

Planning Proposal of Social Infrastructure in North Zone of Surat City

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Abstract - Infrastructure is the key tool for development of any nation. Infrastructure play a major part in economic development of the country and improving the well-being of community. In an urban area, the social infrastructure plays a significant role for citizen's comfort, satisfaction and to improve quality of life. With increasing population, pressure is increased on existing social infrastructure. Effective delivery of social infrastructure such as health an education take part in improving economic development of the country. Surat is on the path of becoming smart city and therefore the efficiency and effectiveness of social infrastructure shall be of prime focus. Henceforth, the distribution of social infrastructure according to the norms is among important goal for Surat Municipal Corporation. The purpose of proposed study is to assess the existing condition of social infrastructure in the study area to identify gaps (existing and projected) as per the norms and guidelines and proposed for improvement and suitable recommendation. North zone of Surat city is selected as the study area.

Keywords: Assessment of Infrastructure, Quality of Life, Social Infrastructure, Surat Municipal Corporation

1. INTRODUCTION

The word 'Infrastructure' has been derived from French language. The word 'Infrastructure' is a combination of two words 'infra' means below and 'structure' means form. Infrastructure refers to the basic systems and services that a country or organization needs in order to function properly. A country's economic and social development is directly dependent on a country's Infrastructure and is the basic requirement. Physical infrastructure directly support economic growth and social infrastructure helps in improving the quality of living standards of the community. Good infrastructure makes the work process easy, resulting in positive and maximum productivity. Infrastructure can be categorized as

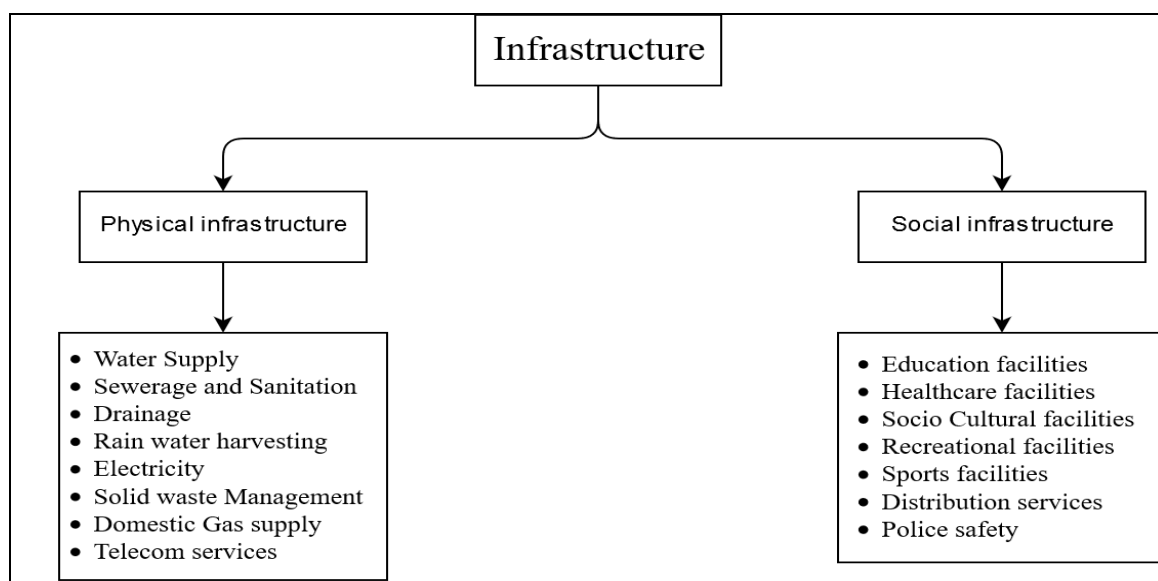


Figure 1: classification of infrastructure

1.1 Physical Infrastructure

Physical infrastructure refers to the basic physical structures required for an economy to function and survive, such as transportation networks, a power grid and sewerage and waste disposal systems. Physical infrastructure include all the services and utilities needed for the economic development of any nation.

Physical Infrastructure includes:

1. Transport:

- a) Railways
- b) Roads
- c) Shipping ports and harbours
- d) Airports
- e) Transport Equipment

2. Communication:

- a) Posts
- b) Telegraphs
- c) Telephones
- d) Radio
- e) Television
- f) Cinema

3. Energy:

- a) Coal
- b) Electricity (Hydrel, Thermal, Nuclear)
- c) Wind Power
- d) Solar Power
- e) Oil
- f) Gas
- g) Biogas

1.2 Social Infrastructure

Social Infrastructure are fundamental services and structures that support the quality of life of a nation, region, city, or neighbourhood. The social infrastructure also help to enhance community well-being and improve the efficiency and skills of manpower. In an urban area, the social infrastructure plays a significant role for citizen’s comfort, satisfaction and to improve quality of life.

The social infrastructure includes the following aspects:

- i. Health-care facilities
- ii. Education facilities
- iii. Socio-cultural facilities
- iv. Recreational facilities
- v. Sports facilities
- vi. Distribution services
- vii. Police safety

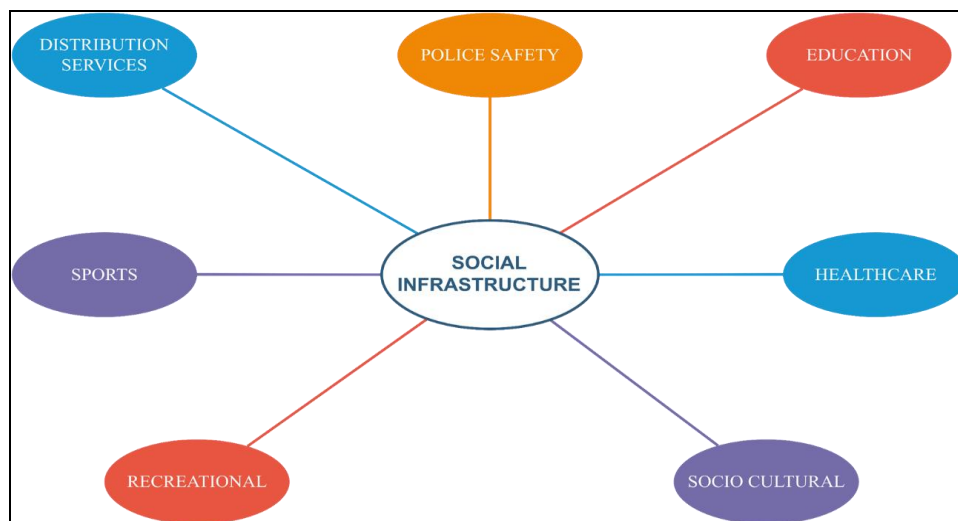


Figure 2: Classification of Social Infrastructures

(Source: URDPFI Guidelines, 2015)

Aim: An assessment and analysis for existing social infrastructure in North zone of Surat city and propose relevant planning proposal for improvement.

2. STUDY AREA

Surat is a city located on the western part of India in the state of Gujarat. It is one of the most dynamic city of India with one of the fastest growth rate due to immigration from various part of Gujarat and other states of India. Surat is the 8th largest city of India in terms of population and largest in non-capital cities. As per city mayor’s foundation report, Surat is the 4th fastest growing city globally. The city has a very vibrant economy. It is hub to the diamond and textile industry. According to an estimate, Surat accounts for 90% of the world’s total rough diamond cutting and polishing. In textiles, Surat contributes 40 per cent of the nation’s total manmade fabric production, 28 per cent of the nation’s total manmade fiber production. Surat is one of the cleanest cities of India and is also known by several other names like "THE SILK CITY", "THE DIAMOND CITY", "THE GREEN CITY", etc.

2.1. Location of Study Area

The city of Surat is located at latitude 21.112°N and longitude 72.814°E on the bank of river Tapi having coastline of Arabian Sea on its West. It is located at 13m above mean sea level. The city of Surat is situated in the well-developed region of south Gujarat.

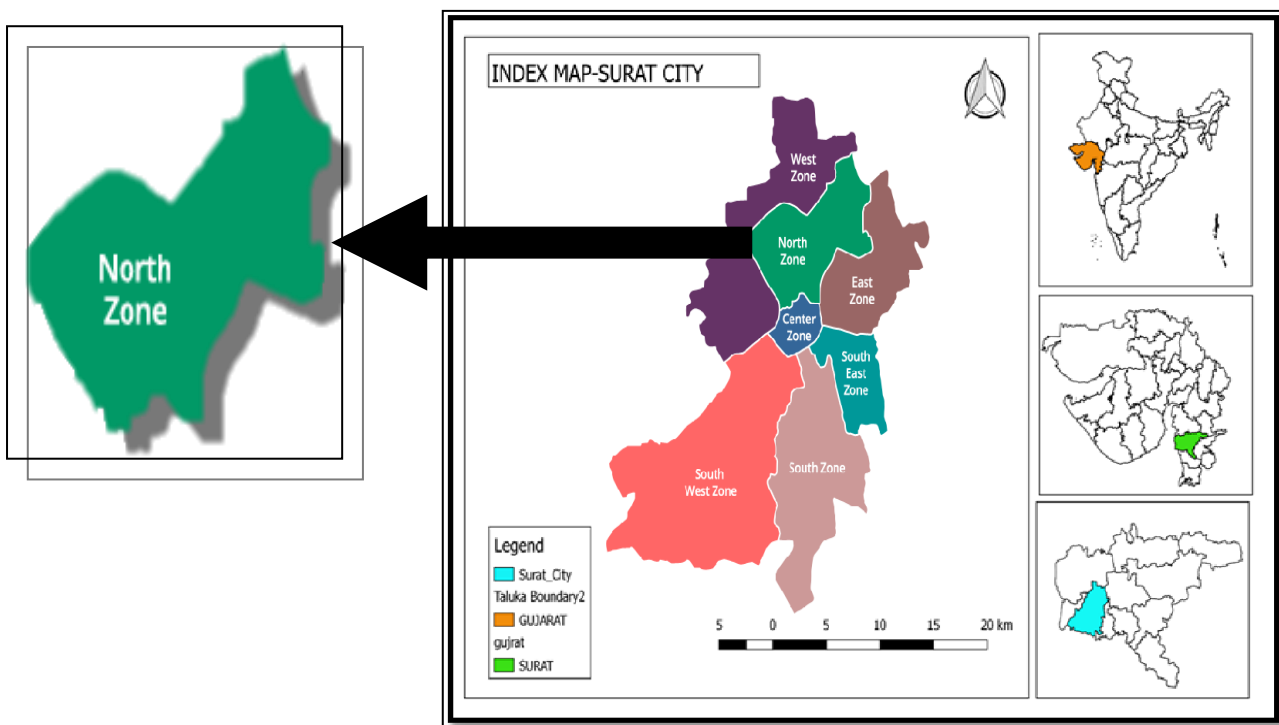


Fig -3: Location of Surat City

An official demographic data of Surat city are taken. Total Estimated population up to 2041 is shown in above table.

Table 2: Population Estimate of Surat City

Year	1991	2001	2011	2021	2031	2041
Population	2,06,202	24,33,835	44,66,826	59,50,831	74,34,835	89,18,840

(Source: Mid-year Population Estimates, SMC)

No.	Zone	Area (Sq. km)	Population	
			2001	2011
1	Central	8.18	4,13,641	4,08,760
2	South West	111.912	2,42,466	3,47,447
3	South	61.764	4,07,980	6,95,028
4	South East	19.492	3,97,257	7,48,304
5	East	37.525	7,11,516	11,37,138
6	North	36.363	4,16,370	7,05,163
7	West	51.279	2,87,144	4,24,986

(Source: Mid-year Population Estimates, SMC)

3. DATA COLLECTION

The data collection was done in order to assess the available existing social infrastructure in the study area. The data were collected with the help of Surat Municipal Corporation.

Table 4 available social infrastructure in the study area

No.	Social Infrastructure	Existing	
1.	Educational Facilities	Pre-primary School	130
		Primary school	108
		Senior secondary School	77
		College	12
2.	Health-Care facilities	Multy Speciality Hospital	3
		Dispensary	19
		General Hospital	37
3.	Socio-Cultural Facilities	Aanganwadi	149
		Library	18
		Community Hall	5
4.	Fire Safety	Fire Station	2
5.	Police Safety	Police Station	3

4. Population Projection

Demographics were studied for population projection up to the year 2041. The mean of Arithmetic Increase Method and Incremental Increase Method was adopted for future population. Table-5 shows approximate projected population for the study area up to the year 2041.

Table 5 approximated projected population up to 2041

Year	1991	2001	2011	2021	2031	2041
Population	206202	417401	705163	992925	1242407	1491887

4.1 Gap Identification

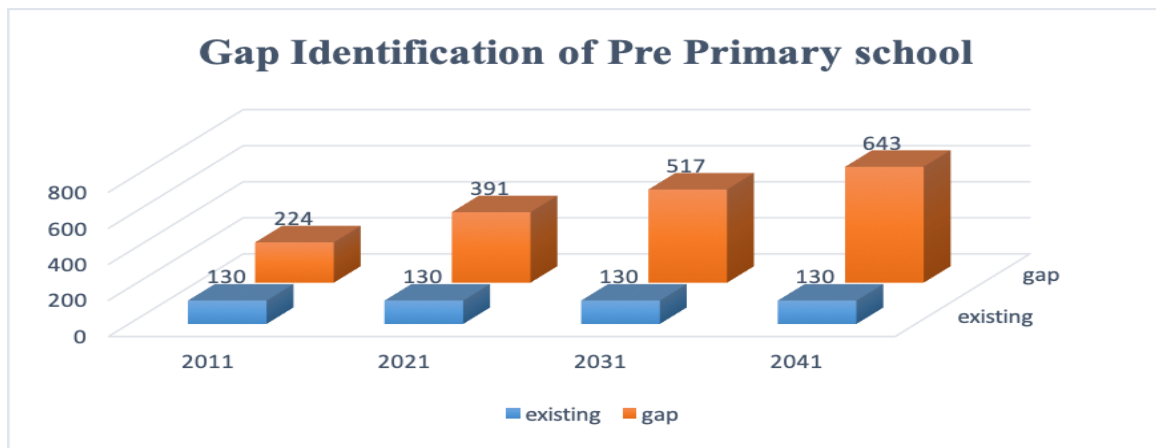


Figure 4. gap identification of pre-primary school

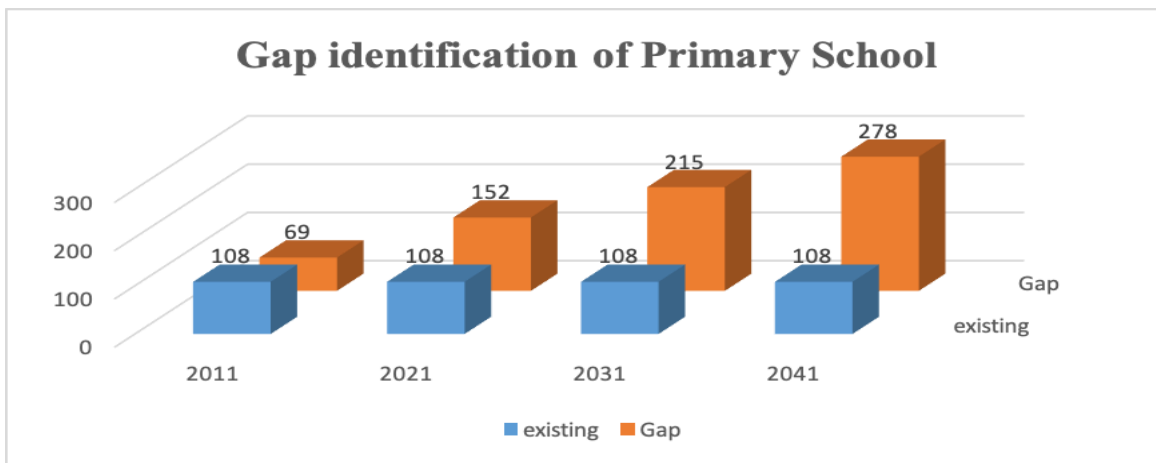


Figure 5. gap identification of primary school

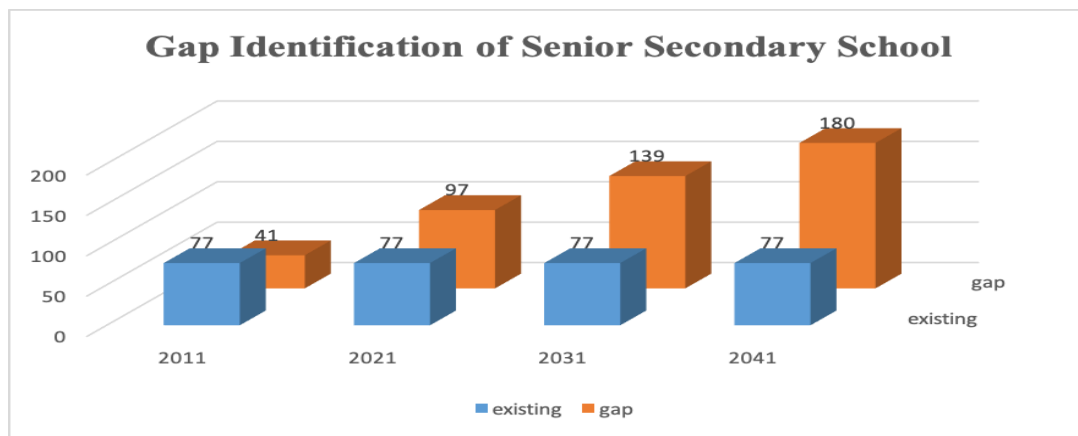


Figure 6. gap identification of senior secondary school

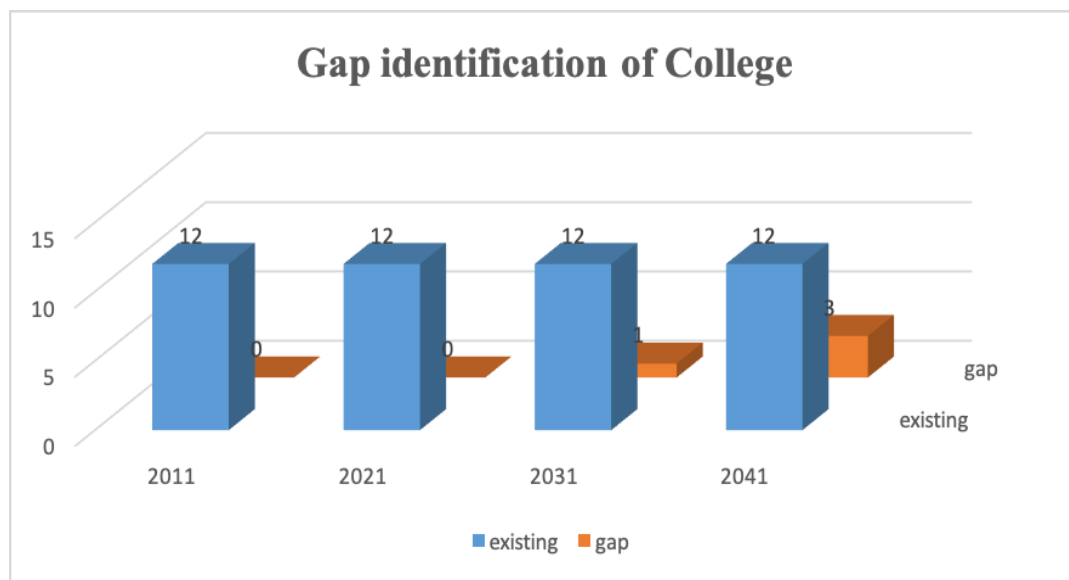


Figure 7. gap identification of college

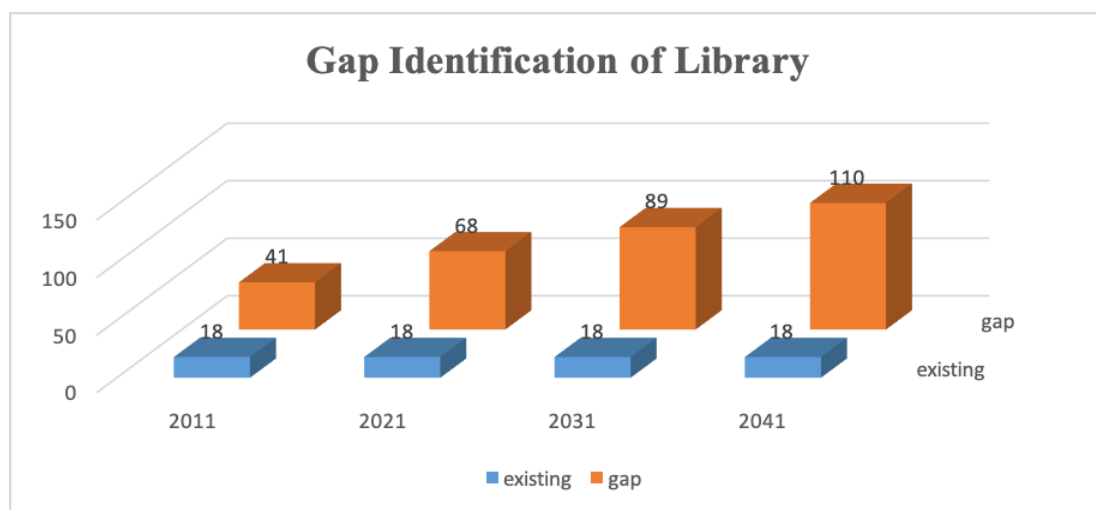


Figure 8. gap identification of library

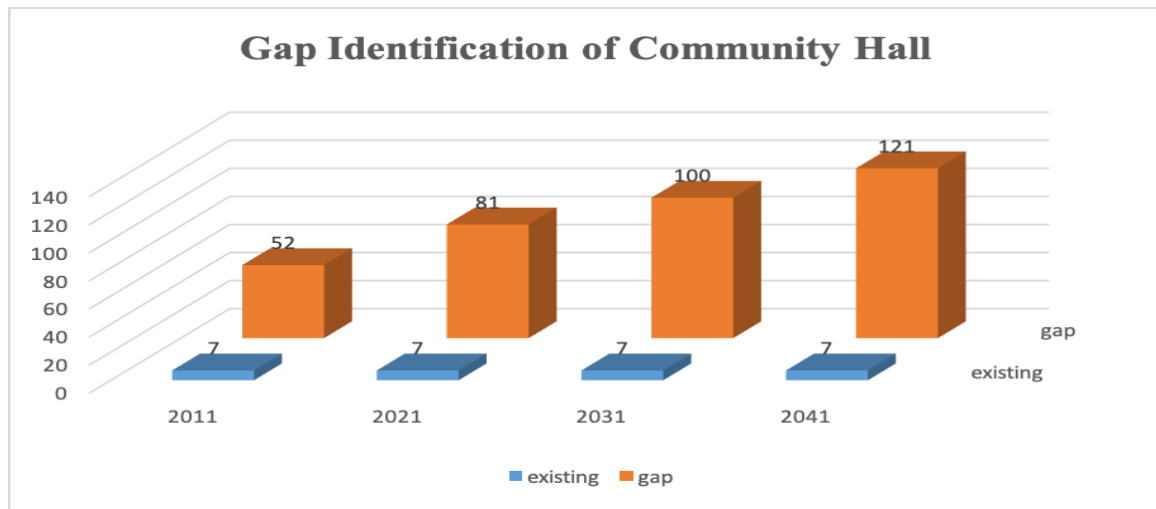


Figure 9. gap identification of community hall

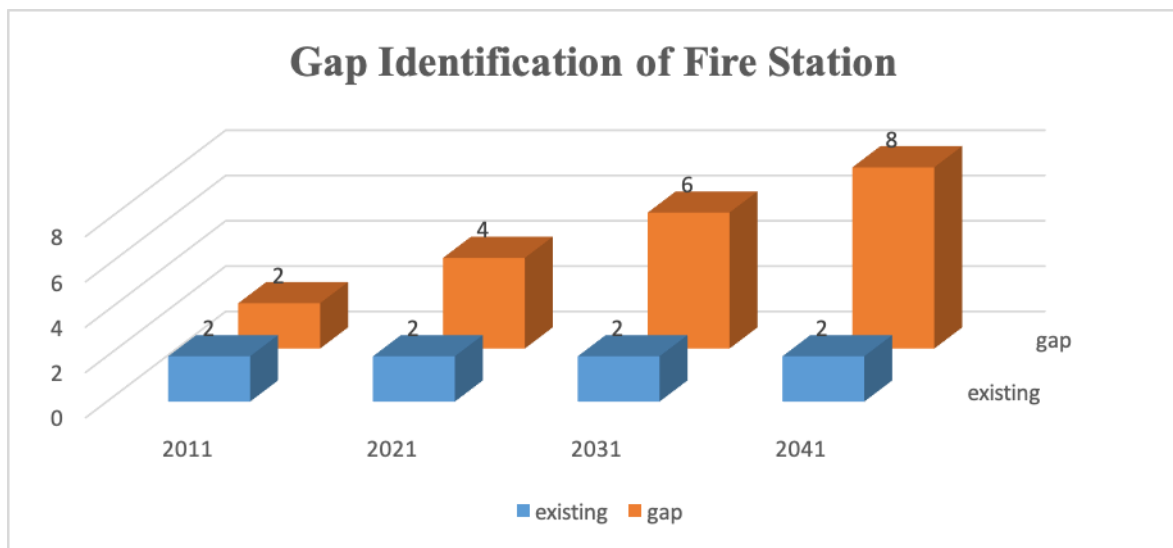


Figure 10. gap identification of fire station

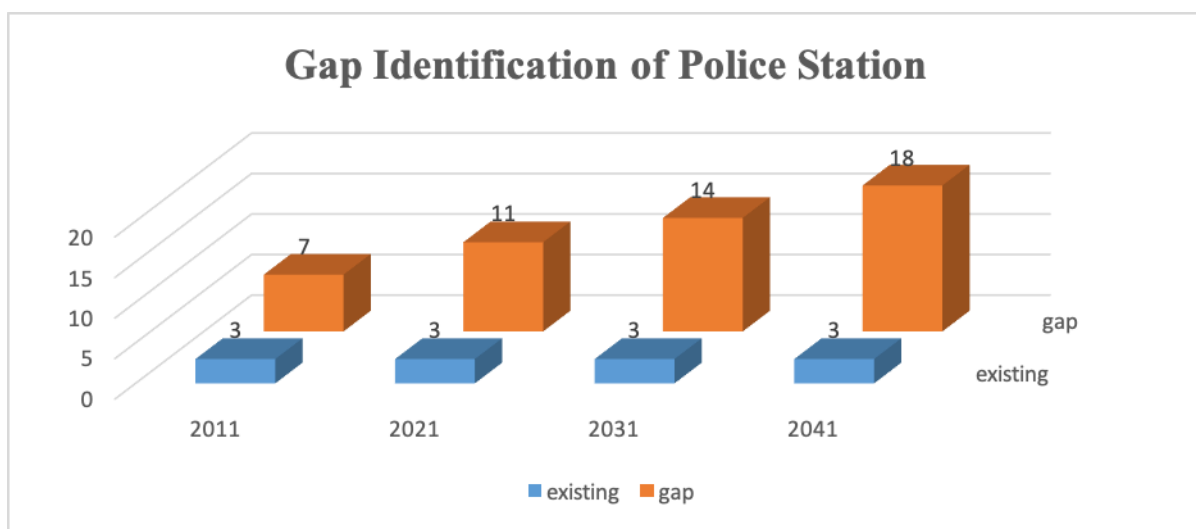


Figure 11. gap identification of police station

5. Concluding Remarks

Development of any urban area dependent upon their current population and future planning of area depends upon their population projection for next 10 year as per URDPFI guideline. SMC estimate population by constant growth rate of Surat city. The identified gap of various facilities may be matched by either public organizations or private sector. Public-Private Partnership based arrangement may also be worked out for providing the social facilities in which the study area lacks.

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