1158	5	2	0.37	No	3
313	1159	6	2	0.37	No	3
314	1160	4	2	0.37	No	3
315	1161	4	2	0.36	No	3
316	1162	3	2	0.35	No	2
317	1163	4	2	0.35	No	3
318	1164	4	2	0.35	No	3
319	1165	4	2	0.35	No	3
320	1166	6	2	0.35	No	3
321	1167	4	2	0.45	No	3
322	1168	4	2	0.45	No	3
323	1169	6	2	0.45	No	3
324	1170	4	2	0.44	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
325	1171	5	2	0.44	No	3
326	1172	5	2	0.44	No	3
327	1173	6	2	0.44	No	3
328	1174	6	2	0.42	No	3
329	1175	6	2	0.41	No	3
330	1176	7	2	0.41	No	3
331	1177	6	2	0.41	No	3
332	1178	4	2	0.28	No	3
333	1179	4	2	0.28	No	3
334	1180	5	2	0.28	No	3
335	1181	3	2	0.28	No	3
336	1182	4	2	0.28	No	3
337	1183	4	2	0.28	No	3
338	1184	4	2	0.28	No	3
339	1185	2	2	0.28	No	3
340	1186	4	2	0.28	No	3
341	1187	4	2	0.28	No	3
342	1188	2	2	0.29	No	3
343	1189	5	2	0.3	No	3
344	1190	3	2	0.35	No	3
345	1191	5	2	0.35	No	3
346	1192	6	2	0.35	No	3
347	1193	7	2	0.35	No	3
348	1194	7	2	0.35	No	3
349	1195	9	2	0.36	No	3
350	1196	10	2	0.36	No	3
351	1197	5	2	0.36	No	3
352	1198	5	2	0.36	No	3
353	1199	6	2	0.37	No	3
354	1200	3	2	0.37	No	3
355	1201	4	2	0.37	No	3
356	1202	5	2	0.37	No	3
357	1203	5	2	0.38	No	3
358	1204	3	2	0.4	No	3
359	1205	4	2	0.4	No	3
360	1206	4	2	0.4	No	3
361	1207	5	2	0.4	No	3
362	1208	3	2	0.33	No	3
363	1209	5	2	0.33	No	3
364	1210	5	2	0.34	No	3
365	1211	6	2	0.35	No	3
366	1212	4	2	0.35	No	3
367	1213	3	2	0.35	No	3
368	1214	3	2	0.35	No	3
369	1215	4	2	0.35	No	3
370	1216	6	2	0.35	No	3
371	1217	3	2	0.35	No	3
372	1218	5	2	0.53	No	3
373	1219	4	2	0.5	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
374	1220	3	2	0.51	No	3
375	1221	4	2	0.52	No	3
376	1222	4	2	0.53	No	3
377	1223	6	2	0.52	No	3
378	1224	6	2	0.53	No	3
379	1225	3	2	0.51	No	3
380	1226	3	2	0.51	No	3
381	1227	4	2	0.51	No	3
382	1228	5	2	0.53	No	3
383	1229	3	2	0.54	No	3
384	1230	3	2	0.55	No	3
385	1231	4	2	0.55	No	3
386	1232	6	2	0.86	No	3
387	1233	6	2	0.86	No	3
388	1234	5	2	0.85	No	3
389	1236	5	2	0.84	No	3
390	1237	5	2	0.83	No	3
391	1235	5	2	0.78	No	3
392	1238	5	2	0.77	No	3
393	1239	4	2	0.76	No	3
394	1240	4	2	0.76	No	3
395	1241	4	2	0.76	No	3
396	1242	5	2	0.76	No	3
397	1243	3	2	0.76	No	3
398	1244	4	2	0.84	No	3
399	1245	3	2	0.86	No	3
400	1246	3	2	0.85	No	3
401	1247	2	2	0.86	No	3
402	1248	5	2	0.86	No	3
403	1249	7	2	0.86	No	3
404	1250	9	2	0.86	No	3
405	1251	5	2	0.86	No	3
406	1252	4	2	0.86	No	3
407	1253	4	2	0.87	No	3
408	1254	7	2	0.88	No	3
409	1255	6	2	0.98	No	3
410	1256	4	2	0.98	No	3
411	1257	4	2	0.98	No	3
412	1258	3	2	0.98	No	3
413	1259	3	2	0.98	No	3
414	1260	4	2	0.98	No	3
415	1261	4	2	0.98	No	3
416	1262	4	2	0.94	No	3
417	1263	4	2	0.94	No	3
418	1264	5	2	0.94	No	3
419	1265	5	2	0.94	No	3
420	1266	5	2	0.94	No	3
421	1267	5	2	0.94	No	3
422	1996	3	2	0.42	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
423	1269	4	2	0.42	No	3
424	1270	4	2	0.43	No	3
425	1271	6	2	0.43	No	3
426	1272	8	2	0.43	No	3
427	1273	5	2	0.43	No	3
428	1274	6	2	0.43	No	3
429	1275	6	2	0.43	No	3
430	1276	3	2	0.34	No	3
431	1277	3	2	0.34	No	3
432	1278	3	2	0.34	No	3
433	1279	2	2	0.35	No	3
434	1280	4	2	0.35	No	3
435	1281	4	2	0.37	No	3
436	1282	4	2	0.35	No	3
437	1283	4	2	0.38	No	3
438	1284	5	2	0.38	No	3
439	1285	5	2	0.38	No	3
440	1286	5	2	0.38	No	3
441	1287	7	2	0.39	No	3
442	1268	5	2	0.35	No	3
443	1288	3	2	0.35	No	3
444	1289	3	2	1.09	Yes	3
445	1290	3	2	1.09	Yes	3
446	1291	3	2	1.09	Yes	3
447	1292	5	2	1.09	Yes	3
448	1293	5	2	1.09	Yes	3
449	1294	5	2	1.08	Yes	3
450	1295	4	2	1.05	yes	3
451	1296	5	2	1.04	Yes	3
452	1297	4	2	1.06	Yes	3
453	1298	8	2	1.05	Yes	3
454	1299	3	2	1.1	Yes	3
455	1300	3	2	1.12	Yes	3
456	1301	4	2	1.14	Yes	3
457	1302	4	2	1.14	Yes	3
458	1303	4	2	1.14	Yes	3
459	1304	5	2	1.15	Yes	3
460	1305	6	2	1.97	Yes	3
461	1306	3	2	0.45	No	2
462	1307	6	2	0.45	No	2
463	1308	6	2	0.45	No	2
464	1309	5	2	0.46	No	2
465	1310	5	2	0.47	No	2
466	1311	6	2	0.47	No	2
467	1312	6	2	0.46	No	2
468	1313	5	2	0.47	No	2
469	1314	3	2	0.47	No	2
470	1315	3	2	0.47	No	2
471	1316	5	2	0.48	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
472	1317	5	2	0.48	No	2
473	1318	5	2	0.48	No	2
474	1319	5	2	0.48	No	2
475	1320	5	2	0.48	No	2
476	1321	5	2	0.49	No	2
477	1322	4	2	0.49	No	2
478	1323	5	2	0.49	No	2
479	1324	5	2	0.54	No	2
480	1325	4	2	0.55	No	2
481	1326	5	2	0.55	No	2
482	1327	8	2	0.55	No	2
483	1328	4	2	0.56	No	2
484	1329	4	2	0.56	No	2
485	1330	4	2	0.56	No	2
486	1331	4	2	0.56	No	2
487	1332	4	2	0.58	No	2
488	1333	4	2	0.58	No	2
489	1334	5	2	0.58	No	2
490	1335	3	2	0.58	No	2
491	1336	3	2	0.58	No	2
492	1337	3	2	0.58	No	2
493	1338	5	2	0.58	No	2
494	1339	4	2	0.58	No	2
495	1340	3	2	0.59	No	2
496	1341	3	2	0.65	No	2
497	1342	4	2	0.65	No	2
498	1343	5	2	0.65	No	2
499	1344	4	2	0.65	No	2
500	1345	6	2	0.65	No	2
501	1346	7	2	0.65	No	2
502	1347	7	2	0.65	No	2
503	1348	4	2	0.65	No	2
504	1349	3	2	0.65	No	2
505	1350	5	2	0.63	No	2
506	1351	5	2	0.64	No	2
507	1352	5	2	0.55	No	2
508	1353	6	2	0.55	No	2
509	1354	6	2	0.55	No	2
510	1355	4	2	0.55	No	2
511	1356	5	2	0.55	No	2
512	1357	4	2	0.53	No	2
513	1358	4	2	0.54	No	2
514	1359	4	2	0.53	No	2
515	1360	5	2	0.55	No	2
516	1361	8	2	0.55	No	2
517	1362	4	2	0.55	No	2
518	1364	3	2	0.55	No	2
519	1363	5	2	0.55	No	2
520	1365	5	2	0.55	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
521	1366	4	2	0.55	No	2
522	1367	4	2	0.55	No	2
523	1368	5	2	0.55	No	2
524	1369	5	2	0.55	No	2
525	1370	7	2	0.81	No	2
526	1371	7	2	0.95	No	2
527	1372	6	2	0.95	No	2
528	1373	5	2	0.95	No	2
529	1374	4	2	0.97	No	2
530	1375	5	2	0.98	No	2
531	1376	5	2	0.98	No	2
532	1377	3	2	0.98	No	2
533	1378	3	2	0.98	No	2
534	1379	3	2	0.98	No	2
535	1380	4	2	0.98	No	2
536	1381	4	2	0.95	No	2
537	1382	4	2	0.85	No	2
538	1383	5	2	0.85	No	2
539	1384	5	2	0.86	No	2
540	1385	4	2	0.86	No	2
541	1386	5	2	0.86	No	2
542	1387	6	2	0.86	No	2
543	1388	3	2	0.86	No	2
544	1389	3	2	0.9	No	2
545	1390	3	2	0.9	No	2
546	1391	6	2	0.92	No	2
547	1392	4	2	0.93	No	2
548	1393	3	2	0.92	No	2
549	1394	4	2	0.93	No	2
550	1395	4	2	0.94	No	2
551	1396	4	2	0.94	No	2
552	1397	4	2	0.94	No	2
553	1398	4	2	0.95	No	2
554	1399	3	2	0.95	No	2
555	1400	3	2	0.95	No	2
556	1401	4	2	0.95	No	2
557	1402	4	2	0.95	No	2
558	1403	4	2	0.45	No	2
559	1404	5	2	0.45	No	2
560	1405	3	2	0.55	No	2
561	1406	3	2	0.55	No	2
562	1407	3	2	0.55	No	2
563	1408	5	2	0.55	No	2
564	1409	5	2	0.65	No	2
565	1410	5	2	0.65	No	2
566	1411	4	2	0.65	No	2
567	1412	4	2	0.82	No	2
568	1413	4	2	0.83	No	2
569	1414	6	2	0.83	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
570	1415	6	2	0.83	No	2
571	1416	5	2	0.85	No	2
572	1417	5	2	0.85	No	2
573	1418	7	2	0.85	No	2
574	1419	6	2	0.85	No	2
575	1420	5	2	0.85	No	2
576	1421	5	2	0.85	No	2
577	1422	4	2	0.85	No	2
578	1423	4	2	0.87	No	2
579	1424	6	2	0.88	No	2
580	1425	2	2	0.95	No	2
581	1426	5	2	0.96	No	2
582	1427	5	2	0.96	No	2
583	1428	4	2	0.97	No	2
584	1429	5	2	0.96	No	2
585	1430	5	2	0.96	No	2
586	1431	3	2	0.96	No	2
587	1432	4	2	0.97	No	2
588	1433	5	2	0.97	No	2
589	1434	2	2	0.97	No	2
590	1435	4	2	0.98	No	2
591	1436	5	2	0.98	No	2
592	1437	5	2	0.98	No	2
593	1438	6	2	0.98	No	2
594	1439	5	2	0.98	No	2
595	1440	5	2	0.98	No	2
596	1441	4	2	0.98	No	2
597	1442	4	2	0.98	No	2
598	1443	4	2	0.98	No	2
599	1444	6	2	0.98	No	2
600	1445	5	2	0.98	No	2
601	1446	4	2	0.98	No	2
602	1447	5	2	0.98	No	2
603	1448	6	2	0.98	No	2
604	1449	5	2	0.98	No	2
605	1450	6	2	0.98	No	2
606	1451	4	2	0.98	No	2
607	1452	4	2	0.98	No	2
608	1453	4	2	0.98	No	2
609	1454	6	2	0.98	No	2
610	1455	5	2	0.98	No	2
611	1456	5	2	0.98	No	2
612	1457	4	2	0.98	No	2
613	1458	4	2	0.98	No	2
614	1459	3	2	0.98	No	2
615	1460	3	2	0.98	No	2
616	1461	3	2	0.98	No	2
617	1462	4	2	0.98	No	2
618	1463	4	2	1	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
619	1464	3	2	1	Yes	2
620	1465	4	2	1	Yes	2
621	1466	5	2	1	Yes	2
622	1467	4	2	1	Yes	2
623	1468	4	2	1	Yes	2
624	1469	4	2	1	Yes	2
625	1470	5	2	1	Yes	2
626	1471	5	2	1.01	Yes	2
627	1472	5	2	1.01	Yes	2
628	1473	5	2	1.01	Yes	2
629	1474	5	2	1.01	Yes	2
630	1475	4	2	1.01	Yes	2
631	1476	4	2	1.01	Yes	2
632	1477	5	2	1.01	Yes	2
633	1478	6	2	1.01	Yes	2
634	1479	4	2	1.01	Yes	2
635	1480	4	2	1.01	Yes	2
636	1481	3	2	1.01	Yes	2
637	1482	3	2	1.02	Yes	2
638	1483	3	2	1.03	Yes	2
639	1484	4	2	1.03	Yes	2
640	1485	4	2	1.03	Yes	2
641	1486	3	2	1.04	Yes	2
642	1487	3	2	1.05	Yes	2
643	1488	5	2	1.01	Yes	2
644	1489	3	2	1.01	Yes	2
645	1490	3	2	1.01	Yes	2
646	1491	3	2	1.01	Yes	2
647	2508	4	2	1.011	Yes	2
648	1492	4	2	1.04	Yes	2
649	1493	4	2	1.02	Yes	2
650	1494	6	2	1.02	Yes	2
651	1495	4	2	1.02	Yes	2
652	1496	4	2	1.04	Yes	2
653	1497	4	2	1.03	Yes	2
654	1498	5	2	1.03	Yes	2
655	1499	3	2	1.02	Yes	2
656	1500	6	2	1.03	Yes	2
657	1501	4	2	1.03	Yes	2
658	1502	4	2	1.03	Yes	2
659	1503	4	2	1.03	Yes	2
660	1504	5	2	1.03	Yes	2
661	1505	5	2	1.03	Yes	2
662	1506	5	2	1.03	Yes	2
663	1507	4	2	1.03	Yes	2
664	1508	4	2	1.03	Yes	2
665	1509	7	2	1.03	Yes	2
666	1510	6	2	1.03	Yes	2
667	1511	5	2	1.03	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
668	1512	4	2	1.03	Yes	2
669	1513	6	2	1.03	Yes	2
670	1514	5	2	1.03	Yes	2
671	1515	6	2	1.03	Yes	2
672	1516	4	2	1.05	Yes	2
673	1517	5	2	1.05	Yes	2
674	1518	4	2	1.05	Yes	2
675	1519	3	2	1.03	Yes	2
676	1520	3	2	1.05	Yes	2
677	1521	4	2	1.05	Yes	2
678	1522	5	2	1.05	Yes	2
679	1523	3	2	1.07	Yes	2
680	1524	3	2	1.07	Yes	2
681	1525	2	2	1.08	Yes	2
682	1526	4	2	1.08	Yes	2
683	1527	4	2	1.08	Yes	2
684	1528	3	2	1.08	Yes	2
685	1529	3	2	1.1	Yes	2
686	1530	3	2	1.1	Yes	2
687	1531	4	2	1.1	Yes	2
688	1532	3	2	1.1	Yes	2
689	1533	4	2	1.1	Yes	2
690	2489	3	2	1.1	Yes	2
691	2504	4	2	1.1	Yes	2
692	2510	4	2	1.1	Yes	2
693	1534	5	2	1.1	Yes	2
694	1535	7	2	1.1	Yes	2
695	1536	6	2	1.1	Yes	2
696	1537	7	2	1.1	Yes	2
697	1538	5	2	1.1	Yes	2
698	1539	4	2	1.1	Yes	2
699	1540	4	2	1.1	Yes	2
700	1541	6	2	1.1	Yes	2
701	1548	6	2	1.1	Yes	2
702	1549	4	2	1.1	Yes	2
703	1542	5	2	1.1	Yes	2
704	1543	7	2	1.11	Yes	2
705	1547	3	2	1.11	Yes	2
706	1545	3	2	1.11	Yes	2
707	1544	5	2	1.12	Yes	2
708	1546	3	2	1.12	Yes	2
709	1550	4	2	1.12	Yes	2
710	1551	6	2	1.12	Yes	2
711	1552	7	2	1.12	Yes	2
712	1553	5	2	1.12	Yes	2
713	1554	4	2	1.13	Yes	2
714	1555	5	2	1.14	Yes	2
715	1556	3	2	1.14	Yes	2
716	1557	4	2	1.14	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
717	1558	5	2	1.14	Yes	2
718	1559	5	2	1.14	Yes	2
719	1560	4	2	1.14	Yes	2
720	1561	5	2	1.14	Yes	2
721	1562	6	2	1.14	Yes	2
722	2486	5	2	1.14	Yes	2
723	1563	5	2	1.14	Yes	2
724	1564	5	2	1.14	Yes	2
725	1565	5	2	1.14	Yes	2
726	1566	5	2	1.14	Yes	2
727	1567	4	2	1.14	Yes	2
728	1568	6	2	1.14	Yes	2
729	1569	6	2	1.14	Yes	2
730	1570	6	2	1.14	Yes	2
731	1571	6	2	1.14	Yes	2
732	1572	4	2	1.14	Yes	2
733	1573	3	2	1.14	Yes	2
734	1574	3	2	1.14	Yes	2
735	1575	5	2	1.14	Yes	2
736	1576	3	2	1.15	Yes	2
737	1577	4	2	1.15	Yes	2
738	1578	5	2	1.15	Yes	2
739	1579	3	2	1.15	Yes	2
740	1580	4	2	1.15	Yes	2
741	1581	2	2	1.16	Yes	2
742	1582	5	2	1.16	Yes	2
743	1583	4	2	1.16	Yes	2
744	1584	4	2	1.16	Yes	2
745	1585	4	2	1.16	Yes	2
746	1586	5	2	1.16	Yes	2
747	1587	4	2	1.16	Yes	2
748	1588	3	2	1.16	Yes	2
749	1589	2	2	1.16	Yes	2
750	1590	4	2	1.16	Yes	2
751	2488	4	2	1.16	Yes	2
752	1591	3	2	1.16	Yes	2
753	1592	4	2	1.16	Yes	2
754	1593	3	2	1.16	Yes	2
755	1594	4	2	1.16	Yes	2
756	1595	4	2	1.16	Yes	2
757	1596	7	2	1.16	Yes	2
758	1597	4	2	1.16	Yes	2
759	1598	5	2	1.16	Yes	2
760	1599	5	2	1.16	Yes	2
761	1600	5	2	1.16	Yes	2
762	1601	4	2	1.16	Yes	2
763	2485	4	2	1.17	Yes	2
764	1603	4	2	1.17	Yes	2
765	1604	5	2	1.17	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
766	1605	5	2	1.17	Yes	2
767	1606	4	2	1.17	Yes	2
768	1607	5	2	1.18	Yes	2
769	1608	5	2	1.18	Yes	2
770	1609	4	2	1.18	Yes	2
771	1610	5	2	1.18	Yes	2
772	1611	4	2	1.18	Yes	2
773	1612	5	2	1.18	Yes	2
774	1613	4	2	1.18	Yes	2
775	1614	6	2	1.18	Yes	2
776	1615	5	2	1.18	Yes	2
777	1602	3	2	1.18	Yes	2
778	1616	5	2	1.18	Yes	2
779	1617	3	2	1.19	Yes	2
780	1618	4	2	1.19	Yes	2
781	1619	3	2	1.19	Yes	2
782	1620	5	2	1.19	Yes	2
783	1621	6	2	1.19	Yes	2
784	1622	4	2	1.19	Yes	2
785	1623	5	2	1.19	Yes	2
786	1624	3	2	1.19	Yes	2
787	1625	3	2	1.19	Yes	2
788	1626	3	2	1.19	Yes	2
789	1628	4	2	1.19	Yes	2
790	1629	3	2	1.19	Yes	2
791	1630	5	2	1.19	Yes	2
792	1631	5	2	1.19	Yes	2
793	1632	4	2	1.23	Yes	2
794	1633	4	2	1.21	Yes	2
795	1634	4	2	1.24	Yes	2
796	1635	5	2	1.25	Yes	2
797	1636	6	2	1.25	Yes	2
798	1637	4	2	1.21	Yes	2
799	1638	4	2	1.23	Yes	2
800	1639	4	2	1.23	Yes	2
801	1640	6	2	1.21	Yes	2
802	1641	6	2	1.22	Yes	2
803	1642	5	2	1.22	Yes	2
804	1643	7	2	1.22	Yes	2
805	1644	8	2	1.22	Yes	2
806	1645	6	2	1.23	Yes	2
807	1646	8	2	1.24	Yes	2
808	1647	5	2	1.24	Yes	2
809	1648	4	2	1.25	Yes	2
810	1649	5	2	1.25	Yes	2
811	1650	3	2	1.25	Yes	2
812	1652	7	2	1.26	Yes	2
813	1651	6	2	1.25	Yes	2
814	1654	4	2	1.25	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
815	1653	5	2	1.25	Yes	2
816	1654	5	2	1.25	Yes	2
817	1655	5	2	1.25	Yes	2
818	1656	4	2	1.25	Yes	2
819	1657	5	2	1.25	Yes	2
820	1658	3	2	1.25	Yes	2
821	1659	5	2	1.21	Yes	2
822	1660	5	2	1.25	Yes	2
823	1661	4	2	1.24	Yes	2
824	1662	4	2	1.23	Yes	2
825	1663	5	2	1.25	Yes	2
826	1664	5	2	2	Yes	2
827	1665	3	2	2.02	Yes	2
828	1666	4	2	2.02	Yes	2
829	1667	4	2	2.18	Yes	2
830	1668	5	2	2.2	Yes	2
831	1669	9	2	2.17	Yes	2
832	1670	8	2	2.15	Yes	2
833	1671	7	2	2.15	Yes	2
834	1672	3	2	0.88	No	2
835	1673	4	2	0.88	No	2
836	1674	4	2	0.88	No	2
837	1675	3	2	0.89	No	2
838	1676	3	2	0.89	No	2
839	1677	4	2	0.9	No	2
840	1678	4	2	0.9	No	2
841	1679	4	2	0.9	No	2
842	1680	4	2	0.91	No	2
843	1681	9	2	0.92	No	2
844	1682	7	2	0.92	No	2
845	1683	6	2	0.8	No	2
846	1684	5	2	0.79	No	2
847	1685	5	2	0.8	No	2
848	1686	3	2	0.8	No	2
849	1687	4	2	0.8	No	2
850	1688	6	2	0.8	No	2
851	1689	3	2	0.8	No	2
852	1690	4	2	0.8	No	2
853	1691	3	2	0.8	No	2
854	1692	3	2	0.82	No	2
855	1693	4	2	0.82	No	2
856	1694	4	2	0.83	No	2
857	1695	4	2	0.83	No	2
858	1696	7	2	0.84	No	2
859	1697	4	2	0.84	No	2
860	1698	5	2	0.84	No	2
861	1699	4	2	0.84	No	2
862	1700	3	2	0.85	No	2
863	1701	4	2	0.85	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
864	1702	4	2	0.85	No	2
865	1703	5	2	0.85	No	2
866	1704	4	2	0.85	No	2
867	1705	8	2	0.8	No	2
868	1706	4	2	0.8	No	2
869	1707	4	2	0.8	No	2
870	1708	6	2	0.8	No	2
871	1709	6	2	0.8	No	2
872	1710	6	2	0.8	No	2
873	1711	3	2	0.8	No	2
874	1712	10	2	0.81	No	2
875	1713	4	2	0.82	No	2
876	1714	4	2	0.82	No	2
877	1715	3	2	0.82	No	2
878	1716	3	2	0.81	No	2
879	1717	4	2	0.83	No	2
880	1718	7	2	0.83	No	2
881	1719	3	2	0.83	No	2
882	1720	4	2	0.84	No	2
883	1721	5	2	0.82	No	2
884	1722	4	2	0.83	No	2
885	1723	6	2	0.84	No	2
886	1726	6	2	0.84	No	2
887	1725	6	2	0.84	No	2
888	1724	5	2	0.85	No	2
889	1727	4	2	0.85	No	2
890	1728	3	2	0.85	No	2
891	1729	6	2	0.85	No	2
892	1730	4	2	0.85	No	2
893	1731	4	2	0.86	No	2
894	1732	5	2	0.86	No	2
895	1733	3	2	0.86	No	2
896	1734	3	2	0.86	No	2
897	1735	4	2	0.86	No	2
898	1736	4	2	0.87	No	2
899	1737	4	2	0.87	No	2
900	1738	3	2	0.87	No	2
901	1739	5	2	0.87	No	2
902	1740	5	2	0.9	No	2
903	1741	4	2	0.87	No	2
904	1742	3	2	0.92	No	2
905	1743	3	2	0.94	No	2
906	1744	4	2	1.1	Yes	2
907	1745	4	2	1.1	Yes	2
908	1746	5	2	1.1	Yes	2
909	1747	9	2	1.1	Yes	2
910	1748	8	2	1.1	Yes	2
911	1749	5	2	1.11	Yes	2
912	1750	4	2	1.12	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
913	1751	3	2	1.12	Yes	2
914	1752	5	2	1.12	Yes	2
915	1753	4	2	1.13	Yes	2
916	1754	7	2	1.13	Yes	2
917	1755	8	2	1.13	Yes	2
918	1756	4	2	1.13	Yes	2
919	1757	3	2	1.14	Yes	2
920	1758	5	2	1.14	Yes	2
921	1759	5	2	1.14	Yes	2
922	1760	4	2	1.14	Yes	2
923	2483	2	2	1.14	Yes	2
924	2481	4	2	1.14	Yes	2
925	1761	8	2	1.15	Yes	2
926	1762	7	2	1.15	Yes	2
927	1763	3	2	1.15	Yes	2
928	1764	9	2	1.17	Yes	2
929	1765	3	2	1.17	Yes	2
930	1766	4	2	1.18	Yes	2
931	1767	6	2	1.18	Yes	2
932	1768	4	2	1.18	Yes	2
933	1769	5	2	1.17	Yes	2
934	1770	5	2	1.17	Yes	2
935	1771	4	2	1.18	Yes	2
936	1772	6	2	1.18	Yes	2
937	1773	3	2	1.18	Yes	2
938	1774	5	2	1.18	Yes	2
939	1775	5	2	1.18	Yes	2
940	1776	4	2	1.08	Yes	2
941	1777	4	2	1.08	Yes	2
942	1778	5	2	1.08	Yes	2
943	1779	4	2	1.08	Yes	2
944	1780	6	2	1.08	Yes	2
945	1781	3	2	1.08	Yes	2
946	1782	5	2	1.09	Yes	2
947	1783	4	2	1.08	Yes	2
948	1784	4	2	1.09	Yes	2
949	1785	5	2	1.09	Yes	2
950	1786	5	2	1.09	Yes	2
951	1787	6	2	1.09	Yes	2
952	1788	3	2	1.09	Yes	2
953	1789	3	2	1.1	Yes	2
954	1790	2	2	1.15	Yes	2
955	1791	4	2	1.15	Yes	2
956	1792	7	2	1.15	Yes	2
957	1793	4	2	1.15	Yes	2
958	1794	4	2	1.15	Yes	2
959	1795	8	2	1.16	Yes	2
960	1796	4	2	1.16	Yes	2
961	1797	3	2	1.16	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
962	1798	3	2	1.16	Yes	2
963	1799	5	2	1.16	Yes	2
964	1800	9	2	1.16	Yes	2
965	2507	4	2	1.16	Yes	2
966	1801	10	2	1.16	Yes	2
967	1802	4	2	1.16	Yes	2
968	1803	3	2	1.16	Yes	2
969	1804	4	2	1.16	Yes	2
970	1805	4	2	1.16	Yes	2
971	1806	5	2	1.16	Yes	2
972	1807	3	2	1.16	Yes	2
973	1808	5	2	1.16	Yes	2
974	1809	3	2	1.16	Yes	2
975	1810	5	2	1.16	Yes	2
976	1811	3	2	1.16	Yes	2
977	1812	8	2	1.16	Yes	2
978	1813	7	2	1.16	Yes	2
979	1814	5	2	1.16	Yes	2
980	1815	5	2	1.16	Yes	2
981	1816	3	2	1.17	Yes	2
982	1817	4	2	1.17	Yes	2
983	1818	4	2	1.17	Yes	2
984	1819	5	2	1.17	Yes	2
985	1820	6	2	1.17	Yes	2
986	1821	6	2	1.18	Yes	2
987	1822	7	2	1.18	Yes	2
988	1823	4	2	1.18	Yes	2
989	1824	6	2	1.18	Yes	2
990	1825	3	2	1.18	Yes	2
991	1826	5	2	1.18	Yes	2
992	1827	4	2	1.18	Yes	2
993	1828	6	2	1.18	Yes	2
994	1829	5	2	1.18	Yes	2
995	1830	5	2	1.18	Yes	2
996	1831	5	2	1.18	Yes	2
997	1832	7	2	1.18	Yes	2
998	1833	5	2	1.18	Yes	2
999	2480	5	2	1.18	Yes	2
1000	1835	6	2	1.18	Yes	2
1001	1836	6	2	1.18	Yes	2
1002	1837	7	2	1.18	Yes	2
1003	1838	5	2	1.18	Yes	2
1004	1839	3	2	1.18	Yes	2
1005	1840	5	2	1.18	Yes	2
1006	1841	5	2	1.18	Yes	2
1007	1842	4	2	1.18	Yes	2
1008	1843	4	2	1.18	Yes	2
1009	1844	3	2	1.19	Yes	2
1010	1845	3	2	1.19	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1011	1846	4	2	1.19	Yes	2
1012	1847	9	2	1.19	Yes	2
1013	1848	3	2	1.19	Yes	2
1014	1849	4	2	1.19	Yes	2
1015	1863	5	2	1.19	Yes	2
1016	1850	4	2	1.19	Yes	2
1017	1851	3	2	1.2	Yes	2
1018	1852	4	2	1.2	Yes	2
1019	1853	4	2	1.2	Yes	2
1020	1854	5	2	1.2	Yes	2
1021	1855	3	2	1.2	Yes	2
1022	1864	5	2	1.2	Yes	2
1023	1856	4	2	1.2	Yes	2
1024	1857	5	2	1.2	Yes	2
1025	1858	5	2	1.2	Yes	2
1026	1859	3	2	1.2	Yes	2
1027	1860	4	2	1.21	Yes	2
1028	1861	3	2	1.21	Yes	2
1029	1862	4	2	1.21	Yes	2
1030	1833	6	2	1.21	Yes	2
1031	1834	5	2	1.21	Yes	2
1032	1865	5	2	0.56	No	2
1033	1867	3	2	0.56	No	2
1034	1868	4	2	0.57	No	2
1035	1869	3	2	0.57	No	2
1036	1870	3	2	0.6	No	2
1037	1871	9	2	0.6	No	2
1038	1872	5	2	0.6	No	2
1039	1873	5	2	0.6	No	2
1040	1874	6	2	0.6	No	2
1041	1875	3	2	0.61	No	2
1042	1876	4	2	0.62	No	2
1043	1877	6	2	0.62	No	2
1044	1878	6	2	0.63	No	2
1045	1879	6	2	0.63	No	2
1046	1880	5	2	0.63	No	2
1047	1881	4	2	0.63	No	2
1048	1882	4	2	0.63	No	2
1049	1883	6	2	0.63	No	2
1050	1884	7	2	0.63	No	2
1051	1885	6	2	0.64	No	2
1052	1886	4	2	0.64	No	2
1053	1887	6	2	0.64	No	2
1054	1888	5	2	0.65	No	2
1055	1889	4	2	0.65	No	2
1056	1890	5	2	0.65	No	2
1057	1891	3	2	0.65	No	2
1058	1892	4	2	0.66	No	2
1059	1866	6	2	0.65	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1060	1893	5	2	0.66	No	2
1061	1894	5	2	0.66	No	2
1062	1895	4	2	0.66	No	2
1063	1896	9	2	0.67	No	2
1064	1897	5	2	0.7	No	2
1065	1898	6	2	0.7	No	2
1066	1899	4	2	0.74	No	2
1067	1900	4	2	0.74	No	2
1068	1901	6	2	0.74	No	2
1069	1902	5	2	0.76	No	2
1070	1903	5	2	0.76	No	2
1071	1904	4	2	0.77	No	2
1072	1905	5	2	0.77	No	2
1073	1906	5	2	0.77	No	2
1074	1907	4	2	0.77	No	2
1075	1908	5	2	0.77	No	2
1076	1909	5	2	0.78	No	2
1077	1910	6	2	0.78	No	2
1078	1911	5	2	0.78	No	2
1079	1912	5	2	0.8	No	2
1080	1913	6	2	0.84	No	2
1081	1914	4	2	0.84	No	2
1082	1915	4	2	0.88	No	2
1083	1916	4	2	0.88	No	2
1084	1917	5	2	0.88	No	2
1085	1918	5	2	0.66	No	2
1086	1919	4	2	0.66	No	2
1087	1924	5	2	0.68	No	2
1088	1921	3	2	0.68	No	2
1089	1922	4	2	0.7	No	2
1090	1923	3	2	0.7	No	2
1091	1920	5	2	0.75	No	2
1092	1925	4	2	0.8	No	2
1093	1926	5	2	0.85	No	2
1094	1926	5	2	0.85	No	2
1095	1927	6	2	0.85	No	2
1096	1928	4	2	0.85	No	2
1097	1929	4	2	0.86	No	2
1098	1930	6	2	0.87	No	2
1099	1931	5	2	0.9	No	2
1100	1932	5	2	0.9	No	2
1101	1933	5	2	0.9	No	2
1102	1934	4	2	0.9	No	2
1103	1935	5	2	0.91	No	2
1104	1936	6	2	0.91	No	2
1105	1937	6	2	0.91	No	2
1106	1938	3	2	0.77	No	2
1107	1940	4	2	0.77	No	2
1108	1941	3	2	0.77	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1109	1942	4	2	0.77	No	2
1110	1943	4	2	0.77	No	2
1111	1944	6	2	0.78	No	2
1112	1945	5	2	0.78	No	2
1113	1946	3	2	0.78	No	2
1114	1947	5	2	0.76	No	2
1115	1948	4	2	0.75	No	2
1116	1949	3	2	0.76	No	2
1117	1950	5	2	0.86	No	2
1118	1951	5	2	0.88	No	2
1119	1952	3	2	0.88	No	2
1120	1953	4	2	0.88	No	2
1121	1954	3	2	0.85	No	2
1122	1955	2	2	0.85	No	2
1123	1956	4	2	0.85	No	2
1124	1957	3	2	0.85	No	2
1125	1958	4	2	0.85	No	2
1126	1959	5	2	0.85	No	2
1127	1960	6	2	0.82	No	2
1128	1961	5	2	0.82	No	2
1129	1962	3	2	0.82	No	2
1130	1963	5	2	0.83	No	2
1131	1964	3	2	0.83	No	2
1132	1965	3	2	0.82	No	2
1133	1966	3	2	0.82	No	2
1134	1967	3	2	0.82	No	2
1135	1968	5	2	0.82	No	2
1136	1969	4	2	0.82	No	2
1137	1970	4	2	0.82	No	2
1138	1971	4	2	0.82	No	2
1139	1972	4	2	0.82	No	2
1140	1973	4	2	0.82	No	2
1141	1974	5	2	0.86	No	2
1142	1975	3	2	0.87	No	2
1143	1976	3	2	0.87	No	2
1144	1977	3	2	0.87	No	2
1145	1978	3	2	0.81	No	2
1146	1979	4	2	0.8	No	2
1147	1980	4	2	0.82	No	2
1148	1981	3	2	0.82	No	2
1149	1982	3	2	0.81	No	2
1150	1983	4	2	0.81	No	2
1151	1984	5	2	0.82	No	2
1152	1985	4	2	0.81	No	2
1153	1986	4	2	0.81	No	2
1154	1987	3	2	0.82	No	2
1155	1988	3	2	0.82	No	2
1156	1989	4	2	0.81	No	2
1157	1990	4	2	0.81	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1158	1991	3	2	0.85	No	2
1159	1992	3	2	0.85	No	2
1160	1993	3	2	0.84	No	2
1161	1994	4	2	0.84	No	2
1162	1995	6	2	0.84	No	2
1163	1997	3	2	0.8	No	2
1164	1998	3	2	0.8	No	2
1165	1999	4	2	0.81	No	2
1166	2000	4	2	0.83	No	2
1167	2001	5	2	0.81	No	2
1168	2002	3	2	0.83	No	2
1169	2003	7	2	0.83	No	2
1170	1147	3	2	0.95	No	3
1171	1627	3	2	0.95	No	2
1172	2004	3	2	1.15	Yes	2
1173	2005	3	2	1.15	Yes	2
1174	2006	5	2	1.15	Yes	2
1175	2007	7	2	1.15	Yes	2
1176	2008	3	2	1.16	Yes	2
1177	2009	3	2	1.19	Yes	2
1178	2010	5	2	1.2	Yes	2
1179	2011	6	2	1.2	Yes	2
1180	2012	3	2	1.18	Yes	2
1181	2013	5	2	1.18	Yes	2
1182	2014	5	2	1.2	Yes	2
1183	2015	4	2	1.2	Yes	2
1184	2016	4	2	1.24	Yes	2
1185	2017	5	2	1.25	Yes	2
1186	2018	6	2	1.25	Yes	2
1187	2019	7	2	1.18	Yes	2
1188	2020	4	2	1.17	Yes	2
1189	2021	4	2	1.18	Yes	2
1190	2022	4	2	1.2	Yes	2
1191	2023	4	2	1.2	Yes	2
1192	2024	6	2	1.2	Yes	2
1193	2025	6	2	1.2	Yes	2
1194	2026	7	2	1.21	Yes	2
1195	2027	5	2	1.22	Yes	2
1196	2028	8	2	1.25	Yes	2
1197	2029	7	2	1.26	Yes	2
1198	2030	6	2	1.24	Yes	2
1199	2031	7	2	1.25	Yes	2
1200	2032	8	2	1.28	Yes	2
1201	2033	7	2	1.25	Yes	2
1202	2034	4	2	1.25	Yes	2
1203	2035	4	2	1.25	Yes	2
1204	2036	4	2	1.25	Yes	2
1205	2037	6	2	1.25	Yes	2
1206	2038	4	2	1.25	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1207	2039	3	2	1.1	Yes	2
1208	2040	4	2	1.1	Yes	2
1209	2041	5	2	1.1	Yes	2
1210	2042	2	2	1.1	Yes	2
1211	2043	5	2	1.1	Yes	2
1212	2044	3	2	1.1	Yes	2
1213	2045	5	2	1.12	Yes	2
1214	2046	5	2	1.17	Yes	2
1215	2047	5	2	1.17	Yes	2
1216	2048	3	2	1.17	Yes	2
1217	2049	5	2	1.16	Yes	2
1218	2050	4	2	1.16	Yes	2
1219	2051	3	2	1.16	Yes	2
1220	2052	5	2	1.14	Yes	2
1221	2053	5	2	1.14	Yes	2
1222	2054	5	2	1.14	Yes	2
1223	2055	5	2	1.13	Yes	2
1224	2056	4	2	1.13	Yes	2
1225	2057	5	2	1.17	Yes	2
1226	2058	5	2	1.18	Yes	2
1227	2059	5	2	1.2	Yes	2
1228	2060	5	2	1.2	Yes	2
1229	2061	4	2	1.18	Yes	2
1230	2062	5	2	1.18	Yes	2
1231	2063	4	2	1.18	Yes	2
1232	2064	3	2	1.13	Yes	2
1233	2065	5	2	1.15	Yes	2
1234	2066	6	2	1.16	Yes	2
1235	2067	6	2	1.17	Yes	2
1236	2068	5	2	1.17	Yes	2
1237	2069	4	2	1.16	Yes	2
1238	2070	3	2	1.15	Yes	2
1239	2071	4	2	1.13	Yes	2
1240	2072	4	2	1.13	Yes	2
1241	2073	6	2	1.13	Yes	2
1242	2074	5	2	1.13	Yes	2
1243	2075	4	2	1.14	Yes	2
1244	2076	4	2	1.14	Yes	2
1245	2077	5	2	1.14	Yes	2
1246	2078	5	2	1.14	Yes	2
1247	2079	6	2	1.15	Yes	2
1248	2080	5	2	1.15	Yes	2
1249	2081	5	2	1.16	Yes	2
1250	2082	4	2	1.14	Yes	2
1251	2083	3	2	1.13	Yes	2
1252	2084	5	2	1.13	Yes	2
1253	2085	5	2	1.13	Yes	2
1254	2086	4	2	1.13	Yes	2
1255	2087	4	2	1.14	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1256	2088	8	2	1.14	Yes	2
1257	2089	5	2	1.14	Yes	2
1258	2090	5	2	1.14	Yes	2
1259	2091	6	2	1.24	Yes	2
1260	2092	6	2	1.2	Yes	2
1261	2093	4	2	1.2	Yes	2
1262	2094	4	2	1.2	Yes	2
1263	2095	5	2	1.2	Yes	2
1264	2096	4	2	1.22	Yes	2
1265	2097	3	2	1.2	Yes	2
1266	2098	4	2	1.2	Yes	2
1267	2099	4	2	1.22	Yes	2
1268	2100	5	2	1.22	Yes	2
1269	2111	3	2	1.25	Yes	2
1270	2102	5	2	1.25	Yes	2
1271	2103	4	2	1.25	Yes	2
1272	2104	5	2	1.25	Yes	2
1273	2105	4	2	1.25	Yes	2
1274	2106	5	2	1.24	Yes	2
1275	2107	7	2	1.24	Yes	2
1276	2108	5	2	1.2	Yes	2
1277	2109	6	2	1.2	Yes	2
1278	2110	3	2	1.26	Yes	2
1279	2101	4	2	1.26	Yes	2
1280	2112	3	2	1.26	Yes	2
1281	2113	4	2	1.26	Yes	2
1282	2114	5	2	1.26	Yes	2
1283	2115	3	2	1.3	Yes	2
1284	2116	3	2	1.3	Yes	2
1285	2117	4	2	1.3	Yes	2
1286	2118	5	2	1.3	Yes	2
1287	2119	6	2	1.31	Yes	2
1288	2120	4	2	1.31	Yes	2
1289	2121	6	2	1.31	Yes	2
1290	2122	4	2	1.32	Yes	2
1291	2123	4	2	1.35	Yes	2
1292	2124	3	2	1.35	Yes	2
1293	2125	3	2	1.35	Yes	2
1294	2126	3	2	1.35	Yes	2
1295	2127	6	2	1.35	Yes	2
1296	2128	5	2	1.35	Yes	2
1297	2129	7	2	1.35	Yes	2
1298	2130	7	2	1.35	Yes	2
1299	2131	4	2	1.33	Yes	2
1300	2132	3	2	1.33	Yes	2
1301	2133	5	2	1.32	Yes	2
1302	2134	5	2	1.33	Yes	2
1303	2135	3	2	1.33	Yes	2
1304	2136	4	2	1.32	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1305	2137	5	2	1.32	Yes	2
1306	2138	5	2	1.31	Yes	2
1307	2139	3	2	1.31	Yes	2
1308	2140	3	2	1.33	Yes	2
1309	2141	3	2	1.36	Yes	2
1310	2142	4	2	1.43	Yes	2
1311	2143	4	2	1.36	Yes	2
1312	2144	3	2	1.39	Yes	2
1313	2145	3	2	1.4	Yes	2
1314	2146	6	2	1.4	Yes	2
1315	2147	4	2	1.4	Yes	2
1316	2148	5	2	1.4	Yes	2
1317	2149	4	2	1.41	Yes	2
1318	2150	4	2	1.41	Yes	2
1319	2151	5	2	1.4	Yes	2
1320	2152	3	2	1.19	Yes	2
1321	2153	3	2	1.19	Yes	2
1322	2154	4	2	1.2	Yes	2
1323	2155	3	2	1.2	Yes	2
1324	2156	3	2	1.2	Yes	2
1325	2157	4	2	1.2	Yes	2
1326	2158	3	2	1.21	Yes	2
1327	2159	4	2	1.22	Yes	2
1328	2160	3	2	1.23	Yes	2
1329	2161	5	2	1.23	Yes	2
1330	2162	4	2	1.23	Yes	2
1331	2163	3	2	1.23	Yes	2
1332	2164	3	2	1.23	Yes	2
1333	2165	4	2	1.24	Yes	2
1334	2166	3	2	1.24	Yes	2
1335	2167	3	2	1.24	Yes	2
1336	2168	4	2	1.25	Yes	2
1337	2169	3	2	1.25	Yes	2
1338	2170	5	2	1.25	Yes	2
1339	2171	4	2	1.25	Yes	2
1340	2173	4	2	1.26	Yes	2
1341	2172	4	2	1.26	Yes	2
1342	2174	3	2	1.26	Yes	2
1343	2175	4	2	1.26	Yes	2
1344	2176	2	2	1.27	Yes	2
1345	2177	4	2	1.27	Yes	2
1346	2178	5	2	1.27	Yes	2
1347	2179	4	2	1.27	Yes	2
1348	2180	4	2	1.27	Yes	2
1349	2181	4	2	1.29	Yes	2
1350	2182	4	2	1.3	Yes	2
1351	2183	5	2	1.3	Yes	2
1352	2184	5	2	1.3	Yes	2
1353	2185	4	2	1.3	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1354	2186	3	2	1.3	Yes	2
1355	2187	4	2	1.3	Yes	2
1356	2188	3	2	1.3	Yes	2
1357	2189	3	2	1.3	Yes	2
1358	2190	4	2	1.27	Yes	2
1359	2191	5	2	1.28	Yes	2
1360	2192	3	2	1.29	Yes	2
1361	2193	3	2	1.3	Yes	2
1362	2194	4	2	1.29	Yes	2
1363	2195	3	2	1.29	Yes	2
1364	2196	5	2	1.27	Yes	2
1365	2197	4	2	1.26	Yes	2
1366	2198	4	2	1.27	Yes	2
1367	2199	5	2	1.3	Yes	2
1368	2200	4	2	1.25	Yes	2
1369	2201	3	2	1.26	Yes	2
1370	2202	3	2	1.27	Yes	2
1371	2203	3	2	1.27	Yes	2
1372	2204	4	2	1.27	Yes	2
1373	2205	4	2	1.28	Yes	2
1374	2206	3	2	1.3	Yes	2
1375	2207	3	2	1.3	Yes	2
1376	2208	4	2	1.3	Yes	2
1377	2209	5	2	1.33	Yes	2
1378	2210	4	2	1.35	Yes	2
1379	2211	4	2	1.38	Yes	2
1380	2212	3	2	1.35	Yes	2
1381	2213	3	2	1.35	Yes	2
1382	2214	3	2	1.4	Yes	2
1383	2215	3	2	1.4	Yes	2
1384	2216	6	2	1.41	Yes	2
1385	2217	4	2	1.43	Yes	2
1386	2218	5	2	1.44	Yes	2
1387	2219	4	2	1.44	Yes	2
1388	2220	3	2	1.44	Yes	2
1389	2221	4	2	1.44	Yes	2
1390	2222	4	2	1.44	Yes	2
1391	2223	3	2	1.44	Yes	2
1392	2224	3	2	1.44	Yes	2
1393	2225	6	2	1.44	Yes	2
1394	2226	6	2	1.44	Yes	2
1395	2227	5	2	1.44	Yes	2
1396	2228	4	2	1.44	Yes	2
1397	2229	4	2	1.44	Yes	2
1398	2230	5	2	1.44	Yes	2
1399	2231	2	2	1.45	Yes	2
1400	2232	3	2	1.45	Yes	2
1401	2233	4	2	1.45	Yes	2
1402	2234	3	2	1.45	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1403	2235	4	2	1.45	Yes	2
1404	2235	4	2	1.46	Yes	2
1405	2236	4	2	1.46	Yes	2
1406	2237	3	2	1.47	Yes	2
1407	2238	3	2	1.47	Yes	2
1408	2239	3	2	1.48	Yes	2
1409	2240	4	2	1.48	Yes	2
1410	2241	6	2	1.48	Yes	2
1411	2242	4	2	1.48	Yes	2
1412	2243	3	2	1.54	Yes	2
1413	2244	3	2	1.54	Yes	2
1414	2245	5	2	1.54	Yes	2
1415	2246	4	2	1.52	Yes	2
1416	2247	7	2	1.52	Yes	2
1417	2248	5	2	1.54	Yes	2
1418	2249	5	2	1.54	Yes	2
1419	2250	4	2	1.54	Yes	2
1420	2251	5	2	1.54	Yes	2
1421	2252	6	2	1.54	Yes	2
1422	2253	5	2	1.56	Yes	2
1423	2254	4	2	1.53	Yes	2
1424	2255	4	2	1.52	Yes	2
1425	2256	5	2	1.55	Yes	2
1426	2257	6	2	1.55	Yes	2
1427	2258	3	2	1.42	Yes	2
1428	2259	3	2	1.42	Yes	2
1429	2260	4	2	1.43	Yes	1
1430	2261	2	2	1.43	Yes	1
1431	2262	3	2	1.43	Yes	1
1432	2263	4	2	1.45	Yes	1
1433	2264	4	2	1.44	Yes	1
1434	2265	3	2	1.44	Yes	1
1435	2266	6	2	1.45	Yes	1
1436	2267	4	2	1.45	Yes	1
1437	2268	3	2	1.45	Yes	1
1438	2269	4	2	1.52	Yes	1
1439	2270	5	2	1.53	Yes	1
1440	2271	5	2	1.55	Yes	2
1441	2272	4	2	1.56	Yes	2
1442	2273	3	2	1.57	Yes	2
1443	2274	3	2	1.58	Yes	2
1444	2275	4	2	1.93	Yes	2
1445	2276	5	2	1.94	Yes	2
1446	2277	2	2	1.96	Yes	2
1447	2278	3	2	1.97	Yes	2
1448	2279	3	2	1.97	Yes	2
1449	2280	4	2	1.97	Yes	2
1450	2281	4	2	1.96	Yes	2
1451	2282	4	2	1.97	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1452	2283	7	2	1.95	Yes	1
1453	2284	3	2	1.95	Yes	1
1454	2285	4	2	1.94	Yes	1
1455	2286	7	2	1.94	Yes	1
1456	2287	3	2	2.15	Yes	2
1457	2288	3	2	2.15	Yes	2
1458	2289	4	2	2.15	Yes	2
1459	2290	5	2	2.14	Yes	2
1460	2291	3	2	2.11	Yes	2
1461	2293	3	2	2.11	Yes	2
1462	2292	4	2	2.11	Yes	2
1463	2294	5	2	2.1	Yes	2
1464	2295	4	2	2.1	Yes	2
1465	2296	3	2	2.1	Yes	2
1466	2297	5	2	2.1	Yes	2
1467	2298	5	2	2.1	Yes	2
1468	2299	3	2	2.06	Yes	2
1469	2300	3	2	2.06	Yes	2
1470	2301	5	2	2.06	Yes	2
1471	2302	3	2	2.06	Yes	2
1472	2303	3	2	2.2	Yes	2
1473	2304	3	2	2.2	Yes	2
1474	2305	3	2	2.18	Yes	2
1475	2306	4	2	2.19	Yes	2
1476	2307	4	2	2.18	Yes	2
1477	2308	6	2	2.18	Yes	2
1478	2309	5	2	2.18	Yes	2
1479	2310	4	2	2.18	Yes	2
1480	2311	6	2	2.18	Yes	2
1481	2312	5	2	2.18	Yes	2
1482	2313	4	2	2.3	Yes	1
1483	2544	5	2	2.3	Yes	1
1484	2314	3	2	2.31	Yes	1
1485	2315	6	2	2.31	Yes	1
1486	2316	3	2	2.32	Yes	1
1487	2317	4	2	2.33	Yes	1
1488	2318	5	2	2.33	Yes	1
1489	2319	3	2	2.35	Yes	1
1490	2320	5	2	2.4	Yes	1
1491	2321	4	2	2.4	Yes	1
1492	2322	5	2	2.4	Yes	1
1493	2323	6	2	2.4	Yes	1
1494	2324	5	2	2.42	Yes	1
1495	2325	4	2	2.43	Yes	1
1496	2326	3	2	2.44	Yes	1
1497	2327	3	2	2.45	Yes	1
1498	2328	3	2	2.61	Yes	1
1499	2329	3	2	2.61	Yes	1
1500	2330	4	2	2.61	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1501	2331	3	2	2.62	Yes	1
1502	2332	4	2	2.62	Yes	1
1503	2333	4	2	2.6	Yes	1
1504	2334	3	2	2.6	Yes	1
1505	2335	4	2	2.61	Yes	1
1506	2336	4	2	2.61	Yes	1
1507	2337	4	2	2.61	Yes	1
1508	2338	5	2	2.61	Yes	1
1509	2339	5	2	2.62	Yes	1
1510	2340	4	2	2.62	Yes	1
1511	2341	4	2	2.62	Yes	1
1512	2342	3	2	2.63	Yes	1
1513	2343	5	2	2.63	Yes	1
1514	2344	4	2	2.64	Yes	1
1515	2345	6	2	2.62	Yes	1
1516	2346	5	2	2.62	Yes	1
1517	2347	5	2	2.63	Yes	1
1518	2348	4	2	2.61	Yes	1
1519	2349	5	2	2.75	Yes	1
1520	2350	4	2	2.76	Yes	1
1521	2351	3	2	2.76	Yes	1
1522	2352	4	2	2.76	Yes	1
1523	2353	5	2	2.76	Yes	1
1524	2354	3	2	2.76	Yes	1
1525	2355	4	2	2.78	Yes	1
1526	2356	5	2	2.76	Yes	1
1527	2357	4	2	2.77	Yes	1
1528	2358	3	2	2.78	Yes	1
1529	2359	3	2	2.77	Yes	1
1530	2360	3	2	2.8	Yes	1
1531	2361	4	2	2.8	Yes	1
1532	2362	3	2	2.8	Yes	1
1533	2363	5	2	2.8	Yes	1
1534	2364	3	2	2.81	Yes	1
1535	2365	6	2	2.82	Yes	1
1536	2366	3	2	2.81	Yes	1
1537	2367	4	2	2.81	Yes	1
1538	2368	3	2	2.82	Yes	1
1539	2369	5	2	2.83	Yes	1
1540	2370	5	2	2.83	Yes	1
1541	2371	4	2	2.84	Yes	1
1542	2372	5	2	2.85	Yes	1
1543	2373	5	2	2.85	Yes	1
1544	2374	4	2	2.85	Yes	1
1545	2375	4	2	2.85	Yes	1
1546	2376	4	2	2.85	Yes	1
1547	2377	4	2	2.84	Yes	1
1548	2378	5	2	2.83	Yes	1
1549	2379	5	2	2.84	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1550	2380	3	2	2.85	Yes	1
1551	2381	4	2	2.87	Yes	1
1552	2382	5	2	2.9	Yes	1
1553	2383	3	2	2.9	Yes	1
1554	2384	4	2	2.9	Yes	1
1555	2385	5	2	2.9	Yes	1
1556	2386	5	2	2.9	Yes	1
1557	2387	5	2	2.9	Yes	1
1558	2388	5	2	2.85	Yes	1
1559	2389	3	2	2.85	Yes	1
1560	2390	6	2	2.85	Yes	1
1561	2391	3	2	2.85	Yes	1
1562	2392	4	2	2.88	Yes	1
1563	2393	3	2	2.88	Yes	1
1564	2394	4	2	2.88	Yes	1
1565	2395	5	2	2.88	Yes	1
1566	2396	5	2	2.88	Yes	1
1567	2397	4	2	2.88	Yes	1
1568	2398	3	2	2.88	Yes	1
1569	2399	4	2	2.9	Yes	1
1570	2400	4	2	2.9	Yes	1
1571	2401	4	2	2.91	Yes	1
1572	2402	3	2	2.91	Yes	1
1573	2403	4	2	2.91	Yes	1
1574	2404	4	2	2.91	Yes	1
1575	2405	5	2	2.92	Yes	1
1576	2406	4	2	2.92	Yes	1
1577	2407	6	2	2.92	Yes	1
1578	2408	3	2	2.91	Yes	1
1579	2409	6	2	2.95	Yes	1
1580	2410	4	2	2.95	Yes	1
1581	2411	5	2	2.95	Yes	1
1582	2412	4	2	2.95	Yes	1
1583	2413	3	2	3	Yes	1
1584	2414	4	2	3	Yes	1
1585	2415	3	2	2.99	Yes	1
1586	2416	4	2	2.99	Yes	1
1587	2417	3	2	2.98	Yes	1
1588	2418	7	2	2.98	Yes	1
1589	2419	4	2	2.98	Yes	1
1590	2420	5	2	2.98	Yes	1
1591	2421	4	2	2.92	Yes	1
1592	2422	6	2	2.9	Yes	1
1593	2423	4	2	2.9	Yes	1
1594	2424	5	2	2.92	Yes	1
1595	2425	4	2	2.9	Yes	1
1596	2427	3	2	2.9	Yes	1
1597	2426	3	2	2.9	Yes	1
1598	2428	3	2	2.92	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1599	2429	4	2	2.92	Yes	1
1600	2430	7	2	2.89	Yes	1
1601	2431	4	2	2.89	Yes	1
1602	2432	4	2	2.91	Yes	1
1603	2433	3	2	2.91	Yes	1
1604	2434	3	2	2.92	Yes	1
1605	2435	4	2	2.92	Yes	1
1606	2436	4	2	2.92	Yes	1
1607	2437	5	2	2.95	Yes	1
1608	2438	5	2	2.96	Yes	1
1609	2439	5	2	2.97	Yes	1
1610	2440	4	2	2.97	Yes	1
1611	2441	4	2	2.98	Yes	1
1612	2442	3	2	2.99	Yes	1
1613	2443	3	2	2.99	Yes	1
1614	2444	4	2	3	Yes	1
1615	2445	3	2	3	Yes	1
1616	2446	3	2	3	Yes	1
1617	2447	3	2	3.04	Yes	1
1618	2448	4	2	3	Yes	1
1619	2449	6	2	3.03	Yes	1
1620	2450	4	2	3.07	Yes	1
1621	2451	4	2	3.07	Yes	1
1622	2452	3	2	3.07	Yes	1
1623	2453	7	2	3.08	Yes	1
1624	2454	4	2	3.01	Yes	1
1625	2455	6	2	3.01	Yes	1
1626	2456	4	2	3.01	Yes	1
1627	2457	5	2	3.03	Yes	1
1628	2458	5	2	3.03	Yes	1
1629	2459	5	2	3.03	Yes	1
1630	2460	4	2	3.04	Yes	1
1631	2461	5	2	3.06	Yes	1
1632	2462	6	2	3.07	Yes	1
1633	2463	4	2	3.07	Yes	1
1634	2464	7	2	3.15	Yes	1
1635	2465	3	2	3.15	Yes	1
1636	2466	3	2	3.2	Yes	1
1637	2467	4	2	3.2	Yes	1
1638	2468	2	2	3.2	Yes	1
1639	2469	4	2	3.42	Yes	1
1640	2470	3	2	2.96	Yes	1
1641	2471	4	2	2.96	Yes	1
1642	2472	4	2	2.97	Yes	1
1643	2473	6	2	2.97	Yes	1
1644	2474	3	2	2.96	Yes	1
1645	2475	3	2	2.96	Yes	1
1646	2476	2	2	2.97	Yes	1
1647	2477	4	2	2.97	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1648	2478	5	2	2.97	Yes	1
1649	2479	4	2	2.97	Yes	1
1650	2491	3	2	2.97	Yes	1
1651	2501	3	2	3.13	Yes	1
1652	2482	2	2	3.13	Yes	1
1653	2484	4	2	3.13	Yes	1
1654	2503	4	2	3.13	Yes	1
1655	2513	5	2	3.13	Yes	1
1656	2487	5	2	3.12	Yes	1
1657	2490	3	2	3.13	Yes	1
1658	2500	4	2	3.13	Yes	1
1659	2499	4	2	3.12	Yes	1
1660	2514	4	2	3.13	Yes	1
1661	2502	3	2	3.13	Yes	1
1662	2511	9	2	3.14	Yes	1
1663	2506	4	2	3.14	Yes	1
1664	2509	6	2	3.14	Yes	1
1665	2512	5	2	3.13	Yes	1
1666	2505	5	2	3.14	Yes	1
1667	2516	4	2	3.15	Yes	1
1668	2518	5	2	3.14	Yes	1
1669	2520	5	2	3.15	Yes	1
1670	2522	5	2	3.2	Yes	1
1671	2524	3	2	3.23	Yes	1
1672	2515	4	2	3.33	Yes	1
1673	2517	6	2	3.33	Yes	1
1674	2519	6	2	3.34	Yes	1
1675	2521	5	2	3.35	Yes	1
1676	2523	4	2	3.36	Yes	1
1677	2525	3	2	3.37	Yes	1
1678	2526	5	2	3.37	Yes	1
1679	2527	5	2	3.37	Yes	1
1680	2528	3	2	3.38	Yes	1
1681	2529	6	2	3.38	Yes	1
1682	2530	3	2	3.38	Yes	1
1683	2531	5	2	3.4	Yes	1
1684	2532	4	2	3.4	Yes	1
1685	2533	3	2	3.43	Yes	1
1686	2534	5	2	3.44	Yes	1
1687	2535	5	2	3.45	Yes	1
1688	2536	4	2	3.45	Yes	1
1689	2537	9	2	1.98	Yes	1
1690	2538	4	2	2	Yes	1
1691	2539	3	2	2	Yes	1
1692	2540	3	2	2.02	Yes	1
1693	2541	4	2	2.03	Yes	1
1694	2542	3	2	2	Yes	1
1695	2543	4	2	2	Yes	1
1696	2545	5	2	2	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 2 (km)	Transport Required	Origin Zone
1697	2546	4	2	2.04	Yes	1
1698	2547	4	2	2.02	Yes	1
1699	2548	5	2	2.8	Yes	1
1700	2549	6	2	2.08	Yes	1
1701	2493	4	2	2.08	Yes	1
1702	2550	6	2	2.09	Yes	1
1703	2551	7	2	2.1	Yes	1
1704	2553	5	2	2.1	Yes	1
1705	2552	6	2	2.11	Yes	1
1706	2492	6	2	2.12	Yes	1
1707	2554	5	2	2.13	Yes	1
1708	2555	6	2	2.15	Yes	1
1709	2556	5	2	2.16	Yes	1
1710	2557	5	2	2.17	Yes	1
1711	2558	3	2	2.15	Yes	1
1712	2559	4	2	2.17	Yes	1
1713	2560	6	2	2.18	Yes	1
1714	2561	7	2	1.53	Yes	2
1715	2562	4	2	1.57	Yes	2
1716	2563	5	2	1.57	Yes	2
1717	2564	5	2	2.57	Yes	2
1718	2565	4	2	1.57	Yes	2
1719	2566	6	2	1.57	Yes	2
1720	2567	5	2	1.62	Yes	2
1721	2568	4	2	1.62	Yes	2
1722	2569	5	2	1.61	Yes	2
1723	2570	5	2	1.68	Yes	2
1724	2571	4	2	1.79	Yes	2
1725	2572	4	2	1.62	Yes	2
	Shelter 2 Total Household = 1725	Shelter 2 Total Population = 7753				

Appendix-C

Table 03: Household to Flood Shelter 3 Mapping Data

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
1	01	4	3	0.011	No	3
2	02	4	3	0.02	No	3
3	03	5	3	0.065	No	3
4	04	3	3	0.068	No	3
5	05	4	3	0.12	No	3
6	06	4	3	0.14	No	3
7	07	5	3	0.22	No	3
8	08	5	3	0.16	No	3
9	09	3	3	0.17	No	3
10	10	4	3	0.18	No	3
11	11	5	3	0.36	No	3
12	12	7	3	0.46	No	3
13	13	4	3	0.35	No	3
14	14	6	3	0.16	No	3
15	15	6	3	0.16	No	3
16	16	6	3	0.17	No	3
17	17	4	3	0.2	No	3
18	18	4	3	0.21	No	3
19	19	5	3	0.21	No	3
20	20	8	3	0.2	No	3
21	21	5	3	0.19	No	3
22	22	5	3	0.21	No	3
23	23	5	3	0.21	No	3
24	24	3	3	0.19	No	3
25	25	5	3	0.22	No	3
26	26	5	3	0.22	No	3
27	27	3	3	0.23	No	3
28	28	3	3	0.23	No	3
29	29	6	3	0.24	No	3
30	30	4	3	0.19	No	3
31	31	6	3	0.21	No	3
32	32	3	3	0.21	No	3
33	33	2	3	0.24	No	3
34	34	3	3	0.24	No	3
35	35	7	3	0.28	No	3
36	36	4	3	0.29	No	3
37	37	6	3	0.34	No	3
38	38	3	3	0.21	No	3
39	39	6	3	0.22	No	3
40	40	4	3	0.24	No	3
41	41	5	3	0.24	No	3
42	42	4	3	0.24	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
43	43	5	3	0.25	No	3
44	44	8	3	0.26	No	3
45	45	4	3	0.28	No	3
46	46	5	3	0.18	No	3
47	47	4	3	0.18	No	3
48	48	5	3	0.28	No	3
49	49	4	3	0.25	No	3
50	50	4	3	0.28	No	3
51	51	3	3	0.25	No	3
52	52	4	3	0.25	No	3
53	53	5	3	0.24	No	3
54	54	5	3	0.24	No	3
55	55	6	3	0.25	No	3
56	56	5	3	0.25	No	3
57	57	4	3	0.25	No	3
58	58	9	3	0.29	No	3
59	59	4	3	0.3	No	3
60	60	5	3	0.31	No	3
61	61	5	3	0.31	No	3
62	62	3	3	0.33	No	3
63	63	3	3	0.34	No	3
64	64	4	3	0.42	No	3
65	65	5	3	0.43	No	3
66	66	8	3	0.46	No	3
67	67	7	3	0.46	No	3
68	68	5	3	0.64	No	3
69	69	4	3	0.6	No	3
70	70	5	3	0.61	No	3
71	71	6	3	0.61	No	3
72	72	3	3	0.6	No	3
73	73	5	3	0.61	No	3
74	74	4	3	0.62	No	3
75	75	5	3	0.65	No	3
76	76	5	3	0.66	No	3
77	77	4	3	0.66	No	3
78	78	3	3	0.66	No	3
79	79	5	3	0.67	No	3
80	80	4	3	0.68	No	3
81	81	4	3	0.68	No	3
82	82	3	3	0.7	No	3
83	83	4	3	0.7	No	3
84	84	7	3	0.71	No	3
85	755	4	3	0.71	No	3
86	85	3	3	0.7	No	3
87	86	3	3	0.71	No	3
88	87	3	3	0.71	No	3
89	88	8	3	0.71	No	3
90	89	5	3	0.72	No	3
91	90	7	3	0.73	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
92	91	4	3	0.73	No	3
93	92	5	3	0.73	No	3
94	93	6	3	0.75	No	3
95	94	3	3	0.82	No	3
96	95	3	3	0.82	No	3
97	96	4	3	0.9	No	3
98	97	8	3	0.9	No	3
99	98	4	3	0.9	No	3
100	99	4	3	0.91	No	3
101	100	3	3	0.91	No	3
102	101	4	3	0.92	No	3
103	102	3	3	1.01	Yes	3
104	103	5	3	1.02	Yes	3
105	104	4	3	1.03	Yes	3
106	105	3	3	1.03	Yes	3
107	106	4	3	1.03	Yes	3
108	107	5	3	1.03	Yes	3
109	108	4	3	1.01	Yes	3
110	109	3	3	1.02	Yes	3
111	110	6	3	0.54	No	3
112	111	6	3	0.55	No	3
113	112	4	3	0.5	No	3
114	113	6	3	0.51	No	3
115	114	6	3	0.51	No	3
116	115	3	3	0.53	No	3
117	116	4	3	0.6	No	3
118	117	5	3	0.6	No	3
119	118	4	3	0.61	No	3
120	119	3	3	0.61	No	3
121	120	4	3	0.62	No	3
122	121	4	3	0.62	No	3
123	122	3	3	0.62	No	3
124	124	7	3	0.8	No	3
125	123	5	3	0.8	No	3
126	125	5	3	0.81	No	3
127	126	5	3	0.82	No	3
128	127	4	3	0.81	No	3
129	128	5	3	0.82	No	3
130	129	4	3	0.81	No	3
131	130	5	3	0.83	No	3
132	131	4	3	0.82	No	3
133	132	4	3	0.83	No	3
134	133	5	3	0.83	No	3
135	134	6	3	0.81	No	3
136	135	4	3	0.83	No	3
137	136	4	3	0.84	No	3
138	137	4	3	0.85	No	3
139	138	6	3	0.85	No	3
140	139	5	3	0.87	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
141	140	5	3	0.9	No	3
142	141	6	3	0.85	No	3
143	142	4	3	1	Yes	3
144	143	6	3	1	Yes	3
145	144	5	3	1.01	Yes	3
146	145	6	3	1.02	Yes	3
147	146	5	3	1.04	Yes	3
148	147	7	3	1.1	Yes	3
149	148	6	3	1.11	Yes	3
150	149	6	3	1.12	Yes	3
151	150	5	3	1.08	Yes	3
152	151	8	3	1.13	Yes	3
153	152	6	3	1.13	Yes	3
154	153	4	3	1.14	Yes	3
155	154	4	3	3	Yes	3
156	155	4	3	1.15	Yes	3
157	156	6	3	0.5	No	3
158	157	5	3	0.5	No	3
159	158	6	4	0.5	No	3
160	159	6	3	0.5	No	3
161	160	4	3	0.51	No	3
162	161	5	3	0.52	No	3
163	162	5	3	0.51	No	3
164	163	6	3	0.53	No	3
165	164	7	3	0.52	No	3
166	165	4	3	0.53	No	3
167	166	5	3	0.54	No	3
168	167	5	3	0.55	No	3
169	168	3	3	0.55	No	3
170	169	4	3	0.56	No	3
171	170	5	3	0.54	No	3
172	171	5	3	0.53	No	3
173	172	3	3	0.55	No	3
174	173	4	3	0.55	No	3
175	174	5	3	0.55	No	3
176	175	5	3	0.56	No	3
177	176	7	3	0.56	No	3
178	177	4	3	0.56	No	3
179	178	6	3	0.54	No	3
180	179	5	3	0.56	No	3
181	180	6	3	0.57	No	3
182	181	6	3	0.56	No	3
183	182	6	3	0.57	No	3
184	183	4	3	0.57	No	3
185	184	4	3	0.67	No	3
186	185	3	3	0.58	No	3
187	186	7	3	0.6	No	3
188	187	5	3	0.6	No	3
189	188	3	4	0.6	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
190	189	5	3	0.62	No	3
191	190	7	3	0.6	No	3
192	191	4	3	0.69	No	3
193	192	6	3	0.75	No	3
194	193	6	3	0.16	No	3
195	194	5	3	0.16	No	3
196	195	5	3	0.33	No	3
197	196	7	3	1	Yes	3
198	197	3	3	1	Yes	3
199	198	9	3	1.01	Yes	3
200	199	3	3	1.02	Yes	3
201	200	5	3	1.03	Yes	3
202	201	7	3	1.04	Yes	3
203	202	5	3	1.05	Yes	3
204	203	4	3	1.2	Yes	3
205	204	6	3	1.12	Yes	3
206	205	4	3	1.12	Yes	3
207	206	8	3	1.14	Yes	3
208	207	3	3	1.15	Yes	3
209	208	4	3	1.16	Yes	3
210	209	3	3	1.18	Yes	3
211	210	5	3	1.18	Yes	3
212	211	5	3	1.22	Yes	3
213	212	4	3	1.24	Yes	3
214	213	4	3	1.27	Yes	3
215	214	4	3	1.28	Yes	3
216	215	6	3	1.1	Yes	3
217	216	4	3	1.1	Yes	3
218	217	6	3	1.3	Yes	33
219	218	3	3	1.3	Yes	3
220	219	3	3	1.5	Yes	3
221	220	5	3	1.5	Yes	3
222	221	5	3	1.5	Yes	3
223	222	3	3	1.5	Yes	3
224	223	4	3	1.5	Yes	3
225	224	5	3	1.51	Yes	3
226	225	4	3	1.52	Yes	3
227	226	3	3	1.53	Yes	3
228	227	5	3	1.55	Yes	3
229	228	4	3	1.55	Yes	3
230	229	5	3	1.55	Yes	3
231	230	5	3	1.7	Yes	3
232	231	4	3	1.7	Yes	3
233	232	4	3	1.7	Yes	3
234	233	4	3	1.7	Yes	3
235	234	3	3	1.68	Yes	3
236	235	3	3	1.68	Yes	3
237	236	4	3	1.67	Yes	3
238	237	4	3	1.65	Yes	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
239	238	4	3	1.65	Yes	3
240	239	5	3	1.65	Yes	3
241	240	4	3	1.65	Yes	3
242	241	4	3	1.68	Yes	3
243	242	4	3	1.66	Yes	3
244	243	4	3	1.66	Yes	3
245	244	7	3	1.67	Yes	3
246	245	3	3	1.67	Yes	3
247	246	6	3	1.7	Yes	3
248	247	2	3	1.7	Yes	3
249	248	3	3	1.7	Yes	3
250	249	6	3	1.72	Yes	3
251	250	7	3	1.72	Yes	3
252	251	6	3	1.72	Yes	3
253	252	5	3	1.72	Yes	3
254	253	5	3	1.78	Yes	3
255	254	5	3	1.8	Yes	3
256	255	4	3	1.81	Yes	3
257	256	4	3	1.81	Yes	3
258	257	4	3	1.82	Yes	3
259	258	5	3	1.84	Yes	3
260	259	3	3	1.83	Yes	3
261	260	5	3	1.82	Yes	3
262	261	5	3	1.84	Yes	3
263	262	6	3	1.84	Yes	3
264	263	4	3	1.83	Yes	5
265	264	5	3	1.85	Yes	3
266	265	6	3	1.85	Yes	3
267	266	5	3	1.86	Yes	3
268	267	5	3	1.86	Yes	3
269	268	4	3	1.86	Yes	3
270	269	4	3	1.86	Yes	3
271	270	7	3	1.87	Yes	3
272	271	6	3	1.86	Yes	3
273	272	6	3	1.87	Yes	3
274	273	5	3	1.87	Yes	3
275	274	4	3	1.87	Yes	3
276	275	8	3	1.86	Yes	3
277	276	5	3	1.87	Yes	3
278	277	3	3	1.87	Yes	3
279	278	7	3	1.88	Yes	3
280	279	4	3	1.88	Yes	3
281	280	4	3	1.88	Yes	3
282	281	3	3	1.88	Yes	3
283	282	5	3	1.88	Yes	3
284	283	4	3	1.88	Yes	3
285	284	6	3	1.89	Yes	3
286	285	4	3	1.89	Yes	3
287	286	5	3	1.84	Yes	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
288	287	4	3	1.84	Yes	3
289	288	3	3	1.84	Yes	3
290	289	4	3	1.84	Yes	3
291	290	7	3	1.84	Yes	3
292	291	7	3	1.84	Yes	3
293	292	4	3	1.84	Yes	3
294	293	6	3	1.85	Yes	3
295	294	7	3	1.85	Yes	3
296	295	5	3	1.9	Yes	3
297	296	4	3	1.9	Yes	4
298	297	5	3	1.91	Yes	3
299	298	4	3	1.92	Yes	3
300	299	5	3	1.92	Yes	3
301	300	4	3	1.93	Yes	3
302	301	4	3	1.94	Yes	3
303	302	6	3	1.94	Yes	3
304	303	5	3	1.94	Yes	3
305	304	4	3	1.95	Yes	3
306	305	4	3	1.95	Yes	3
307	306	5	3	1.96	Yes	3
308	307	5	3	1.97	Yes	3
309	308	4	3	1.96	Yes	3
310	309	3	3	1.96	Yes	3
311	310	9	3	1.97	Yes	3
312	311	4	3	1.97	Yes	3
313	312	5	3	1.98	Yes	3
314	313	6	3	1.97	Yes	3
315	314	4	3	2	Yes	3
316	315	6	3	2	Yes	3
317	316	6	3	1.98	Yes	3
318	317	6	3	1.98	Yes	3
319	318	4	3	1.98	Yes	3
320	319	6	3	1.99	Yes	3
321	320	6	3	2.1	Yes	4
322	322	9	3	2.2	Yes	3
323	323	5	3	2.11	Yes	3
324	324	4	3	2.2	Yes	3
325	325	4	3	2.2	Yes	3
326	321	5	3	2.2	Yes	3
327	326	4	3	2.2	Yes	3
328	327	5	3	2.2	Yes	3
329	328	4	3	2.2	Yes	3
330	329	5	3	2.2	Yes	3
331	330	5	3	2.2	Yes	3
332	331	6	3	0.35	No	3
333	332	5	3	0.37	No	3
334	333	3	3	0.37	No	3
335	334	5	3	0.38	No	3
336	335	4	3	0.4	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
337	336	5	3	0.42	No	2
338	337	5	3	0.42	No	2
339	338	4	3	0.42	No	2
340	339	7	3	0.61	No	3
341	340	4	3	0.62	No	3
342	341	5	3	0.63	No	3
343	342	4	3	0.63	No	3
344	343	7	3	0.63	No	3
345	344	4	3	0.63	No	3
346	345	4	3	0.63	No	3
347	346	5	3	0.64	No	3
348	347	6	3	0.66	No	3
349	348	6	3	0.66	No	3
350	349	4	3	0.66	No	3
351	350	3	3	0.67	No	3
352	351	3	3	0.68	No	3
353	352	4	3	0.68	No	3
354	353	5	3	0.7	No	3
355	354	6	3	0.7	No	3
356	355	8	3	0.68	No	3
357	356	5	3	0.68	No	3
358	357	4	3	0.7	No	3
359	358	4	3	0.73	No	3
360	359	3	3	0.74	No	2
361	360	5	3	0.64	No	2
362	361	5	3	0.74	No	2
363	362	6	3	0.76	No	2
364	363	5	3	0.76	No	2
365	364	3	3	0.67	No	2
366	365	3	3	0.74	No	3
367	366	5	3	0.76	No	3
368	367	4	3	0.75	No	3
369	368	4	3	0.77	No	3
370	369	6	3	0.77	No	3
371	370	3	3	0.77	No	3
372	371	7	3	0.78	No	3
373	372	3	3	0.78	No	3
374	373	5	3	0.79	No	3
375	374	3	3	0.79	No	3
376	375	3	3	0.79	No	3
377	376	4	3	0.79	No	3
378	377	4	3	0.8	No	3
379	378	5	3	0.81	No	3
380	379	5	3	0.81	No	3
381	380	5	3	0.82	No	3
382	381	5	3	0.83	No	3
383	382	5	3	0.84	No	3
384	383	6	3	0.84	No	3
385	384	6	3	0.87	No	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
386	385	5	3	0.8	No	3
387	386	6	3	0.81	No	3
388	387	5	3	0.81	No	3
389	388	8	3	0.82	No	3
390	389	3	3	0.82	No	3
391	390	9	3	0.82	No	3
392	391	3	3	0.82	No	3
393	392	5	3	0.82	No	3
394	393	4	3	0.83	No	3
395	394	4	3	0.83	No	3
396	395	4	3	0.83	No	3
397	396	8	3	0.85	No	3
398	397	4	3	0.85	No	3
399	398	4	3	0.85	No	3
400	399	4	3	0.85	No	3
401	400	5	3	0.85	No	3
402	401	4	3	0.86	No	3
403	402	7	3	0.86	No	3
404	403	4	3	0.86	No	3
405	404	5	3	0.86	No	3
406	405	5	3	0.87	No	3
407	406	4	3	0.87	No	3
408	407	6	3	0.88	No	3
409	408	5	3	0.88	No	3
410	409	5	3	0.88	No	3
411	410	6	3	0.88	No	3
412	411	5	3	0.88	No	3
413	412	7	3	0.88	No	3
414	413	4	3	0.88	No	3
415	414	5	3	0.89	No	3
416	415	7	3	0.9	No	3
417	416	4	3	0.9	No	3
418	417	5	3	0.87	No	3
419	418	6	3	0.87	No	3
420	419	7	3	0.86	No	3
421	420	4	3	0.86	No	3
422	421	3	3	0.86	No	3
423	422	5	3	0.88	No	3
424	423	5	3	0.9	No	3
425	424	6	3	0.91	No	3
426	425	6	3	0.92	No	3
427	426	3	3	0.93	No	3
428	427	3	3	0.93	No	3
429	428	5	3	0.94	No	3
430	429	5	3	1	Yes	3
431	430	4	3	1	Yes	3
432	431	5	3	1	Yes	3
433	432	5	3	1	Yes	3
434	433	6	3	1.04	Yes	3

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
435	434	4	3	1.04	Yes	3
436	435	5	3	1.05	Yes	3
437	436	4	3	1.1	Yes	3
438	437	6	3	1.1	Yes	3
439	438	4	3	1.12	Yes	3
440	439	5	3	1.4	Yes	3
441	440	4	3	0.65	No	2
442	441	6	3	0.67	No	2
443	442	5	3	0.65	No	2
444	443	5	3	0.72	No	2
445	444	6	3	0.81	No	2
446	445	5	3	0.83	No	2
447	446	5	3	0.84	No	2
448	447	7	3	0.88	No	2
449	448	5	3	0.88	No	2
450	449	4	3	0.89	No	2
451	450	3	3	0.89	No	2
452	451	6	3	0.9	No	2
453	452	5	3	0.94	No	2
454	453	3	3	0.95	No	2
455	454	4	3	0.95	No	2
456	455	5	3	1.12	Yes	2
457	456	4	3	1.1	Yes	2
458	457	4	3	1.12	Yes	2
459	458	6	3	1.13	Yes	2
460	459	5	3	1.13	Yes	2
461	460	6	3	1.14	Yes	2
462	461	6	3	0.38	No	2
463	462	5	3	0.39	No	2
464	463	6	3	0.4	No	2
465	464	6	3	0.39	No	2
466	465	6	3	0.4	No	2
467	466	5	3	0.41	No	2
468	467	5	3	0.4	No	2
469	468	5	3	0.37	No	2
470	469	3	3	0.38	No	2
471	470	3	3	0.35	No	2
472	471	4	3	0.34	No	2
473	472	5	3	0.32	No	2
474	473	4	3	0.33	No	2
475	474	4	3	0.35	No	2
476	475	5	3	0.34	No	2
477	476	5	3	0.3	No	2
478	477	5	3	0.35	No	2
479	478	6	3	0.35	No	2
480	479	6	3	0.1	No	2
481	480	4	3	0.25	No	2
482	481	4	3	0.26	No	2
483	482	8	3	0.27	No	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
484	483	4	3	0.27	No	2
485	484	6	3	0.29	No	2
486	485	5	3	0.28	No	2
487	486	6	3	0.29	No	2
488	487	5	3	0.28	No	2
489	488	5	3	0.29	No	2
490	489	6	3	0.3	No	2
491	490	4	3	0.3	No	2
492	491	6	3	0.3	No	2
493	492	6	3	0.3	No	2
494	493	4	3	0.25	No	2
495	494	5	3	0.26	No	2
496	495	6	3	0.27	No	2
497	496	6	3	0.28	No	2
498	497	4	3	0.26	No	2
499	498	3	3	0.27	No	2
500	499	3	3	0.28	No	2
501	500	4	3	0.28	No	2
502	501	4	3	0.29	No	2
503	502	5	3	0.29	No	2
504	503	5	3	4	Yes	2
505	504	5	3	3.98	Yes	2
506	505	3	3	3.97	Yes	2
507	506	3	3	3.97	Yes	2
508	507	5	3	3.97	Yes	2
509	508	5	3	3.97	Yes	2
510	509	5	3	3.96	Yes	2
511	510	5	3	3.96	Yes	2
512	511	4	3	3.95	Yes	2
513	512	5	3	3.94	Yes	2
514	513	3	3	3.95	Yes	2
515	514	3	3	3.94	Yes	2
516	515	4	3	3.95	Yes	2
517	516	5	3	3.95	Yes	2
518	517	5	3	3.95	Yes	2
519	518	4	3	3.95	Yes	2
520	519	4	3	3.95	Yes	2
521	520	3	3	3.96	Yes	2
522	757	5	3	3.96	Yes	2
523	522	5	3	3.95	Yes	2
524	523	3	3	3.95	Yes	2
525	758	5	3	3.95	Yes	2
526	525	7	3	3.94	Yes	2
527	526	4	3	3.96	Yes	2
528	527	4	3	3.96	Yes	2
529	528	3	3	3.96	Yes	2
530	529	5	3	3.93	Yes	2
531	530	7	3	3.93	Yes	2
532	531	4	3	3.93	Yes	2

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
533	532	6	3	3.93	Yes	2
534	533	3	3	2.55	Yes	1
535	534	5	3	2.55	Yes	1
536	535	4	3	2.55	Yes	1
537	536	6	3	2.55	Yes	1
538	537	5	3	2.55	Yes	1
539	538	6	3	2.55	Yes	1
540	539	5	3	2.55	Yes	1
541	540	5	3	2.55	Yes	1
542	541	5	3	2.5	Yes	1
543	542	4	3	2.49	Yes	1
544	543	5	3	2.49	Yes	1
545	544	4	3	2.55	Yes	1
546	545	4	3	2.55	Yes	1
547	546	5	3	2.54	Yes	1
548	547	5	3	2.53	Yes	1
549	548	4	3	2.49	Yes	1
550	549	4	3	2.49	Yes	1
551	550	4	3	2.6	Yes	1
552	551	5	3	2.6	Yes	1
553	552	4	3	2.6	Yes	1
554	553	6	3	2.61	Yes	1
555	555	5	3	2.61	Yes	1
556	554	4	3	2.62	Yes	1
557	556	5	3	2.65	Yes	1
558	557	4	3	2.65	Yes	1
559	558	5	3	2.65	Yes	1
560	559	5	3	2.64	Yes	1
561	560	6	3	2.64	Yes	1
562	561	4	3	2.64	Yes	1
563	562	4	3	2.62	Yes	1
564	563	5	3	2.61	Yes	1
565	564	4	3	2.6	Yes	1
566	565	4	3	2.6	Yes	1
567	566	5	3	2.6	Yes	1
568	567	5	3	2.6	Yes	1
569	568	7	3	2.6	Yes	1
570	569	5	3	2.6	Yes	1
571	570	5	3	2.6	Yes	1
572	571	6	3	2.6	Yes	1
573	572	4	3	2.59	Yes	1
574	573	3	3	2.58	Yes	1
575	574	3	3	2.58	Yes	1
576	779	5	3	2.57	Yes	1
577	575	5	3	2.56	Yes	1
578	576	4	3	2.56	Yes	1
579	577	4	3	2.56	Yes	1
580	578	6	3	2.55	Yes	1
581	579	3	3	2.55	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
582	580	4	3	2.55	Yes	1
583	581	4	3	2.55	Yes	1
584	582	5	3	2.55	Yes	1
585	583	5	3	2.56	Yes	1
586	584	5	3	2.55	Yes	1
587	585	5	3	2.55	Yes	1
588	586	4	3	2.55	Yes	1
589	587	5	3	2.55	Yes	1
590	588	4	3	2.55	Yes	1
591	589	3	3	2.55	Yes	1
592	590	3	3	2.55	Yes	1
593	591	4	3	2.55	Yes	1
594	592	4	3	2.54	Yes	1
595	593	3	3	2.54	Yes	1
596	594	5	3	2.54	Yes	1
597	595	4	3	2.54	Yes	1
598	596	3	3	2.52	Yes	1
599	597	4	3	2.52	Yes	1
600	598	4	3	2.52	Yes	1
601	599	6	3	2.52	Yes	1
602	601	5	3	2.52	Yes	1
603	602	5	3	2.52	Yes	1
604	603	3	3	2.51	Yes	1
605	604	4	3	2.52	Yes	1
606	605	3	3	2.52	Yes	1
607	606	3	3	2.55	Yes	1
608	607	3	3	2.5	Yes	1
609	608	3	3	2.5	Yes	1
610	609	4	3	2.5	Yes	1
611	610	3	3	2.5	Yes	1
612	611	4	3	2.47	Yes	1
613	612	4	3	2.47	Yes	1
614	613	4	3	2.47	Yes	1
615	614	3	3	2.47	Yes	1
616	615	6	3	2.45	Yes	1
617	616	4	3	2.45	Yes	1
618	617	4	3	2.46	Yes	1
619	618	3	3	2.47	Yes	1
620	619	4	3	2.45	Yes	1
621	620	4	3	2.45	Yes	1
622	521	3	3	2.46	Yes	2
623	756	4	3	2.46	Yes	2
624	759	5	3	2.45	Yes	2
625	524	4	3	2.45	Yes	2
626	760	5	3	2.45	Yes	2
627	761	4	3	2.46	Yes	2
628	762	5	3	2.46	Yes	2
629	763	5	3	2.45	Yes	2
630	621	5	3	2.47	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
631	622	4	3	2.47	Yes	1
632	623	3	3	2.46	Yes	1
633	624	7	3	2.48	Yes	1
634	625	5	3	2.48	Yes	1
635	626	4	3	2.48	Yes	1
636	627	5	3	2.48	Yes	1
637	628	5	3	2.48	Yes	1
638	629	5	3	2.48	Yes	1
639	630	7	3	2.48	Yes	1
640	631	5	3	2.48	Yes	1
641	632	5	3	2.48	Yes	1
642	670	6	3	2.5	Yes	1
643	766	4	3	2.5	Yes	1
644	767	5	3	2.5	Yes	1
645	600	5	3	2.5	Yes	1
646	768	5	3	2.5	Yes	1
647	765	7	3	2.5	Yes	1
648	769	4	3	2.52	Yes	1
649	764	6	3	2.51	Yes	1
650	770	5	3	2.5	Yes	1
651	771	5	3	2.52	Yes	1
652	772	4	3	2.52	Yes	1
653	773	4	3	2.52	Yes	1
654	774	4	3	2.52	Yes	1
655	778	5	3	2.52	Yes	1
656	775	5	3	2.55	Yes	1
657	776	4	3	2.55	Yes	1
658	777	3	3	2.55	Yes	1
659	633	5	3	2.55	Yes	1
660	634	5	3	2.45	Yes	1
661	635	7	3	2	Yes	1
662	637	5	3	2	Yes	1
663	636	6	3	2	Yes	1
664	638	6	3	1.9	Yes	1
665	639	4	3	1.9	Yes	1
666	640	3	3	1.87	Yes	1
667	641	4	3	1.86	Yes	1
668	642	5	3	1.96	Yes	1
669	643	4	3	1.86	Yes	1
670	644	3	3	1.85	Yes	1
671	645	3	3	1.85	Yes	1
672	646	3	3	1.85	Yes	1
673	647	5	3	1.85	Yes	1
674	648	5	3	1.85	Yes	1
675	649	4	3	1.85	Yes	1
676	650	3	3	1.82	Yes	1
677	651	5	3	1.82	Yes	1
678	652	4	3	1.8	Yes	1
679	653	5	3	1.81	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
680	654	5	3	1.81	Yes	1
681	655	4	3	1.84	Yes	1
682	656	5	3	1.86	Yes	1
683	657	5	3	1.85	Yes	1
684	658	4	3	1.85	Yes	1
685	659	3	3	1.85	Yes	1
686	660	4	3	1.85	Yes	1
687	661	5	3	1.87	Yes	1
688	662	6	3	1.86	Yes	1
689	663	5	3	1.85	Yes	1
690	664	5	3	2.35	Yes	1
691	665	5	3	2.35	Yes	1
692	666	3	3	2.35	Yes	1
693	667	3	3	2.37	Yes	1
694	668	5	3	2.38	Yes	1
695	669	7	3	2.4	Yes	1
696	671	5	3	2.36	Yes	1
697	672	4	3	2.36	Yes	1
698	673	4	3	2.36	Yes	1
699	674	4	3	2.36	Yes	1
700	675	7	3	2.37	Yes	1
701	676	6	3	2.4	Yes	1
702	677	6	3	2.4	Yes	1
703	678	5	3	2.4	Yes	1
704	679	4	3	2.4	Yes	1
705	680	4	3	2.4	Yes	1
706	681	7	3	2.45	Yes	1
707	682	5	3	2.45	Yes	1
708	683	6	3	2.45	Yes	1
709	684	6	3	2.45	Yes	1
710	685	6	3	2.45	Yes	1
711	686	6	3	2.45	Yes	1
712	687	5	3	2.47	Yes	1
713	688	8	3	2.5	Yes	1
714	689	4	3	2.5	Yes	1
715	690	5	3	2.5	Yes	1
716	691	4	3	2.54	Yes	1
717	692	4	3	2.54	Yes	1
718	693	4	3	2.54	Yes	1
719	694	5	3	2.54	Yes	1
720	695	5	3	2.55	Yes	1
721	696	5	3	2.57	Yes	1
722	697	5	3	2.7	Yes	1
723	698	4	3	2.7	Yes	1
724	699	3	3	2.7	Yes	1
725	700	4	3	2.74	Yes	1
726	701	4	3	2.75	Yes	1
727	702	4	3	2.75	Yes	1
728	703	4	3	2.75	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
729	704	4	3	2.75	Yes	1
730	705	5	3	2.8	Yes	1
731	706	5	3	2.8	Yes	1
732	707	5	3	2.8	Yes	1
733	708	4	3	2.8	Yes	1
734	709	5	3	2.8	Yes	1
735	710	4	3	2.8	Yes	1
736	711	3	3	2.82	Yes	1
737	712	3	3	2.82	Yes	1
738	713	4	3	2.83	Yes	1
739	714	7	3	2.83	Yes	1
740	715	5	3	2.84	Yes	1
741	716	4	3	2.85	Yes	1
742	717	4	3	2.87	Yes	1
743	718	5	3	2.87	Yes	1
744	719	6	3	2.88	Yes	1
745	720	5	3	2.87	Yes	1
746	721	5	3	2.9	Yes	1
747	722	4	3	2.9	Yes	1
748	723	5	3	2.9	Yes	1
749	724	5	3	2.9	Yes	1
750	725	4	3	2.9	Yes	1
751	726	6	3	2.91	Yes	1
752	727	6	3	2.91	Yes	1
753	728	7	3	2.91	Yes	1
754	729	6	3	2.91	Yes	1
755	730	6	3	2.91	Yes	1
756	731	2	3	2.91	Yes	1
757	732	3	3	2.91	Yes	1
758	733	4	3	2.92	Yes	1
759	734	5	3	2.92	Yes	1
760	735	6	3	2.92	Yes	1
761	736	4	3	2.94	Yes	1
762	737	4	3	2.94	Yes	1
763	738	8	3	2.95	Yes	1
764	739	3	3	2.95	Yes	1
765	740	4	3	2.95	Yes	1
766	741	3	3	2.95	Yes	1
767	742	4	3	2.98	Yes	1
768	743	5	3	2.98	Yes	1
769	744	5	3	2.98	Yes	1
770	745	6	3	2.98	Yes	1
771	746	4	3	2.98	Yes	1
772	747	5	3	2.97	Yes	1
773	748	4	3	2.96	Yes	1
774	749	4	3	2.96	Yes	1
775	750	6	3	2.97	Yes	1
776	751	6	3	2.97	Yes	1
777	752	5	3	2.96	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
778	753	6	3	2.95	Yes	1
779	754	6	3	2.98	Yes	1
780	780	4	3	2.98	Yes	1
781	781	4	3	2.98	Yes	1
782	782	4	3	3	Yes	1
783	783	7	3	2.99	Yes	1
784	784	3	3	2.99	Yes	1
785	785	5	3	2.99	Yes	1
786	786	4	3	2.99	Yes	1
787	787	4	3	2.99	Yes	1
788	788	3	3	2.99	Yes	1
789	789	5	3	3	Yes	1
790	790	5	3	3	Yes	1
791	791	5	3	3.1	Yes	1
792	792	4	3	2.75	Yes	1
793	793	4	3	2.75	Yes	1
794	794	3	3	2.75	Yes	1
795	795	3	3	2.75	Yes	1
796	796	4	3	2.75	Yes	1
797	797	6	3	2.75	Yes	1
798	798	4	3	2.75	Yes	1
799	799	5	3	2.74	Yes	1
800	800	7	3	2.71	Yes	1
801	801	7	3	2.71	Yes	1
802	802	5	3	2.6	Yes	1
803	803	5	3	2.58	Yes	1
804	804	5	3	2.61	Yes	1
805	805	4	3	2.61	Yes	1
806	806	5	3	2.61	Yes	1
807	807	4	3	2.6	Yes	1
808	808	7	3	3.2	Yes	1
809	809	6	3	3.2	Yes	1
810	810	6	3	3.2	Yes	1
811	811	5	3	3.3	Yes	1
812	812	5	3	3.3	Yes	1
813	813	5	3	3.3	Yes	1
814	814	6	3	3.3	Yes	1
815	815	3	3	3.3	Yes	1
816	816	5	3	3.3	Yes	1
817	817	5	3	3.3	Yes	1
818	818	5	3	3.3	Yes	1
819	819	8	3	3.3	Yes	1
820	820	4	3	3.3	Yes	1
821	821	5	3	3.3	Yes	1
822	822	5	3	3.31	Yes	1
823	823	3	3	3.32	Yes	1
824	824	5	3	3.34	Yes	1
825	825	7	3	3.34	Yes	1
826	826	5	3	3.35	Yes	1

SL No.	Household No.	Population	Shelter No.	Distance to Shelter 3 (km)	Transport Required	Origin Zone
827	827	6	3	3.35	Yes	1
828	828	4	3	3.4	Yes	1
829	829	7	3	3.4	Yes	1
830	830	4	3	3.42	Yes	1
831	831	6	3	3.41	Yes	1
832	832	6	3	3.43	Yes	1
833	833	6	3	3.45	Yes	1
834	834	4	3	3.45	Yes	1
835	835	8	3	3.45	Yes	1
836	836	5	3	3.45	Yes	1
837	837	5	3	3.45	Yes	1
838	838	4	3	3.95	Yes	1
839	839	6	3	3.95	Yes	1
840	840	6	3	3.95	Yes	1
841	841	5	3	3.96	Yes	1
842	842	5	3	3.96	Yes	1
843	843	4	3	3.97	Yes	1
844	844	7	3	3.96	Yes	1
845	845	5	3	3.96	Yes	1
846	846	4	3	3.98	Yes	1
847	847	5	3	3.98	Yes	1
	Shelter 3 Total Household = 847	Shelter 3 Total Population = 4024				