DEFICIENCY OF TRAFFIC SIGNAL CONTROL SYSTEM IN DHAKA CITY

A Thesis
Submitted by

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It is hereby declared that this thesis or any part of it has not been submitted elsewhere for the award of any degree or diploma.

July, 2011 Rajib khadem

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ABSTRACT

The widespread commercial, industrial, government, private and other activities have encouraged migration of people from outside resulting in abnormal growth of vehicular population in Dhaka City. The rapid growth of vehicular population is causing enormous effect on traffic system. At present the traffic signal system in Dhaka City can not manage this traffic. The traffic density has exceeded saturation level in most of the arterial roads.

In this research, a total of 70 signalized intersections and 253 approaches in these intersections in Dhaka City were studied. Detail field surveys are conducted in each intersection. From survey of the existing signal system it is observed that out of 70 signalized intersections, 84% are fixed time (FT) multi-plan signal system, 9% are Centrally Monitored Vehicle Actuated Signals, 3% are pedestrian actuated and the remaining 4% are vehicle and pedestrian actuated control system. Field observation reveals that with the fixed nature of control system, often the prefixed timing plan does not match the demand of actual flow. Field observations reveal that only one timing plan is provided at 61 numbers or 87% intersections. It was also observed that among 70 signalized intersections, 1% signals are designed with 5-phase timing plan, 43% with 4-phase plan, 49% with 3-phase plan and 7% with 2-phase plan.

Significant numbers of physical deficiencies are identified at the intersections. The placement of signal is wrong at 59% intersections, signal light direction is wrong at 27% intersections; controller cabinet conditions are not satisfactory in intersections. Access is restricted for the maintenance of signal at 21% intersections, size of mast arm is wrong at 84% intersections, pole and mast arm are colorless at 54 % intersections. Mounting of signal head in pole and mast arm is wrong at most intersections. Traffic sign and road marking provided at intersections are fewer than required. Pedestrians signal head is broken at 39% intersections. Footpath, pedestrian refuse, median conditions are not good at signalized intersections. Sight distances at intersections are very poor. Signals are not clearly visible at some intersections due to obstruction like as signboard or bill board, trees, electric pole etc. At 45 % approaches signals are not visible due to obstructions.

Significant numbers of operational deficiencies are observed at the intersections. In old Dhaka at almost all of the traffic signals are not operational. Non- motorized vehicle are observed more in old Dhaka. Most of the intersections are controlled manually. Such as police control traffic manually by hand at 47% intersections, auto signal runs at 53% intersections. Both auto signal and police control by hand at 56% intersections. Maximum green time observed too long at some intersections and exceeds the maximum limits. All red phases, preemption, traffic control at special events and incidents management are absent in signal system at all intersections. Pedestrian signal conditions are very worse and road users do not follow. Pedestrian signal lights are off at 59% approaches. No pedestrian signal is found at 20% approaches. Signal retiming is not done properly and timely in most cases. Monitoring and maintenance are also very poor. There are no guidelines or manuals for signal operation and maintenance.

Some cities of developing countries like Delhi, Pune, Bangalore, Bandung and Phuket use advance system such as Area Traffic Control System (ATCS), Phuket type, Central Control System for signal operation. In Dhaka City the signals are isolated, fixed time and manual control system. Deficiencies of Supporting TCDs are more in Dhaka city as compared to Delhi city.

Physical deficiencies are observed largely in placement of signal, signal light, signal head, size of pole and mast arm, the access for maintenance of signal, pedestrian signal and signal visibility. The operational deficiencies are mainly observed in signal timing control, retiming, discipline or rules, maintenance of traffic signal, signal timing plan, preemption, traffic control at special events and incidents. Management practices, availability of a mission statement and annual review are absent. Ineffective operation, maintenance and monitoring of traffic signals have safety implications. Deficiency of traffic control device causes road traffic violations that have an adverse effect on safety.

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ABBREVIATION

ATC	:	Area Traffic Control
ATCS	:	Area Traffic Control System
BRTA	:	Bangladesh Road Transport Authority
CMVPA	:	Centrally Monitored Vehicle and Pedestrian Actuated
CMVA	:	Centrally Monitored Vehicle Actuated
CMS	:	Changeable message signs
DMP	:	Dhaka Metropolitan Traffic Police
DCC	:	Dhaka City Corporation
DUTP	:	Dhaka Urban transport project
DTCB	:	Dhaka Transport Coordination Board
FHWA	:	Federal Highway Administration
FT	:	Fixed Time
GSM	:	Global System for Mobile Communication
GPS	:	Global Positioning System
ITC	:	Intersection Traffic Controller
ITS	:	Intelligent Transportation Systems
JICA	:	Japan International Collaboration Association
MUTCD	:	Manual on Uniform Traffic Control Devices
NMT	:	Non Motorized Transport
PA	:	Pedestrian Actuated
RAJUK	:	Rajdhani Unnayan Kartipakha
RTV	:	Road Traffic Violation
RHD	:	Roads and Highway Division
SCATS	:	Sydney Coordinated Adaptive Traffic System
TCD	:	Traffic Control Device
TMC	:	Traffic Management Center
VA	:	Vehicle Actuated
L.M.V	:	Light motor vehicle
A/R	:	Auto rickshaw

H.T.V	:	Heavy transport vehicle
H.G.V	:	Heavy goods vehicle

GLOSSARY

Actuated Signal Control : Phase time based on detection data.

Arterial : A signalized street that primarily serves through traffic and that secondarily provides access to abutting properties.

All-Red : Intervals during which all phases receive a red indication. The purpose of the all-red interval is to allow vehicles that entered the intersection during the yellow interval to clear the intersection before a green indication is given to a conflicting movement.

Controller : A mechanical or solid-state device which governs the operation of the signal indications.

Cycle : A complete sequence of signal indications.

Cycle Length : The time required for a complete sequence of phases at a signal. It is typically measured as the time elapsed from the end of main street green to the end of main street green again. Cycle length remains constant with fixed-time signals but varies from cycle to cycle with actuated signals.

Detector : Any hardware which detects vehicles or pedestrians and places a call for service to the signal controller.

Cycle Failure : Occasion where all queued vehicular demand cannot be served by a single green indication or signal phase.

Flashing Don't Walk : An indication warning pedestrians that the walk indication has ended and the don't walk indication will begin at the end of the pedestrian clearance interval.

Green time : The duration, in seconds, of the green indication for a given movement at a signalized intersection.

Isolated Operation : Mode of operation whereby a traffic signal operates independently of any other signals in its vicinity (as opposed to coordinated operation). Signals within a coordinated system can also operate in isolated mode during certain periods of the day.

Isolated intersection : An intersection at least one mile from the nearest upstream signalized

Lost Time: : The portion of time at the beginning of each green period and a portion of each yellow change plus red clearance period that is not usable by vehicles.

Maximum Green : The maximum length of time that a phase can be green in the presence of a conflicting call.

Pedestrian : An individual traveling on foot.

Time of Day Plans : Signal timing plans associated to specific hours of the day associated with fluctuations in demand.

Traffic Signal A device to warn, controls, or direct at least one traffic movement at an intersection.

Traffic Signal Controller : A device controlling indication changes at a traffic signal.

Signal Aspect : An optical system which produces a light output of specified size, color, shape and quality.

Signal Face : A combination of signal aspects which together produce a continuous sequential display of light outputs to convey control information to road users.

Signal Head : An assembly of one or more signal faces, mounted on a single support system.

Pedestrian Signal Faces : Signal faces providing control information to pedestrians.

Urgent faults : Urgent faults shall generally relate to

a) Faults at the Central Monitoring Station
b) Controller malfunction
c) Detector and Pushbutton failure
d) Failure of communications
e) Lamp Failure
f) Damage to equipment at site
g) Standby Power Supply Source
h) Electrical Hazard.

Less urgent faults : would include:

a) Updating of signal timings
b) Changes to signal plans
c) Corrosion and material distress

CHAPTER 1
INTRODUCTION

1.1 General

Intersections are of great concern due to conflicting traffic movements, crashes and vehicle delays. The signal system in intersections provides orderly movement of vehicles, improved safety, provision for progressive flow of traffic in corridor, possible improvements in capacity, reduced travel times and aims to maximize traffic flow. Intersections controls traffic in a safe, orderly and efficient manner.

The total road network in Dhaka City spans about 2230 kilometers- including roads, lanes and by-lanes. The road network constitutes of about only 8% of city's total land area (Hossain, 2004). The functional primary road spans only 84.67 Km (DCC). More than 5.2 lakh motorized vehicles such as cars, jeeps, microbuses, taxicabs, CNG-run auto-rickshaws, buses, minibuses, trucks and human haulers are registered with the Bangladesh Road Transport Authority in Dhaka till 2009. Everyday more than 100 registered vehicles enter the city roads. Traffic is more in comparison to road network in Dhaka City. There are 70 traffic signalized intersections in Dhaka City. But due to congestion condition the signalized intersections can not manage traffic and create unbearable sufferings to the road users. City roads from end to end are filled with vehicles, none of them moving. Chaos on the roads began as soon as an office hour starts and it continues all day long causing immense sufferings to the city dwellers. Traffic does not move in lanes. Road users are not following the traffic rules and laws in Dhaka City.

In Dhaka City in the year 2000-2001 Dhaka Urban Transport Project (DUTP) has installed 9 Halogen type traffic signals in Newmarket-Mirpur road considered as Demo Corridor. After that in year 2004 by the fund of World Bank Dhaka City Corporation has installed four types of traffic signals at 59 intersections along the major corridors in Dhaka (Hadiuzzaman, 2008). At present in Dhaka City Corporation (DCC) area, there are 70 traffic signals at the congested intersections.

1.2 Statement of the Problem

Traffic signal system is approaching lots of difficulties in controlling vehicular movements in mega cities such as Dhaka. This research is focused on identifying the deficiencies of traffic signal in Dhaka.

Various signal timing control system are now used in Dhaka City. In some intersections, traffic signal is fixed time or pre timed. In some intersections, police control time manually by using hand. In some intersections police change signal light or time, observing the traffic volume or queue. In other intersections, traffic police are working simultaneously with signal light. Traffic flow is directed or guided by traffic police officer and they use their judgment (Hossain, 2004). As such, signal settings are not responsive to the flow characteristics. There is no consistency between the signal timings and the traffic demand (Hasan, 1996). For using of various timing control system drivers, road users and pedestrians are confused and are facing difficulties. Due to lack of retiming, maintenance and operation, the traffic signal control system is not working properly. These are ineffective and do not serve the purpose.

1.3 Objectives of the Study:

The main objectives of the proposed study are:

1. To review the existing traffic signal system in Dhaka City.
2. To identify the physical and operational deficiency of traffic signal system in Dhaka City.
3. Comparing the traffic signal control system of Dhaka City with some cities of other developing countries.

It is expected that outcome of this study will identify the physical and operational deficiency of traffic signal system in Dhaka City which will help the traffic engineer to provide solution for elimination of such physical and operational deficiencies.

1.4 Scope of the Study:

The research includes the investigation of traffic signaling system and their deficiencies. The investigation was accomplished mainly in Dhaka metropolitan area; particular emphasis has been made on the Dhaka city corporation area comprising (134 sq. m) [DCC 2004]. The comparisons of signal systems were also performed on some cities of developing countries.

1.5 Organization of the Thesis:

The research consists of six chapters. The first chapter contains the statement of the problem, objectives of the study, scope of the study and the thesis organization. Chapter two incorporates literature review related to the traffic signal system and also describes the existing signal system in Dhaka City. Chapter three describes the methodology of data collection, analysis and the procedures applied for the execution of the study. Chapter four deals the identification of physical and operational deficiency of traffic signal in Dhaka City. Effects due to deficiencies are also described here. Chapter five discusses the comparison of signal system of Dhaka City with some cities of developing countries. Chapter six includes the conclusion of the entire study. Recommendation to overcome of the deficiencies and improving of the signal system are also discussed and the future scope is presented in this chapter.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

A concise literature review is carried out to get the basic understanding and to obtain knowledge on traffic signal of various cities in the world which has been depicted in this chapter. The summary of former research works on traffic signal, traffic signal system in metropolitan Dhaka city and also the traffic signal system in home and abroad are also discussed with relevant research approach as well as the findings and discussion on those works.

2.2 Traffic Control Device (TCD)

According to the Manual on Uniform Traffic Control Devices (MUTCD) of the year 2009, all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, bikeway, or private road open to public travel by authority of a public agency or official having jurisdiction, or, in the case of a private road, by authority of the private owner or private official having jurisdiction. The predominant reason of traffic control devices, as well as the principles for their use, is to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, and private roads open to public travel throughout the Nation. Traffic control devices notify road users of regulations and provide warning and guidance needed for the uniform and efficient operation. If it is necessary all signs, signals, markings, and other devices can be used alone or in combination (Khisty, 2003).

2.2.1 Traffic signs

A “Traffic Sign” is meant by any object, device, line or mark on the road whose object is to convey to road users, or any specified class of road user, restrictions, prohibitions, warnings or information, of any description (Sign Manual, 2000). These signs are primarily used to inform about traffic regulation and warning to the road users and guide them to reach their interested places.

Regulatory signs are utilized to indicate traffic regulations. These signs have a legal offence if it is violated. These signs are usually circular in shape with red border, white background. Regulatory signs have two parts such as mandatory and prohibitory signs. Mandatory signs include stops, keep right, yield or give way etc. Prohibitory signs include no right/ left/ u-turn, no pedestrians, no standing, no parking etc.

Warning signs are used to convey message to warn about potentially hazardous condition ahead and where some caution/ attention is needed. These signs are also known as danger signs or cautionary signs or safety signs. These are not always an offence if not complied. These are usually equilateral triangle in shape with red border. Examples of these signs are railway level crossing with gate, roundabout.

Information signs show the direction of important places of interests. These signs are used to guide the road users along route to make the travel convenient, safe and comfortable. These signs are also used at the place where the drivers would be doubt. These are usually rectangular in shape. Example of these signs can be mentioned as pedestrian crossing, lane for rickshaws and cycle, advanced direction etc.

2.2.2 Traffic markings

Road marking is any kind of device or material that is used on a road surface in order to convey traffic information providing message without distracting driver attention from the carriageway and reduce environmental impact. Road surface markings are used on roadways to provide direction and information to drivers and pedestrians. Uniformity of the markings is an important factor in minimizing confusion and uncertainty about their meaning, and efforts exist to standardize such markings across borders. They can be used to outline traffic lanes and can also indicate regulation for parking and stopping. They are applied to the road surface in the form of lines, stripes, words, symbols, and raised markers. The road markings are predictably white and yellow color and each type of markings has a special meaning. Disobey the meanings of these markings is an offence and may be accused by the traffic police. Therefore, the basic knowledge of these road markings is indispensable for all the road users. Road marking materials are made of thermoplastic cement paint (reflective/non reflective), self adhesive plastic/aluminum sheet, stud and glass beads (produce retro-reflective effects) etc.

2.2.3 Traffic signals

Traffic signals are signaling devices positioned at road intersections, pedestrian crossings and other locations to organize challenging flows of traffic. They assign the right of way to road users by the use of lights in typical colors. Characteristically traffic signals consist of a set of three colored lights: red, yellow and green. Traffic signals are used at intersections to diminish variance to the minimum extent by time sharing of right of way. This actually lessens the capacity of the intersection, but significantly improves the safety (Overseas road note 13, 1996).

American Practice

In American practice, the signal sequence is Red, Green and Yellow. Red indication prohibits entry into the section, whereas the green allows entry. Yellow indication makes caution of the traffic that the related green movement is being terminated and the red indication is about to initiate. In addition to circular red, green and yellow, American practice permits red arrow, green arrow and yellow arrow indications to control traffic in a definite direction (Kadiyali, 2006).

Indian practice

The Indian practice is to have an amber period of 2 seconds as a transition interval between termination of related green movement and exhibition of a red indication of between termination of a red indication and commencement of related green movement (Kadiyali, 2006).

British practice

In the UK signals are located on the kerb, at the roadside with the "primary" signal close to the stop line. The minimum requirement is the traffic signal in-stalled one meter from the stop line, on the nearside of the carriage-way each signal face normally has three vertical lights with a nominal diameter of 200mm. The signal sequence is red, red/amber shown together, green and amber. The common practice is to use circular red, amber and green signals, though in certain circumstances green-arrow signals are also used. When the red signal is displayed, the right of way is denied to the traffic from entering the intersection. The red/amber signifies an alert to the drivers that the signal aspect is about to change to green so that they can be in readiness to go. The green signal aspect denotes that the right of way is given to the drivers to enter the intersection. The amber signal alerts the drivers that the red signal aspect is about to commence shortly and the green aspect is about to be terminated. A green-arrow aspect permits the drivers to enter the intersection to make the movement indicated by the arrow (Kadiyali, 2006).

2.3 Historical Development of Traffic Signal

The first traffic signal was installed in London in 1868 and used semaphore 'arms' together with red and green gas lamps. Unfortunately, it exploded; putting an end to this sort of control for 50 years in 1918 the first three colored light signals were installed in New York. The first interconnected traffic signal system was installed in Salt Lake City in 1917with six connected intersections controlled simultaneously from a manual switch. The first automatic experimental traffic lights in England were deployed in Wolverhampton in 1927 (Overseas road note 13, 1996).

US Patents for traffic control devices date back as early as 1909. Most of these devices involved semaphores or arrows to direct traffic. The modern electric traffic light is an American invention. As early as 1912 in Salt Lake City, Utah, policeman invented the first red-green electric traffic lights. On 5 August 1914, the American Traffic Signal Company installed a traffic signal system on the corner of East 105th Street and Euclid Avenue in Cleveland, Ohio. As with the London gas powered signal, these devices were designed to assist traffic police at busy intersections. When the police officer signaled for a change in traffic movement, he would also change the color of the lights illuminated in the signal device. It had two colors, red and green, and a buzzer, based on the design of James Hoge, to provide a warning for color changes. In 1920 William Potts, a Detroit Traffic Police Superintendent designed the first 4-way three-color traffic control device (Figure 2.1) that is recognized as the basis for the modern traffic signal. Potts built what was basically a rectangular box that was divided into three stacked chambers. Each chamber was illuminated by a single bulb. Railroad signal lenses were affixed on each side of each chamber and the signal was suspended from a cable so it could be more readily seen by traffic. While the few traffic signals that already existed displayed only red and green colors, Potts' added a yellow "caution" interval to warn motorists that the traffic signal was changing.

Figure 2.1: First 4-way Three-Color Traffic Control Device

Ashville, Ohio claims to be the location of the oldest working traffic light in the United States, used at an intersection of public roads until 1982 when it was moved to a local museum.

Timers on traffic signals originated in Taipei, Taiwan, and brought to the US after an engineer discovered its use. Though uncommon in most American urban areas, timers are still used in

some other Western Hemisphere countries. Timers are useful for drivers/pedestrians to plan if there is enough time to attempt to cross the intersection before the light turns red and conversely, the amount of time before the light turns green.

2.4 Types of Signal Available:

Fixed time (FT) operation

Fixed-time method of automatic control shall be introduced either manually by a switch in the Inner Control Panel located inside the main door of the controller or through remote control from the Central Monitoring Station. While in FT mode of operation, input signals from the vehicle detection systems or pedestrian push buttons shall be ignored. Fixed-time control is ideally suited to closely spaced intersections where traffic volumes and patterns are consistent on a daily or day-of-week basis. Such conditions are often found in downtown areas. It does not require detectors, thus making its operation immune to problems associated with detector failure. It requires a minimum amount of training to set up and maintain. On the other hand, pre-timed control cannot compensate for unplanned fluctuations in traffic flows, and it tends to be inefficient at isolated intersections were traffic arrivals are random (Traffic signal timing manual, 2008).

Vehicle actuated (VA) operation:

In vehicular actuated mode, systems operate the Traffic lights by detecting the movement of the arriving vehicles in the controlled zone. Detector loops are installed below the ground at suitable points for sensing the arrival of vehicles. The loop is connected to an electronic vehicle detector. This is a very precise and discriminatory device with adjustable sensitivity and gives an input signal to the controller every time a vehicle passes over the sensor. VA method of operation shall be introduced either manually by a switch in the Inner control Panel located inside the main door of the controller or through remote control from the Central Monitoring Station (ICB for Contract Package, 2004).

Vehicle actuated control is ideally suited to isolated intersections where the traffic demands and patterns vary widely during the course of the day. Most modern controllers in coordinated signal systems can be programmed to operate in a fully-actuated mode during low-volume periods where the system is operating in a "free" (or non-coordinated) mode. Fully-actuated control can also improve performance at intersections with lower volumes that are located at the boundary

of a coordinated system and do not impact progression of the system (Traffic signal timing manual, 2008).

Flash amber mode

A flashing amber signal in some countries means that drivers must proceed with caution. Normally displayed on all approaches with a frequency of 1 hertz (1 flash per second), this signal is sometimes used from midnight to 4 or 5 o'clock in towns with notorious night time red-running (Overseas road note 13, 1996). Flash Amber mode of operation shall be available either as a manually switch able option or as one of the signal plans which can be scheduled through a timetable or as a default. Whenever the ITC detects a serious fault during diagnostics, the controller shall immediately exit from the operating mode and reside in the flash amber mode till reset by an authorized technician (ICB for Contract Package, 2004).

Amber phase

The amber light signal indicates the prohibition that vehicular traffic shall not proceed beyond the stop line, or if the stop line is not visible (or there is no stop line), beyond the signals, except in the case of any vehicle which when the light signal first appears is so close to the stop line or light signals that it cannot be safely stopped before passing the stop line or light signals. The time for the amber signal is normally fixed for the city or region at 3 or 4 seconds (Overseas road note 13, 1996).

Area Traffic Control (ATC)

Area traffic control systems are traffic responsive system that use data from vehicle detectors and optimize traffic signal settings to reduce vehicle delays and stops. The system operates in a closed loop, evaluating the real time demand and properly updating network signal timings (Muralidharan, 2009).

According to the road note 13, Area Traffic Control (ATC) is the centralized control of traffic signals on an area-wide basis using micro-processor and computer technology. Usually the traffic controllers on street are linked to one or more central computers in the control centre, via data transmission cables. The cable network can either be provided as a dedicated network or private circuits leased from the telephone company (or a mixture of both, according to cost).

Optimized signal coordination. With the aid of centralized computer control, signal settings can be optimized on an area basis to provide minimum overall delay and reduced journey times.

- **Control flexibility.** Changing traffic conditions can be catered for by vehicle actuation or predetermined Multiplan operation. The time settings of traffic signals can also be altered very quickly by manual intervention at the control centre, such as modifying the existing signal timing plan or replacing it with a new plan.
- **Fault monitoring.** One of the most important facilities offered by ATC systems is the continuous monitoring of the operation of the traffic signal equipment linked to the computer. Any fault condition detected is reported to the Control Room immediately and fault repairs can be carried out quickly.
- **Priority for emergency and public transport vehicles.**

For fire engines which always start from a certain fire station, special plans may be prepared for predetermined `preferred routes' and stored in the central computer. Priority arrangements can be given to public transport routes, bus ways, etc.

- **Accident reduction.** ATC systems improve road safety, especially in the traffic conditions of some developing cities.

2.5 Pedestrian Signal

According to the MUTCD (FHWA, 2009) Pedestrian signal indications shall have the following meanings:

A. A steady WALKING PERSON (symbolizing WALK) signal indication means that a pedestrian facing the signal indication is permitted to start to cross the roadway in the direction of the signal indication, possibly in conflict with turning vehicles. The pedestrian shall yield the right-of-way to vehicles lawfully within the intersection at the time that the WALKING PERSON (symbolizing WALK) signal indication is first shown.

B. A flashing UPRAISED HAND (symbolizing DONT WALK) signal indication means that a pedestrian shall not start to cross the roadway in the direction of the signal indication, but that any pedestrian who has already started to cross on a steady WALKING PERSON (symbolizing WALK) signal indication shall proceed to the far side of the traveled way of the street or highway, unless otherwise directed by a traffic control device to proceed only to the median of a divided highway or only to some other island or pedestrian refuge area.

C. A steady UPRAISED HAND (symbolizing DONT WALK) signal indication means that a pedestrian shall not enter the roadway in the direction of the signal indication.

D. A flashing WALKING PERSON (symbolizing WALK) signal indication has no meaning and shall not be used.

2.6 Warrants for Signal

According to the road note 13, Traffic signals may be justified if, usually two, of the following criteria are present:

- Where there is a minimum major-street/minor-street conflicting vehicle volume;
- Where there may be need to interrupt continuous flow on the major road to allow traffic to exit from the minor road without excessive delay;
- Where a minimum pedestrian volume conflicts with a minimum vehicle volume;
- Where a schoolchildren crossing is present;
- Where there is a need to maintain progressive movement of vehicles along an otherwise signaled route; and
- Where there is a record of accidents of the type which could be reduced by the use of traffic signals.

According to MUTCD (FHWA, 2009) the investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:

Warrant 1, Eight-Hour Vehicular Volume
Warrant 2, Four-Hour Vehicular Volume
Warrant 3, Peak Hour
Warrant 4, Pedestrian Volume
Warrant 5, School Crossing
Warrant 6, Coordinated Signal System
Warrant 7, Crash Experience
Warrant 8, Roadway Network
Warrant 9, Intersection Near a Grade Crossing

2.7 Signal Scheme:

Development of Traffic Signal Phasing

- A cycle is made up of individual phases (where a phase include green, yellow and all red for a particular movement)
- The most basic operation is referred to as 2-phase

- When left-turn volumes cannot be serviced without long delays, then 3-phase designs are used

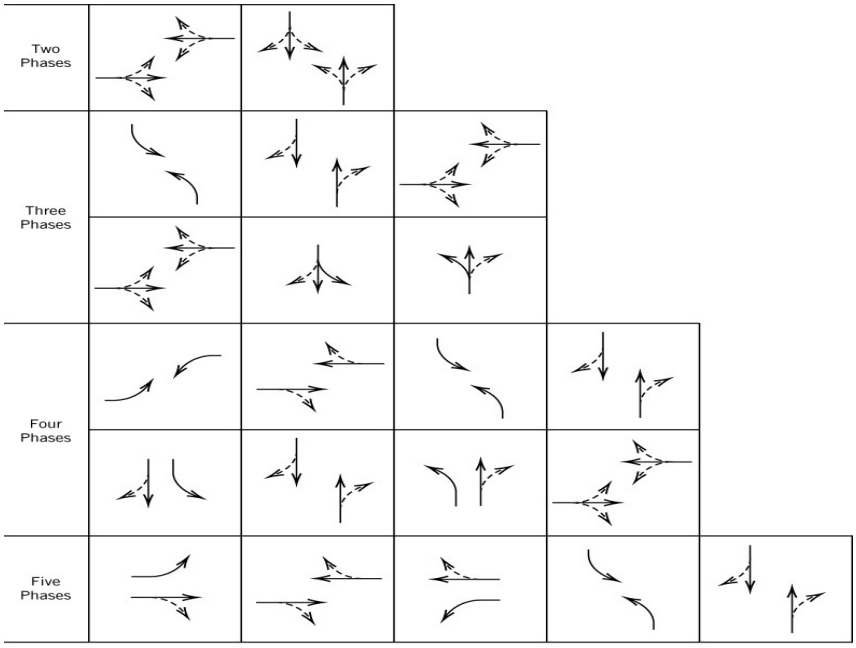

Figure 2.2: Traffic Signal Phasing

Some traffic signal software's as like SCAT, SCOOT, MOVA, SIDRA, TRANST etc are generally used for signal timing.

2.8 History of Signal in Dhaka City

There has been little work in the traffic signal field from developing countries in general In Bangladesh so far only one extensive study in this field has been reported. The study was undertaken by PPK Consultants Pty Ltd, Australia in association with Delcan International Corporation, Canada and Development Design Consultants, Bangladesh. In 1981, there were only 15 signalized intersections and another 15 were proposed in the Integrated Urban Development Plan. Prior to 1977, RAJUK was responsible for signal installation and control. In the early 1980's control of signal was transferred to Police Traffic Division with RHD engineers assigned to help. This experiment lasted only a year before signals were reassigned to DCC (Hasan, 1996). In year 2000-2001 DUTP has installed 9 Halogen type traffic signals in Newmarket-Mirpur road. After that in year 2004 by the fund of World Bank Dhaka City Corporation has installed four types of traffic signals at 59 intersections along the major corridors in Dhaka. At present there are 70 signalized intersections in Dhaka City.

Central monitoring station:

DCC established central monitoring station in Nagarbhaban in 2004 through TYCO Company. It was connected at each of the controller in signalized intersections by GSM network of Grameen Phone mobile company. Grammen Phone sim card was inserted at each controller of signalized intersections. Data from each controller transferred data to the central monitoring station and data was manipulated and again send to the controller. Communication had been done by this system. But this system had not been operated by the operating team and was closed at that time due to technical difficulties. According to specification it should be upgraded and operated in future (ICB for Contract Package, 2004).

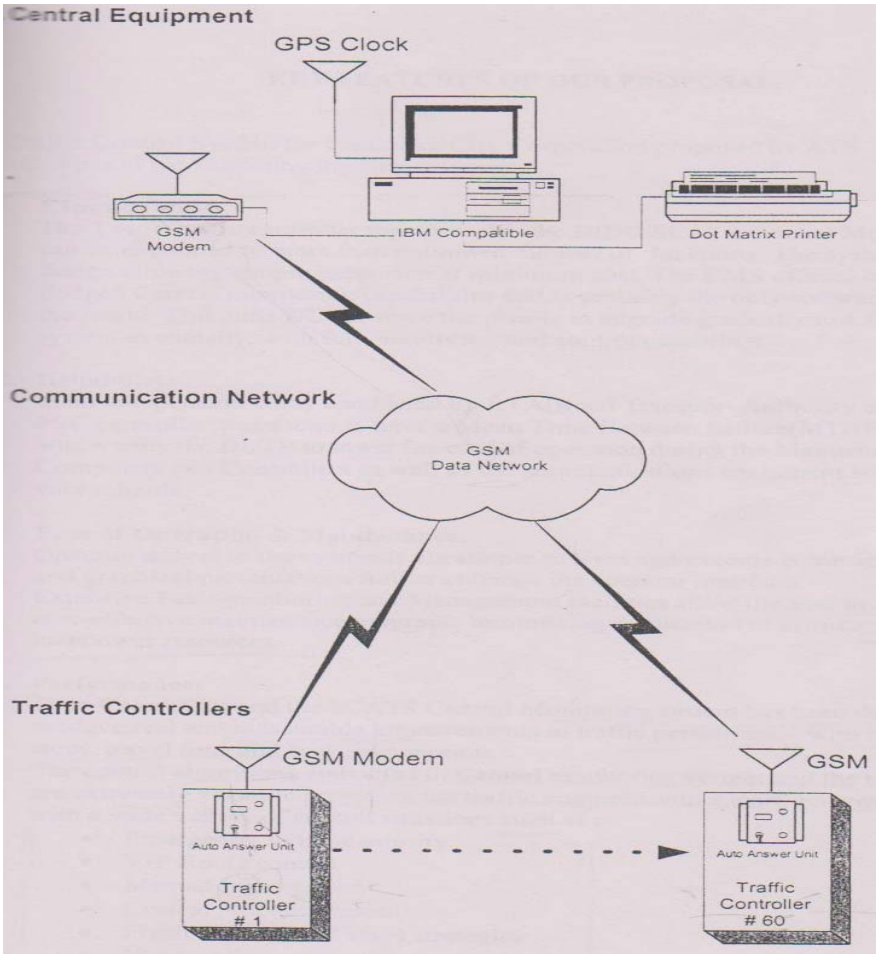

Figure 2.3: Central Monitoring System was used for Signal in Dhaka City.

2.9 Existing Traffic Signal System in Dhaka City:

2.9.1 Traffic signal in Dhaka City:

Various signal control or timing systems are now used in Dhaka City. As for example in some intersection traffic signal are fixed time or pre timed. In some intersections, police control time manually. Actuated or semi-actuated control systems are not used.

Legend : ● Signalized Intersection

Figure 2.4: Signalized Intersections in Dhaka City

Traffic signal controllers

Four types of signal systems were installed. Each of these four types differs in their level of sophistication. The typical configurations of these four types are:

Type 1: Centrally Monitored Vehicle and Pedestrian Actuated Signals (CMVPA)
The system shall consist of a controller, vehicle loop detectors, pedestrian push buttons, Outstation Transmission Unit, signal aspects, poles and other ancillary equipment.

Type 2: Centrally Monitored Vehicle Actuated Signals (CMVA)
The system consists of a controller, vehicle loop detectors, Outstation Transmission Unit, Signal Aspects, Poles and Ancillary equipment

Type 3: Pedestrian Actuated Signals (PA)
The system consists of a controller, pedestrian push buttons, signals Aspects, Poles and Ancillary equipment.

Type 4: Fixed Time Signals (FT)
The system shall consist of a controller, signal aspects, poles and other ancillary equipment.
For the existing traffic signal system field survey was conducted at seventy traffic signalized intersections in Dhaka City. The data includes signal ID number, no. of legs, no. of timing plans, maximum green time in controller, maximum cycle time in controller and signal condition. The no. of phases and the types of controllers were taken from DCC.

Table 2.1: Seventy Traffic Signalized Intersections in Dhaka City

SL. No.	Intersection	ID	No. of Legs	No of Phases	No of timing plans	Maximum green time(Sec)	Maximum Cycle length (Sec)	Type of controller	Present condition
01.	Mujib Avenue (Natun Bazar)	01	4	4	1	off	off	FT	Off
02.	Bashundhara	02	3	3	1	Off	Off	FT	Off
03.	Darussalam (TTC)	03	3	3	1	55	105	CMVPA	Operational
04.	Mirpur Mazar Road	04	3	3	1	70	100	FT	Operational
05.	Mirpur-1	05	3	2	1	55	143	FT	Operational
06.	Fakirapul	06	4	4	1	69	155	FT	Operational
07.	Kataban	07	4	4	1	65	185	FT	Operational
08.	Shapla Chattar	09	4	4	1	Off	Off	FT	Off
09.	Kadam Chattar	10	3	3	1	80	185	FT	Operational
10.	English Road	11	4	4	1	Off	Off	FT	Off
11.	Kakrail (rajmoni)	12	4	4	1	46	154	FT	Operational
12.	Bijoy Nagar	13	3	3	1	36	164	CMVA	Operational
13.	Topkhana/palton	14	4	4	1	84	204	FT	Operational
14.	Mouchak	15	3	3	1	81	193	FT	Operational
15.	Malibagh	16	3	3	1	101	154	CMVA	Operational
16.	Rajarbagh	17	4	4	1	Off	Off	FT	Off
17.	New Market	18	4	4	1	60	200	FT	Operational
18.	Hotel Sheraton	19	3	3	1	92	220	CMVA	Operational
19.	Kakrail Mosque	20	3	4	1	70	130	FT	Operational

Table 2.1continue: Seventy Traffic Signalized Intersections in Dhaka City

SL. No.	Intersection	ID	No. of Legs	No of Phases	No of timing plans	Maximum green time(Sec)	Maximum Cycle Length(Sec)	Type of controller	Present condition
20.	Bangla Motor	21	4	2	1	220	340	CMVA	Operational
21.	Science Lab	22	3	3	1	75	155	FT	Operational
22.	Ittefaq	23	3	2	1	Off	Off	PA	Off
23.	Zero Point	24	4	4	1	40	242	FT	Operational
24.	Golapshah Mazar	25	4	4	1	Off	Off	FT	Off
25.	Kamalapur container	26	3	3	1	Off	Off	FT	Off
26.	Malibagh rail gate	27	3	3	1	70	120	CMVA	Operational
27.	Nabisco	28	3	3	1	55	130	FT	Operational
28.	Tongi diversion (FDC)	29	3	3	1	-	-	CMVA	Red light on of all approaches
29.	Moghbazar	30	4	4	1	Off	Off	FT	Off
30.	Mohakhali Amtoli	31	3	3	1	81	150	FT	Operational
31.	Mohakhali Rail Crossing	32	3	4	1	Off	Off	FT	Operational
32.	Azimpur Intersection	33	4	4	1	Off	Off	FT	Off
33.	Bonani Kakoli	34	4	4	1	100	212	FT	Operational
34.	Chairman bari	35	3	3	1	76	140	FT	Operational
35.	Jahangir Gate	36	3	3	1	70	130	FT	Operational
36.	Parliament	37	3	3	1	Off	Off	FT	Off
37.	Bijoy Sarani	38	3	3	1	225	590	FT	Operational
38.	Agargaon	39	3	3	1	76	216	FT	Operational
39.	BijoySarani (Aeroplane)	40	4	4	1	60	250	FT	Operational
40.	Khamar Bari	41	4	4	1	47	142	FT	Operational
41.	Farmgate	42	4	2	1	100	183	FT	Operational
42.	Hotel Sonargaon	43	5	4	1	322	470	FT	Operational
43.	Shahbagh	44	4	4	1	76	272	FT	Operational
44.	Matshaw Bhaban	45	4	4	1	52	145	FT	Operational
45.	Carzon Hall	46	4	4	1	100	160	FT	Operational
46.	Peerjangi Mazar	47	3	3	1	Off	Off	FT	Off
47.	Kamalpur Railway Station	48	4	4	1	Off	Off	FT	Off
48.	Gulistan Square	49	4	2	1	Off	Off	FT	Off
49.	Dholaikhal	08	4	4	1	-	-	FT	Red light on of all approaches
50.	Zahir Raihan	50	4	3	1	Off	Off	FT	Off
51.	Bangshal	51	4	3	1	Off	Off	FT	Operational
52.	Sadarghat	52	4	4	1	Off	Off	FT	Off
53.	Dhanmondi Road no. 6 and 7	53	4	3	1	53	145	FT	Operational
54.	Dhanmondi Road no. 10	54	4	3	1	55	145	FT	Operational
55.	Shanti Nagar	55	4	4	1	80	264	FT	Operational
56.	Bata Signal	56	4	4	1	50	120	FT	Operational
57.	Gulshan -1	57	4	4	1	82	265	CMVPA	Operational
58.	Gulshan -2	58	4	4	1	90	320	CMVPA	Operational
59.	Palashi Intersection	59	5	5	1	75	150	FT	Operational
60.	PM Office	60	3	3	1	56	120	FT	Operational
61.	Tejgaon Rangs link road intersection	61	4	4	1	66	190	FT	Operational
62.	Green Road (Panthpath)	-	4	3	7	82	130	FT	Operational
63.	Ressel square(Panthpath)	-	3	3	7	74	130	FT	Operational
64.	Dhanmondi-27	-	3	3	7	80	130	FT	Operational
65.	Manik Mia Avenue	-	3	3	7	77	130	FT	Operational
66.	Asad Gate	-	3	3	7	101	130	FT	Operational
67.	Mohammadpur Thana Crossing	-	4	3	7	97	130	FT	Operational
68.	College Gate	-	3	3	7	101	130	FT	Operational
69.	Shishu Mela	-	4	3	7	84	130	FT	Operational
70.	Shamoli Cinema Hall	-	3	3	7	92	130	FT	Operational

From table 2.2 it was also observed that among 70 intersections about 1% (01 no.) signals are designed with 5-phase timing plan, 43% with 4-phase plan, 49% with 3-phase plan and 7% with 2-phase plan. Among 70 intersections 44% are 3-legs, 53% are 4-legs, 3% 5-legs. Out of 70 intersections 84% are found to be with fixed time (FT), 9% are Centrally Monitored Vehicle Actuated Signals, 3% are Pedestrian Actuated and the remaining 4% are vehicle and pedestrian actuated control system. Field observation reveals that with the fixed nature of control system often the prefixed timing plan does not match with the actual traffic flow. From table only 1 (one) timing plan is provided at 61 numbers of intersections and 7 no. of timing plan is provided at 9 numbers of intersections. Signals are off at 16 numbers or 23% intersections.

Phase equipment shall provide adequate control and drive capability for switching signal aspects comprising of red, amber and green aspects. Typically, four types of signal faces have been envisaged as indicated below:

i. A 5 aspect signal face for motor vehicle movement comprising of red, amber and three directional greens.

ii. A 4 aspect signal face for motor vehicle movement comprising of red, amber and two directional greens.

iii. A 3 aspect signal face for non-motor vehicle movement comprising of red, amber and green.

iv. A 2 aspect signal face for pedestrian movement comprising of red and green.

Table 2.2: Equipment List of Seventy no. of Traffic Signal in Dhaka City

Sl No.	Location	Mast Arm pole	pole	16 core cable	7 core cable	4 core cable	PS cable	5 aspect Signal faces	4 aspect Signal faces	3 aspect Signal faces	2 aspect Signal faces	Upvc pipe	Total LED
1.	Basundhara	2	8	378	98	1102	65	-	10	-	5	43	40
2.	Mojib Avenue	2	8	162	289	599	23	-	10	-	12	48	40
3.	Gulshan- 1	4	9	470	56	1511	55	-	16	-	8	81	60
4.	Gulshan- 2	4	8	413	56	1670	56	-	16	-	8	62	60
5.	Nabisco	-	8	234	257	350	40	-	11	-	8	92	44
6.	Tongi Diversion	2	10	241	350	934	40	-	7	5	8	63	43
7.	Mogbazar	2	10	812	710	408	50	14	-	-	8	196	70
8.	Mouchak	1	10	412	338	432	74	-	3	8	8	140	33
9.	Malibagh	-	10	285	413	1443	76	-	8	2	8	42	38
10.	Rajarbagh	2	8	460	28	388	44	14	-	-	5	120	70
11.	Malibag Rail Gate	2	9	310	111	966	44	-	4	4	19	41	18
12.	Shanti Nagar	4	14	1210	532	1906	101	-	16	8	8	52	88
13.	Kakrail (Rajmoni)	1	13	645	71	387	40	6	5	4	5	119	53
14.	Kakrail Mosque	2	7	531	658	1658	40	-	11	12	18	240	80
15.	Bijoy Nagar .	3	16	401	90	1117	51	-	11	-	4	90	44
16.	Fakirapul	3	9	559	42	575	47	15	-	-	8	165	75
17.	Kamalapur Container	2	7	286	148	649	171	-	11	-	5	211	40
19.	Kamalapur station	1	8	324	212	617	62	8	-	-	12	33	40
20.	Topkhana (Palton)	3	16	814	56	840	35	13	3	1	10	140	80
21.	Zero Point	4	8	817	56	262	30	17	-	-	8	102	85
22.	Golapshah Mazar	2	13	741	390	1156	115	-	-	14	12	102	42
23.	Gulistan Square	3	7	195	475	432	131	-	3	10	-	120	42
24.	Zahir Raihan	2	17	1082	280	1037	112	12	6	-	16	137	96

Table 2.2 continue: Equipment List of Seventy no. of Traffic Signal in Dhaka City

Sl No.	Location	Mast Arm pole	pole	16 core cable	7 core cable	4 core cable	PS cable	5 aspect Signal faces	4 aspect Signal faces	3 aspect Signal faces	2 aspect Signal faces	Upvc pipe	Total LED
25.	Bangshal Road	2	7	249	51	271	29	2	6	-	7	39	46
26.	Sadarghat Road	1	12	590	111	656	24	6	4	-	14	133	42
27.	Dholaikhal	1	16	520	14	586	27	3	10	-	8	73	45
28.	English Road	3	9	597	346	866	60	8	4	2	8	104	58
29.	Shapla Chattar	5	16	787	56	219	56	-	-	14	16	86	42
30.	Ittefaq	-	6	219	-	684	50	-	-	6	6	70	18
31	Tejgoan Link Rd.	2	11	416	227	113	56	7	5	2	11	189	61
32	Mirpur 1	1	5	101	194	180	63	-	-	9	-	45	36
33	Mirpur Mazar Road	-	10	422	153	506	40	-	9	-	6	97	48
34	Darussalam	2	13	456	142	1771	108	-	4	10	12	68	70
35	Dhanmondi Rd. 10	3	5	289	42	307	23	4	8	-	8	56	68
36	Dhanmondi Rd 6,7	2	13	296	175	153	25	4	8	-	8	230	68
37	Science Lab	5	19	1431	880	2725	106	2	7	16	14	413	114
38	New Market	4	12	1032	260	182	80	6	10	4	17	86	116
39	Azimpur	-	12	607	309	570	27	12	4	8	16	68	132
40	Palashi	1	14	814	460	1213	133	12	-	-	10	70	80
41	Agargoan	2	12	383	489	471	345	-	11	-	6	558	92
42	Bijoyshoroni, aroplane	2	13	780	257	680	98	6	6	3	18	178	99
43	Khamarbari	3	13	1146	435	711	166	-	9	11	16	97	101
44	Kakoli	1	7	222	143	310	70	4	8	-	2	47	56
45	Chairman bari	1	5	322	53	306	93	-	8	2	4	46	46
46	Mohakhali-Amtoli	3	8	484	170	258	95	-	7	5	10	86	63
47	Mohakhali Rail Crossing	2	9	587	151	507	23	2	4	8	7	65	96
48	Jahangir Gate	1	5	357	28	404	22	-	5	2	4	54	34
49	Parliament Bhaban	2	5	483	187	298	65	-	4	6	6	80	33
50	Bijoy Sarani	1	16	189	434	505	70	-	4	9	12	80	67
51	Farmgate	2	8	431	519	491	101	-	1	13	4	75	51
52	Hotel Sonargoan	5	15	530	899	1973	85	-	-	20	14	187	88
53	Banglamotor	4	10	512	281	1160	64	12	4	2	14	126	110
54	Hotel Sheraton	2	4	1091	164	988	99	-	5	9	8	64	63
55	Shahbagh	3	17	502	275	576	136	-	15	8	16	87	116
56	Katabone	-	12	431	249	517	27	12	-	-	8	159	76
57	Bata Crossing	-	12	742	156	552	30	6	4	2	13	56	82
58	Matshaw Bhaban	-	14	547	298	361	80	6	6	4	12	84	90
59	Kadam Chattar	3	14	994	556	1603	79	-	-	14	12	120	66
60	Curzan Hall	3	15	850	149	850	50	-	15	6	16	187	110
61	PM Office	-	11	601	307	587	128	-	7	9	8	198	71
62	Green Road (Panthpath)	4	9	134	518	430	70	9	7	2	12	65	103
63	Rassel Square	3	9	514	843	357	52	-	5	9	7	75	55
64	Dhanmondi-27	3	6	463	583	504	148	-	12	-	6	78	60
65	Manik Mia Avenue	3	9	196	607	556	77	-	4	11	12	162	73
66	Asad Gate	6	11	1408	1334	1717	87	-	20	3	12	198	113
67	Mohammadpur Thana	4	12	842	941	993	75	16	-	-	11	105	102
68	College Gate	5	10	1270	734	981	81	-	19	1	8	170	95
69	Shishu Mela	3	7	347	315	203	30	-	9	4	10	102	68
70	Shamoli Cinema Hall	3	4	451	302	149	30	-	12	21	2	95	115
	Total	**126**	**474**	**28055**	**21219**	**36295**	**3831**	**138**	**358**	**290**	**467**	**5680**	**3932**

Source: Dhaka City Corporation

From table shows that 5 aspect signal is 18 percent, 4 aspects signal is 36 percent, 3 aspects signal is 22 percent and 2 aspects signal is 24 percent.

2.10 Previous Study:

Hossain (2004) in his study "Shaping up of urban transport system of a developing metropolis in absence of proper management setup: the case of Dhaka" showed traffic flow at the traffic signal junctions guided by traffic police on duty at the junction. He found that the manual operation of signal junctions is creating huge congestion problem although apparently the policemen are actively fighting against congestion.

Imran (2006) in his study "Traffic signal design and modification of Webster's delay formula under non-lane based heterogeneous road traffic condition**"** have observed that the fixed timing control causes unnecessary delay and often indulges traffic police to override the signal. He identified that the maintenance practice of signalized intersection is very poor in Dhaka City.

A study named "Effect on non-motorized transport on the performance of road traffic in metropolitan Dhaka" done by Hossain (1996) mention in his studies that non motorized transport (NMT) is predominant in metropolitan Dhaka. He finds that mobility and speed of a road section decreases with the increases of NMTs in the link traffic.

Razzak (2005) showed his studied "Driver understanding of traffic signs" that drivers in Dhaka City may not understood the meaning or they are confused about the meaning of the following warning, regulatory and information's signs.

Bhuyanb (2006) conduct a study on Transport Deficiencies at Kalabagan Area of Dhaka City. In his study he stated that unplanned, haphazard, and donation basis transportation system was developed by individual initiative and so the transport system in Dhaka City is a cause of unsafe, unreliable, and inconvenient to the people.

2.11 Summary

This chapter illustrates the basic aspects of the traffic signal system. The signals systems from home and abroad are represented in this chapter. Succinct reviews of historical and present development traffic signal are provided. The existing situations of the traffic signal system in Dhaka City were also presented.

CHAPTER 3
METHODOLOGY AND DATA COLLECTION

3.1 Introduction

This chapter includes the technique of data collection and the procedures applied for the execution of the study is described. In this chapter the overall research methodologies that have been followed to achieve the objectives, times of data collection, data collection procedures, analysis and the outlines of the study are described.

3.2 Identification of System Deficiencies

Identify weakness and problem areas, which are contributing to poor performance – for example, equipment with high failure rates, signals with recurring operational problems etc. Identify the deficiencies based on severity of problems and impacts on customers. Non-compliances with the standards/guides/manuals and specifications are also considered as deficiencies.

Inputs **–** Key inputs to the deficiency identification include:

- Standards or deficiency criteria of traffic signal;
- Inventory information including intersection traffic characteristics, signal equipment and system, condition and capabilities, and current operating parameters of the signal system etc.

3.3 Outline of the Research Methodology and Data Collection of the Study:

Following processes/methods were applied for achieving the objective:

In order to obtain information, a comprehensive literature was undertaken and information was collected from various sources viz. research studies, theses, journals, project documents in home and abroad. Review of documents was also carried out regarding the traffic signal system, traffic signal operation and maintenance, institutional setup etc in Dhaka city to acquire knowledge about the signal system. Both primary and secondary data have been collected and compiled with a view to achieve the objective.

For study the existing signal system it is necessary the information was collected the actual traffic situation, signal system, timing control system, phasing, geometry etc. For

this purpose survey was conducted of all signalized intersections in Dhaka City. Survey involves the information regarding the system requirements, no of phases, types of signal, aspects of signal, types of signal controllers, no of lanes, types of signal light used, signal timing control, maximum green time, maximum cycle time, presence of non motorized vehicle at signalized intersections etc. Information was also collected from the concerned organizations such as Dhaka City Corporation (DCC), Dhaka Metropolitan Traffic Police (DMP), Rajdhani Unnayan Kartipakha (RAJUK), Bangladesh Road Transport Authority (BRTA), Dhaka Transport Coordination Board (DTCB).

In order to identify the physical and operational deficiency of signal system detail field survey was conducted in each intersection of Dhaka City. From the survey data physical deficiency such as position of signal, poles, cabinet condition, signal light or vision, traffic sign and marking, sight distance at intersection, condition of footpath, median, pedestrian refuse at intersections, pedestrian crossing facilities, pedestrian signal, signal visibility etc. were identified.

Also the operational deficiency such as signal timing control system, retiming, signal light condition, signal maintenance, timing control at special events or incidents, signal operation and management and institutional weakness etc were identified. To identify the deficiencies following steps are followed overall observation of the signal system in the city, signalized intersection survey, taking photograph and discussion with the professionals and policy makers will taken were carried out. Digital Camera, measuring tape, sprit label, staffs, stopwatch etc equipment were used for survey.

The collected data from primary source and information taken from secondary source were used for comparison. The signal system in some other cities in developing countries and in Dhaka City was observed and discussed. The traffic signal system of the various cities in developing countries including Dhaka City was studied and compared in the form of a table. Also the TCDs deficiencies of Dhaka City and Delhi City were compared. Thus a comparative study of traffic signal control system was conducted between Dhaka City and some cities of other developing countries.

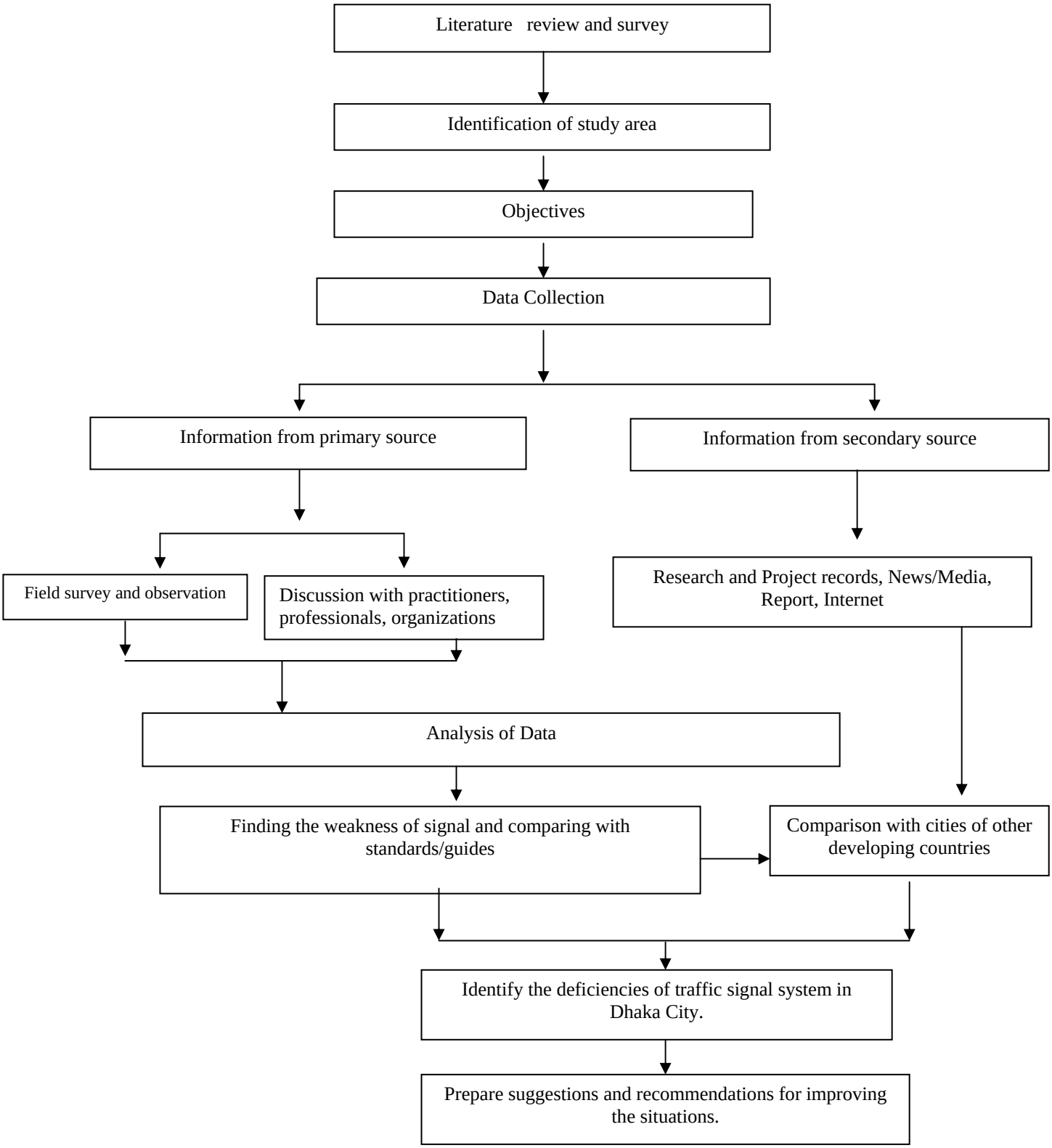

Figure 3.1: Outline of the Research Methodology

To identify the deficiencies of signal the following fields have been selected:

- Physical deficiencies of traffic signal, signal controller, pedestrian signal, traffic sign, road marking, signal visibility, footpath, median, sight distance at intersections etc.
- Profile of Dhaka Metropolitan city.
- Signal operation, management - facilities, conditions, limitations etc.
- Institutions setup, functions, co-ordination with different agencies.

3.4 Types and Sources of Major Data

During study, different types of data have been collected from different sources.

3.4.1 Primary Data

- For existing situation overall observation of the traffic signal system in Dhaka City such as signal condition, phase, types of signal controller, timing plan, maximum green time, cycle length, timing control were taken.

- Identification of physical deficiencies of the following parameters such as placement of signal, signal light condition, cabinet condition, poles and mast arm placement, location and height, material and access for maintenance of signal, signal head arrangement, head mounting/ assembly, head direction, pedestrian signal. Sign, marking, signal visibility, footpath, median, pedestrian refuge at signalized intersections, sight distance at intersections etc were surveyed. Water level machine used for vertical and horizontal position of signal. Measurement tape, staffs are used for measurement.

- Identification of operational deficiencies of the following parameters such as lane discipline at signalized intersections, lack of discipline/rules, parking at intersections, traffic signal light condition, signal timing control system, timing Plan, pedestrian signal head condition, pedestrian signal face, pedestrian signal pole condition, preemption, retiming, maintenance, traffic control at special events and incidents, training, mode of operation etc were surveyed.

- Capturing photographs were taken to observe the real situation and deficiencies at signalized intersections.

- Discussion with professionals/policy makers of different relevant organizations.

3.4.2 Secondary Data

- Books and publications, Research and Project Report — Transport situation, information of traffic signal related study of a some cities in the world.
- Dhaka Transport coordination board—transport planning, signal planning,
- Dhaka City Corporation — GIS road network, institutional setup for signal, signal system, signal operation and maintenance, signal related information etc.
- Dhaka Metropolitan Police—Signal timing information, signal control.
- Bangladesh Road Transport Authority (BRTA) — Number of vehicle registered,
- Print and Electronic Media Report- News, Magazine, TV, Radio report
- Internet browsing — definition, good references/practices, examples

Detail procedure and aspects of the data collection has been described according to the flow chart 1 in the detailed methodology.

3.5 Time of Data Collection

- Preliminary survey was conducted at all of the signalized intersections in Dhaka City from April 2010 to May 2010. Detail survey was carried out during different days of month and different time of all the signalized intersections in Dhaka City from November 2010 to January 2011 to obtain more authentic data and results. Data have been collected from morning to evening and sometimes at night also. Some data has been collected in weekend. Special data has been collected in the special situation or conditions. For example, preemption, rail priority, incident management etc.
- Data from media reports, news, or internet browsing have been collected continuously throughout the entire study period, 2010-2011. Other secondary data like survey report, publications and presentations were collected subsequently in different time.

3.6 Data Analysis

After the collection of the data from various sources, all data have been analyzed by using Excel software. Physical and operational deficiencies at approaches and intersections were identified in numbers and percentages. Graphs and tables were prepared from data.

3.7 Summary

In this chapter, detail methodologies followed in the research were presented. The survey, data collection and the analysis process for identifying the deficiencies and comparison with some other cities were discussed briefly. Deficiencies were identified in numbers and percentages and showed in tables and graphs. Subsequent chapters deal with identification of deficiencies and important findings from the analysis.

CHAPTER 4
IDENTIFICATION OF PHYSICAL AND OPERATIONAL DEFICIENCY

This chapter deals with the identification of physical and operational deficiency of traffic signal in Dhaka City. Physical deficiency such as position of signal, poles, cabinet condition, signal light or vision, traffic sign and marking, sight distance at intersection, pedestrian signal, signal visibility etc are described. Also the operational deficiency such as signal timing control system, retiming, signal light condition, signal maintenance , timing control at special events or incidents, signal operation and management etc. are described.

PHYSICAL DEFICIENCIES:

4.1 Placement of Signal

In Dhaka city total seventy signalized intersections are existed and in these intersections 253 approaches are observed. Certain guidelines are mentioned in the traffic signal positioning in the Traffic Signs Manual and also specifications in Contract Package No. (G) ETSS1, “Supply and Installation of Traffic Signals in Dhaka City”.

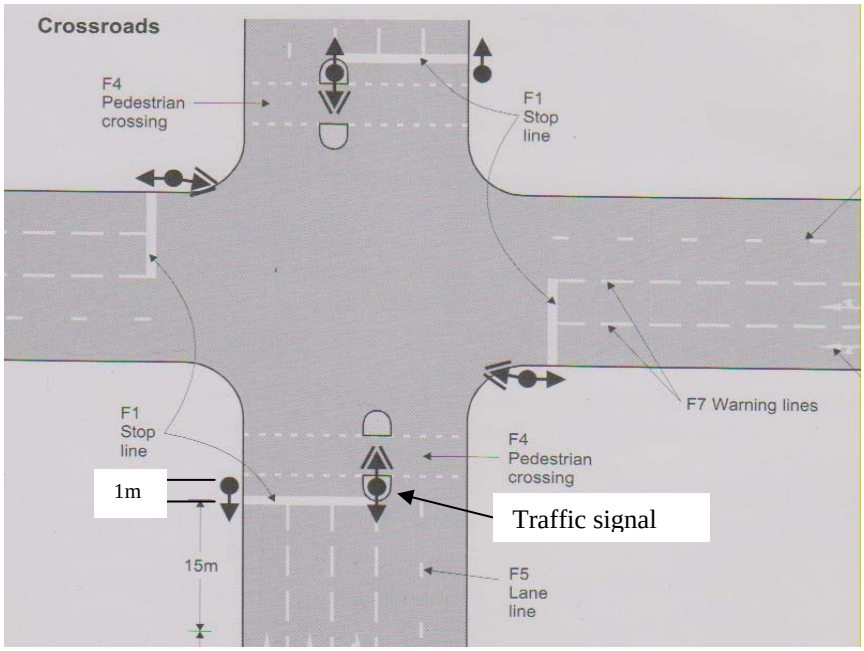

Figure 4.1: Traffic Signal at Cross Roads

According to the sign manual the traffic signal should be placed one meter ahead of the stop line. In figure 4.1 shown, signal positioning at cross roads. Besides, position of signal for each approach should be the sited on the left-hand side at the entrance to the intersection. If the approach is more than two lanes wide a second primary signal may be needed on the right-hand side and where necessary, a traffic island must be built to accommodate it. The survey conducted on every signalized intersection and approaches of the signalized intersection.

In figure 4.2a, signal positioning is six meter ahead from stop line in Banani Kakoli intersection; here signal is set in front of the pedestrian crossing which became barrier to trespass and is not compliant according to the manual. In figure 4.2b, the signal positioning is one meter behind from stop line at north approach in Agargoan intersection, where as it should placed one meter in front of the stop line.

Figure 4.2 a: Placement of Traffic Signal in Banani Kakoli Intersection.

Figure 4.2 b: Position of Traffic Signal at North Approach in Agargoan Intersection.

In figure 4.3 shown in below the wrongful placements as well as correct placements and their respective percentages. Out of 253 approaches the signal positioning is wrong at 64 numbers or 25.3 percent approaches and there is no signal found at 4 numbers or 1.6 percent approaches. Out of 70 intersections 29 numbers or 41.4 percent intersections the traffic signal was not placed correctly.

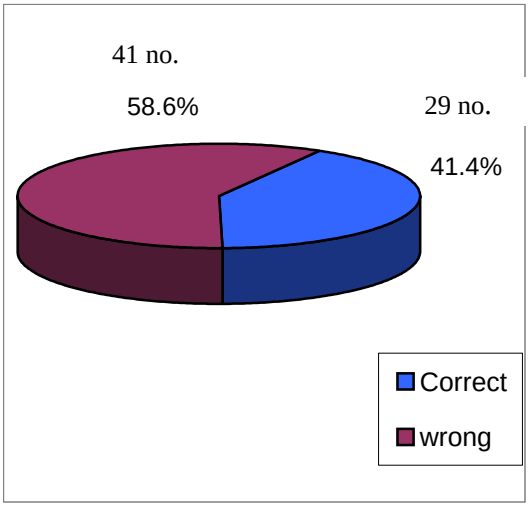

Figure 4.3 a: Placement of Signals at Intersections

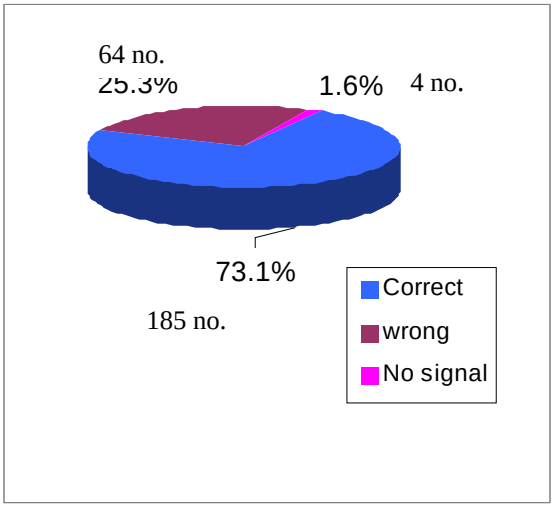

Figure 4.3 b: Placement of Signals at Approaches

Most of the cases signals are placed in front of the pedestrians crossing and too far from the stop line. The drivers have a tendency to stop the vehicle near the signal and they stop the vehicle on the pedestrians crossing. For these pedestrians can not use the crossing facility and they are forced to cross the intersections with the gap between vehicles, which causes conflicts between vehicle and pedestrians and also occurs delay. Besides the signal set back is reduced in junction that makes difficulties for turning movement of long vehicles. When signal placed behind the stop line drivers stops the vehicles in front of the signals and in that situation they cannot see the signal lights.

Traffic signals that are wrong positioned should be replaced according to the manual as one meter ahead from the stop line and behind the pedestrian crossing.

4.2 Traffic Signal Light Condition at Intersection

4.2.1 Signal light missing/broken at intersections

For controlling of traffic the signal lights should be operated at intersection. According to the specification “Supply and Installation of Traffic Signals in Dhaka City” lamp and lamp drive faults shall be monitored to ensure that the switching of each phase aspect corresponds to the drive signals from the controller. From field survey it is revealed that signal lights are not operated perfectly. Signal light is missing at 4.3% approaches and at 11.4 % intersections.

Table 4.1: Signal Light Missing/broken at Intersection

Light condition	**Approaches** (Numbers and Percentages)			**Intersections** (Numbers and Percentages)	
	Ok	Missing	No signal	Ok	Missing
Light Condition	238 94.1 %	11 (4.3%)	4 (1.6%)	62 (88.6%)	8 (11.4 %)

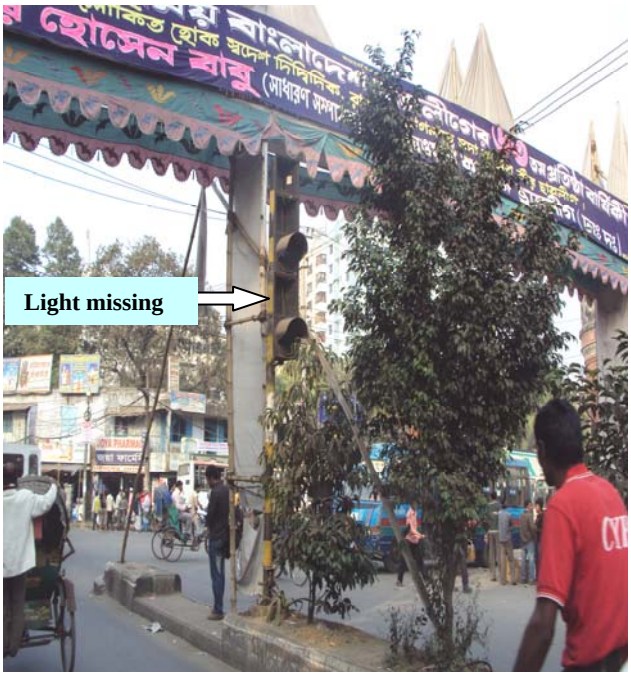

Figure 4.4 a: Signal Light Condition at South Approach in Sadarghate Intersection.

Figure 4.4 b: Signal Light Condition in Gulistan Square Intersection

In figure 4.4a, signal light is missing /broken at south approach in Sadarghate intersection. In figure 4.4b, signal light is also missing in Gulistan Square intersection. Due to the traffic signal light broken or missing, increase probability of traffic hazard and to manage traffic flow is difficult.

4.2.2 Traffic signal light size at intersections

Signal light size is important, as it should be clear view by the road users. As said by the sign manual the minimum diameter for normal signal lenses is 200mm, but 300mm is preferred, especially at large and busy junctions. All arrow signals, and signals mounted overhead must have lenses that are at least 300mm in diameter. The signal light size is correct at 249 numbers or 98.4 percent of approaches. There is no significant deficiency observed in signal light sizes.

Table 4.2: Traffic Signal Light Size at Intersections

Light	**Approaches** (Numbers and Percentages)			**Intersections** (Numbers and Percentages)	
	Ok	Not ok	No signal	Ok	Not ok
Light size	249 (98.4%)	0 (0.00%)	4 (1.6%)	70 (100%)	0.0 (0.0%)

4.2.3 Signal light direction at intersections

Traffic signal Light directions should be consistent to direction of traffic flow, so that it is easily visible to the divers and can take decision quickly. From field survey it is observed that signal light direction is wrong at 8.7 percent approaches and at 27.1 percent intersections.

Table 4.3: Signal Light Direction at Intersections

Signal Light	**Approaches** (Numbers and Percentages)			**Intersections** (Numbers and Percentages)	
	Ok	Direction wrong	No signal	Ok	Direction wrong
Signal Light direction	227 (89.7%)	22 (8.7%)	4 (1.6%)	51 (72.9%)	19 (27.1%)

Due to wrong direction of signal light the drivers are confused to take decision at intersections. This leads to unsafe driving conditions.

4.3 Controller Cabinet Conditions at Signalized Intersections:

According to the Traffic Signal Design Guide & Timing Manual, November 2007, Alabama Department of Transportation, the cabinet should be located so that it does not obstruct intersection sight distances. This is particularly important with respect to vehicles turning right from side streets. The cabinet should be located so that right turning vehicles have a clear line of sight to their left. In accordance with the Contract Package no. (G) ETSS1, “Supply and Installation of traffic Signals in Dhaka City” the controller shall be housed in a cabinet should suitable rust resistant to provide mechanical protection to the controller equipment in the operating environment. To ensure operational safety, two levels of access shall be provided. Access to facilities associated with manual control shall be gained without opening the main

door. Access to all internal equipment shall be via a single front opening door hinged at three positions, top middle and bottom. All doors shall be secured against unauthorized entry by suitable locking arrangement. The cabinet shall be ventilated. All cabinets shall be given a unique number visible from outside. Telephone numbers of the Central Monitoring Station shall also be prominently displayed to facilitate immediate report of faults. The controller cabinet shall be mounted either on a pole or on an appropriate rigid base on the footpath or a traffic island and shall have adequate clearance above the surface level to ensure there is no water ingress into the cabinet and to facilitate cable termination, inspection and maintenance.

In figure 4.5a, it has shown that only one level of access or access is restricted in cabinet at Bijoynagar intersection where as two level of access is required. In figure 4.5b shown that Cabinet is too near the curve in Pirjangi Mazar intersection. Due to very near from the curve the accident may occur at any time and also reduce sight distance. In figure 4.5c shown that one controller cabinet is broken in Kamalapur Station intersection and in figure 4.5d, one controller cabinet is corroded in Tongi Diversion intersection.

Figure 4.5 a: Access Condition of Signal Controller Cabinet at Bijoynagar Intersection.

Figure 4.5 b: Signal Controller Cabinet Placement Condition in Pirjangi Mazar Intersection.

Figure 4.5 c: Signal Controller Cabinet Condition at Kamalapur Station.

Figure 4.5 d: One Controller Cabinet is Corroded in Tongi Diversion Intersection.

Table 4.4: Traffic Signal Controller Cabinet Condition at Intersections

Sl	**Condition**	**Intersections (Numbers and Percentage)**	
		Yes	**No/ Fault**
01	Placement of cabinet	63 (90 %)	7 (10 %)
02	Corrosion /colorless	30 (42.9 %)	40 (57.1 %)
03	Level of Access	65 (92.9 %)	5 (7.1 %)
04	Ventilation	70 (100 %)	0 (0.0 %)
05	UPS	32 (45.7 %)	38 (54.3 %)
06	Microprocessor	66 (94.3 %)	4 (5.7 %)
07	Memory	65 (92.9 %)	5 (7.1 %)
08	Lamp control board	65 (92.9 %)	5 (7.1 %)

Traffic signal controller cabinet at signalized intersection in Dhaka City is presented in table 4.4. The placement of cabinet is wrong at 10% intersections. Colorless or corroded of cabinet is at 40 numbers or 57.1 % intersections. Required level of access is not found at 7.1% of intersections. There is not found any significant deficiency in ventilation. UPS is absent at 54%

intersections, microprocessor fault at 6% intersections, memory fault at 7% intersections and lamp control board fault at 7% intersections.

Due to the wrong placement of cabinet, accident occurs with the vehicles; sight distance reduced at intersections, sometimes water ingress into the cabinet and terminates the operations. Due to lack of corrosion resistance or color of cabinet the mechanical protections to the controller equipment is reduced and have an affect on the operating environment.

4.4 Traffic Signal Poles and Mast arm Condition at Intersections:

4.4.1 Size of pole and mast arm:

Pole and mast arm size is important because with the size changes the signal head position also changes. In keeping with the specifications, “Supply and Installation of Traffic Signals” size of pole and mast arm is as follows:

i. A standard pole which shall extend vertically 4 meters above ground level.
ii A mast arm pole, which shall extend vertically 6 meters above ground and extend horizontally 4 meters from the vertical arm.

Table 4.5 shown in below the correct size as well as wrong size of poles at every approaches and intersections. Pole size is correct at 249 numbers or 98.1 percent approaches. There is not found any signal at 1.6 percent approaches. There is no significant deficiency found in pole size.

Table 4.5: Pole Size at Signalized Intersection

Pole	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No	No signal	Yes	No
Size	249 (98.1%)	0 (0.0 %)	4 (1.6 %)	70 (100%)	0 (0.0 %)

Figure 4.6: Mast arm Height at North Approach of Natun Bazar inetersection

Table 4.6: Mast arm Size at Signalized Intersections

Mast-arm	**Approaches** (Numbers and percentage)				**Intersections** (Numbers and percentage)		
	Yes	No/ Wrong	No Mast-arm	No signal	Yes	No/ Wrong	No Mast
Size	6 (2.4 %)	130 (51.4 %)	113 (44.6%)	4 (1.6 %)	0 (0.0 %)	59 (84.3 %)	11 (15.7 %)

In figure 4.6 at north approach of Natun Bazar mast arm is extend vertically 6.7 meters where as 6.0 meter is required and also the extend arm from the vertical is not horizontal. From survey data it is revealed that size of mast arm size is not complained with manual at 84.3 % intersections and 51.4% approaches. There is not found any mast arm at 44.6 percent approaches and 15.7% intersections.

4.4.2 Color and corrosion resistance of pole and mast arm:

Colors in pole and mast arm are essential to resist from corrosion and weathering effect. In figure 4.7 mast arm is colorless and corroded at south approach in Science Lab intersection.

Figure 4.7: Mast Arm Condition in Science Lab Intersection.

Table 4.7: Color and Corrosion Resistance of Pole and Mast arm at Signalized Intersections

Color condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	Colorless and corroded	No signal	Yes	Colorless and corroded
Color and corrosion resistance of pole and mast- arm	158 (62.4 %)	91 (36%)	4 (1.6%)	32 (45.7 %)	38 (54.3 %)

Pole and mast arm is colorless at 36 percent approaches and at 54.3 percent intersections. For these pole and mast arm life times is reduced and also has an affect on operating environment. Besides for this the pole and mast arm appearance is looks poor.

4.4.3 Pole and mast arm location at intersections

Pole and mast arm location is an important part for signal system. In accordance with the sign manual, pole and mast arm location should be close to the kurb or edge of the carriageway, but have to leave sufficient clearance to prevent the signal head being struck by vehicles.

Figure 4.8: Signal Pole at North Approach in Bijoy Nagar Intersection.

Table 4.8: Pole and Mast arm location at Signalized Intersections

Pole and mast arm	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No/wrong	No signal	Yes	No/wrong
Pole and mast arm location	241 (95.3 %)	8 (3.1 %)	4 (1.6 %)	64 (91.4 %)	6 (8.6 %)

Figure 4.8 shows the signal pole is very near to the curve at north approach in Bijoy Nagar intersection. Vehicle was struck the pole. The pole and mast arm location is wrong at 3.1 percent approaches and at 8.6 percent intersections. For incorrect location of poles and mast arm most often vehicles struck signals and tilt the pole.

4.4.4 Vertical position of pole and mast arm:

Vertical positions of pole and mast arm are needed. If the pole and mast arm is not vertical, the signal light direction changes and affects on the clear visibility for the road users. According to specification, “Supply and Installation of Traffic Signals in Dhaka City” signal pole and mast arm should be vertical. Figure 4.9 shows the signal pole is tilted in Bangshal intersection. From field observation it is revealed those pole and mast arms are tilted at 5.7% intersections.

Figure 4.9: Signal Pole Condition in Bangshal Intersection.

Table 4.9: Vertical Position of Pole and Mast arm at Intersections

Pole and Mast arm	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	OK	Tilted	No signal	OK	Tilted
Vertical position of pole and mast arm	245 (96.8 %)	4 (1.6 %)	4 (1.6 %)	66 (94.3 %)	4 (5.7 %)

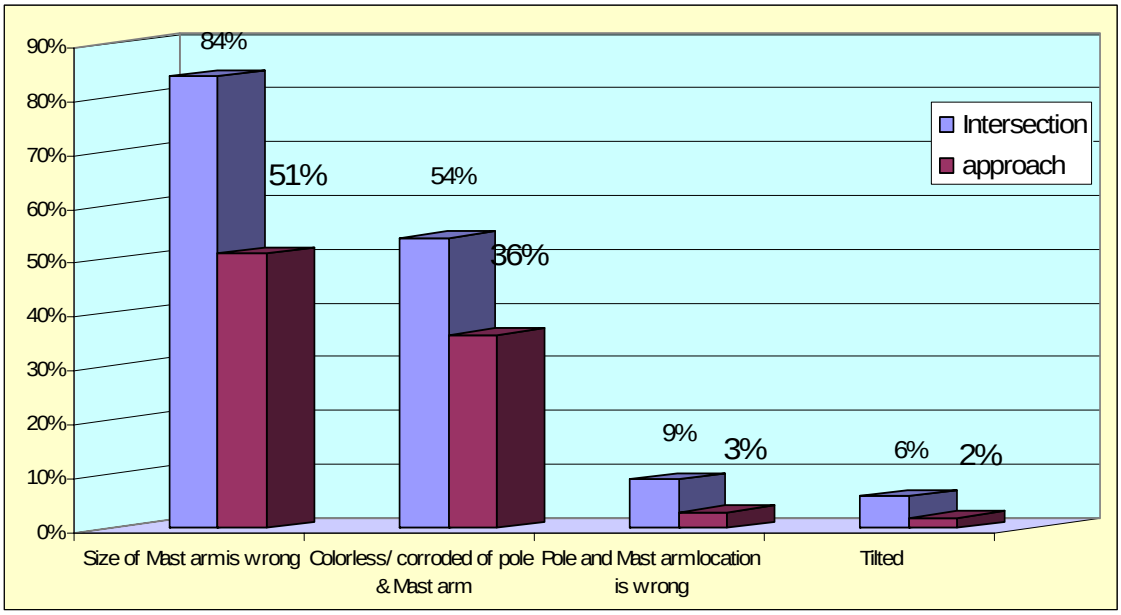

Figure 4.10 Signal Pole and Mast arm Condition at Intersections

From figure 4.10 shows at 84% intersections mast arm size is wrong. For the wrong size of mast arm, position of a signal head in the driver's field of vision and placing signals is not uniform. The conspicuity of a traffic signal is reduces and also a driver's response to the traffic signal changes. Consequently decrease the traffic signal conspicuity and increase specific crash type at signalized intersections.

4.5 Material and Access for Maintenance of Signal

According to the specifications in Contract Package No.(G) ETSS1, "Supply and Installation of Traffic Signals in Dhaka City" materials of signal should be fixings and fastenings properly.

Table 4.10: Material Fixing/ Fastening Condition of Signal

Material of signal	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Ok/Yes	Fixing loose/ Not ok	No signal	Ok/Yes	Fixing loose/ Not ok
Fixing/ Fastening	239 (94.5 %)	10 (4 %)	4 (1.6 %)	64 (91.4 %)	6 (8.6 %)

From table 4.10 at 10 numbers of approaches and 6 numbers of intersections materials fixing/ fastenings are loose. Due to loose fitting/fixing, signals operating condition are reduced and affected by adverse weather.

Figure 4.11a): Access Condition for Maintenance of Signal at South Approach in Bijoynagar

Figure 4.11b): Access Condition for Maintenance of Signal Zahir Raihan Intersection.

In figure 4.11a, access is restricted for maintenance at south approach in Bijoynagar intersection. In figure 4.11b, access is also restricted for maintenance of signal in Zahir Raihan intersection. Easy and direct access is necessary for lamp replacement and maintenance. During malfunction or failure of signal it is required to maintenance quickly. Some times need to repair urgently. Maintenance is required for continuous the signal operational. From observation at 21.4% intersections access is restricted for maintenance.

Table 4.11: Access Condition for Maintenance of the Signal at Intersections

Access condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No	No signal	Yes	No
Access	230 (90.9 %)	19 (7.5 %)	4 (1.6 %)	55 (78.6 %)	15 (21.4 %)

Therefore technicians are facing access difficulties at repairing work. Access restriction hampers the maintenances works.

4.6 Traffic Signal Head Condition at Intersections

4.6.1 Signal head standard arrangement

According to Contract Package "Supply and Installation of Traffic Signals in Dhaka City", the minimum diameter for normal signal lenses is 200mm, but 300mm is preferred, especially at large and busy junctions. All arrow signals, pedestrian signals, and signals mounted overhead must have lenses that are at least 300mm in diameter. The signal lamps should be mounted on a black backing board to make them more visible. In figure 4.12 Signal head standard arrangement are given.

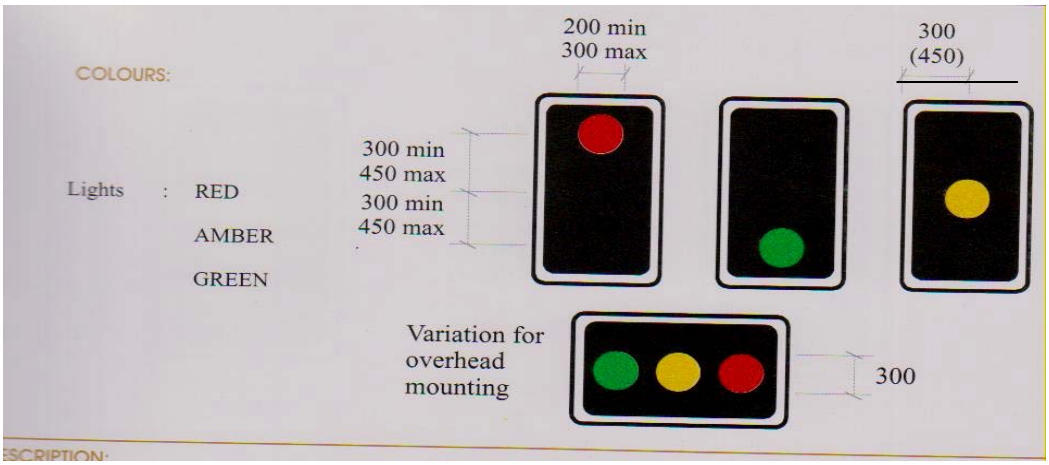

Figure 4.12: Traffic Signal Head Standard Arrangement

From table 4.12 traffic signal standard arrangement and head size is correct at 98.1 percent approaches. Signal standard arrangement and head size is incorrect at zero percent of approaches and intersections. There is not any significant deficiency found in signal standard arrangement and head sizes.

Table 4.12: Signal Head Standard Arrangement at Intersections.

Signal head	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No	No signal	Yes	No
Head size and arrangement	249 (98.1%)	0 (0.00 %)	4 (1.6 %)	70 (100.0 %)	0 (0.0 %)

4.6.2 Head mounting/ assembly

Head mounting horizontally/vertically

As said by contract package no. (G) ETSS1, "Supply and Installation of traffic Signals in Dhaka City" the mounting arrangement shall be such that, after attachment to the pole, the signal aspect can be adjusted, both horizontally and vertically to aim them appropriately for the approaching traffic stream. In figure 4.13, signal head is not vertical and horizontal in Mirpur Mazar intersection. In table 4.13 shows signal head mounting is incorrect at 9.1% approaches and at 23 % intersections. Therefore the line of sight changes of the signal light and have an effect on the approaching traffic stream.

Figure 4.13: Signal Head condition in Mirpur Mazar

Table 4.13: Signal Head Mounting (Horizontal/Vertical) at Intersections

Head mounting	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No	No signal	Yes	No
Head mounting (horizontal /vertical)	226 (89.3%)	23 (9.1 %)	4 (1.6 %)	54 (77 %)	16 (23 %)

Signal head direction

As indicated by the contract package contract package no. (G) ETSS1, "Supply and Installation of Traffic Signals in Dhaka City" the mounting arrangement to aim the direction is appropriately for the approaching traffic stream.

Table 4.14: Traffic Signal Head Direction (Correct and Wrong) at Intersections

Signal head	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Ok	Wrong	No signal	Ok	Wrong
Head direction	239 (94.5 %)	10 (4 %)	4 (1.6 %)	62 (88.6 %)	8 (11.4 %)

Figure 4.14a) Signal Head Direction Wrong at North Approach in Sadarghat Intersection.

Figure 4.14 b) Signal Head Direction is not Towards the Flow of Traffic in Kamalapur Container

Figure 4.14.a and 4.14b shows that signal head direction is not towards the flow of traffic in Sadarghat and Kamalapur Container intersection. In table 4.14 shows signal head direction is correct at 239 numbers or 94.5 percent approaches and at 62 numbers or 88.6 percent intersections. Signal head direction is wrong at 10 numbers approaches and at 11.4 percent intersections.

Head placement/ assembly in pole and mast arm:

According to the specification, "Supply and installation of Traffic signal in Dhaka City" vehicle signal faces shall normally be fixed with the lowest part of the head assembly in pole 2.5 m above the carriage way level. Signal faces on mast arms shall be fitted such that the lowest part of the signal head assembly is at least 5.5 m above the carriage way surface. According to the traffic sign manual lowest part of the head assembly shall be 2.3 m above the carriage way level. Signal faces on mast arms shall be fitted such that the lowest part of the signal head assembly is at least 5.7m above the carriage way surface.

Head on pole and mast arms at intersections has potential to improve traffic signal conspicuity. The conspicuity of a traffic signal and a driver's response to the traffic signal is enhanced by the position of a signal head in the driver's field of vision and placing signals in uniform and consistent locations where people are looking for visual clues.

Figure 4.15 a) Signal Head Assembly at Kakrail Mosque Intersection.

Figure 4.15 b) Signal Head Assembly in Mast arm at Mohakhali Amtoli Intersection

In Figure 4.15a lowest part of the signal face assembly is 3.1 above the carriage way level where as 2.5 meter is required. In Figure 4.15b lowest part of the signal face assembly is 6.4 meter above the carriage way level where as 5.5 meter is required. Due to non compliance with the specification/guide drivers feel discomfort to see the signal lights. In table 4.15 shows mounting of signal head in pole is correct at 56.1 percent approaches and 27.1 percent intersections. Mounting of signal head in pole is wrong at 107 numbers or 42.3 percent approaches and 51 numbers or 72.9 percent intersections.

Table 4.15: Mounting Situation of Signal Head in Pole

Head assembly	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Ok	Wrong	No signal	Ok	Wrong
Assembly of head in Pole	142 (56.1 %)	107 (42.3 %)	4 (1.6 %)	19 (27.1 %)	51 (72.9 %)

In table 4.16 shows mounting of signal head in mast arm is correct at 10 numbers or 4 percent approaches and at zero percent intersections. Mounting of signal head in mast arm is wrong at 126 numbers or 49.8 percent approaches and at 52 numbers or 82.7 percent intersections. There is no mast arm found at 113 numbers or 44.6 percent approaches and at 17.1 percent intersections.

Table 4.16: Mounting Situation of Signal Head in Mast arm

Head assembly	**Approaches** (Numbers and percentage)				**Intersections** (Numbers and percentage)		
	Yes	No	No Mast-arm	No signal	Yes	No	No Mast arm
Assembly of Head in Mast arm	10 (4 %)	126 (49.8%)	113 (44.6%)	4 (1.6 %)	0 (0.0 %)	58 (82.7 %)	12 (17.1 %)

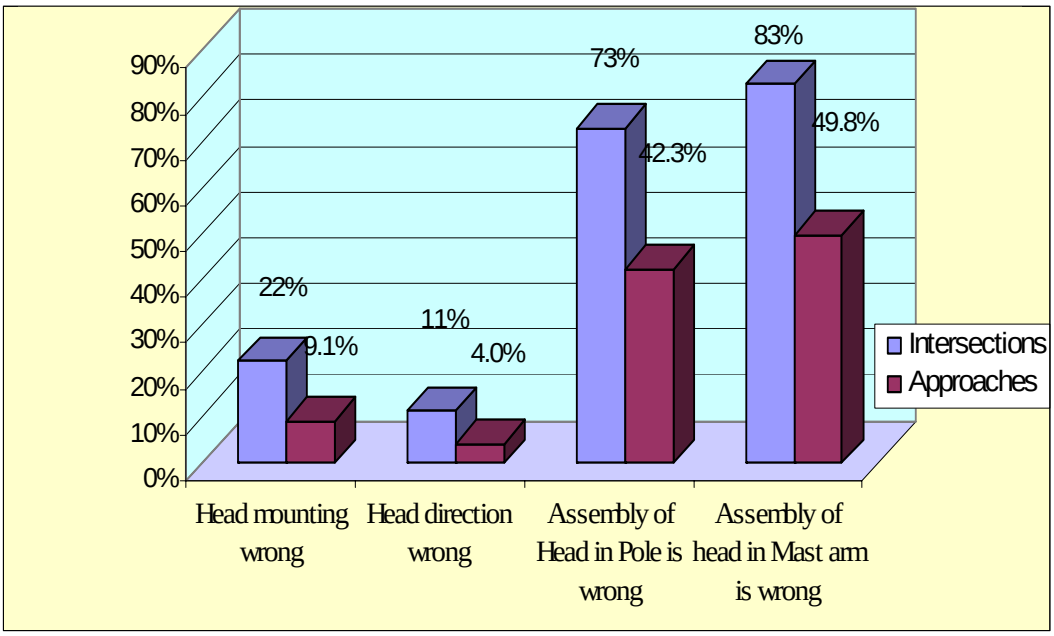

Figure 4.16 Signal Head Condition at Approaches and Intersections

Approaches with poorly placed of head in traffic signals are increase of rear-end conflicts and collisions. Due wrong direction of signal head drivers confuses and reaction time increase. In figure 4.16 at 11% intersections head is not vertical. For this reason light angle is changed and many drivers can not see the signal lights clearly.

4.7 Traffic Sign Condition at Signalized Intersections

According to sign manual various signs, which are used in signalized intersection, have different indication, meaning and use. From the field survey it is revealed that traffic sign conditions are very poor at most of the intersections in Dhaka city.

No Stopping sign is used in urban areas like as Dhaka City where it essential to ban vehicles from stopping, e.g. on heavily congested or high-speed roads where stopping would cause congestion and accidents. But No Stopping sign is presence only at 7 numbers approaches.

No Pedestrians sign indicates section of allow pedestrian are prohibited and to allow pedestrians to use an alternative route, such ascertain bridges or flyovers where separate provision has been made for pedestrians. In Dhaka City foot over bridge exist at 30 approaches. No pedestrians sign is presence at 3 numbers approaches. From observation, it is shown that very few numbers of this sign is used at signalized intersections in Dhaka City where as required is more for reducing traffic delay and accident.

No Rickshaws sign indicates areas where rickshaws are prohibited. From table 4.17, No Rickshaws sign is present at 12 numbers of approaches whereas 86 numbers of approaches this sign is needed.

No Parking sign should only be used where there would be a serious parking problem. No Parking sign is present at 54 numbers of approaches which is not enough to provide smooth flow of traffic. No Parking sign is absences at 199 numbers of approaches where adequate numbers of this sign should be required as busy street or too close to a major junction in Dhaka city.

No Stopping sign is used in urban areas where it essential to ban vehicles from stopping, e.g. on heavily–trafficked or high-speed roads where stopping would cause congestion and accidents. No Stopping sign is presence at 7 numbers of approaches which is very few in terms of necessity. No Stopping sign is absence at 246 numbers of approaches whereas it should be provided in sufficient quantity as required places to prevent congestion and accidents.

Roundabout sign warns that there is a roundabout ahead positioned on the left hand side of the road in advance of the junction. From table-4.17 round about sign is present at 3 numbers of approaches, which is required amount to provide, warn to the drivers.

Figure 4.17: Traffic Sign Condition at East Approach in Rajarbagh Intersection

Pedestrian Crossing sign is located on the left hand side of the road facing the traffic so that pedestrian can easily cross the road. This sign is needed at 223 numbers of approaches but presence only at 67 numbers of approaches. Pedestrian crossing sign is necessary to install at 156 numbers of approaches with respect to pedestrian volume and to avoid a tendency of accident. In figure 4.17 traffic sign is tilted at east approach of Rajarbagh intersection.

No Right turn is used where turning right into a side road at a junction is prohibited. No Right turn sign is presence at 9 numbers approaches.

Table 4.17: Traffic Sign at Approaches

Traffic Sign	**Approaches (numbers)**	
	Yes	Required
No pedestrians	3	-
No rickshaws	12	86
No Parking	54	199
No Stopping	7	246
Roundabout	3	-
Traffic signals	4	-
Railway level crossing with gate	3	-
Pedestrian Crossing	67	156
Advanced direction Sign	19	234

Traffic Sign	**Numbers of approaches**
	Yes
No Right Turn	9
Turn left	2
Keep Left	43
Turn Right	3
No Left Turn	1
No U Turn	9
Pass Either Side	9
Special speed limit	5

No Left turn is used where turning left into a side road at a junction is prohibited. No Left turn sign is present at 1 number of approaches, which is very small amount according to their requirement in heavily trafficked road. No U turn sign indicates any vehicle cannot take u-turn. In table-4.17, No U turn sign is present at 9 numbers of approaches. Turn Left sign indicates vehicular traffic may only proceed in the direction indicated by the arrow. Turn left sign is present at 2 numbers of approaches.

Keep Left sign indicates vehicular traffic may only proceed by keeping to the side indicated by the arrow. In table 4.17, Keep Left sign is present at 43 numbers of approaches which is slightly considerable according to their demand to provide concern about regulation. Pass Either Side sign is used to mark the obstruction such as traffic island, areas at road works and this sign must be placed at the beginning of the obstruction with adequate clearance between the sign and the road edge.

In table-4.17, Pass Either Side sign is present at 9 numbers of approaches. Advanced Direction Sign is used to give drivers information about the junction ahead. Advance direction sign is presence at 19 numbers of approaches.

The absence of a sign (common at most of the intersections) has an adverse effect on capacity and safety at signalized intersections. It also affects pedestrians and motorists behavior. The awareness of both pedestrians and motorists decreases due to the absence of traffic sign. The absence of a sign is one of the reasons for driver responsibility failures. It is impossible to correct driver right-of-way misconceptions or violations as the absence of a traffic sign. When stop sign is not present, cross traffic does not stop at intersection. Seriously injurious of all road users is increased in road traffic. Due to absent of signs in signalized intersections road users can not get the information and guide line. It is not possible to inform road users about traffic laws or regulations and to warn about hazardous condition ahead where traffic sign is absent.

4.8 Road Marking at Signalized Intersections:

From field observation it is revealed that different types of road marking are absence most of the intersections.

Stop lines must be located to facilitate movements by vehicles turning from other streets. Whenever it is important that a vehicle should stop further from an intersection than is customary, the signal faces for that approach should be located so that vehicles are kept at the

proper stop position. As said by the sign manual Stop line is marked on the carriageway one meter in before the signal. From table 4.18 Stop line is present at 35.6 percent approaches and 61.4 percent of intersections where it should be present at all approaches or intersections. Stop line is faded at 8 numbers of approaches or 3.2 percent approaches and at 8.6 percent intersections where it should be clear to see.

In figure 4.18a and 4.18b shows that there is no marking in Mohakhali and Kadomchatter intersection. In figure 4.18c Stop Line and Signal Control Pedestrian Crossing are absent in Dhanmondi 6 & 7 intersection. Faded markings are observed in Pirjangimazar intersection (figure 4.18d).

Figure 4.18a): No marking in Mohakhali Railcrossing Intersection

Figure 4.18b): No marking in Kadomchatter Intersection

Signal controlled Pedestrian Crossing is two 100mm wide broken white lines at right angles to the traffic flow. Pedestrian Crossing is present at 82 numbers or 32.4 % approaches and 39 numbers or 55.7% intersections. Pedestrian crossing is faded at 16 numbers approaches and 11 numbers intersections. Pedestrian crossing is absent at 171 numbers of approaches and 44.3 percent intersections.

Lane Line is used on all roads with a width of 5.5 meters or wider. Lane Line is present at 67.1 percent intersections where it should be present on all roads of which width is 5.5 meters or more. Lane Line is faded at 6 numbers approaches and 8.6% intersections.

Figure 4.18c) No Stop Line & Pedestrian Crossing at Dhanmondi 6 & 7

Figure 4.18d) Faded Marking in Pirjangimazar Intersection

No Parking is continuous yellow line100mm wide at urban areas. The marking can be used to prevent parking that would cause obstruction or interfere with visibility, such as in or near junctions. No parking is present at 24.5 percent approaches and at 44.1 percent intersections where it should be used in every approach or intersections. No parking is absent at 75.5 percent approaches and 58.6 percent intersections where absence of no parking is not possible at signalized intersections to prevent parking that cause obstruction or interfere with visibility.

Table 4.18: Traffic Marking at Approaches and Intersections

Marking	**Approaches** (Numbers and percentages)			**Intersections** (Numbers and percentages)		
	Yes	No/ Absence	Faded	Yes	No/ Absence	Faded
Stop Line	90 (35.6%)	163 (64.4 %)	8 (3.2 %)	43 (61.4 %)	23 (38.6 %)	6 (8.6 %)
Signal –Controlled Pedestrian Crossing	82 (32.4 %)	171 (67.6 %)	16 (6.3 %)	39 (55.7 %)	31 (44.3 %)	11 (15.7 %)
Lane Line	96 (37.9 %)	157 (62.1 %)	6 (2.4 %)	47 (67.1 %)	23 (32.9 %)	6 (8.6 %)
No Parking	62 (24.5%)	191 (75.5 %)	-	29 (41.4 %)	41 (58.6 %)	-
Traffic Lane Arrows	39 (15.4 %)	214 (84.6 %)	1 (0.4 %)	18 (25.7 %)	52 (74.3 %)	1 (1.4 %)
Chevron Marking	7 (2.8%)	246 (97.2%)	-	3 (4.3 %)	67 (95.7 %)	-
Yellow Box	0 (0.0%)	253 (100%)	-	0 (0.0%)	70 (100%)	-
Special Speed Limit	0 (0.0%)	253 (100%)	-	0 (0.0%)	70 (100%)	-

Traffic Line Arrows indicate to drivers which lane they should take when approaching a junction. Traffic lane arrows are present at 39 numbers or 15.4 % approaches and 18 numbers or 25.7 % intersections where it must be placed in all signalized intersections.

From table 4.18 shown Chevron Marking is presence at 2.8 percent approaches and at 4.3 percent intersections. Yellow Box is marked on the carriageway at junctions. Lane for (cycle and rickshaws) is only used to mark a lane, which is reserved for cycle and rickshaw. But from survey, marking of Yellow Box, Special Speed Limit are not found at any approaches and intersections.

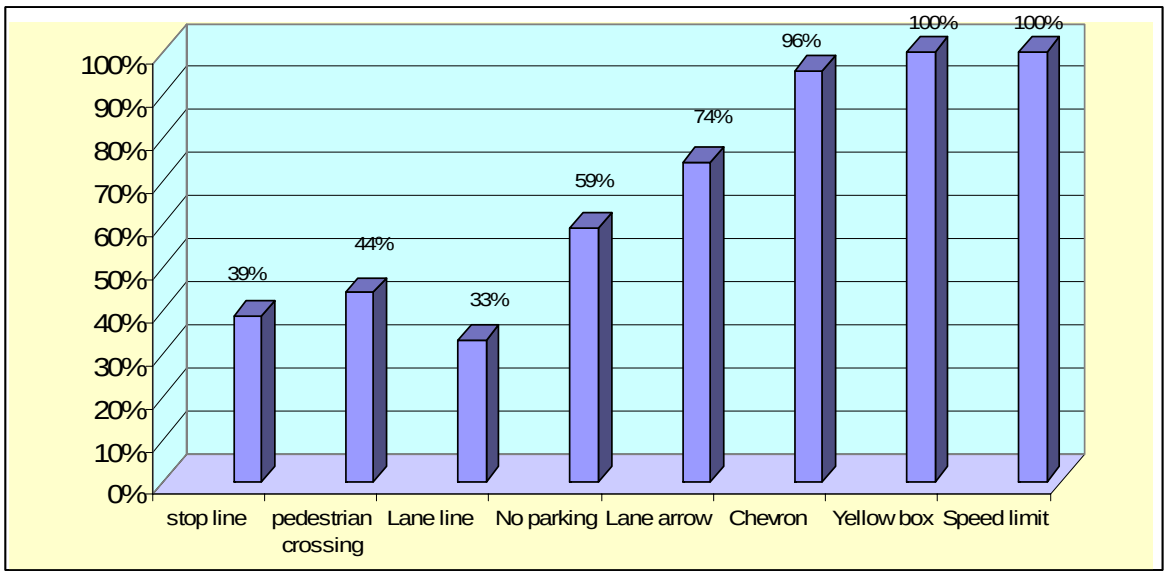

Figure 4.19: Absence of Traffic Marking at Intersections

From figure 4.19 maximum numbers of marking are absence most of the intersections. In some intersections markings are not clear or faded. These are few as required. Due to the absence of a road marking, traffic guidance and control are failed although traffic signal remains presence in intersection. As a result, it is not possible to carry smooth flow of traffic. Driver's stopping behavior depends on stop line. They are not influenced to stop their vehicles where stop line is not present or faded. They stop the vehicle in front of pedestrian crossing, as a result pedestrians are facing difficulties to cross the road. Pedestrians cross the road within the gap between the vehicles at intersections and thus occur conflicts between vehicles and pedestrians that effects on safety and also increase delay. Due to the absence of pedestrian crossing, violations of vehicles within the pedestrian crossing area are increased and pedestrians are not guided. Due to the absence of traffic lane lines, it does not help to promote travel in proper lanes and it hamper in promoting safety and ensuring maximum capacity.

4.9 Pedestrian Signal Condition

The signal sequence for pedestrians is red, green and flashing green. The instruction conveyed by each signal is:

Red Standing Man - Pedestrians are prohibited from crossing the road.

Green Walking Man - Pedestrians may cross the road with care.

Flashing Green Man - Pedestrians are prohibited from crossing the road unless they are already in the road, in which case they should continue.

The signal head is normally sited on the same post as the traffic signal. The signals controlling pedestrian movements must face across the road so that the signal can be clearly seen by pedestrians.

4.9.1 Presence of pedestrian signal at signalized intersections

From table 4.19 pedestrian signal is present at 79.8 % approaches and at 95.7 % intersections. Pedestrian signal is absent at 20.2% approaches and 4.3 % of intersections.

Table 4.19: Pedestrian Signal Presence at Intersections

Pedestrian signal condition	**Approaches** (Numbers and percentage)		**Intersections** (Numbers and percentage)	
	Yes	No	Yes	No Signal
Pedestrian signal presence	202 (79.8%)	51 (20.2%)	67 (95.7%)	3 (4.3 %)

4.9.2. Pedestrian signals light size

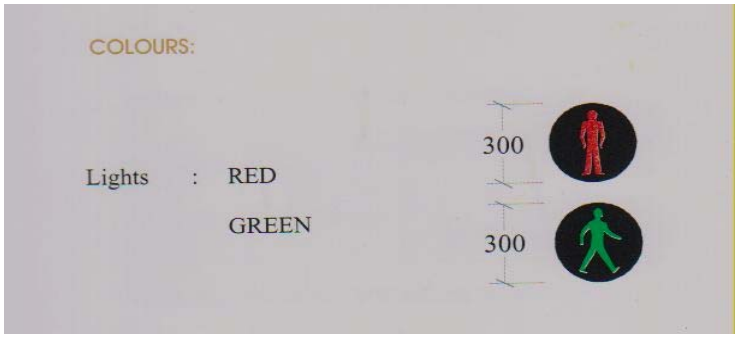

Figure 4.20: Pedestrian Signal Light Sizes and Meaning

Pedestrian signal face shall contain two aspects arranged vertically. The aspects shall be circular with a diameter of 200 ± 5 mm. From table 4.20 light sizes is correct at 79.8 percent approaches and 95.7 percent intersections. There is no significant deficiency found in light size.

4.9.3 Push button condition of pedestrian signal at intersections

Pedestrian pushbuttons are electronic buttons used by pedestrians to change traffic signal timing.

Figure 4.21: Push Button is at Mirpur Darus-salam(TTC) Intersection

To accommodate pedestrian crossings pushbuttons may be needed at some crossings, but their use should be minimized. Signals can be put in pedestrian “recall” for key time periods of day such as school crossing times. As traffic signals become more complex pedestrian pushbuttons are needed. In Figure 4.21 Push button is not working at Mirpur Darus-salam (TTC) intersection. From table 4.20, Push button is found at 6.3 % approaches and at 8.6 % intersections. The existing push buttons are not working. Push button is absent at 73.5 % approaches and at 91.4 % intersections.

4.9.4 Pedestrian signal placement at intersections

Pedestrian signals can only be used in conjunction with traffic signals. Pedestrian signal faces shall be at normal height on the standard pole located on the left footpath at the stop line of an approach road.

Table 4.20: Pedestrian signal light Size, Pole positioning, Pole size and Push button at intersections.

Condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Yes	No	No signal	Yes	No	No signal
Light Size	202 (79.8%)	0 (0.0%)	51 (20.2 %)	67 (95.7%)	0 (0.0 %)	3 (4.3 %)
Pole size	202 (79.8%)	0 (0.0%)	51 (20.2%)	67 (95.7%)	0 (0.0 %)	3 (4.29 %)
Pole positioning	192 (75. 9%)	10 (4 %)	51 (20.2 %)	60 (85.7 %)	7 (10.0 %)	3 (4.3 %)
Push button	16 (6.3%)	186 (73.5 %)	51 (20.2 %)	06 (8.6 %)	64 (91.4 %)	3 (4.3 %)

Pole positioning is correct at 192 numbers or 75.9 percent approaches and at 60 numbers or 85.7 percent intersections. Pedestrian signal pole positioning is incorrect/wrong at 10 numbers or 4 % approaches and at 7 numbers or 10 % intersections. From table 4.20 pole size is correct at 202 numbers or at 79.8 % approaches and at 67 numbers or at 95.7 % intersections. Pole size is incorrect at zero number or zero percent intersections.

Figure 4.22: Pedestrian Signal Pole Positioning is Wrong at West Approach in Farm Gate Intersection.

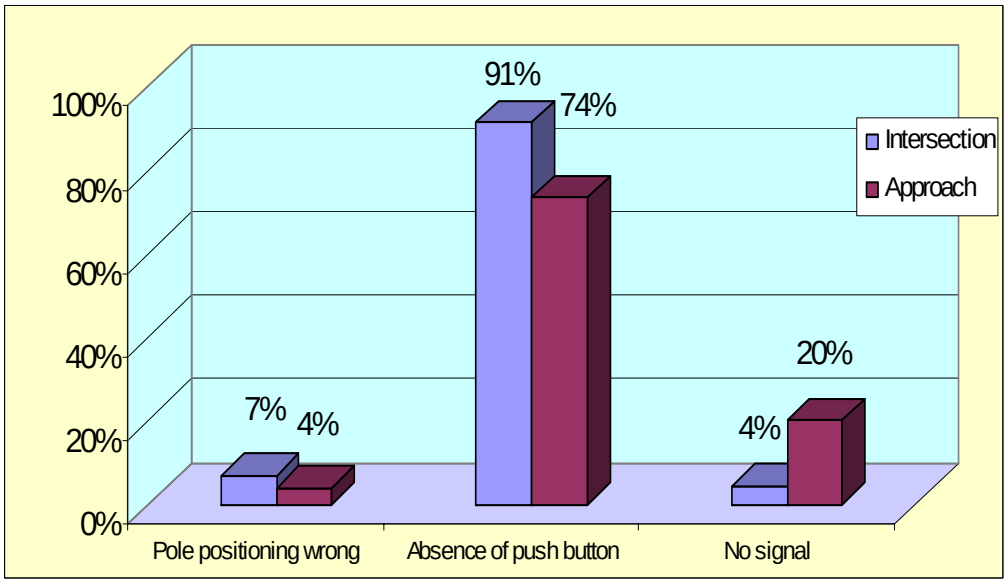

Figure 4.23: Pedestrian Signal Pole Condition

In figure 4.22 Pedestrian signal pole positioning is wrong at west approach in Farmgate intersection and barrier in front of the pedestrian signal. Because of wrong placement pedestrians cannot see the signal light, and cannot be sure to cross the road, which is very dangerous and also has no benefit to pedestrians.

4.9.5 Pedestrian signal pole condition at intersections:

Pedestrian signal pole vertical:

Table 4.21 Pedestrian Signal Pole Condition (Ok/Tilted) at intersections

Condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Ok	Tilted	No signal	Ok	Tilted	No signal
Pole	192 (75.9 %)	10 (4 %)	51 (20.2 %)	57 (81.4 %)	10 (14.3 %)	3 (4.3 %)

From table 4.21 pedestrian signal poles are vertical at 75.9 % approaches and at 81.4 % intersections. Pedestrian signal poles are tilted at 10 numbers or 4 % approaches and 10 numbers or 14.3 % intersections.

Color condition of pedestrian signal pole:

From table 4.22 pedestrian signal poles are colored at 66.8 % approaches and at 80 % intersections. Pedestrian signal poles are colorless at 13 % approaches and 17.1 % intersections.

Table 4.22: Pedestrian Signal Pole Condition (Ok/colorless) at Intersections

Pedestrian signal pole	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Ok	Colorless	No signal	Ok	Colorless	No signal
Color	169 (66.80%)	33 (13%)	51 (20.2 %)	56 (80.0 %)	12 (17.1 %)	3 (4.3 %)

4.9.6 Pedestrian signal head condition at intersections

Head placement:

From field survey it is observed that head placement is correct at 109 numbers or 43.1 percent of approaches and at 21 numbers or 30% intersections. Head placement is wrong at 93 numbers or 36.8 percent approaches and 46 numbers or 65.7 percent intersections. There is not found any pedestrian signal at 51 numbers or 20.2% approaches and at 3 numbers or 4.3% intersections.

Table 4.23: Pedestrian Signal Head Placement (Ok/Wrong) at Intersections.

Condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Ok	Wrong	No signal	Ok	Wrong	No signal
Head placement	109 (43.1%)	93 (36.8%)	51 (20.2 %)	21 (30.0 %)	46 (65.7 %)	3 (4.3 %)

Pedestrian signal head direction:

In table 4.24 Pedestrian signal head direction is correct at 161 numbers 63.6 % approaches and 37 numbers or 52.9 % intersections. Pedestrian signal head direction is wrong at 41 numbers or 16.2 % approaches and 30 numbers or 42.9 % intersections.

Table 4.24: Pedestrian Signal Head Direction (Ok/Wrong) at Intersections

Condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Ok	Wrong	No signal	Ok	Wrong	No signal
Head direction	161 (63.6%)	41 (16.2 %)	51 (20.2 %)	37 (52.9 %)	30 (42.9 %)	3 (4.3 %)

Figure 4.24 a) Pedestrian Signal Face is not to the Direction of the Traffic flow at Kakrail

Figure 4.24 b) Pedestrian signal head condition in Bashundhara Intersection

Due to pedestrian signal head at wrong direction pedestrians are misguided.

Pedestrian signal head broken:

In table 4.25 pedestrian signal head is broken at 20.6% approaches and at 38.6% intersections.

Table 4.25: Pedestrian Signal Head Condition (Ok/Broken) at Intersections

Head Condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)		
	Ok	Broken	No signal	Ok	Broken	No signal
Head broken	150 (59.3%)	52 (20.6%)	51 (20.2 %)	40 (57.1 %)	27 (38.6 %)	3 (4.3 %)

From figure 4.25a and 4.25b shows pedestrian signal head is broken in Palton(Topkhana) and Palashi intersections. These are adverse effects on safety. Signal head location has an effect on accident potential and traffic efficiency.

Figure 4.25a) Pedestrian Signal Head Condition in Palton(Topkhana)

Figure 4.25b) Pedestrian signal head Broken at Dhakashori apporoach in Palashi

Pedestrian signal face condition at intersections:

Pedestrian signal face shall contain two aspects arranged vertically. The aspects shall be circular. The upper aspect shall show a standing red man on a black ground while the lower aspect shall show a walking green man on a black ground (figure 4.20).

Figure 26: Pedestrian Signal Face is not Clear at Bijoynagar Intersection

Table 4.26: Pedestrian Signal Face Condition at Intersections.

Pedestrian signal	**No. of approach and percentage**			**No. of intersection and percentage**		
	Yes/Clear	Face is not clear	No signal	Yes/Clear	Face is not clear	No signal
Pedestrian signal face.	84 (33.2%)	118 (46.6 %)	51 (20.2 %)	18 (25.7%)	49 (70 %)	3 (4.3 %)

Figure 4.26 shows that pedestrian signal indication is unclear at Bijoy Nagar intersection. From table 4.26 pedestrian signal face is not clear at 118 numbers or 46.6 % approaches and 49 numbers or 70 % intersections. There is no signal at 51 numbers or 20.2 % approaches and 3 numbers or 4.3 % intersections.

Its position should make it readily visible to drivers making that movement. Signal heads should be placed for optimum visibility during critical pedestrian vehicular movements. Head placement should not cause motorists to look up rather than in front and to the side. Due to wrong direction, reduce or block visibility of pedestrian signal light. Pedestrians to begin cross with the wrong crossing indication. Due to broken of signal head the number of conflicts increase with motor vehicles (especially turning vehicles) and pedestrians at intersections.

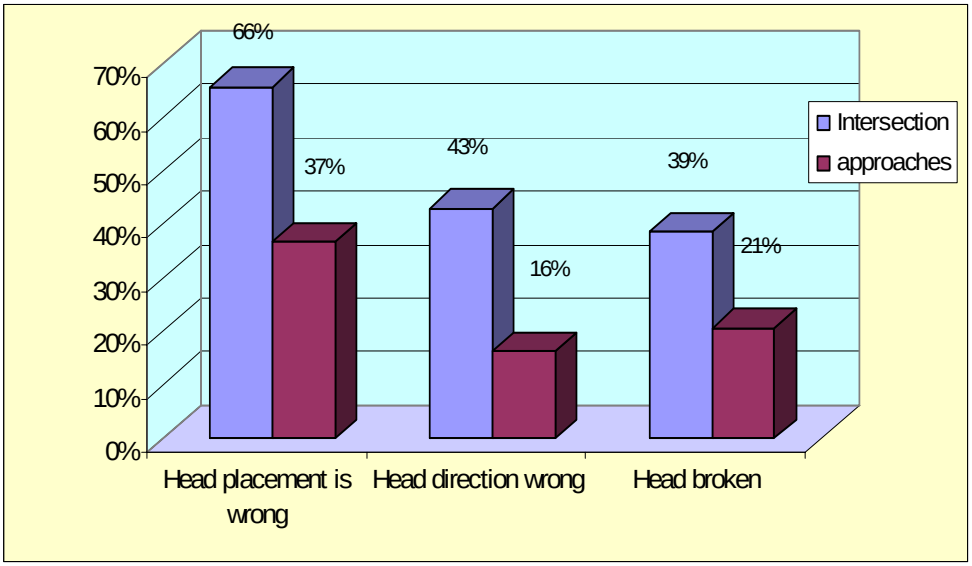

Figure 4.27: Pedestrian Signal Head Condition at Intersection

4.10 Footpath, Median, Pedestrian Refuge Condition at Signalized Intersections.

4.10.1 Footpath at signalized intersections.

Footpath is necessary at signalized intersection for pedestrians. Pedestrians wait in footpath near the pedestrian crossing at signalized intersection when the traffic flow occurs. Footpaths are safe, convenient and easy to use. The volume of road traffic and pedestrian traffic is very high in Dhaka City. Footpath is present at 90 percent intersections. Footpath is not found at 10.0 percent intersections.

Figure 4.28a) Footpath Condition at East Approach in Azimpur Intersection.

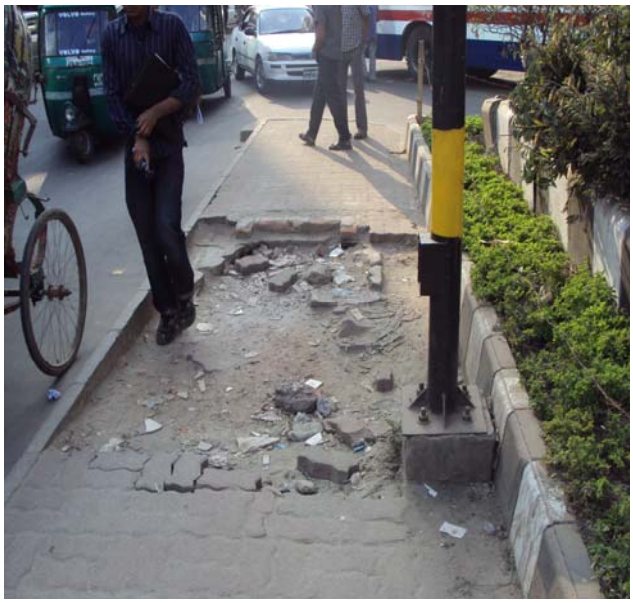

Figure 4.28b) Broken Footpath in Gulshan- 1 Intersection

Table 4.27: Footpath Condition at Signalized Intersections

Footpath	Approaches (Numbers and percentage)		Intersections (Numbers and percentage)	
	Yes	No	Yes	No
Footpath presence	245 (96.8 %)	8 (3.2 %)	63 (90.0 %)	7 (10.0 %)

Footpath	Approaches (Numbers and percentage)		Intersections (Numbers and percentage)	
	Yes	Broken	Yes	Broken
Footpath condition	176 (69.6 %)	77 (30.4 %)	27 (38.6 %)	43 (61.4 %)

The existing footpath condition is poor. In figure 4.28b footpath is broken in Gulshan-1 intersection. From the field survey it is revealed that footpath is broken at 77 numbers or 30.4

percent approaches and 43 numbers or 61.4 percent intersections. For these types of problem, pedestrians feel discomfort to use the footpath and are forced to walk at intersection (figure 4.28a).

4.10.2 Road median condition at signalized intersection

Median provides traffic safety, functional integrity of the road. It helps for the access management. Median physically separate opposing traffic Streams and help stop vehicles traveling into opposing traffic lanes. It allows space for speed changes, storage of right turning and U-turning vehicles. Median barriers used as ‘safety barriers' (designed to safely stop or redirect vehicles that hit them) are usually stronger than median barriers used mainly to direct traffic flows or discourage pedestrians from crossing. They are often built on the centre of wide urban multi-lane roads where they can be used to stop pedestrians crossing the road at unsafe places.

From observation median is present at 87.1 % intersections and 96% approaches. Besides the existing median are also broken in some intersections. Median is broken at 15 percent intersections. In figure 4.29, median is broken and no median barrier at east approach in Dholaikhal intersection.

Figure 4.29: Median Condition at East Approach in Dholaikhal Intersection.

Table 4.28 Median Condition at Signalized Intersections

Condition	Approaches (Numbers and percentage)		Intersections (Numbers and percentage)	
	Yes	No	Yes	No
Median presence	243 (96.0 %)	10 (4.0 %)	61 (87.1 %)	9 (12.9 %)

Median	Approaches (Numbers and percentage)		Intersections (Numbers and percentage)	
	Yes	broken	Yes	Broken
Median condition	230 (95%)	13 (5 %)	60 (85 %)	10 (15 %)

4.10.3 Pedestrian refuge condition at signalized intersections :

Pedestrian refuge can help pedestrians to cross such roads safely. They can be used where there is a demand for pedestrians to cross the road, Pedestrian refuse are essential at intersections for safety. Most pedestrian crashes happen while the pedestrian is attempting to cross the road.

Figure 4.30a) Pedestrian Refuge Condition at Malibagh Rail Crossing Intersection.

Figure 4.30b) Pedestrian refuse broken at Khamarbari

Figure 4.30c): Pedestrian refuse broken at west approach of Asad gate.

Crossing a busy road with fast flowing traffic can be very difficult. These provide a rest area for pedestrians, particularly intersection within the provided signal time. At large intersection pedestrians can wait and the accident possibility is reducing.

Figure 4.30a, 4.30b and 4.30c show pedestrian refuges are broken in Malibagh Rail Crossing, Khamarbari and Asad gate intersections. From survey data it is revealed that Pedestrian refuge is present at 77.9% approaches and at 55.7% intersections. From the existing pedestrian refuges the broken are observed at 18.6% intersections. For these reason pedestrians can not pass safely at intersections.

Table 4.29: Pedestrian Refuge Condition at Signalized Intersections

Pedestrian refuge	**Approaches** (Numbers and percentage)		**Intersections** (Numbers and percentage)	
	Yes	No	Yes	No
Presence	197 (77.9 %)	56 (22.1 %)	39 (55.7 %)	31 (44.3 %)

Pedestrian refuge	**Approaches** (Numbers and percentage)		**Intersections** (Numbers and percentage)	
	Yes	Broken	Yes	Broken
Pedestrian refuge Condition	179 (91%)	18 (9 %)	57 (81.4 %)	13 (18.6 %)

Pedestrian refuge should be provided as required and maintained well.

4.11 Sight Distance at Signalized Intersections:

A driver's ability to see the road ahead and other intersection users is critical to safe and efficient use of all roadway facilities, especially signalized intersections. Intersection sight distance is the distance required for a driver without the right of way to perceive and react to the presence of conflicting vehicles and pedestrians.

For sight distance the following criteria should be met:[the AASHTO policy, pp. 654-680]

- The first vehicle stopped on an approach should be visible to the first driver stopped on each of the other approaches.
- Vehicles making permissive movements (e.g., permissive left turns, right turns on red, etc. should have sufficient sight distance to select gaps in oncoming traffic.

In figure 4.31a tree and electric pole are present in left side of the road in the Pirjangimazar intersection which restricts the sight distance.

Figure 4.31 a) Sight Distance is Restricted in Pirjangimazar Intersection

Figure 4.31 b) Police Box in Place of Pedestrian Refuse at Shantinagar Intersection

Figure 31c): Sight distance is restricted due to Bill board in left sight at Matshaw Bhaban

Table 4.30: Sight Distance at Signalized Intersections

Visibility of signal light	**Approaches** (Numbers and percentage)		**Intersections** (Numbers and percentage)	
	Yes	No	Yes	No
Police box/booth	23 (9.1%)	230 (90.9%)	23 (32.9%)	47 (67.1%)
Building/Structure	43 (17.0%)	210 (83.0%)	25 (35.7%)	45 (64.3%)
Electric pole/wire	65 (25.7%)	188 (74.3%)	37 (52.9%)	33 (47.1%)
Signboard/billboard	42 (16.6%)	211 (83.4%)	27 (38.6%)	43 (61.4%)
Tree	32 (12.6%)	221 (87.4%)	24 (34.3%)	46 (65.7%)

From table 4.30 Police box/booth is existed at 9.1% approaches and 32.9% intersections, Building/Structure is present at 17 % approaches and 35.7% intersections, Electric pole/wire is found at 25.7% approaches and 47.1% intersections, Signboard/billboard is found at 16.6% approaches and 38.6% intersections, Tree is found at 12.6% approaches and 35% intersections in front of signals.

Signalized intersections with a high frequency of crashes are related to turning maneuvers. Due to lack of sight distance at signalized intersections frequency of angle crashes increase

involving left turning and opposing through vehicles. For left turn on red, is left-turning vehicles that are involved in rear-end or angle crashes with cross-street vehicles approaching from the right or vehicles turning right from the opposing approach, and crashes involving pedestrians.

4.11 Obstructed/Poor Visibility of Signal Light at Intersections

According to the sign manual drivers in each approach lane must have a clear view of at least one primary signal. In figure 4.32a shows that tree is observed in front of signal light in Hotel Sonargaon intersection. In figure 4.32b signal visibility is reduced due to police box in front of traffic signal in Malibagh intersection. In figure 4.32c traffic signal is obstructed by cable at west approach of Dhanmondi-27 intersection, in figure 4.30d traffic signal is obstructed by electric pole at east approach in Bangshal intersection where clear view of traffic signal is required. In Figure 4.32e bamboo structure is observed in front of signal light in English road intersection. In Figure 4.32f traffic signal is obstructed by cable in Mouchak intersection. These poor visibilities of signal can create a problem for smooth flow or driver act.

Figure 4.32a) Poor Visibility of Traffic Signal in Hotel Sonargaon

Figure 4.32b) Visibility of Traffic Signal at West Approach in Malibagh Intersection

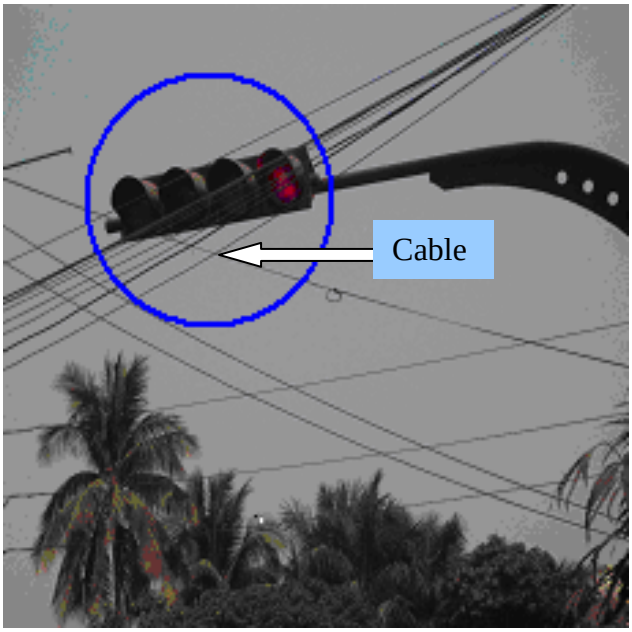

Figure 4.32c) Visibility of Traffic Signal at West Approach of Dhanmondi-27 Intersection

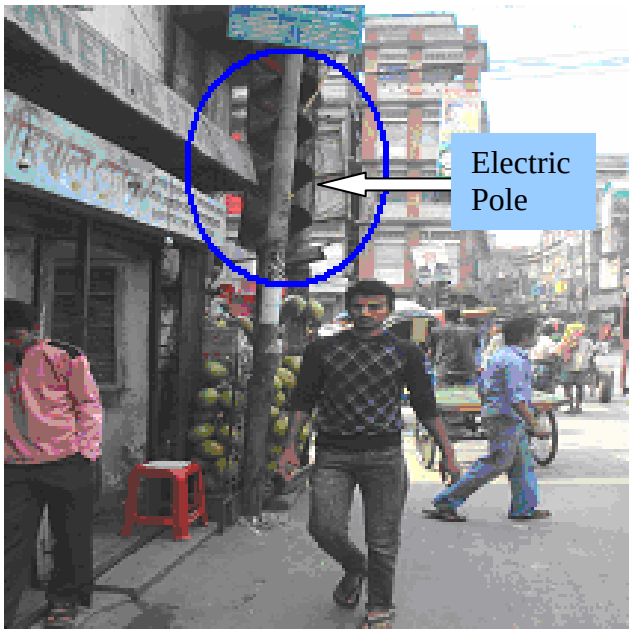

Figure 4.32d) Visibility of Traffic Signal at East Approach in Bangshal Intersection

Table 4.31 shows clear view, building/structure, signboard/bill board, tree, cable in front of signal light, electric pole and their respective percentages in form of approaches and intersections. Out of 70 intersections, the clear view is yes/exist at 17 numbers or 24.3% intersections, no (not exit) at 53 numbers or 75.7 % intersections. Building or structure is yes/exist at 8 numbers of intersections or 11.4% intersections.

Figure 4.32e) visibility of traffic signal at west approach in English road

Figure 4.32f): Cable in front of primary signal at Mouchak

Table 4.31: Obstructed/Poor Visibility of Signal Light at Intersections

Signal visibility	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	Yes	No	No signal	Yes	No
Clear view	136 (53.8%)	113 (44.7 %)	4 (1.6 %)	17 (24.3 %)	53 (75.7 %)
Building/Structure	11 (4.3%)	238 (94.1 %)	4 (1.6 %)	8 (11.4 %)	62 (88.6 %)
Signboard/billboard	23 (9.1%)	226 (89.3 %)	4 (1.6 %)	17 (24.3 %)	53 (75.7 %)
Tree	67 (25.5%)	182 (71.9 %)	4 (1.6 %)	42 (60%)	28 (40 %)
Cable	12 (4.74 %)	237 (93.7 %)	4 (1.6 %)	10 (14.3 %)	60 (85.7 %)
Electric Pole	23 (9.1%)	226 (89.3%)	4 (1.6 %)	16 (22.9 %)	54 (77.1 %)

Signboard or bill board exists at 17 numbers or 24.3% intersections. Tree exists at 42 numbers or 60% intersections. Cable in front of signal light is yes/exist at 10 numbers or 14.3% intersections. Electric Pole exists at 16 numbers intersections or 22.9% intersections.

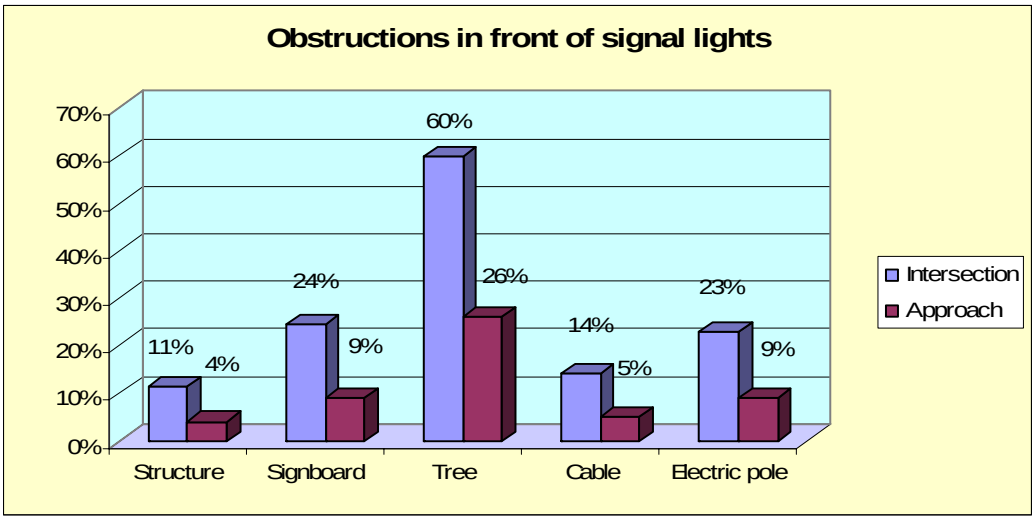

Figure 4.33 Obstructions In front of Signal Light

Due to obstructions in front of traffic signal lights, driver can not see the signal lights properly and they can not take decision. As a result increases conflicts and driver errors.

OPERATIONAL DEFICIENCY IN SIGNAL SYSTEM

From the field surveys following operational deficiencies are identified in the traffic signal system of Dhaka City.

4.13 Poor Lane Discipline at Signalized Intersections:

In Dhaka City, 70 signalized intersections and 253 approaches were surveyed. Motorized traffic is observed at 86 numbers or 34% approaches and 55 numbers or 79% intersections.

Lane discipline is maintained at few approaches and intersections. Lane discipline is absent almost all of the approaches and intersections.

Figure 4.34:Condition of Traffic Lane Discipline in Fakirapul Intersection

In figure 4.34 it can be found that vehicles do not maintain lanes in Fakirapul intersection. Due to lack of lane discipline saturation headway, lost time and effective green time are difficult to measure and cannot be properly justified.

4.14 Lack of Discipline or Rules at Intersections:

4.14.1 Road users do not follow signal light:

According to sign manual, auto signal control should be maintained. In Dhaka City three types of signal lights are usually used. When the red light is on, vehicles must stop and wait behind the stop line. In green time, vehicles may proceed past the stop line and may turn in any direction, subject to the normal priority rules being observed, and provided that the turn is not prohibited by another light signal or a regulatory traffic sign. Yellow light on is meant that vehicles must stop at the stop line unless they are so close to the stop line that they cannot stop safely.

Figure 4.35a and 4.35b show that signal light is followed at 194 numbers or 77% approaches and 52 numbers or 75% intersections. Signal light is not followed at 55 numbers or 21% approaches and 18 numbers or 25% of intersections.

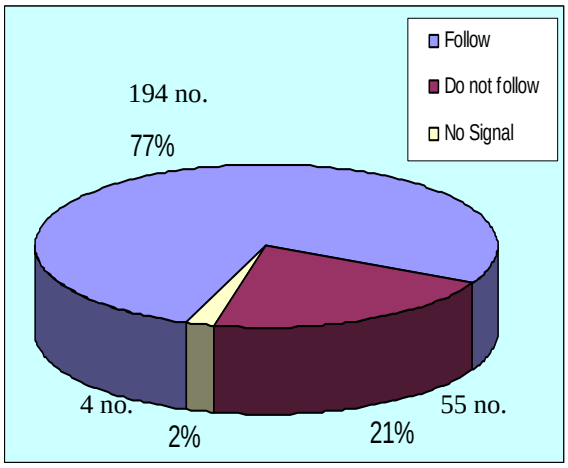

Figure 4.35 a) Following of Signal Light at Approaches

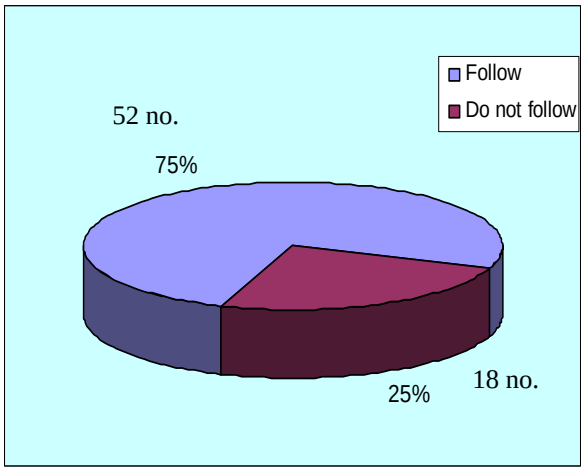

Figure 4.35 b) Following of Signal Light at intersections

Because of not following the signal lights, pedestrians are confused to cross the roads. They cross the roads at any time when they find gaps/chance and for this the accident is occurred at any time. Also the vehicle conflicts and crash rates are increased.

4.14.2 Stop line and pedestrian crossing violation:

Stop line and Pedestrian crossing are violated at most of the intersections. In figure 4.36a, pedestrians cross the road at Banglamotor intersections during the green time. Here the violation occurs for the deficiency of traffic control device. In figure 4.36 b, stop line and pedestrian crossing violation occurred in Ressel Square Intersection.

Table 4.32: Maintaining of Discipline/Rules at Signalized Intersections

Discipline /rules	**Approaches** (Numbers and percentage)		**Intersections** (Numbers and percentage)	
	Yes	No	Yes	No
Stop line violation	229 (90.5 %)	24 (9.5 %)	67 (95.7 %)	3 (4.3 %)
Pedestrian crossing violation	227 (89.7 %)	26 (10.3 %)	66 (94.3 %)	4 (5.7 %)

Figure 4.36 a) Pedestrians do not Follow Traffic Rules in Banglamotor Intersection

Figure 4.36 b) Stop line and Pedestrian Crossing Violation in Ressel Square Intersection

From table 4.32 it can be found that stop line is violated at 229 numbers or 90.5 % approaches and 67 numbers or 95.7 % intersections. Pedestrian crossing is violated at 227 numbers or at 89.7 percent approaches and at 66 numbers or 94.3 % intersections. For these pedestrians can not cross the road at pedestrian crossing location. They cross the road inside the intersection which affects on safety and also increases traffic delay.

Illegal parking:

According to the road note 13, the most important factor affecting the capacity of a junction approach is the need to avoid obstruction to traffic flow, either temporary base (a taxi or bus stopping for passengers) or permanent base (a parked car).

Table 4.33: Illegal Parking and Bus Stoppage at Signalized Intersections

Violation	**Signalized intersections** (Numbers and percentage)	
	Yes	No
Illegal parking	40 (57 %)	30 (43 %)
Bus stoppage at intersections	41 (59%)	29 (41 %)

Figure 4.37 a) Illegal Parking in Zahir Raihan Intersection

Figure 4.37 b) Bus Stoppages and Carrying Passengers at Banglamotor Intersections

From table 4.33 it can be found that illegal parking and bus stoppage are at 40 and 41 numbers intersections respectively. Due to parking at intersections capacity is reduced and vehicles cannot effectively utilize the green time. These affects traffic queue dispersion in the green time. As a result delay is increased.

4.15 Traffic signal light condition

Traffic signal light conditions are not satisfactory at many intersections. Figure 4.38a and 4.38b shows signal lights are off at Mirpur 1 and Parliament intersections. In table 4.34a signal lights are off at 23.7 % approaches and 27.1 % intersections.

Table 4.34 a): Traffic Signal Light Conditions at Intersections (On/ Off)

Light condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	On	Off	No signal	On	Off
Light	189 (74.7 %)	60 (23.7 %)	4 (1.6 %)	51 (72.9 %)	18 (27.1 %)

Figure 4.38a): Signal Light Condition in Mirpur 1 Intersection.

Figure 4.38 b): Signal Light Condition in Parliament Intersection.

Table 4.34b): Traffic Signal Light Conditions at Intersections (OK/ Blinking)

Light condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	OK	Blinking	No signal	OK	Blinking
Light	238 (94.1 %)	11 (4.3 %)	4 (1.6 %)	65 (92.9%)	5 (7.1 %)

Table 4.34c): Traffic Signal Light Conditions at Intersections (Ok/dirty)

Light condition	**Approaches** (Numbers and percentage)			**Intersections** (Numbers and percentage)	
	OK	Dirty	No signal	OK	Dirty
Lamp cleaning	228 (90.1 %)	21 (8.3 %)	4 (1.6 %)	62 (88.6 %)	8 (11.4%)

In table 4.34b signal light is blinking at 11numbers or 4.3 % approaches and 5 numbers or 7.1 percent intersections. In table 4.34c signal lamp is clean at 228 numbers or 90.1 % approaches and 62 numbers or 88.6 % intersections. Signal lamp is dirty at 21numbers or 8.3% approaches and 8 numbers or 11.4 % intersections.

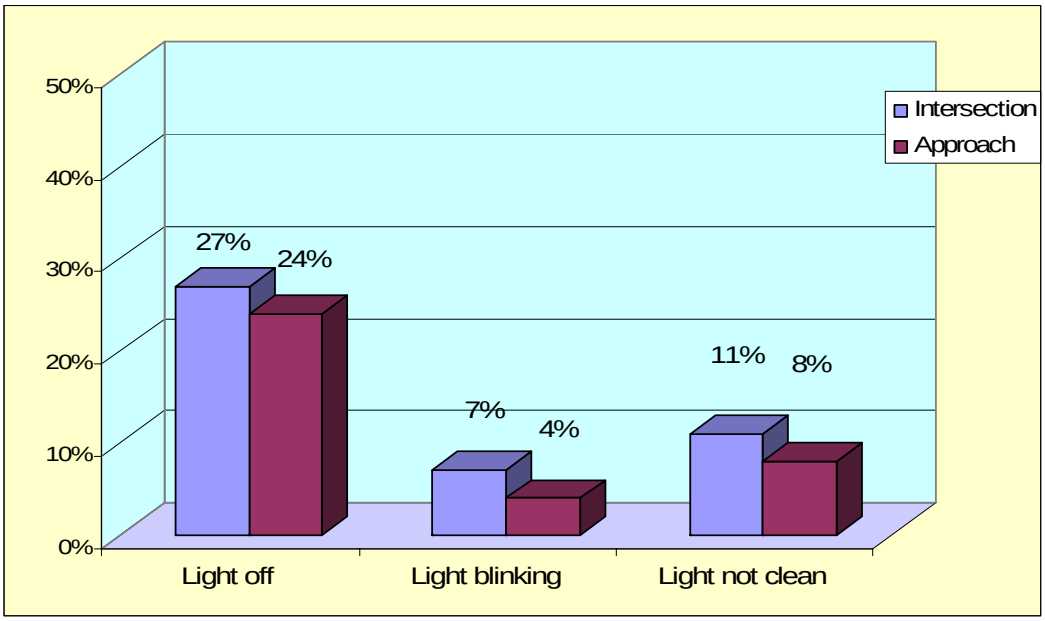

Figure 4.39: Traffic Signal Light Conditions at Intersections

Signal light is off at 27% off intersections; blinking at 7% intersections and is dirty at 11% intersections. For these reason drivers are hesitated to understand the signal light indication and driver's error is also increased.

4.16 Traffic Signal Timing Control at Intersections

4.16.1 Traffic signal timing control by traffic police:

In Dhaka City signal timing are controlled by traffic police. Police personnel have lack of proper knowledge about traffic engineering, signal timing design and signal system. But they provide and control signal timing manually. They use their individual judgment or visual observation and provide timing control according to their own.

When the queue of vehicles is set, many drivers cannot see the hand indications of traffic police due to low height of the controlled person. At intersections with a higher proportion of heavy vehicle, drivers in adjacent lanes or following a heavy vehicle may not be able to see the hand indication of police. Drivers follow their front vehicles in the queue. As a result start-up lost time for vehicles is increased and delay is also increased. Besides traffic Sergeants are mostly busy with filing cases against vehicles that break laws. In figure 4.40 traffic policeman is indicating by hand manually to stop the traffic at Moghbazar intersection.

Table 4.35a Traffic Signal Timing Control at Intersections

Intersection (Numbers and percentage)	
Maintaining manually by hand	Auto signal
33 (47.1 %)	37 (52.9 %)

Figure 4.40: Police control Traffic by Hand at Moghbazar Intersection.

.

Table 4.35 b: Traffic Signal Timing Control at Intersections

Both auto signal and police control by hand at intersection (Number and percentage)	
Yes	No
39 (55.7 %)	31 (44.3 %)

From table 4.35a it can be found that traffic police control vehicular traffic manually by hand at 33 numbers or 47.1 % intersections. Auto signal runs at 37 numbers or 52.9 % intersections. From table 4.35b it is observed that both auto signal and police control by hand at 39 numbers or 55.7 % intersections.

Table 4.36: Signal Timing Provided in Controller at Intersections

Timing control (in controller) Number and percentage of intersection)	
Police	DCC
61 (87.1 %)	9 (12.9 %)

Table 4.37: Number of Police at Intersections

Total number of intersections	Total No. of police
70	245

In table 4.36 it can be found that timing are controlled by police at 61 numbers or 87.1 % intersections and by DCC at 9 numbers or 12.9 % intersections. From Table 4.37 it can be found that huge numbers of police staffs (approximately 245 persons) work everyday for signal timing control manually in Dhaka City. Also observation from tables shows that most of the intersections in the city are controlled by police. Large amount of revenue is also needed for the government to maintain the additional police forces. If the signal system runs in automated and actuated control, no police staff will be required for timing control.

For following the signal indication, avoiding the violation in intersections and to maintain proper timing the traffic police training are very much necessary. Police Personnel should stay at the traffic point and help the drivers and the pedestrians to motivate them to obey the law and the traffic rules.

4.16.2 Inappropriate/no signal control plan or no timing plan

In 2004 DCC provided signal timing at 59 intersections in Dhaka City. After that, timing is not updated by traffic engineers. Signal timing is controlled by traffic police. But police provides signal timing as their individual or visual judgments. As a result signal timing is not responsive to the actual demand. Signal timing should meet the actual demand. Also timing should be provided by traffic engineers.

Timing Plan

According to Federal Highway Administration, 2009, “Traffic Signal Operations and Maintenance Staffing Guidelines” number of daily plans are needed. From observation (table 2.1) only one timing plan is operated in whole day at 61 numbers intersections and seven

timing plans is provided at 9 numbers of intersections. There is no timing plan provided for special events, weekends and incidents.

Table 4.38: Comparison of the Signal Timing Plan with Standards.

Characteristic	Guide/ constrained Ideal Traffic System	Observation/Findings
Number of timing plans	Methodology used to determine number of daily plans needed.	Very few plans are applied. Number and duration of plans determined by traffic police.

Requisite number of plans should be provided to support daily needs, weekends and special events.

Too long green time and cycle time:

According to specification, "Supply and Installation of Traffic Signal in Dhaka City" the expected characteristics of timing parameters are given in table 4.39.

Table 4.39: Expected Characteristics of Timing Parameters

Parameter	Range	Maximum Step Size
Safety Timings		
Leaving Amber	3 sec	-
Other Signal Timings		
Phase Minimum Green	3-30 sec	1 sec
Vehicle green extension	0.2-5 sec	0.2 sec
Phase Extension	0-25 sec	0.5 sec
Phase Maximum	0-99 sec	1 sec
All-Red Extension	0-25 sec	1 sec
Max Extended All- Red	0-60 sec	1 sec

All of the signals are fixed time and the timing program are provided or set with the indication of traffic police. Police change the signal time during rush hours by manual key operation. Maximum green time and cycle time was observed too long at intersections such as at Banglamotor intersection maximum green time 420 sec and cycle time 623 sec, at Hotel Sonargaon intersection maximum green time 485 sec and cycle time 670 sec, at Bijoy Shoroni intersection maximum green time 280 seconds and cycle time 650 sec, at Shahbag intersection maximum green time 242 seconds and cycle time 415 sec respectively.

Due to providing too long green time in one approach, initial lost time is decreased. But in other approaches large queue is formed, most often queue is spill up and drivers are frustrated.

4.16.3 All red phases:

According to the specification, the controller shall have the facility such as during any stage-to-stage change an all red phase can be generated simultaneously on phases which change their right-of-way. The controller should allow to be specified an all-red stage. But from observations it is found that, all-red phase is absent at all signalized intersections and also in controller do not have any entry for all-red phases by the agency. All-red stage timing option should be provided in controller during any stage-to-stage change.

4.17 Pedestrian Signals Condition at Intersections

4.17.1 Pedestrian signal light condition (light on/off)

From table 4.40 pedestrian signal light is on at 53 numbers or 21% approaches and 26 numbers or 37.1 % intersections. Pedestrian signal light is off at 149 numbers or 58.9 % approaches and at 41 numbers or 58.6 % intersections. There is no signal at 51 numbers or 20.2 % approaches and 3 numbers or 4.3 % intersections.

Table 4.40: Pedestrian Signal Light Condition at Intersections

Signal light	**Approaches** (Number and percentage)			**Intersections** (Number and percentage)		
	On	Off	No signal	On	Off	No signal
Light condition	53 (21 %)	149 (58.9 %)	51 (20.2 %)	26 (37.1 %)	41 (58.6%)	3 (4.3 %)

Figure 4.41: Pedestrian Signal Light Condition at East Approach in Nabisco Intersection.

In figure 4.41 pedestrian signal lights are off at east approach in Nabisco intersection.

4.17.2 Pedestrian signal head cleanliness at intersections

From table 4.41 it is observed that pedestrian signal head is clean at 173 numbers or 68.4 % approaches and 46 numbers or 65.7 % of intersections. Pedestrian signal head is dirty at 29 numbers or 11.4 % approaches and 11 numbers or 15.7 % intersections.

Table 4.41: Pedestrian Signal Head Condition at Intersections

Condition	**Approaches** (Number and percentage)			**Intersections** (Number and percentage)		
	Ok	Dirty	No signal	Ok	Dirty	No signal
Head condition	173 (68.4%)	29 (11.4 %)	51 (20.2 %)	46 (65.7 %)	11 (15.7 %)	3 (4.3 %)

For lack of cleanliness, the lifetime of signal light and head is reduced.

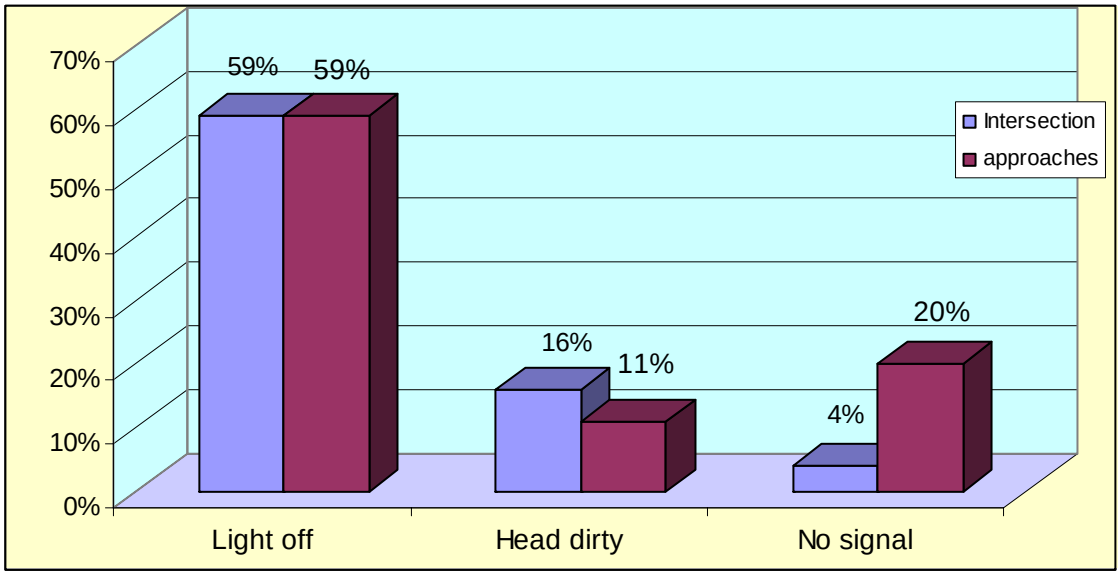

Figure 4.42: Pedestrian Signal Condition at Approaches and Intersections

Figure 4.42 shows signal lights are off at large percentage of the intersections. It's clear that pedestrian signal are not maintained and these are not working properly. That's why pedestrians are confused to cross the road. They cross the road as their wish even in green time during the traffic movement. These have an effect on safety and also increase delay.

4.18 Preemption

Signal preemption controls the movement of traffic that is of greater importance than general vehicle and pedestrian traffic. Preemptive control is necessary to avoid collisions (e.g., trains versus automobiles) and/or give right of way to vehicles in an emergency situation (e.g., fire engines responding to an emergency).

Some of the benefits associated with traffic signal preemption are:

• Improved response time/travel times for emergency, rail and other preempting vehicles.

• Improved safety and reliability for vehicles receiving preemption right of way (e.g. emergency vehicles, trains).

• Improved safety and clarity of right of way for other roadway users.

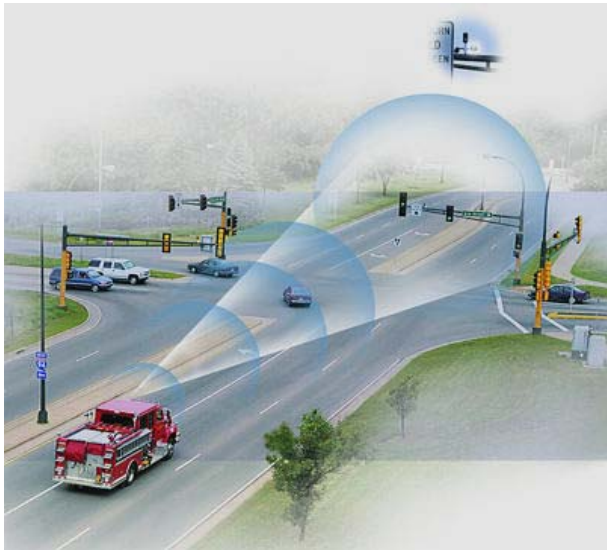

Figure 4.43: Emergency Vehicle Signal Preemption

Rail priority mode:

During the crossing of train across the road, the traffic signals for vehicles should be given less priority and trains are provided prime precedence. For this reason, the traffic signal system is designed to enable the rail priority mode. A rail priority over-ride facility should be given to the ITC at such locations. An efficient controller mode should be introduced to get the signals from sensors of traffic rail gate. From survey it is found that Malibagh Rail Gate, Bonani Kakoli, Mohakhali Rail-crossing intersections are in close proximity of road-rail at-grade crossings. But the rail priority modes are absent in these intersections and no sensors are found in the traffic rail gates. There is no special sequence of signal phases or timing at controller in these

signalized intersections due to rail priority. Dhaka City Corporation took initiative to set up sensors at the rail gate, but it is not set up till now.

It is necessary to coordinate with Bangladesh Railway and providing sensors in rail gates to set up the rail priority mode in signals. A special sequence of signal phases to the controller should be provided during the approach or passage of a train.

Priorities of emergency vehicle, fire service, ambulance, important people are also absent.

4.19 Retiming:

The need for signal retiming or rephrasing may result from the following:

• Change in population level and car ownership in the region.
• Change in land use that changes traffic demand.
• Change in traffic patterns resulting from changes in the highway network.
• Change in traffic operations such as corridor management plans.

In 2004 signal timing was provided at 62 signalized intersections in Dhaka City under the Dhaka Urban transport project. In 2009 timing was provided at 9 intersections in Mirpur road (Demo corridor). After that period retiming is not provided at signalized intersections till now by evaluation. Timing changes in the signal controller by the DCC with the request of traffic police officer. This timing does not satisfy the actual demand of traffic. Also from observation it is seen that most of the intersections in major corridors are congested as the queues at signalized intersections are not completely discharged during the green period. It is needed taking different traffic signal timing strategies as the traffic flow conditions are congested.

According to Federal Highway Administration, 2009, “Traffic Signal Operations and Maintenance Staffing Guidelines” ,signal timing performance should be reviewed at periods established by management plans but should not exceed 30 to 36 month periods. Signals should be retimed using an accepted methodology. The collection and analysis of traffic and accident data should be provided to determine the need for retiming, rephrasing, and pedestrian treatment on a 30 to 36 month basis. Retiming should follow in a timely manner.

Table 4.42: Comparison of the Signal Retiming (Survey Result) with Standards

Characteristic	Guide / Constrained Ideal Traffic System	Observation
Signal timing reviews and updates	30 to 36 month updates using a documented methodology. May be reviewed more frequently if automatically collected data is available and processed.	Do not meet ideal system. More than 5 years, often in response to crises or Police requests.

Retiming provides a benefit because of significant reduction in delay and fuel consumption. Signal retiming should be reviewed timely and should follow the accepted methodology.

4.20 Maintenance of Traffic Signal:

According to traffic signal timing manual, staffing level of 30-40 signals per technician for agencies that operate signals will be appropriate to support the Constrained Ideal Traffic System and a staffing level of 75-100 signals per engineer. Smaller agencies will likely require fewer signals per engineer because economies of scale may be difficult to realize.

Table 4.43: Staffs for Traffic Signal Operation in Dhaka City

Location	City / Area Approx. Population	Number of signalized intersection	Existing Staffs
Dhaka City	10 million	70	One Assistant Engineer (Electrical), two Sub assistant Engineers (Electrical).

In Dhaka City to look after the traffic signals one assistant engineer (Electrical) and two sub assistant engineers (Electrical) are involved in DCC. There is no traffic engineer found for traffic signal operation.

According to the specification, "Supply and installation of Traffic signal in Dhaka City" Urgent Faults shall be attended to within 2 hours and Less Urgent Faults shall be attended to within the day and corrected as soon as possible.

Table 4.44: Comparison of the Maintenance Response Times of Signal with Guide.

Criteria	Guide/Specification	observation
Maintenance Response Times	i. Urgent Faults shall be attended to within 2 hours. ii. Less Urgent Faults shall be attended to within the day and corrected as soon as possible.	Takes several days and months for urgent faults and less urgent faults.

Dhaka City Corporation gives the contract to the contractors on the basis of tendering every fiscal year for signal repairing and maintenance in Dhaka City. DCC have no own technician

to fix the technical problems of the signal system. As all the signal modes are fixed- time based, isolated and without Traffic Management Centre, the failure reports are not collected automatically from the controllers. Beside no capability is provided for control equipment at isolated intersections to report failures automatically. DCC operates all isolated traffic signals in Dhaka City so they are not able to detect any failures in due time. As a result maintenance team needs to go physically to identify faults. Sometimes traffic police and public complain are raised to repair the faults as soon as possible. Hence it requires long time to monitor, identify the faults properly. Response times to repair are generally not satisfactory. Response time takes several days or months to repair the fault.

Table 4.45: Comparison of Operation and Maintenance of Traffic Signal with Guide

Criteria	**Guide FHWA, 2009,** National Traffic Signal Report Cards recommendation	**Survey Results**
Traffic Signal Maintenance Staffing	30 to 40 signals are maintained by each technician.	No technician is found in DCC of their own.
Signal Monitoring	Monitoring of signals to provide reports to maintenance personnel within 5 minutes of automatic failure report.	Have no automated failure reporting.
Critical Malfunction Response Time	Should not exceed one hour during business hours and 2 hours at other times.	Reporting agency takes several days in average during business hours and other times.

There is no periodic updating of management plans, mission statement, strategic plan, objectives and measures, periodic collection and review of performance data that can decrease deficiencies in signal system. Maintenance should be improved for security and safety.

4.21 Traffic Control at Special Events and Incidents

Traffic patterns for special events, roadway construction, inclement weather, crashes etc. are different from those that exist during normal traffic conditions. It is important for agencies to develop and utilize an incident management plan for its signal system. In particular, the high volumes of traffic generated by planned special events, the reduction of corridor capacity from

roadway incidents, or the increased travel demand triggered by region wide evacuations can necessitate signal timing changes.

There is no timing plan for incidents such as accidents, rally, adverse weather or special operations. The signal systems in Dhaka city have no planning provided in the controller for incident management, VVIP movements, Rally, Accident and for other special events. For these situations the traffic police control signal timing by manual key operation in the controller or by using hand indication. They have no plan for management in signal system. These situations increase congestion, generates high volumes of traffic and increase delay.

Besides, there is lack of sufficient level of coordination among the jurisdictions impacted by the traffic from planned special events or emergency situations. The inter-jurisdictional coordination is absent in related organizations such as law enforcement, public safety organizations, and various transportation/transit agencies to share resources and exchange the required information and to implement the required traffic control/signal timing plans.

On the operations/planning side, an initial step would be to determine the specific route and intersections where traffic signals would be retimed. Adjustments to the cycle length and green time for a particular movement are typical components of an incident management plan. Alternate signal timing plans for incidents or special operations are required to the signal system.

4.22 No Guides for signal Operation and Maintenance:

Lack of a credible guideline for traffic signal operations and maintenance has resulted in the inefficient operation and maintenance of traffic signals. Ineffective operation and maintenance of traffic signals has serious safety implications and contributes to thousands of hours of unnecessary traffic delays and congestion on both local and major arterial systems and road networks.

In Dhaka City for signal operations and maintenance there is lacking in mission statements, concept procedures and also there is no guidelines/manuals. Due to absence of guidelines the agency repairs and maintains the signal as their wish and has not provided proper planning, mission statements. The documented objectives and performance standards are needed. Guidelines for traffic signal operations and maintenance are required. Guidelines for pedestrian crossing times, vehicle clearance intervals, and signal indications, standardize timing parameters, walk, flashing don’t walk, yellow, and all-red indications etc. are necessary.

4.23 Lack of Training for Signal Operation and Maintenance

Training is necessary; a valuable component of the traffic signal maintenance is ensuring that the staff managing and maintaining the traffic signals has been trained to operate the system. Qualified personnel are required to operate the signal system. But no specialized and professional training are rendered to the DCC staffs, contractors and others who can maintain the signal. Training provisions are generally inadequate and not systematized. Necessary trainings are required to become the experts of equipment handling, software. Police personals maintain signal timing but they are deprived of such guidance. Road users also do not get any general idea about traffic signal.

4.24 Mode of Operation at Traffic Signal:

Fixed timing:

All of the intersections are running in fixed time operation. Here automatic control shall be introduced either manually by a switch in the Inner Control Panel located inside the main door of the controller. Due to fixed timing the system cannot respond to unpredictable events. Timing is not accurate to the real condition and rapidly aged.

Vehicle Actuated (VA)

Vehicle Actuated (VA) mode is not followed for signal operation in Dhaka City and hence no detector is used. The signal timing is not based on the right-of-way demand.

Manual system

Manual method of control shall be introduced and operated by switches on the Manual Control Panel. Under the manual method of control, demands generated by vehicle detectors or pedestrian push buttons shall be ignored. It shall be possible for the operator to select through a key switch mechanism, one of three alternative stage sequences. The selected stage sequence shall be served in a cyclical order as requested by the operator through a push button mechanism. Switching to any other mode of operation shall terminate the manual operation.

Figure 4.44: Manual Control Key in Controller Cabinet at Jahangir Gate.

According to the National Land Transport Policy in 2004, "Automatic traffic controls will replace manual systems". But till now manually control system is running. In most of the junctions, police control signal manually.

Flashing amber mode:

According to the specification, whenever the ITC detects a serious fault during diagnostics, the controller should immediately exit from the operating mode and reside in the flash amber mode till reset by an authorized technician. The controller have facility to provide flash Amber mode of operation as a manual switch option or as one of the signal plans which can be scheduled through a timetable or as a default. But flashing amber mode is absent at all intersections. The fault log and switch in the controller do not provide appropriate entry for flashing amber mode operation.

4.25 Traffic Signal Controllers

The type and percentage of the equipment has a bearing on some of the challenges that the agency staff faces, the premise being that the greater the number of different types of equipment present in a signal system, the more difficult it is to operate and maintain. Additional training and configuration management are required.

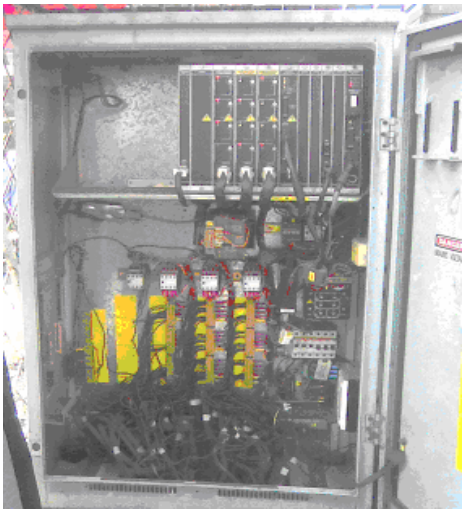

Figure 4.45: Typical Controller Cabinet

DCC uses older technology that have differences in hardware and software that may result in different operations, making troubleshooting more difficult for the technician to operate in the field.

4.26 Overview

In this chapter, physical and operational deficiencies of signal system in Dhaka City have been identified. The physical deficiencies are largely observed in placement of signal, traffic signal light, signal head, pole and mast arm, pedestrian signal and signal visibility etc. The operational deficiencies are mainly observed in signal timing control, retiming, lack of discipline or rules, maintenance of traffic signal etc.

CHAPTER 5
COMPARISON IN TRAFFIC SIGNAL

5.1 Introduction: This chapter deals with the comparison of signal system of Dhaka City with some cities of developing countries. The advantages, disadvantages of signal system in some cities are discussed and compared with Dhaka City.

5.2 Delhi City, India

Delhi has witnessed a phenomenal growth in both human and vehicular population. Ever increasing number of road users compete for space on a road network which has been upgraded for increased mobility without a dedicated traffic management system. This has brought a rising trend of traffic violations. Deficiencies in the TCDs revealed that there is a correlation between the deficient TCDs and RTVs.

Table 5.1: Comparison of TCD's Deficiencies at Signalized Intersection in between Dhaka and Delhi

SL	Deficiencies	Effected number of intersections (%)	
		Dhaka City	Delhi City
1	Obstructed Visibility of Primary Traffic Signal	76	78
2	Presence of Supporting TCDs (Lens)	-	51
3	Absence of Supporting TCDs-Stop Line/ Pedestrian Crossing.	73	63
4	Deficiency of Stop Line-Absence of Stop Line.	74	42
5	Deficiency of Pedestrian Crossing	78	36

From the table deficiency of Supporting TCDs are more in Dhaka City than Delhi City. In Delhi City has developed Area Traffic Control System (ATCS) at 63 junctions.

5.3 Bangalore City, India

Bangalore city is one of the most sought cities in the India. Rapid population growth because of IT and other associated industries in Bangalore led to an increase in the vehicular population to about 1.5 million, with an annual growth rate of 7-10%. Two wheelers constitute more than 70% of the total volume, while cars comprise 15%, autos 4% and the remaining 8% includes other vehicles such as buses, vans and tempos.

Figure 5.1: Bangalore City Traffic Situation

Table 5.2: Vehicle Population in Bangalore City (up to 31-12-2009)

Two Wheelers	**L.M.V**	**A/R**	**H.T.V**	**H.G.V**	Others	Total
2607536	646494	105630	42164	129312	122232	3653368

Bangalore City, has witnessed a phenomenal growth in vehicle population. As a result, many of the arterial roads and intersections are operating over the capacity (i.e., v/c is more than 1) and average Journey speeds on some of the key roads in the Central Area are lower than 10 kmph in the peak hour. The Traffic Management Center (TMC) at the Ashok Nagar Police station is the hub of a transportation management system, where information about the transportation network shall be collected and combined with other operational and control data to manage the transportation network and to produce traveler information. Up gradation of traffic signals including vehicle actuation – 182 nos.

Figure 5.2: Traffic Management Center at Bangalore City

Figure 5.3: Camera Placement and TMC at Bangalore

The TMC shall link various elements of Intelligent Transportation Systems such as vehicle actuated traffic signals, surveillance cameras, enforcement cameras etc., installed at various locations in the city, enabling decision makers to identify and react to an incident in a timely manner based on real-time data. The TMC would receive the data or information from the field and the same would be received, understood and decisions would be made and the decision so made from the center shall be communicated to the end user to act on it to achieve the desired result. Interim Traffic Management Centre has been handling the following components:

a) Information/data from the traffic signals from the 182 signals spread across the city.
b) Live feed of images from the 160 surveillance cameras installed at various junctions in the city.
c) Traffic violation data from the 5 enforcement cameras installed in the city.

Vehicle actuation and automated signaling:

An underlying sensor (also referred to as loop) embedded below the asphalted road near the zebra crossing, senses the vehicles passing over it. The sensor is linked to a controller placed at the junction, which sends signals indicating presence or absence of vehicles over it. Every direction is allotted a minimum 9-second phase time to begin with. As long as vehicles are present on the loop. Four seconds will continue to be added in the phase time

i.e. 9, 13, 17 and so on, subject to an upper limit. Incase no vehicle passes for more than 4 seconds the controller turns the signal red even if allocated green time is still unutilized. Hence, wastage of green time is avoided and traffic from other direction is released. As a result of this technology, total cycle time in each cycle will vary according to traffic flow.

Vehicle actuation avoids wastage of green time and encourages discipline by reducing signal jumping offences. The maximum benefits of vehicle actuation an experienced during lean hours and at junctions where different directions have different traffic densities. During peak hours, when there is over saturation in all the directions, vehicle actuated signal function like fixed-time signal.

Automated signaling is a concept where in all the signals placed at various junctions of the city are centrally controlled from a central hub. Traffic signal at each junction is connected to a controller, which in turn is connected to TMC using lease line.

Area Traffic Control (ATC) in Bangalore:

This concept is a combination of signal progression and vehicle actuation. A fixed time is allocated at each junction controller for each direction. This time is validated against the traffic passing in these directions; if it is observed that the entire allocated green time for a particular direction is not utilized then the green time in that direction is reduced by 10%. This activity is repeated till the optimum green time is achieved for each direction. In all the junctions in the area or the corridor, the entire process the embedded loops at junctions play an important role in detecting vehicles passing towards particular direction. This information is processed by the controller at each junction and is passed to the central server placed at TMC, where an algorithm takes decisions on green time optimization.

5.4 Pune City, India:

In Pune City 38 Junctions has developed the Area Traffic Control System (ATCS).

Figure 5.4: Pune ATCS Configuration

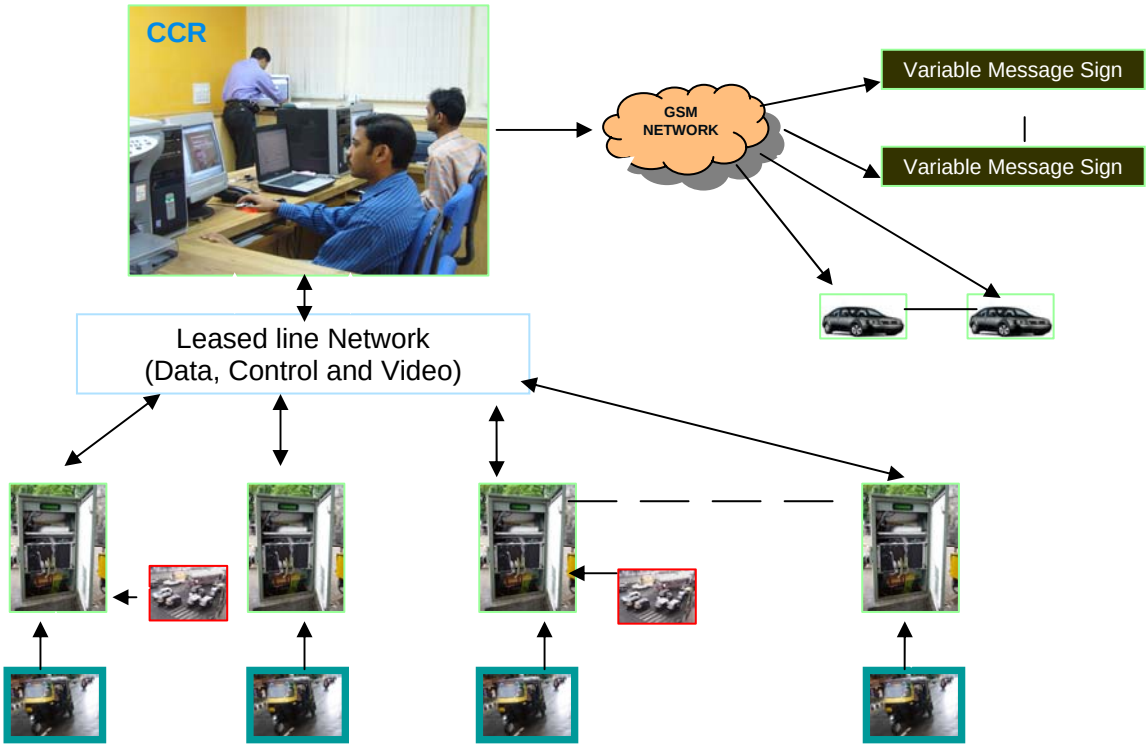

Figure 5.5: Variable Massage Sign at Swargate in Pune.

5.5 Bandung City, Indonisia:

A large road network under ATCS surveillance in Bandung, Indonesia was used. Advanced traffic control system SCATS (Sydney Coordinated Adaptive Traffic System)

controlled 117 signalized intersections out of 135 intersections in Bandung. SCATS is currently running in Bandung.

Figure 5.6: Traffic Situation at Bandung City.

5.6 Phuket City, Thailand

In Phuket City a new signal controls system that is combined with an image processing vehicle detector and an advanced signal controller. The image processing vehicle detector was modified to detect information useful for signal control, and the signal controller was improved so as to calculate the green times that fit the changing traffic demand. The new signal control system is installed at six main intersections in Phuket City and the system has realized smooth and safe traffic at these intersections.

Phuket type:

In the Phuket type system, traffic signal controller and detectors operated without being connected to the center. Vehicle detectors were also installed near intersections for collecting traffic volume information. It was installed at 40-60 m upstream from the stop line. For the system in Phuket, image processing type detectors were used. A camera unit can be installed at 8-10 m above the road surface and can collect traffic data listed in table 5.3. In the Phuket type system, the camera units are installed on traffic signal poles as shown in Fig 5.7

Table 5.3: Measurement Item in Phuket Type

Measurement Item	**Number of Measurable Lanes**
Traffic Volume / Occupancy	4 lanes
Speed	4 lanes
Vehicle Type (L/S)	4 lanes
Vehicle Presence	4 lanes
Queue Length	2 lanes

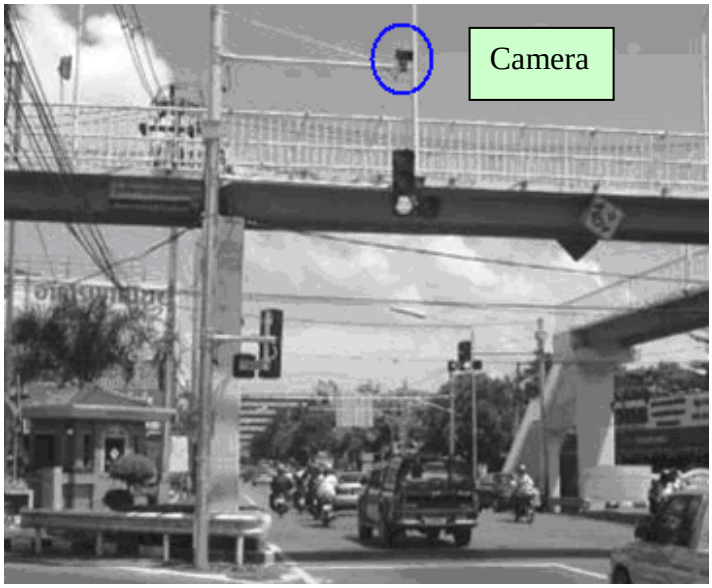

Figure 5.7: Camera Placement in Signal Pole at Phuket Type

Vehicle existence detection

In general, a vehicle passes the stop line every 2 seconds on each lane under congested condition (as shown in Fig. 5.8a). This traffic performance is called saturation flow. In gap-actuated control, the distance between two vehicles is measured and if the distance in seconds is 3-4 seconds, the traffic controller judges that the saturation flow stopped and ends green signal accordingly. The image processing type detectors installed in Phuket can detect vehicle presence lane by lane in a detection area, which is 20-60 m upstream from stop line, by a single camera unit. This leads to the perfect detection of vehicle existence at intersections, and allows accurate termination of green signal time.

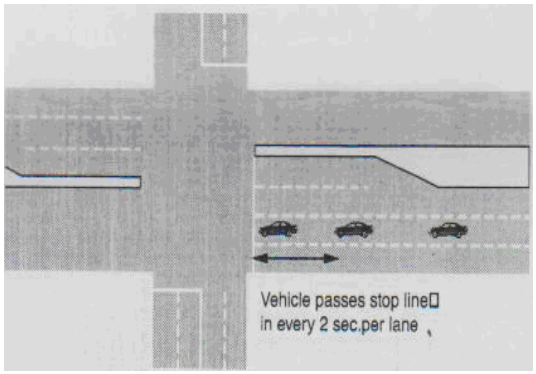

Figure 5.8a: Determination of Saturation Flow

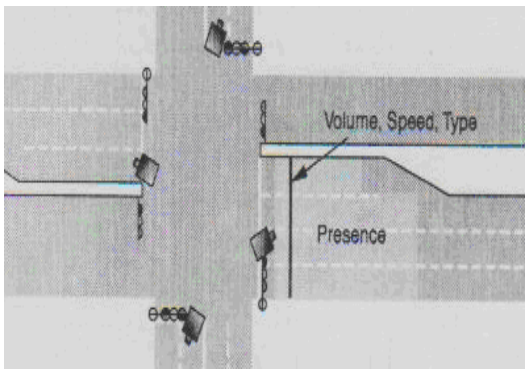

Figure 5.8b: Placing of Image Processing Detector

Cycle length control

In Phuket city, at intersections where no offset control is required since distances between intersections are long, the "cycle-less control" method, which adjusts signal cycle lengths according to the incoming traffic volume of each cycle, was employed.

Offset control

At intersections where the distances between are less than 300 m, offset control is employed to adjust the start time of green signal at each intersection, so that vehicles are able to pass through the intersections with minimum stops. In the Phuket type system, traffic information cannot be administrated collectively via a traffic control center, and signal control will be executed based on preinstalled time-of-day data. The signal controllers in Phuket are equipped with a GPS system to adjust the clock every hour.

The construction of centralized system, however, requires a large amount of time and cost. There is a large difference in adaptability to changes in traffic conditions between the intersections controlled using data and intersections controlled collectively via a control center. To compensate for this difference, the Phuket type system that can adapt to traffic condition changes has been developed.

5.7 Dhaka City:

Dhaka city expanded very rapidly. In Dhaka city traffic situation mix, non motorized vehicles are more and the number of vehicles increases rapidly.

Table 5.4: Vehicle Population in Dhaka City (up to 2009)

SL	Type of Vehicles	Number of Vehicles
1	Motor Car	147283
2	Jeep/St. Wagon/ Microbus	58608
3	Taxi	10682
4	Bus	8210
5	Minibus	8317
6	Truck	30015
7	Auto-rickshaw/ Auto-tempo	14820
8	Motor-Cycle	219443
9	Others	29907
	Total	**527285**

Source: BRTA

In Dhaka City central control is absent. Vehicle actuation is absent and all of the signals are isolated and fixed time. For traffic signal system, traffic flow data, real time data are not taken in Dhaka City. There is no coordinated or area controlled traffic signals in Dhaka Metropolitan Area.

Table 5.5: Comparison of Signal System with Some Cities of Developing Countries

City	Operation agencies	Traffic condition	Signal control System	Central control	Incident management	Special Events
Dhaka	DCC and DMP	Mix	Fixed Time and Manual	No	No	No
Delhi	Delhi traffic police	Motorized	ATCS	Yes	Yes	Yes
Bangalore	Bangalore City traffic police	Motorized	ATCS	Yes	Yes	Yes
Pune	traffic police	Motorized	ATCS	Yes	Yes	Yes
Bandung	-	Motorized	ATCS and VA	Yes	Yes	Yes
Phuket	traffic police	Motorized	Phuket type and centralized traffic control	Yes	Yes	Yes

From table 6.5 it is observed that in most of the cities traffic signal is controlled by traffic police. In Dhaka city timing is controlled by fixed time and manual method, other cities such as Delhi, Bangalore, Pune and Bandung timing is controlled by ATCS system. In Phuket city timing is controlled by Phuket type and centralized traffic control. Timing control at incident, special events is absent in Dhaka City but controlled in Delhi, Bangalore, Pune, Bandung and Phuket city.

.

Table 5.6: The Comparison of Ancillary Devices with Some Cities

City	Preemption/ Priority	CCTV
Dhaka	No	No
Delhi	Yes	Yes
Bangalore	Yes	Yes
Pune	Yes	Yes
Bandung	Yes	Yes
Phuket	Yes	Yes

From table 5.6 it is observed preemption, CCTV are absent in Dhaka City that exists in Delhi, Bangalore, Pune and Phuket city.

5.8 Summary

Traffic congestion is a complex problem in many large cities around the world, including the developing countries. More emphasis is being given recently on the application of advanced technologies. The application of the advanced technology in developing countries is difficult because cities in developing countries face more severe transportation problems than those in developed countries and characterized by specific geometric and traffic local conditions. Though lots of challenges advanced and centralized control system are used in Delhi, Bangalore, Pune, Bandung cities. In Dhaka City fixed time and manual control are used.

CHAPTER 6
RECOMMENDATION AND CONCLUSION

6.1 General

This chapter has presented the study findings and the deficiencies of the traffic signal system in Dhaka City with a comparative view between the signal systems in Dhaka City and some other cities in developing countries. It is expected that this research work would help the city authorities, policy makers, professionals, planners to take appropriate measurements. Various effects due to deficiencies of signal system and recommendations for improving the situation also presented in this chapter.

6.2 Summary of Finding and Effects:

6.2.1 Physical deficiency:

Placement of signal: The placement of signal is wrong at 59% intersections which create confusion for the pedestrians to cross the road at intersections and drivers are facing difficulties as they can not see the signal light properly.

Signal light: The traffic signal light is missing at 11.4% intersections; signal light direction is wrong at 27.1% intersections. This leads to unsafe driving conditions that have an effect on safety of road users.

Signal Controller: Deficiencies of controller cabinet was observed at intersections such as placement is wrong at 10% intersections, corrosion and colorless scenario are at 57%, level of access is restricted at 7% intersections, UPS are absent at 54% intersections. For these reasons accident occurs with the vehicles; sight distance is reduced at intersections, water ingress into the cabinet and terminates the operations, and mechanical protection to the controller equipment is reduced.

Access for maintenance at signals and material fixing/fastening: Access is restricted for the maintenance of signal at 21.4% intersections which affects the maintenance work in these signals. Material fixing/fastening of signals are lose at 9% intersections that reduce the signal life time and operating condition.

Pole and mast arm: Size of mast arm is wrong at 51 % approaches and at 84% intersections. Therefore the conspicuity of a traffic signal is reduced and also a driver's response to the traffic signal changes. Pole and mast arm are Colorless at 54 % intersections, location is wrong at 9% intersections and is tilted at 6% intersections.

Signal head: Signal head mounting (vertical and horizontal) is incorrect at 23% intersections, head direction is wrong at 11 % intersections, mounting of signal head in pole is wrong at 73% intersections, mounting of signal head in mast arm is wrong at 83% intersections. For this reason light angle is changed and many drivers can not see the signal lights clearly which increase the rear-end conflicts and collisions.

Traffic sign and road marking: The traffic sign are very few and marking are inadequate at signalized intersections. Road marking such as stop line is absent at 64% approaches, pedestrian crossing is absent at 68% approaches, lane line is absent at 62% approaches.

Pedestrian signal: Push button at pedestrian signal is found only at 9% intersections. The existing push buttons are not working. Pedestrian signal pole positioning is wrong at 10% intersections, signal head direction is wrong at 43% intersections; head is broken at 39% intersections. Because of these reasons pedestrians confused and misguided to cross the road which is very dangerous and also has no benefit to pedestrians.

Footpath, median and pedestrian refuse at intersections: Footpath is absent at 10% intersections and broken at 61.4 % intersections. For these, pedestrians feel discomfort to use footpath and are forced to walk at intersection. Median is broken at 15 percent intersections. Pedestrian refuge is absent at 44.3% intersections and broken at 18.6% intersections.

Sight distance at intersections: Sight distances at intersections are very poor at signalized intersections such as police box/booth exists at 33% intersections; building/structure exists at 36% intersections etc. Due to lack of sight distance conflicts and angle crashes increase at signalized intersections.

Signal visibility: Traffic signal lights are not visible due to obstruction like as signboard or bill board, trees, electric pole etc. At 45% approaches signals are not visible due to obstructions. Because of obstructions in front of traffic signal lights, drivers can not see the signal lights properly. Therefore conflicts and driver errors are increasing rapidly.

6.2.2. Operational deficiency

Lack of discipline or rules: Lane discipline is absent almost all of the approaches and intersections. Due to lack of lane discipline saturation headway, lost time, effective green time are difficult to measure and is not properly justified. Stop line is violated at 96% intersections; pedestrian crossing is violated at 94% intersections, illegal parking is at 57 % intersections and bus stoppage is at 60% intersections. These are affects on traffic queue dispersion in the green time and increase delay.

Signal light: Signal light is off at 27% intersections, blinking at 7% intersections and signal is not clean at 11% intersections.

Timing control: Traffic police control traffic manually by hand at 47% intersections. Auto signal runs at 53% intersections. Both auto signal and police control by hand at 56% intersections. Timing is provided in controller by police at 87% intersections and by DCC at 13% intersections. Police personnel are in the lack of proper knowledge about traffic engineering, signal timing design and signal system. But they provide and control signal timing manually.

Timing plan: Only one timing plan is operated in whole day at 61 numbers intersections and 7 no. of timing plan is operated at 9 numbers intersections. There is no timing plan provided in controller for special events and weekends.

Improper timing: Maximum green time and cycle time observed too long at intersections. Due to providing too long green time in one approach initial lost time is decreased. But at other approaches large queue is formed, most often queue is spill up and the drivers are frustrated.

All red phases: All red phases are absent at all signalized intersections and also in controller there is no entry for all red phases.

Pedestrian signals: Pedestrian signal head is dirty at 16 % intersections. Pedestrian signal lights are off at 59% intersections. No signal is found at 20% approaches and at 4% intersections. Pedestrian signal face is not clear at 70% intersections. For these pedestrians are confused to cross the road. They cross the road at any time even in green time during the traffic movement. These have an effect on safety and also increase delay.

Preemption: Preemption and incident management are absent in signal system. There is no entry in controller for preemption, special events and incident management.

Signal retiming: Signal retiming is not done timely and do not follow any accepted methodology. For this the timing does not match or satisfy the actual demand.

Maintenance: Maintenance response time for failure repairing is not good and also there is no ability to automatically detect the failure.

Management plans: There is no periodic updating of management plans, strategic plan, objectives and measures, periodic collection and review of performance data that can decrease deficiencies in signal system.

Standards or guides: In Dhaka City for signal operations and maintenance there are no mission statements, concept procedures and guidelines/manuals. Due to absent of guidelines the agency operates and maintains the signal as their wish and has not provided proper planning.

Training: Specialized and professional training are not rendered to the DCC staffs, police personals, contractors and others who maintain the signal. Training provisions are generally inadequate.

Coordination: Lack of regional operations collaboration and coordination activities between transportation and public safety agencies such as DCC, DMP, BRTA, RAJUK etc.

Mode of operation:

Fixed time and manual system are operated in Dhaka City. Flashing of yellow indication option is absent at all intersections.

6.2.3 Comparison:

- Traffic situation in Delhi, Pune and Bangalore as like in Dhaka City and ATCS is implemented in these cities though there are lots of Challenges (such as high mix traffic, traffic do not follow lanes). In Dhaka City signals are fixed time and manual control.
- Deficiencies of TCDs are more in Dhaka City than Delhi City.
- The supplementary devices such as preemptions, CCTV, changeable message sign are observed in Delhi, Pune, Bangalore, Phuket City that are not observed in Dhaka City.
- The image processing type detectors are used in Phuket system. The construction of centralized system requires a large amount of time and cost. There is a large difference in adaptability to changes in traffic conditions between the intersections controlled using data and intersections controlled collectively via a control center. To compensate for this difference, the Phuket type system has been developed in Phuket City.

6.3 Conclusion:

Large numbers of physical and operational deficiencies are observed in traffic signal system in Dhaka city. Physical deficiencies are observed largely in placement of signal, traffic signal light, signal head, size of pole and mast arm, access for maintenance of signal, pedestrian signal and signal visibility that create pedestrians and drivers facing difficulties, increase conflicts and collision, reduce material operating conditions, increase possible traffic hazard, unsafe driving conditions at intersections etc.

The operational deficiencies are mainly observed in signal timing control, retiming, lack of discipline or rules, maintenance of traffic signal, signal timing plan, preemption, traffic control at special events and incidents. Management practices, availability of a mission statement and annual review are absent. Due to these deficiencies signal timing does not match with the actual demand, drivers are frustrated and reduce roadway capacity and so

forth. Ineffective operation, maintenance and monitoring of traffic signals have safety implications and contribute annually to millions of hours of unnecessary traffic delays and congestion. Deficiency of traffic control device causes road traffic violations that have an adverse effect on safety.

The advanced technologies and centralized control system are used in the cities of developing countries like Delhi, Bangalore, Pune, Bandung and Phuket whereas these are not practiced in Dhaka City. To introduce the advanced system for signal in Dhaka City is necessary.

The traffic signal should be operated and maintained appropriately and should follow the standards or manual. The corrective measures should be taken to mitigate deficiencies.

6.4 Recommendation:

Physical deficiency:

1. Traffic signal should be placed at correct location and should follow the standards or manuals. It should be placed one meter ahead from the stop line and behind the pedestrian crossing.
2. The broken signal lights should be repaired immediately. The traffic signal light direction should be corrected and to the flow of traffic stream.

3. The controller unit should be maintained well. Placement of cabinet should be in correct position. At least two level of access should be provided where access is restricted. Cabinet should be colored and corrosion resistant. UPS should be provided at the required controller cabinets. Fault of microprocessor, memory, and lamp control board should be repaired timely to keep the signal operational. Besides the older technology is used in hardware and software that result in various operations and making difficult for technician in the field. Latest technology in hardware and software is needed.

4. Sufficient access should be provided for maintenance of signal. For continuous signal operation and increasing life time the fitting/fixing of signal materials should be kept well.

5. Pole and mast arm location should be placed at correct location. Horizontal and vertical position and sizes of mast arm should be corrected for improving the traffic signal conspicuity and to keep drivers response of traffic signal.

6. Signal heads should be mounted correctly to provide greater visibility. For reducing rear-end conflicts and collisions signal head assemble or placing should be correct and follow standards. Also signal head direction should be towards the traffic stream and mounting should be truly horizontal and vertical.

7. Sufficient numbers of traffic control signs should be provided to guide motorists. Respective persons should take countermeasures such as to provide as required no. of signs, markings at signalized intersections to guide the road users and also to maintain the signal system, reduce delay and hidden violation.

8. Pedestrian signal should be placed correctly so that they are easily visible to pedestrians. Broken pedestrian signal head should be repaired and head direction should be correct. Pedestrian signal push button should be provided as required at intersections and also should be kept workable.

9. Sight distance should be improved by clearing roadside obstructions at intersections such as tree, signboard/billboard, electric pole/ wire, structure, police box /booth etc. Parking and other obstruction should be eliminated from intersections.

10. Approach treatments are required to remove the obstructions such as structure, signboard, tree, cable, electric pole etc in front of signals. These improve signal visibility that will aid drivers in making decisions at the intersections and forewarn them of a signalized intersection.

Operational deficiency:

11. Enforcing the road users to obey the rules is necessary.
12. Signal timing should meet the actual demand and for this reason timing should be provided by traffic engineers.

13. A methodology for determining the number of daily timing plans required as well as weekend and special function timing plans should be utilized. Alternate signal timing plans for incidents or special operations are required. Video or visual—dynamic message boards are programmed to inform motorists of the incident and possible diversion.
14. Traffic signal timing should be provided within the maximum and minimum limits.
15. All Red phase options should be provided in controller during any stage-to-stage change.
16. Pedestrian signal should maintain well and workable to provide safety for the pedestrians and reduce delay.
17. Incident management, preemption should be provided in signals.
18. Signal timing should be reviewed and retimed at 30 to 36 month periods. Signals should be retimed using an accepted methodology.
19. It is necessary to improve the capabilities. Maintenance is required to improve security, safety of traffic signal. Persistent monitoring of the traffic signal system is necessary. Adequate staffing for maintenance of traffic signals should be provided.
20. Management plans should include a mission statement, strategic plan, objectives and measures, periodic collection and review of performance data.
21. It is needed to develop manuals/standards for traffic signal operation and maintenance to assist the agency for effectively operation and maintenance of traffic signal systems.
22. Sufficient training should be required for police persons, DCC staffs, and contractors etc. those who works on the signal system.
23. Regional operations collaboration and coordination activities should increase between transportation and public safety agencies such as DCC, DMP, BRTA, BR etc.
24. Manual mode of operation should be avoided. Flashing yellow indication option should be provided in controller during any change for safety reason. So that driver’s can understand the situation easily.
25. Adequate policies should be taken for signal system. It is needed to consult with stakeholders and formulate countermeasures.
26. In Dhaka City, centralized control system should be implemented by solving the technical problems such as GSM network, modem establishment, equipment fixing

and replacement etc. The Traffic Management Center (TMC) can be established and the staffs for TMC should be deployed and should get sufficient training with hand-on experience. Also TMC should be equipped with wireless traffic communication system, traffic surveillance system, traffic signaling system, traffic help line and traffic planning operations.

Comparison:

27. ATCS can be started as a test basis at some intersections in Dhaka City.
28. Phuket type system can be installed into the congested intersections in Dhaka city at different locations as a test basis.
29. It is needed to install Traffic Surveillance Cameras at signalized intersections to look at the live feeds coming in from the fields such as tolerable queue length, congestion or an accident/incident that has occurred on the field.

6.5 Limitations of the Study:

To fulfill the objectives in this research that was a difficult due to the scarcity of data, manpower, resource and time constrains. The limitations of the study are given below.

1. Some deficiencies of the traffic signal were not measured such as failure rates, level of service, crash rates etc. because of the unavailability and complexity of the data collection.

2. Due to the absent of operation and maintenance guide lines of traffic signal, some deficiency criteria can not be found in signal system.
3. By reason of the frequent power failure at some signalized intersections survey were taken several times for the authentic data.

4. Data collections were difficult at some intersections due to access limitation in traffic signal.
5. Due to lack of documentation most of the data have been collected by survey.

6.6 Recommendations for Future Study

1. The study has been performed with particular emphasis on the identification of physical and operational deficiency of signal system in Dhaka City. Similar studies should be carried out to identify the deficiencies of signal system into other cities.
2. Studies should be carried out such as the implication of the advanced technology for improves the signal system at Dhaka or other cities in the country.
3. Introducing the centralized traffic signal control system in Dhaka City or other cities.
4. Traffic signal light positioning effects on the road users.

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APPENDICES

APPENDIX A

PHYSICAL DEFICIENCY OF TRAFFIC SIGNAL

1. Placement of signal

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Not ok.	Positioning of left side signal is too near the curb in footpath.
			South	Not ok	Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass.
			West	Ok.	
2	12	Kakrail (rajmoni)	North	Ok.	
			South	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	
			East	Ok	
			West	Ok	
3	16	Malibagh	North	Not ok	
			South	Ok	
			East	Ok	
			West	No signal.	
4	17	Rajarbagh	North	Not ok	
			South	Ok	
			East	Ok	
			West	Ok	
5	15	Mouchak	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	
6	27	Malibagh Rail Gate	South	Ok	
			East	Ok	
			West	Not ok	

02. Traffic signal light condition at intersections

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
1	13	BijoyNagar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
2	12	Kakrail (rajmoni)	North	Yes	Wrong	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
3	16	Malibagh	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
			East	No signal			
4	17	Rajarbagh	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
5	15	Mouchak	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
6	27	Malibagh Rail Gate	South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
7	47	Pir Jongi Mazar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
8	06	Fakirapul	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
9	14	Palton (Topkhana)	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Wrong	Ok	
			West	Yes	Ok	Ok	

03. Cabinet condition at intersections

Physical deficiency

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
1	13	BijoyNagar	Yes	Yes	No. One levels of Access	Yes	No	Ok	Ok	Ok
2	12	Kakrail (rajmoni)	Yes	One house is colorless & corroded	Yes	Yes	Yes	Ok	Ok	Ok
3	16	Malibagh	Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
4	17	Rajarbagh	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
5	15	Mouchak	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok
6	27	Malibagh Rail Gate	Yes	No.One house is colorless & corroded	Yes	Yes	No	Ok	Ok	Ok
7	47	Pir Jongi Mazar	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
8	6	Fakirapul	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
9	14	Palton (Topkhana)	No. Positioning is very near to the curve and drain	Yes	No. Temporary shop in front of cabinet..	Yes	No	Ok	Ok	Ok
10	48	Kamalapur Station	Yes	No.One house is broken & corroded .	Yes	Yes	No	Ok	Ok	Ok
11	26	Kamalapur Container	Yes	No.One house is colorless	Yes	Yes	No	Ok	Ok	Ok
12	24	Zero point	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
13	25	Gulistan/Golapshah Mazar	Yes	One house is colorless & corroded	Yes	Yes	No	Ok	Ok	Ok
14	32	Mohakhali	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok

4. Poles and mast arm condition at intersections

Physical deficiency

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
1	13	BijoyNagar	North	Yes	There is no mast arm	Yes	No. In left side pole is too near to the curve.	No. Pole is Not horizontal. Pole is tilted
			South	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
2	12	Kakrail (rajmoni)	North	Yes	No	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
3	16	Malibagh	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	No signal				
			West	Yes	There is no mast arm	Yes	Yes	Ok
4	17	Rajarbagh	North	Yes	No	Yes	No-Pole position is very near to the curve.	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
5	15	Mouchak	North	Yes	No	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
6	27	Malibagh Rail Gate	South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Poles are colorless.	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
7	47	Pir Jongi Mazar	North	Yes	There is no mast arm	Poles are colorless.	Yes	Ok
			South	Yes	There is no mast arm	Yes	No-Pole position is very near to the curve in left side.	Ok
			West	Yes	There is no mast arm	Poles are colorless.	Yes	Ok

5. Material (Fixing/Fastening) and Access for Maintenance of Signal

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
1	13	BijoyNagar	North	No	Yes
			South	Yes	NO- In front & back of signal presence structure
			West	Yes	Yes
2	12	Kakrail (rajmoni)	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
3	16	Malibagh	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
4	17	Rajarbagh	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
5	15	Mouchak	North	Yes	Yes
			South	Yes	Yes
			East	No	No
6	27	Malibagh Rail Gate	South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
7	47	Pir Jongi Mazar	North	Yes	Yes
			South	Yes	Tree is in front of lamp.
			West	Yes	Tree is in front of lamp.

6. Traffic Signal Head Condition at Intersections

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
1	13	BijoyNagar	North	Yes	No	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
2	12	Kakrail (rajmoni)	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
3	16	Malibagh	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	No	Ok	Yes	There is no mast arm
			West	No signal				
4	17	Rajarbagh	North	Yes	Yes	Ok	Wrong	No
			South	Yes	No	Ok	Yes	No
			East	Yes	No	Ok	Yes	There is no mast arm
			West	Yes	No	Ok	Wrong	There is no mast arm
5	15	Mouchak	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	No
6	27	Malibagh Rail Gate	South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
7	47	Pir Jongi Mazar	North	Yes	No	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
8	06	Fakirapul	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	No
9	14	Palton (Topkhana)	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	No	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No

7. Traffic sign at signalized intersection

SL	Inter-section	Appr-oach	No pedestrians (Yes/ No)	No rickshaws (Yes/ No)	No Parking (Yes/ No)	No Stopping (Yes/ No)	No Right Turn (Yes/ No)	No Left Turn (Yes/ No)	No U Turn (Yes/ No)	Turn Left (Yes/ No)	Keep Left (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (Yes/ No)	Special speed limit (Yes/ No)	Round about (Yes/ No)	Traffic signals	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (Yes/ No)	Advanced direction Sign (Yes/ No)
1	BijoyNagar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
2	Kakrail (rajmoni)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
3	Malibagh	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4	Rajarbagh	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Tilting	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
5	Mouchak	North	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
6	Malibagh Rail Gate	South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No
7	Pir Jongi Mazar	North	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		West	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
8	Fakirapul	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
9	Palton (Topkhana)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

08. Traffic marking at signalized intersection

Physical deficiency

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
1	BijoyNagar ID-13	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		West	Yes- Faded	Yes- Faded	Yes- Faded	No	No	No	No	No
2	Kakrail (rajmoni)	North	No	No	No	Yes	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	Yes- Faded	Yes- Faded	No	Yes	No	No	No
		West	Yes- Faded	Yes- Faded	No	No	No	No	No	No
3	Malibagh ID-16	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
4	Rajarbagh ID-17	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
5	Mouchak ID-15	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
6	Malibagh rail gate	South	No	No	No	No	No	No	No	No
		East	yes	yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
7	Pir Jongi Mazar ID-47	North	yes	yes	yes	No	No	No	No	No
		South	yes	yes	yes	No	No	No	No	No
		West	yes	yes	yes	No	No	No	No	No
8	Fakirapul ID-06	North	No	No	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	Yes	No	No	No
		East	Yes	Yes -faded	Yes-faded	No	Yes	No	No	No
		West	Yes	Yes -faded	Yes	No	Yes	No	No	No
9	Palton /(Topkhana) ID-14	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	Yes	Yes -faded	Yes-faded	No	Yes	No	No	No
		West	No	Yes –faded	No	No	No	No	No	No

9. Footpath, median, Pedestrian refuge condition at intersections

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
1	13	BijoyNagar	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
2	12	Kakrail (rajmoni)	North	Yes	Ok	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			East	Yes	Some uni-block missing	Yes	Yes	
			West	No – Left side	Ok	Yes	Yes	
3	16	Malibagh	North	Yes	Broken	Yes	No	
			South	Yes	Some uni-block missing	Yes	Yes	
			East	No	Broken	Yes	No	
			West	Yes	Ok	Yes	No	
4	17	Rajarbagh	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Some uni-block missing	Yes	Yes	
5	15	Mouchak	North	Yes	Ok	Yes	Not applicable	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Broken	Broken	
6	27	Malibagh Rail Gate	South	Yes	Ok	Broken	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
7	47	Pir Jongi Mazar	North	Yes	Broken	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
8	06	Fakirapul	North	Yes	Ok	Yes	Yes	
			South	Yes	undulation	Yes	Yes	
			East	Yes	Some uni-block missing	Yes	Yes	
			West	Yes	Ok	Yes	Yes	

10. Pedestrian signal condition

Physical deficiency

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
1	13	BijoyNagar	North	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
			South	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
2	12	Kakrail (rajmoni)	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Wrong	Ok	
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Yes	
			West	Yes	Yes	No	No	Yes	Ok	Ok	Yes	Ok	Ok	
3	16	Malibagh	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			West	No signal										
4	17	Rajarbagh	North	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	Ok	Ok	Broken	(Two lights are missing)
			South	No signal										
			East	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Yes	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Broken	
5	15	Mouchak	North	No signal										
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
6	27	Malibagh Rail Gate	South	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
			East	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
7	47	Pir Jongi Mazar	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	Head is not visible due to electric pole
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	

11. Sight distance

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
1	BijoyNagar ID-13	North	No	No	No	No	No	
		South	No	No	Yes-Electric pole is in left side.	No	No	Bamboo structure
		West	No	No	Electric pole is in left side.	No	No	
2	Kakrail (rajmoni)	North	No	No	Electric pole is in left side.	Signboard is in left side.	No	
		South	No	No	Yes- Electric pole is in left side.	Yes- Signboard at median	No	
		East	Yes- police box at median	No	No	No	No	
		West	No	No	No	No	No	
3	Malibagh ID-16	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	Yes- police box at median	No	No	Yes	No	
4	Rajarbagh ID-17	North	No	No	No	Yes-Signboard is in left side.	Yes- Tree is in median	
		South	No	No	Yes-Electric pole is in left side.	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
5	Mouchak ID-15	North	No	No	No	Yes	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
6	Malibagh Rail Gate ID-27	South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	

12 Obstructed /poor visibility of signal light:

Physical deficiency

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
1	BijoyNagar ID-13	North	Yes	No	No	No	No	No	
		South	Yes	No	No	Yes- at median	No	No	
		West	Yes	No	No	Yes at median	No	No	
2	Kakrail (rajmoni)	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	Yes at island	Tree in front of signal at island	No	No	
		West	Yes	No	No	Yes	No	No	
3	Malibagh ID-16	North	No	No	No	Tree in front of signal at median	No	Yes- left side	
		South	Yes	No	No	Tree in front of signal at median	No	No	
		East	Yes	No	No	No	No	No	
		West	No signal						
4	Rajarbagh ID-17	North	No	No	Traffic sign is in front of signal.	No	No	No	
		South	No	No	Traffic sign is in front of signal.	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
5	Mouchak ID-15	North	No	No	No	No	No	Yeas	
		South	No	No	No	Tree in front of signal	No	Cable is in front of signal in left side.	
		East	No	No	No	Tree in front of signal in left side	No	No	

APPENDIX B

OPERATIONAL DEFICIENCY OF TRAFFIC SIGNAL

01. Poor lane discipline at intersections:

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Mix	No	
			South	Mix	No	
			West	Mix	No	
2	12	Kakrail (rajmoni)	North	Motorized	Yes	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
3	16	Malibagh	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
4	17	Rajarbagh	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
5	15	Mouchak	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
6	27	Malibagh Rail Gate	South	Mix	No	
			East	Mix	No	
			West	Mix	No	
7	47	Pir Jongi Mazar	North	Mix	No	
			South	Mix	No	
			West	Mix	No	
8	06	Fakirapul	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
9	14	Palton (Topkhana)	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	

2. Lack of discipline/rules :

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	Stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	No	
2	12	Kakrail (rajmoni)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
3	16	Malibagh	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
4	17	Rajarbagh	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
5	15	Mouchak	North	Follow	No	Yes	
			South	Follow	Yes	Yes	
			East	Follow	No	Yes	
6	27	Malibagh Rail Gate	East	Follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
			North	Do Not follow	Yes	No	
7	47	Pir Jongi Mazar	North	Do Not follow	Yes	No	
			South	Do Not follow	Yes	NO	
			West	Do Not follow	No	No	
8	06	Fakirapul	North	Follow	Yes	Yes	
			South	follow	No	No	
			East	follow	Yes	No	
			West	follow	No	No	

3. Illegal parking and bus stoppage at signalized intersections

Operational deficiency

SL	ID	Intersection	Illegal parking (Yes/No)	bus stoppage in signalized intersections (Yes/No)	Others
1	13	Bijoy Nagar (Night Angel),	Yes	Yes	
2	12	Kakrail (rajmoni),	Yes	Yes	
3	16	Malibagh,	Yes	Yes	
4	17	Rajarbagh,	Yes	Yes	
5	15	Mouchak	Yes	Yes	
6	27	Malibagh Rail Gate	Yes	Yes	
7	47	Pir Jongi Mazar	Yes	Yes	
8	6	Fakirapul	Yes	Yes	
9	14	Palton /(Topkhana)	Yes	Yes	
10	48	Kamalapur Station	Yes	Yes	
11	26	Kamalapur Container	No	No	
12	24	Zero point	Yes	Yes	
13	25	Gulistan	Yes	Yes	
14	32	Mohakhali Railcrossing	Yes	Yes	
15	35	Chairman Bari	No	No	
16	34	Bonani Kakoli	No	Yes	
17	31	Mohakhli Amtoli	No	No	
18	42	Firmgate	No	Yes	
19	38	Bijoy Sarani	No	No	
20	60	PM Office	No	No	
21	36	Jahangir Gate	No	No	
22	30	Moghbazar	Yes	Yes	
23	05	Mirpur-1	Yes	Yes	
24	03	Darussalam(TTC)	No	Yes	
25	04	Mirpur Mazar	Yes	Yes	
26	54	Dhanmondi Road 10	No	Yes	
27	53	Dhanmondi Road .6&7	No	No	
28	22	Science Lab.	Yes	Yes	
29	18	New Market	Yes	Yes	
30	33	Azimpur	Yes	No	
31	59	Palashi	Yes	No	
32	39	Agargaon	No	Yes	

4. Signal lamp / light condition at intersectios

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
1	13	Bijoy Nagar (Night Angel)	North	On (right arrow light is off)	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
2	12	Kakrail (rajmoni)	North	Off (All lights are off)	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
3	16	Malibagh	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	No signal		
4	17	Rajarbagh	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
5	15	Mouchak	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
6	27	Malibagh Rail Gate	South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
7	47	Pir Jongi Mazar	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
8	06	Fakirapul	North	On (One Light is off)	Ok	Ok
			South	On (2 Lights are off)	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
9	14	Palton /(Topkhana)	North	On (1 Light is off)	Ok	Ok
			South	On (2 Lights are off)	Ok	Ok
			East	On	Ok	Ok
			West	On	(Amber light is blinking.)	Ok

4. Police Control signal at intersections

Sl	ID	Intersection	No. of police	Maintaining [manually by hand / Auto signal	Timing control (Police/DCC)	both auto signal and police control by hand (Yes/No)	Remarks
01	13	Bijoy Nagar (Night Angle)	03	By hand	Police	No	
02	12	Kakrail (rajmoni)	04	By hand	Police	No	
03	16	Malibagh	04	By hand	Police	No	
04	17	Rajarbagh	03	By hand	Police	No	
05	15	Mouchak	03	By hand	Police	Yes	
06	27	Malibagh Rail Gate	04	Auto	Police	Yes	
07	47	Pir Jongi Mazar	02	Auto	Police	Yes	
08	06	Fakirapul	04	Auto	Police	Yes	
09	14	Palton (Topkhana)	04	By hand	Police	No	
10	48	Kamalapur Station	02	By hand	Police	No	
11	26	Kamalapur Container	03	By hand	Police	No	
12	24	Zero point	04	By hand	Police	Yes	
13	25	Gulistan/Golapshah Mazar	04	By hand	Police	No	
14	32	Mohakhali Rail crossing	4	By hand	Police	No	
15	35	Chairman Bari	2	By hand	Police	Yes	
16	34	Bonani Kakoli	2	By hand	Police	No	
17	31	Mohakhli Amtoli	4	Auto	Police	No	
18	42	Firmgate	3	Auto	Police	No	
19	38	Bijoy Sarani	4	Auto	Police	Yes	
20	60	PM Office	3	By hand	Police	Yes	
21	36	Jahangir Gate	3	Auto	Police	No	
22	30	Moghbazar	4	Auto	Police	Yes	
23	05	Mirpur-1	2	By hand	Police	No	

5. Preemption / Priority

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
2	12	Kakrail (rajmoni)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
3	16	Malibagh	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
4	17	Rajarbagh	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
5	15	Mouchak	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
6	27	Malibagh Rail Gate	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
7	47	Pir Jongi Mazar	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
8	06	Fakirapul	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	

7. Signal mode

Sl	ID	Intersection	Flashing amber mode (Yes/No)	All red phases (Yes/No)
1	13	Bijoy Nagar (Night Angel)	No	No
2	12	Kakrail (rajmoni)	No	No
3	16	Malibagh	No	No
4	17	Rajarbagh	No	No
5	15	Mouchak	No	No
6	27	Malibagh Rail Gate	No	No
7	47	Pir Jongi Mazar	No	No
8	6	Fakirapul	No	No
9	14	Palton /(Topkhana)	No	No
10	48	Kamalapur Station	No	No
11	26	Kamalapur Container	No	No
12		Zero point	No	No
13	25	Gulistan	No	No
14	32	Mohakhali Railcrossing	No	No
15	35	Chairman Bari	No	No
16	34	Bonani Kakoli	No	No
17	31	Mohakhli Amtoli	No	No
18	42	Firmgate	No	No
19	38	Bijoy Sarani	No	No
20	60	PM Office	No	No
21	36	Jahangir Gate	No	No
22	30	Moghbazar	No	No
23	05	Mirpur-1	No	No
24	03	Darussalam(TTC)	No	No
25	04	Mirpur Mazar	No	No
26	54	Dhanmondi Road 10	No	No
27	53	Dhanmondi Road .6&7	No	No
28	22	Science Lab.	No	No
29	18	New Market	No	No
30	33	Azimpur	No	No
31	59	Palashi	No	No
32	39	Agargaon	No	No
33	41	Khamar Bari	No	No

8. Pedestrian Signal

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
1	Bijoy Nagar (Night Angel)	North	Off	Yes	Dirty	
		South	No signal			
		West	On	Signal indication is unclear	Ok	
2	Kakrail (rajmoni)	North	Off	Signal indication is unclear	Ok	
		South	No signal			Foot over bridge
		East	On	Yes	Ok	
		West	On	Signal indication is unclear	Ok	
3	Malibagh	North	Off	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	Off	Yes	Ok	
		West	No signal			
4	Rajarbagh	North	Off	Signal indication is unclear	Dirty	
		South	No signal			
		East	Off	Signal indication is unclear	Dirty	
		West	Off	Signal indication is unclear	Ok	
5	Mouchak	North	No signal			Foot over bridge
		South	No signal			
		East	On	Signal indication is unclear	Ok	
6	Malibagh Rail Gate	South	On	Yes	Ok	
		East	No signal			
		West	On	Signal indication is unclear	Ok	
7	Pir Jongi Mazar	North	On	Signal indication is unclear	Ok	
		South	Off	Yes	Ok	No lights are found.
		West	Off	Yes	Ok	
8	Fakirapul	North	Off	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	Off	Signal indication is unclear	Ok	
		West	Off	Signal indication is unclear	Ok	
9	Palton /(Topkhana)	North	On	Yes	Ok	
		South	Off	face Not clear	Ok	
		East	Off	face Not clear	Ok	
		West	Off	face Not clear	Ok	

APPENDIX C

Different pictures of signal

Figure 1: Tree is in front of Signal in Shapla Chattar Intersection.

Figure 2: Signal Head Broken in Bata crossing intersection.

Figure 3: Tree is in front of Signal in Dhanmondi Road 10 Intersection.

Figure 4: Signal Head Broken and not vertical in Gulistan/Golapshah Mazar

Figure 5: Signal Head Broken in Ittefaq Intersection

Figure 6: One Controller Cabinet is Colorless in Curzon Hall Intersection.

Figure 7: Pedestrian Signal Light is Off in Tejgaon Rangs Link Road Intersection.

Figure 8: Broken Footpath in Tejgaon Rangs Link Road Intersection.

Figure 9: Signal Light Off in Bijoy Shoroni Aeroplane Intersection

Figure 10: Signal Light is not Visible at Mast Arm in Zero point Intersection

Figure 11: Traffic Signal in Bijoy Shoroni Intersection

Figure 12: Tree in Front of Signal Light in Katabone Intersection

Figure 13: Tree in Front of Signal Light in Newmarket Intersection

Figure 14: Signal Light Broken in Shahbagh Intersection

Figure 15 : Hand indication of Police at Shamoli Cinema Hall Intersection

Figure16: Wrong Placement of Signal at Hotel Sheraton Interspersion

Figure 17: One Cabinet House is Colorless at Dhanmondi 10 Intersection

Figure 18: Broken Foothpath in ShishuMela Intersection

Figure 19: One Cabinet House is Colorless at Gulshan- 2 Intersection

Figure 20: Pedestrian Signal Head Condition in Gulshan- 2 Intersection

Figure 21: Vehicle Stops Inside the Manikmia Avenue Intersection

Figure 22: No Marking in Manikmia Avenue

Figure 23: Pedestrian Crossing and Stop line Violation in Green Road (Panthpath)

Figure 24: Tree in front of signal in Green Road (Panthpath)

APPENDIX A

PHYSICAL DEFICIENCY OF TRAFFIC SIGNAL

1. Placement of signal

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Not ok.	Positioning of left side signal is too near the curb in footpath.
			South	Not ok	Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass.
			West	Ok.	
2	12	Kakrail (rajmoni)	North	Ok.	
			South	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	
			East	Ok	
			West	Ok	
3	16	Malibagh	North	Not ok	
			South	Ok	
			East	Ok	
			West	No signal.	
4	17	Rajarbagh	North	Not ok	
			South	Ok	
			East	Ok	
			West	Ok	
5	15	Mouchak	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	
6	27	Malibagh Rail Gate	South	Ok	
			East	Ok	
			West	Not ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
7	47	Pir Jongi Mazar	North	Ok (The primary signal is only in left side).	In median there is no signal.
			South	Ok	
			West	Ok	
8	06	Fakirapul	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
9	14	Palton (Topkhana)	North	Ok	
			South	Not ok	
			East	Ok	
			West	Ok	
10	48	Kamalapur Station	North	Ok	
			South	There is no primary signal.	
			West	Ok	
11	26	Kamalapur Container	North	Ok	
			South	Ok	
			West	Ok	
12	24	Zero point	North	Not ok	It is not compliant according to the manual
			South	Not ok	It is not compliant according to the manual
			East	Not ok	It is not compliant according to the manual
			West	Not ok	It is not compliant according to the manual
13	25	Gulistan	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
14	32	Mohakhali	North	Ok	
			South	Ok	
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
15	35	Chairman Bari	North	Ok	
			South	Not ok	
			East	Ok	
16	34	Bonani Kakoli	North	Not ok (There is No pedestrian crossing facility in North approach).	
			South	Ok	
			East	Not ok	
			West	Not ok	
17	31	Mohakhli Amtoli	North	Ok	
			South	Ok	
			East	Ok	
18	42	Firmgate	North	Ok	
			South	Ok	
			West	Ok	
19	38	Bijoy Sarani	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
20	60	PM Office	North	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	
			South	Ok	
			West	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	
21	36	Jahangir Gate	North	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	
			South	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is No Primary signal at left side in North approach.
			East	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is No Primary signal in North approach.
22	30	Moghbazar	North	Ok	It is not compliant according to the manual
			South	Ok	It is not compliant according to the manual
			East	Ok	
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
23	05	Mirpur-1	South	Ok	
			East	Ok	
			West	Ok	
24	03	Darussalam (TTC)	North	Ok	
			South	Ok	
			East	Ok	
25	04	Mirpur Mazar	North	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	It is not compliant according to the manual
			South	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	It is not compliant according to the manual
			East	Not ok (Primary signal existed in the median is set in front of the pedestrian crossing which became barrier to trespass).	It is not compliant according to the manual
26	54	Dhanmondi Road 10	North	Ok	
			South	Ok	
			East	Not ok	
			West	Not ok	
27	53	Dhanmondi Road .6&7	North	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is no pedestrian crossing facility in North approach.
			South	Ok	
			East	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is No pedestrian crossing facility.
			West	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is no pedestrian crossing facility.
28	22	Science Lab.	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
29	18	New Market	North	Ok	
			South	Ok	
			East	Ok	
			West	Not ok. The Primary signal is positioned 4(four) meter ahead of the stop line	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
30	33	Azimpur	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
31	59	Palashi	Nilkhet	Ok	
			Chankharpul	Ok (in left side)	In median there is no primary signal
			Dhaka medical	Ok (in left side), in median there is no primary signal	
			Azimpur	Not ok	It is not compliant according to the manual
			Dhakessori	Not ok (in left side), in median there is no primary signal	It is not compliant according to the manual
32	39	Agargaon	North	Not ok (The Primary signal is positioned one meter behind from stop line)	
			South	Ok (in median)	there is No signal in left side
			East	Not ok	It is Not compliant according to the manual
			West	Ok	
33	41	Khamar Bari	North	Ok	
			East (Khamar Bari)	Not ok (Primary signal is set in front of the pedestrian crossing which became barrier to trespass).	There is No Pedestrian crossing facilities
			East (firmgate)	Ok	
			West	Ok	
34	40	Bijoy Sarani (Aeroplane)	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
35	37	Parliament Intersection	North	Ok	
			East	Ok	
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
36	43	Hotel Sonargaon	North	Not ok	It is not compliant according to the manual
			South	Ok	
			East	Not ok	It is not compliant according to the manual
			West	Ok	
			Hatirpool	Ok	
37	21	Bangla motor	North	Ok	
			South	Ok	
			East	Ok	
			West	Not ok	
38	19	Hotel Sheraton	North	Not ok. The signal is positioned 2(two) meter ahead of the stop line.	
			South	Ok	
			East	Ok	
39	44	Shahbagh	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
40	07	Katabone	North	Ok	
			South	Ok (In median)	in left side there is no signal
			East	Not ok	
			West	Ok	
41	56	Bata crossing	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
42	45	Matshaw Bhaban	North	Ok	
			South	Not ok	Have No pedestrian crossing facility
			East	Ok	
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
43	10	KadamChattar	North	Ok	
			South	Ok	
			East	Ok	
44	46	Curzon Hall	North	Ok	
			South	Not ok (In left side signal placement is 4 meter ahead from stop line).	
			East	Ok	
			West	Not ok. Signal placement is 0.3 meter ahead from stop line.	
45	02	Basundhara Intersection	North	Ok	
			South	Ok	
			East	Ok (in median)	In left side there is no signal
46	01	Mojub Avenue (Natun Bazar) Intersection	North	Ok	
			South	Ok	
			East	Not ok .The signal is positioned 5(five) meter ahead of the stop line.	In left side there is no signal
			West	Ok (in left side).	There is no signal head in mast arm at median.
47	57	Gulshan- 1 Intersection	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
48	58	Gulshan- 2 Intersection	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
49	28	Nabisco Intersection	North	Ok	
			South	Not ok	There is no pedestrian crossing facility
			East	Not ok	
50	29	Tongi Diversion Intersection	North	Not ok..	There is no pedestrian crossing facility
			South	Not ok The signal is positioned 0.2 meter ahead of the stop line.	
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
51	55	Shanti Nagar Intersection	North	Not ok	
			South	Ok	
			East	Ok	
			West	Not ok. The signal is positioned 4 meter ahead of the stop line.	
52	20	Kakrail Mosque Intersection	North	Ok	
			South	Ok	
			East	Ok	
53	57	Gulistan Square Intersection	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Ok	
			West	Ok	
54	50	Zahir Raihan Intersection	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Ok	
			West	No signal	
55	51	Bangshal Road Intersection	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Ok	
			West	No signal	
56	52	Sadarghat Road Intersection	North	Not ok (The signal is positioned 4 meter ahead of the stop line).	
			South	Ok	
			East	Ok	
			West	Ok	
57	08	Dholaikhal Intersection	North	Ok	
			South	Ok	
			East	Not ok	It is not compliant according to the manual
			West	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
58	11	English Road Intersection	North	Ok	
			South	Ok	
			East	Ok (in left side)	There is no signal in median
			West	Ok	
59	09	Shapla Chattar Intersection	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
60	23	Ittefaq Intersection	South	There is no signal.	One way
			East	Not ok	It is not compliant according to the manual
			West	Ok	
61	61	Tejgaon Rangs Link Road Intersection	North	Ok	
			South	Not ok. The signal is positioned 0.3 meter ahead of the stop line.	
			East	Ok	
			West	Ok (in median)	No primary signal in left side
62	62	Green Road (Panthpath)	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
63	63	Rassel Square	North	Ok	
			South	Not ok	It is not compliant according to the manual
			East	Not ok- The signal is positioned 4 meter ahead of the stop line.	
64	64	Dhanmondi-27	North	Not ok	
			South	Ok	
			West	Ok	
65	65	Manik Mia Avenue	North	Ok	
			South	Ok	
			East	Ok	

SL	ID	Intersection Name	Approach	signal Position (ok/ Not ok)	Remarks
66	66	Asad Gate	North	Not ok	
			South	Ok	
			East	Ok	
			West	Ok	
67	67	Mohammadpur Thana Crossing	North	Ok	
			South	Ok	
			East	Ok	
			West	Ok	
68	68	College Gate (Sohrawardi hospital)	North	Not ok	(There is no pedestrian crossing facility)
			South	Ok	
			West	Ok	
69	69	ShishuMela	North	Ok	
			South	Ok	
			East	Ok	
70	70	Shamoli Cinema Hall	North	Not ok	It is not compliant according to the manual
			South	Ok	
			West	Ok	

02. Traffic signal light condition at intersections

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
1	13	BijoyNagar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
2	12	Kakrail (rajmoni)	North	Yes	Wrong	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
3	16	Malibagh	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
			East	No signal			
4	17	Rajarbagh	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
5	15	Mouchak	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
6	27	Malibagh Rail Gate	South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
7	47	Pir Jongi Mazar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
8	06	Fakirapul	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
9	14	Palton (Topkhana)	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Wrong	Ok	
			West	Yes	Ok	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
10	48	Kamalapur Station	North	Yes	Wrong	Ok	
			South	No signal			
			West	Yes	Ok	Ok	
11	26	Kamalapur Container	North	Yes	Wrong	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
12	24	Zero point	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
13	25	Gulistan	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
14	32	Mohakhali	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Wrong- in right side	Ok	
15	35	Chairman Bari	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
16	34	Bonani Kakoli	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
17	31	Mohakhli Amtoli	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Wrong- in left side	Ok	
18	42	Firmgate	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
19	38	Bijoy Sarani	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
20	60	PM Office	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
21	36	Jahangir Gate	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
22	30	Moghbazar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
23	05	Mirpur-1	South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
24	03	Darussalam (TTC)	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
25	04	Mirpur Mazar	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
26	54	Dhanmondi Road 10	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
27	53	Dhanmondi Road .6&7	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
28	22	Science Lab.	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	wrong	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
29	**18**	**New Market**	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
30	**33**	**Azimpur**	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	Ok	
31	**59**	**Palashi**	Nilkhet	Yes	Ok	Ok	
			Chankharpul	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			Azimpur	Yes	Ok	Ok	
			Dhakessori	Yes	Ok	Ok	
32	**39**	**Agargaon**	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
33	**41**	**Khamar Bari**	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			Firmgate	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
34	**40**	**Bijoy Sarani(Aeroplane)**	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	One light missing	
35	**37**	**Parliament Intersection**	North	Yes	Yes	Ok	
			East	Yes	Direction wrong	Ok	
			West	Yes	Yes	One light missing	
36	**43**	**Hotel Sonargaon**	North	Yes	Yes	Ok	
			Hatirpool	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
37	21	Bangla motor	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
38	19	Hotel Sheraton	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
39	44	Shahbagh	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
40	07	Katabone	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
41	56	Bata crossing	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
42	45	Matshaw Bhaban	North	Yes	direction wrong	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
43	10	KadamChattar	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
44	46	Curzon Hall	North	Yes	Yes	Ok	
			South	Yes	direction wrong	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
45	02	Basundhara Intersection	North	Yes	Yes	Ok	
			South	Yes	direction wrong	Ok	
			East	Yes	Yes	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
46	01	Mojub Avenue (Natun Bazar) Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Broken	
			West	Yes	Yes	Ok	
47	57	Gulshan- 1 Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
48	58	Gulshan- 2 Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
49	28	Nabisco Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	direction wrong-in left side	Ok	
50	29	Tongi Diversion Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
51	55	Shanti Nagar Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	direction wrong	Ok	
			West	Yes	Yes	Ok	
52	20	Kakrail Mosque Intersection	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
53	57	Gulistan Square Intersection	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Ok	Ok	
			West	Yes	Ok	One light is missing	
54	50	Zahir Raihan Intersection	North	Yes	Ok	One light is missing	
			South	Yes	Ok	One light is missing	
			East	Yes	Direction wrong	Ok	
			West	Yes	Yes	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
55	51	Bangshal Road Intersection	North	Yes	Ok	Ok	
			South	Yes	Ok	Ok	
			East	Yes	Direction wrong	Ok	
			West	No signal			
56	52	Sadarghat Road Intersection	North	Yes	Direction wrong	Yes	
			South	Yes	Ok	5 lights are missing in left side & 3 lights are missing in median	
			East	Yes	Ok	One light is missing	
			West	Yes	Direction wrong	One light is missing	
57	08	Dholaikhal Intersection	North	Yes	Ok	One light is missing	
			South	Yes	Ok	Ok	
			East	Yes	Ok	One light is missing	
			West	Yes	Ok	Ok	
58	11	English Road Intersection	North	Yes	Direction wrong	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Direction wrong	Ok	
59	09	Shapla Chattar Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
60	23	Ittefaq Intersection	South	No signal			
			East	Yes	Direction wrong	In left side 1(one) light is missing	
			West	Yes	Direction wrong	Ok	
61	61	Tejgaon Rangs Link Road Intersection	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
62	62	Green Road (Panthpath)	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	

SL	ID	Intersections	Approach	Light size [200-300mm dia] (Yes/No)	Light facing/direction (Ok/wrong)	Light Broken/missing (Ok/ Broken/missing)	Remarks
63	63	Rassel Square	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
64	64	Dhanmondi-27	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
65	65	Manik Mia Avenue	North	Yes	Yes	Ok	
			South	Yes	Direction wrong	Ok	
			East	Yes	Yes	Ok	
66	66	Asad Gate	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
67	67	Mohammadpur Thana Crossing	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
68	68	College Gate (Sohrawardi hospital)	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			West	Yes	Yes	Ok	
69	69	ShishuMela	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			East	Yes	Yes	Ok	
70	70	Shamoli Cinema Hall	North	Yes	Yes	Ok	
			South	Yes	Yes	Ok	
			West	Yes	Yes	Ok	

03. Cabinet condition at intersections

Physical deficiency

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
1	13	BijoyNagar	Yes	Yes	No. One levels of Access	Yes	No	Ok	Ok	Ok
2	12	Kakrail (rajmoni)	Yes	One house is colorless & corroded	Yes	Yes	Yes	Ok	Ok	Ok
3	16	Malibagh	Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
4	17	Rajarbagh	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
5	15	Mouchak	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok
6	27	Malibagh Rail Gate	Yes	No.One house is colorless & corroded	Yes	Yes	No	Ok	Ok	Ok
7	47	Pir Jongi Mazar	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
8	6	Fakirapul	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
9	14	Palton (Topkhana)	No. Positioning is very near to the curve and drain	Yes	No. Temporary shop in front of cabinet..	Yes	No	Ok	Ok	Ok
10	48	Kamalapur Station	Yes	No.One house is broken & corroded .	Yes	Yes	No	Ok	Ok	Ok
11	26	Kamalapur Container	Yes	No.One house is colorless	Yes	Yes	No	Ok	Ok	Ok
12	24	Zero point	No. Positioning is very near to the curve and drain	Yes	Yes	Yes	No	Ok	Ok	Ok
13	25	Gulistan/Golapshah Mazar	Yes	One house is colorless & corroded	Yes	Yes	No	Ok	Ok	Ok
14	32	Mohakhali	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
15	35	Chairman Bari	Yes	No . One house is colorless.	Yes	Yes	No	Ok	Ok	Ok
16	34	Bonani Kakoli	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
17	31	Mohakhli Amtoli	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
18	42	Firmgate	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
19	38	Bijoy Sarani	Yes	No. One house is colorless & broken.	Yes	Yes	Yes	Ok	Ok	Ok
20	60	PM Office	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
21	36	Jahangir Gate	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
22	30	Moghbazar	Yes	Yes	No. Only one level of access	Yes	No	Ok	Ok	Ok
23	05	Mirpur-1	Yes	No. one house is colorless.	Yes	Yes	No	Ok	Ok	Ok
24	03	Darussalam(TTC)	Yes	No. one house is colorless.	Yes	Yes	No	Ok	Ok	Ok
25	04	Mirpur Mazar	Yes	No. one house is corroded & broken .	Yes	Yes	No	Ok	Ok	Ok
26	54	Dhanmondi Road 10	Yes	No. one house is colorless.	No	Yes	Yes	Ok	Ok	Ok
27	53	Dhanmondi Road .6&7	Yes	No. two houses are corroded	No	Yes	No	Ok	Ok	Ok
28	22	Science Lab.	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
29	18	New Market	Yes	No. one house is colorless	Yes	Yes	Yes	Ok	Ok	Ok
30	33	Azimpur	No. Positioning is Very near to the curve.	No. one house is colorless & corroded.	Yes	Yes	No	Ok	Ok	Ok
31	59	Palashi	Yes	No. one house is corroded.	Yes	Yes	No	Ok	Ok	Ok
32	39	Agargaon	Yes	No. one house is colorless	Yes	Yes	No	Ok	Ok	Ok
33	41	Khamar Bari	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok
34	40	Bijoy Sarani(Aeroplane)	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
35	37	Parliament Intersection	Yes	No. one house is corroded	No. Tree in front of cabinet	Yes	No	Ok	Ok	Ok
36	43	Hotel Sonargaon	Yes	No. One house corroded	Yes	Yes	Yes	Ok	Ok	Ok
37	21	Bangla motor	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
38	19	Hotel Sheraton	Yes	No. One house is corroded	Yes	Yes	Yes	Ok	Ok	Ok
39	44	Shahbagh	Yes	No. One house is corroded.	Yes	Yes	Yes	Ok	Ok	Ok
40	07	Katabone	No. Position is Very near to the curve and drain	No. one house is corroded	Yes	Yes	No	Ok	Ok	Ok
41	56	Bata crossing	Yes	No. One house colorless & corroded	No	Yes	No	Ok	Ok	Ok
42	45	Matshaw Bhaban	Yes	No. one house is corroded	Yes	Yes	Yes	Ok	Ok	Ok

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
43	10	KadamChattar	Yes	No. two house s are corroded & colorless.	Yes	Yes	Yes	Ok	Ok	Ok
44	46	Curzon Hall	Yes	one house is colorless and corroded .	Yes	Yes	Yes	Ok	Ok	Ok
45	02	Basundhara Intersection	Yes	No. One house is corroded & broken .	Yes	Yes	No	Ok	Ok	Ok
46	01	Mojub Avenue (Natun Bazar) Intersection	Yes	No. One house is colorless.	Yes	Yes	No	Ok	Ok	Ok
47	57	Gulshan- 1 Intersection	Yes	No. 1 house is corroded	Yes	Yes	Yes	Ok	Ok	Ok
48	58	Gulshan- 2 Intersection	Yes	No. 1 house is corroded	Yes	Yes	Yes	Ok	Ok	Ok
49	28	Nabisco Intersection	Yes	No. One house is corroded	Yes	Yes	No	Ok	Ok	Ok
50	29	Tongi Diversion Intersection	Yes	No. One house rusty	Yes	Yes	No	Ok	Ok	Ok
51	55	Shanti Nagar Intersection	Yes	No. Two house rusty	One level of access	Yes	No	Ok	Ok	Ok
52	20	Kakrail Mosque Intersection	Yes	No. One house is corroded .	Yes	Yes	No	Ok	Ok	Ok
53	57	Gulistan Square Intersection	Yes	Yes	Yes	Yes	No	Ok	Ok	Ok
54	50	Zahir Raihan Intersection	Yes	No. One house is colorless and corroded.	Yes	Yes	No	Fault	Fault	Fault
55	51	Bangshal Road Intersection	Yes	Yes	Yes	Yes	Yes	Fault	Fault	Fault
56	52	Sadarghat Road Intersection	Yes	Yes.	Yes	Yes	No	Fault	Fault	Fault

SL	ID	Intersections	Placement of cabinet (Yes/ No)	Colors and corrosion resistance , Condition (Yes/ No)	level of Access (Yes / No)	Ventilation (Yes / No)	UPS (Yes / No)	Microprocessor (OK/Fault)	Memory (OK/Fault)	Lamp control board (OK/Fault)
57	08	Dholaikhal Intersection	Yes	No. One house is colorless and corroded .	Yes	Yes	No	Fault	Fault	Fault
58	11	English Road Intersection	Yes	No. One house is colorlesss and corroded.	Yes	Yes	No	Fault	Fault	Fault
59	09	Shapla Chattar Intersection	Yes	No. One house rusty	Yes	Yes	Yes	Ok	Ok	Ok
60	23	Ittefaq Intersection	Yes	No. One house is colorless	Yes	Yes	Yes	Ok	Ok	Ok
61	61	Tejgaon Rangs Link Road Intersection	Yes	No. One house is corroded	Yes	Yes	Yes	Ok	Ok	Ok
62	62	Green Road (Panthpath)	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
63	63	Rassel Square	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
64	64	Dhanmondi-27	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
65	65	Manik Mia Avenue	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
66	66	Asad Gate	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
67	67	Mohammadpur Thana Crossing	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
68	68	College Gate (Sohrawardi hospital)	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
69	69	ShishuMela	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Ok
70	70	Shamoli Cinema Hall	Yes	No. One house is corroded.	Yes	Yes	Yes	Ok	Ok	Ok

4. Poles and mast arm condition at intersections

Physical deficiency

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
1	13	BijoyNagar	North	Yes	There is no mast arm	Yes	No. In left side pole is too near to the curve.	No. Pole is Not horizontal. Pole is tilted
			South	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
2	12	Kakrail (rajmoni)	North	Yes	No	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
3	16	Malibagh	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	No signal				
			West	Yes	There is no mast arm	Yes	Yes	Ok
4	17	Rajarbagh	North	Yes	No	Yes	No-Pole position is very near to the curve.	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
5	15	Mouchak	North	Yes	No	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
6	27	Malibagh Rail Gate	South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Poles are colorless.	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
7	47	Pir Jongi Mazar	North	Yes	There is no mast arm	Poles are colorless.	Yes	Ok
			South	Yes	There is no mast arm	Yes	No-Pole position is very near to the curve in left side.	Ok
			West	Yes	There is no mast arm	Poles are colorless.	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
8	06	Fakirapul	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
9	14	Palton (Topkhana)	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	Mast arm is corroded	Yes	tilted
10	48	Kamalapur Station	North	Yes	No	Mast arm is colorless.	No-Pole position is very near to the curve in left side.	Ok
			South	No Signal				
			West	Yes	There is no mast arm	Yes	Yes	No. tilted.
11	26	Kamalapur Container	North	Yes	No	Yes	No-Pole position is very near to the curve in left side.	Ok
			South	Yes	No	No. Mast arm is colorless and rusty.	No- very near to the curve	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
12		Zero point	North	Yes	No	No. Mast arm is colorless and rusty.	Yes	Ok
			South	Yes	No	No. Mast arm is colorless and rusty.	Yes	Ok
			East	Yes	No	No. Mast arm is corroded	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
13	25	Gulistan	North	Yes	No	No. Mast arm is corroded	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
14	32	Mohakhali	North	Yes	No	No- Poles are colorless and corroded.	Yes	Ok
			South	Yes	No	No- Poles are colorless and corroded.	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
15	35	Chairman Bari	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
16	34	Bonani Kakoli	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
17	31	Mohakhli Amtoli	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	No. Mast arm is colorless	Yes	Ok
			East	Yes	No	No. Mast arm is colorless	Yes	Ok
18	42	Firmgate	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
19	38	Bijoy Sarani	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
20	60	PM Office	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
21	36	Jahangir Gate	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
22	30	Moghbazar	North	Yes	No	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
23	05	Mirpur-1	South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
24	03	Darussalam (TTC)	North	Yes	No	Mast arm is corroded	Yes	Ok
			South	Yes	No	Mast arm is corroded	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
25	04	Mirpur Mazar	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
26	54	Dhanmondi Road 10	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
27	53	Dhanmondi Road .6&7	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
28	22	Science Lab.	North	Yes	No	No. Poles are colorless	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	No. Poles are colorless	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
29	18	New Market	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
30	33	Azimpur	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
31	59	Palashi	Nilkhet	Yes	There is no mast arm	No. Pole is corroded	Yes	Ok
			Chankharpul	Yes	No	No. Pole is corroded	Yes	Ok
			Dhaka Medical	Yes	There is no mast arm	No. Pole is corroded	Yes	Ok
			Azimpur	Yes	There is no mast arm	No. Pole is corroded	Yes	Ok
			Dhakessori	Yes	There is no mast arm	Pole is corroded	Yes	Ok
32	39	Agargaon	North	Yes	No	No. Mast arm is corroded	Yes	Ok
			South	Yes	No	No. Pole & mast arm are colorless	Yes	Ok
			East	Yes	There is no mast arm	No. Pole is colorless	Yes	Ok
			West	Yes	There is no mast arm	No. Pole is colorless	Yes	Ok
33	41	Khamar Bari	North	Yes	No	Yes	Yes	Ok
			Firmgate	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
34	40	Bijoy Sarani(Aeroplane)	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	No	No. Pole is colorless	Yes	Ok
			West	Yes	No	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
35	37	Parliament Intersection	North	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes-mast arm colorless	Yes	Ok
36	43	Hotel Sonargaon	North	Yes	No	Mast arm is colorless	Yes	Ok
			South	Yes	No	Mast arm is colorless	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
			Hatirpool	Yes	There is no mast arm	Yes	Yes	Ok
37	21	Bangla motor	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	Yes	Yes	Yes	Ok
38	19	Hotel Sheraton	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	No. Mast arm is colorless	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
39	44	Shahbagh	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	No. Mast arm is colorless	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	No	Mast arm is colorless	Yes	Ok
40	07	Katabone	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
41	56	Bata crossing	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
42	45	Matshaw Bhaban	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
43	10	KadamChattar	North	Yes	No	No. Mast arm is colorless and corroded.	Yes	Ok
			South	Yes	No	No. Mast arm is colorless and corroded.	Yes	Ok
			East	Yes	No	No. Mast arm is colorless and corroded.	Yes	Ok
44	46	Curzon Hall	North	Yes	No	No. Mast arm is colorless and corroded.	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	No. Mast arm is colorless and corroded.	Yes	Ok
			West	Yes	No	No. Mast arm is colorless & corroded.	Yes	Ok
45	02	Basundhara Intersection	North	Yes	No	No. Mast arm is colorless and corroded.	Yes	Ok
			South	Yes	Yes	No. Mast arm is colorless	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
46	01	Mojub Avenue (Natun Bazar) Intersection	North	Yes	No	No. Mast arm corroded and colorless	Yes	Ok
			South	Yes	There is no mast arm	No. Pole is colorless	Yes	Ok
			East	Yes	There is no mast arm	No. Pole is colorless	Yes	Ok
			West	Yes	No	No. Pole is corroded	Yes	Ok
47	57	Gulshan- 1 Intersection	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	No. Mast arm is corroded	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
48	58	Gulshan- 2 Intersection	North	Yes	No	Ok	Yes	Ok
			South	Yes	No	Ok	Yes	Ok
			East	Yes	No	Ok	Yes	Ok
			West	Yes	No	Ok	Yes	Ok
49	28	Nabisco Intersection	North	Yes	No	No. Mast arm is colorless & rusty	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
50	29	Tongi Diversion Intersection	North	Yes	There is no mast arm	Ok	Yes	Ok
			South	Yes	No	No. Mast arm colour less	Yes	Ok
			West	Yes	No	No. Mast arm colour less	Yes	Ok
51	55	Shanti Nagar Intersection	North	Yes	There is no mast arm	No. Pole corroded	Yes	Ok
			South	Yes	There is no mast arm	No. Pole is colorless	Yes	Ok
			East	Yes	Yes	No. Pole is colorless and mast arm corroded	Yes	Ok
			West	Yes	No	No. Pole is colorless and mast arm corroded	Yes	Ok
52	20	Kakrail Mosque Intersection	North	Yes	There is no mast arm	Yes	Yes	Ok
			South	Yes	There is no mast arm	Yes	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
53	57	Gulistan Square Intersection	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
54	50	Zahir Raihan Intersection	North	Yes	No	No. Colorless	Yes	Ok
			South	Yes	No	pole & mast arm are colorless	Yes	Ok
			East	Yes	There is no mast arm	pole & mast arm are colorless	Yes	Ok
			West	Yes	There is no mast arm	No. pole is colorless, mast arm corroded	Yes	Ok
55	51	Bangshal Road Intersection	North	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			West	No signal				
56	52	Sadarghat Road Intersection	North	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			South	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			East	Yes	No	No. pole is colorless, mast arm is colorless	Yes	Ok
			West	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
57	08	Dholaikhal Intersection	North	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			South	Yes	There is no mast arm	Ok	Yes	Ok
			East	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			West	Yes	No	No. pole is colorless, mast arm is colorless	Yes	Ok
58	11	English Road Intersection	North	Yes	No	No. pole is colorless, mast arm is corroded	Yes	Ok
			South	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			East	Yes	There is no mast arm	No. pole is colorless	Yes	Ok
			West	Yes	No	No. pole is colorless, mast arm is corroded	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
59	09	Shapla Chattar Intersection	North	Yes	No	No. Pole and mast arm corroded, colorless and tilted	Yes	Ok
			South	Yes	There is no mast arm	No. pole is colorless, mast arm is corroded	Yes	Ok
			East	Yes	No	No. Pole corroded	Yes	Ok
			West	Yes	No	No. pole is colorless, mast arm is corroded	Yes	pole & mast arm is tilted
60	23	Ittefaq Intersection	South	there is No signal (One way)				
			East	Yes	There is no mast arm	No. Pole is colorless.	No-Pole position is very near to the curve in left side.	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
61	61	Tejgaon Rangs Link Road Intersection	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	No. Mast arm is colorless	Yes	Ok
			East	Yes	There is no mast arm	Yes	Yes	Ok
			West	Yes	There is no mast arm	Yes	Yes	Ok
62	62	Green Road (Panthpath)	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	Yes	Yes	Yes	Ok
			West	Yes	Yes	Yes	Yes	Ok
63	63	Rassel Square	North	Yes	Yes	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
64	64	Dhanmondi-27	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok

SL	ID	Intersections	Approach	Size of poles (Yes/ No)	Size of Mast arm (Yes/ No)	Color and corrosion resistance of pole and mast arm, (Yes/ Color less)	Pole & mast arm location (Yes/ Wrong)	Vertical position of pole and mast arm (Ok/tilted)
65	65	Manik Mia Avenue	North	Yes	No	No. Mast arm is colorless	Yes	Ok
			South	Yes	No	No. Mast arm is colorless	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
66	66	Asad Gate	North	Yes	No	No. Mast arm is colorless & corroded	Yes	Ok
			South	Yes	No	No. Mast arm is colorless & corroded	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	No. Mast arm is colorless & corroded	Yes	Ok
67	67	Mohammadpur Thana Crossing	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
68	68	College Gate (Sohrawardi hospital)	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			West	Yes	No	Yes	Yes	Ok
69	69	ShishuMela	North	Yes	No	Yes	Yes	Ok
			South	Yes	No	Yes	Yes	Ok
			East	Yes	No	No	Yes	Ok
70	70	Shamoli Cinema Hall	North	Yes	Yes	No. Mast arm is colorless & corroded	Yes	Ok
			South	Yes	Yes	Yes	Yes	Ok
			West	Yes	Yes	No. Mast arm is colorless & corroded	Yes	Ok

Physical deficiency

5. Material (Fixing/Fastening) and Access for Maintenance of Signal

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
1	13	BijoyNagar	North	No	Yes
			South	Yes	NO- In front & back of signal presence structure
			West	Yes	Yes
2	12	Kakrail (rajmoni)	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
3	16	Malibagh	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
4	17	Rajarbagh	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
5	15	Mouchak	North	Yes	Yes
			South	Yes	Yes
			East	No	No
6	27	Malibagh Rail Gate	South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
7	47	Pir Jongi Mazar	North	Yes	Yes
			South	Yes	Tree is in front of lamp.
			West	Yes	Tree is in front of lamp.

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
8	06	Fakirapul	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
9	14	Palton (Topkhana)	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
10	48	Kamalapur Station	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
11	26	Kamalapur Container	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
12	24	Zero point	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Tree & pole are in front of signal
13	25	Gulistan	North	Yes	Tree is in front of signal in the median, Temporary shop exists beside the signal in the right side of the road.
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
14	32	Mohakhali	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
15	35	Chairman Bari	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
16	34	Bonani Kakoli	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
17	31	Mohakhli Amtoli	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
18	42	Firmgate	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
19	38	Bijoy Sarani	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
20	60	PM Office	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
21	36	Jahangir Gate	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
22	30	Moghbazar	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
23	05	Mirpur-1	South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
24	03	Darussalam (TTC)	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
25	04	Mirpur Mazar	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
26	54	Dhanmondi Road 10	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
27	53	Dhanmondi Road .6&7	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
28	22	Science Lab.	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
29	**18**	**New Market**	North	Yes	Yes
			South	Yes	Tree in front of signal
			East	Yes	Yes
			West	Yes	Yes
30	**33**	**Azimpur**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Tree in front of signal
31	**59**	**Palashi**	Nilkhet	Yes	Tree
			Chankharpul	Yes	Temporary shop
			East	Yes	Yes
			Azimpur	Yes	Yes
			Dhakessori	Yes	Yes
32	**39**	**Agargaon**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
33	**41**	**Khamar Bari**	North	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
34	**40**	**Bijoy Sarani(Aeroplane)**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
35	**37**	**Parliament Intersection**	North	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
36	**43**	**Hotel Sonargaon**	North	Yes	Yes
			South	Yes	Yes
			Hatirpool	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
37	**21**	**Bangla motor**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
38	**19**	**Hotel Sheraton**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
39	**44**	**Shahbagh**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
40	**07**	**Katabone**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
41	**56**	**Bata crossing**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
42	**45**	**Matshaw Bhaban**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Tree is in front of signal
			West	Yes	Yes
43	**10**	**KadamChattar**	North	Yes	Yes
			South	Yes	Tree is in front of signal
			East	Yes	Yes
44	**46**	**Curzon Hall**	North	Yes	Yes
			South	Yes	Tree is in front of signal
			East	Yes	Yes
			West	Yes	Yes
45	**02**	**Basundhara Intersection**	North	Ok	Yes
			South	Fixing are loose at joints	Yes
			East	Ok	Yes
46	**01**	**Mojub Avenue (Natun Bazar) Intersection**	North	Fixing are loose at joints	Yes
			South	left side loose	Left side temporary shop
			East	Not properly tighten	Yes
			West	Not properly tighten	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
47	**57**	**Gulshan- 1 Intersection**	North	Ok	Yes
			South	Ok	Yes
			East	Ok	Yes
			West	Ok	Yes
48	**58**	**Gulshan- 2 Intersection**	North	Ok	Yes
			South	Ok	Yes
			East	Ok	Yes
			West	Ok	Yes
49	**28**	**Nabisco Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
50	**29**	**Tongi Diversion Intersection**	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
51	**55**	**Shanti Nagar Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
52	**20**	**Kakrail Mosque Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
53	**57**	**Gulistan Square Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
54	**50**	**Zahir Raihan Intersection**	North	Yes	No- temporary shop
			South	Fixing are loose at joints	Yes
			East	Yes	In right side access is restricted for temporary shop
			West	Yes	Yes
55	**51**	**Bangshal Road Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	access is restricted for temporary shop
			West	No signal	
56	**52**	**Sadarghat Road Intersection**	North	Yes	Yes
			South	fixing loose	Yes
			East	Yes	Yes
			West	fixing loose	Yes
57	**08**	**Dholaikhal Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
58	**11**	**English Road Intersection**	North	Yes	Yes
			South	Yes	access is restricted for temporary shop
			East	Yes	Yes
			West	Yes	Yes
59	**09**	**Shapla Chattar Intersection**	North	Yes	Yes
			South	Yes	Temporary Shop
			East	Yes	Yes
			West	Yes	Temporary Shop

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
60	**23**	**Ittefaq Intersection**	South	No signal (N/A)	
			East	Yes	Yes
			West	Yes	Yes
61	**61**	**Tejgaon Rangs Link Road Intersection**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
62	**62**	**Green Road (Panthpath)**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West	Yes	Yes
63	**63**	**Rassel Square**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
			West		
64	**64**	**Dhanmondi-27**	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
65	**65**	**Manik Mia Avenue**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
66	**66**	**Asad Gate**	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes

SL	ID	Intersections	Approach	Materials of signal (Fixing/Fastening) (Yes/ No)	Access for maintenance of signal. (Yes/No)
67	**67**	**Mohammadpur Thana Crossing**	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
68	**68**	**College Gate (Sohrawardi hospital)**	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes
69	**69**	**ShishuMela**	North	Yes	Yes
			South	Yes	Yes
			East	Yes	Yes
70	70	Shamoli Cinema Hall	North	Yes	Yes
			South	Yes	Yes
			West	Yes	Yes

Physical deficiency

6. Traffic Signal Head Condition at Intersections

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
1	13	BijoyNagar	North	Yes	No	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
2	12	Kakrail (rajmoni)	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
3	16	Malibagh	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	No	Ok	Yes	There is no mast arm
			West	No signal				
4	17	Rajarbagh	North	Yes	Yes	Ok	Wrong	No
			South	Yes	No	Ok	Yes	No
			East	Yes	No	Ok	Yes	There is no mast arm
			West	Yes	No	Ok	Wrong	There is no mast arm
5	15	Mouchak	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	No
6	27	Malibagh Rail Gate	South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
7	47	Pir Jongi Mazar	North	Yes	No	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
8	06	Fakirapul	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	No
9	14	Palton (Topkhana)	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	No	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
10	48	Kamalapur Station	North	Yes	Yes	wrong	Yes	No
			South	There is No signal				
			West	Yes	Yes	Ok	wrong	There is no mast arm
11	26	Kamalapur Container	North	Yes	No	wrong	Wrong	No
			South	Yes	No	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	There is no mast arm
12	24	Zero point	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No
13	25	Gulistan	North	Yes	Yes	Ok	Yes	No head in mast arm
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
14	32	Mohakhali	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	There is no mast arm
15	35	Chairman Bari	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
16	34	Bonani Kakoli	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
17	31	Mohakhli Amtoli	North	Yes	No	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	No
18	42	Firmgate	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	There is no mast arm
19	38	Bijoy Sarani	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	No
20	60	PM Office	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
21	36	Jahangir Gate	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
22	30	Moghbazar	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	No
23	05	Mirpur-1	South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
24	03	Darussalam (TTC)	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
25	04	Mirpur Mazar	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
26	54	Dhanmondi Road 10	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	No
27	53	Dhanmondi Road .6&7	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
28	22	Science Lab.	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Wrong	Yes	There is no mast arm
29	**18**	**New Market**	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
30	**33**	**Azimpur**	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
31	59	Palashi	Nilkhet	Yes	Yes	Ok	Wrong	There is no mast arm
			Chankharpul /BUET	Yes	Yes	Ok	Wrong	No
			Dhaka Medical	Yes	Yes	Ok	Wrong	There is no mast arm
			Azimpur	Yes	Yes	Ok	Yes	There is no mast arm
			Dhakessori	Yes	Yes	Ok	Yes	There is no mast arm
32	39	Agargaon	North	Yes	Yes	Ok	Wrong	No
			South	Yes	No	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
33	41	Khamar Bari	North	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	No
			Firmgate	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
34	40	Bijoy Sarani(Aeroplane)	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	There is No head in pole	No
35	37	Parliament Intersection	North	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Yes	No
36	43	Hotel Sonargaon	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	No
			Hatirpool	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No
37	21	Bangla motor	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	No
			East	Yes	No	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No
38	19	Hotel Sheraton	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
39	44	Shahbagh	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	No

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
40	07	Katabone	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
41	56	Bata crossing	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
42	45	Matshaw Bhaban	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
43	10	KadamChattar	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	No
44	46	Curzon Hall	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Wrong	No
45	02	Basundhara Intersection	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Yes	Yes
			East	Yes	Yes	Ok	Wrong	There is no mast arm
46	01	Mojub Avenue (Natun Bazar) Intersection	North	Yes	No	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	Yes	Ok	Yes	No
47	57	Gulshan- 1 Intersection	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
48	58	Gulshan- 2 Intersection	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
49	28	Nabisco Intersection	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
50	29	Tongi Diversion Intersection	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No
51	55	Shanti Nagar Intersection	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	Yes
			West	Yes	Yes	Ok	Wrong	No
52	20	Kakrail Mosque Intersection	North	Yes	Yes	Ok	Wrong	There is no mast arm
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Wrong	There is no mast arm
53	57	Gulistan Square Intersection	North	Yes	Yes	Ok	Wrong	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	There is no mast arm
54	50	Zahir Raihan Intersection	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	No	Direction wrong	Yes	There is no mast arm
			West	Yes	Yes	Direction wrong	Wrong	There is no mast arm
55	51	Bangshal Road Intersection	North	Yes	No	Ok	Yes	There is no mast arm
			South	Yes	Yes	Ok	Wrong	No
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	No signal				
56	52	Sadarghat Road Intersection	North	Yes	Yes	Head direction is wrong at median	Yes	There is no mast arm
			South	Yes	Yes	Ok	Yes	There is no mast arm
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Yes	There is no mast arm
57	08	Dholaikhal Intersection	North	Yes	Yes	Ok	Yes	There is no mast arm
			South	Yes	No	Ok	Yes	There is no mast arm
			East	Yes	Yes	head direction wrong at median	No	There is no mast arm
			West	Yes	Yes	Ok	Yes	No

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
58	11	English Road Intersection	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	Yes	Ok	Yes	There is no mast arm
			West	Yes	No	Ok	Wrong	No
59	09	Shapla Chattar Intersection	North	Yes	Yes	Direction wrong	Wrong	No
			South	Yes	Yes	Ok	Wrong	There is no mast arm
			East	Yes	No	wrong	Wrong	No
			West	Yes	No	Ok	Wrong	No
60	23	Ittefaq Intersection	South	No signal				
			East	Yes	Yes	Wrong	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Wrong	There is no mast arm
61	61	Tejgaon Rangs Link Road Intersection	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	There is no mast arm
			West	Yes	Yes	Ok	Yes	There is no mast arm
62		Green Road (Panthpath)	North	Yes	Yes	Ok	Yes	Yes
			South	Yes	Yes	Ok	Yes	Yes
			East	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No
63		Rassel Square	North	Yes	Yes	Ok	Wrong	Yes
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	Yes
64		Dhanmondi-27	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Wrong	No
65		Manik Mia Avenue	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Wrong	No
66		Asad Gate	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	No
67		Mohammadpur Thana Crossing	North	Yes	Yes	Ok	Yes	Yes
			South	Yes	Yes	Ok	Yes	Yes
			East	Yes	Yes	Ok	Wrong	No
			West	Yes	Yes	Ok	Wrong	No

SL	ID	Intersections	Approach	Signals standard arrangement: [Sign manual] (Yes/No)	Head mounting [horizontally /vertically] (Yes/No)	Head mounting [face direction] (Ok/wrong)	Placement/mounting of Head in pole [2.3 -2.5 m above the carriageway level] (Ok/wrong)	Placement of signal/ Head mounting in mast arm, [5.5-5.7 m above the carriageway level] (Yes/No)
68		**College Gate (Sohrawardi hospital)**	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			West	Yes	Yes	Ok	Wrong	No
69		**ShishuMela**	North	Yes	Yes	Ok	Yes	No
			South	Yes	Yes	Ok	Yes	No
			East	Yes	Yes	Ok	Yes	No
70		Shamoli Cinema Hall	North	Yes	Yes	Ok	Yes	Yes
			South	Yes	No	Ok	Yes	Yes
			West	Yes	Yes	Ok	Wrong	No

7. Traffic sign at signalized intersection

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
1	BijoyNagar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
2	Kakrail (rajmoni)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
3	Malibagh	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4	Rajarbagh	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Tilting	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
5	Mouchak	North	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
6	Malibagh Rail Gate	South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	Yes	Yes	No
7	Pir Jongi Mazar	North	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		West	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
8	Fakirapul	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
9	Palton (Topkhana)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
10	Kamalapur Station	North	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
11	Kamalapur Container	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
12	Zero point	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No
13	Gulistan	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
14	Mohakhali	North	No	No	Yes	No	No	No	No	No	No	No	No	Yes	No	No	Yes	Yes	No
		South	No	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes
		West	No	No	Yes	Yes	No	No	No	No	Yes	No	Yes	No	No	No	Yes	Yes	No
15	Chairman Bari	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
16	Bonani Kakoli	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No
		West	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
17	Mohakhli Amtoli	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
18	Firmgate	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
19	Bijoy Sarani	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes	No
		West	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
20	PM Office	North	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No
21	Jahangir Gate	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
22	Moghbazar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
23	Mirpur-1	South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
24	Darussalam (TTC)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes	No
25	Mirpur Mazar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No
26	Dhanmondi Road 10	North	No	Yes	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
27	Dhanmondi Road .6&7	North	No	No	No	No	Yes	No	Yes	No	Yes	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	Yes	No	Yes	No	Yes	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
28	Science Lab.	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
29	New Market	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
30	Azimpur	North	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No		No	No	No	No	No		No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
31	Palashi	Nilkhet	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		Chankharpul /buet	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Dhaka medical	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Azimpur	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		Dhakessori	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
32	Agargaon	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
33	Khamar Bari	North	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No
		Firmgate	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
34	Bijoy Sarani(Aero plane)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
35	Parliament	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No
36	Hotel Sonargaon	North	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No
37	Bangla motor	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
38	Hotel Sheraton	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No		Yes
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
39	Shahbagh	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	Yes	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes
		East	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No
40	Katabone	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
41	Bata crossing	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
42	Matshaw Bhaban	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
43	KadamChattar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
44	Curzon Hall	North	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	Yes
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	No	No
45	Basun-dhara	North	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
46	Mojub Avenue (Natun Bazar)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
47	Gulshan- 1	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
48	Gulshan- 2	North	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		East	No	Yes	Yes	No	No	No	No	No	No	Yes	No	No	No	Yes	No	No	Yes
		West	Yes		Yes	No	No	No	No	No	No	Yes	No	No	No	Yes	No	No	Yes
49	Nabisco	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50	Tongi Diversion	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
51	Shanti Nagar	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
52	Kakrail Mosque	North	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
53	Gulistan Square	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
54	Zahir Raihan	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
55	Bangshal Road	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
56	Sadarghat Road	North	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
57	Dholikhal	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
58	English Road	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
59	Shapla Chattar	North	No	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
60	Ittefaq	South	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
61	Tejgaon Rangs Link Road	North	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	Yes	No
62	Green Road (Panthpath)	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
63	Rassel Square	North	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	Yes	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
64	Dhanmondi-27	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	Not applicable	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	Yes	Yes	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
65	Manik Mia Avenue	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes
		South	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	Yes	No
		East	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No
66	Asad Gate	North	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No	Yes	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
67	Mohammadpur Thana Crossing	North	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	Yes	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
		East	No	Yes	No	No	No	No		No	No	No	No	No	No	No	No	Yes	No overtaking
		West	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	Yes	No
68	College Gate (Sohrawardi hospital)	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

SL	Inter-section	Appr-oach	No pedestrians A8 (Yes/ No)	No rickshaws A9 (Yes/ No)	No Parking (A18) (Yes/ No)	No Stopping (A19) (Yes/ No)	No Right Turn (A22) (Yes/ No)	No Left Turn (A23) (Yes/ No)	No U Turn (A24) (Yes/ No)	Turn Left (A32) (Yes/ No)	Keep Left (A33) (Yes/ No)	Turn Right (Yes/ No)	Pass Either Side (a36) (Yes/ No)	Special speed limit A26 (Yes/ No)	Round about (B9) (Yes/ No)	Traffic signals B17	Railway level crossing with gate (Yes/ No)	Pedestrian Crossing (C2) (Yes/ No)	Advanced direction Sign (Yes/ No)
69	Shishu-Mela	North	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		East	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
70	Shamoli Cinema Hall	North	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes

08. Traffic marking at signalized intersection

Physical deficiency

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
1	BijoyNagar ID-13	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		West	Yes- Faded	Yes- Faded	Yes- Faded	No	No	No	No	No
2	Kakrail (rajmoni)	North	No	No	No	Yes	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	Yes- Faded	Yes- Faded	No	Yes	No	No	No
		West	Yes- Faded	Yes- Faded	No	No	No	No	No	No
3	Malibagh ID-16	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
4	Rajarbagh ID-17	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
5	Mouchak ID-15	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
6	Malibagh rail gate	South	No	No	No	No	No	No	No	No
		East	yes	yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
7	Pir Jongi Mazar ID-47	North	yes	yes	yes	No	No	No	No	No
		South	yes	yes	yes	No	No	No	No	No
		West	yes	yes	yes	No	No	No	No	No
8	Fakirapul ID-06	North	No	No	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	Yes	No	No	No
		East	Yes	Yes -faded	Yes-faded	No	Yes	No	No	No
		West	Yes	Yes -faded	Yes	No	Yes	No	No	No
9	Palton /(Topkhana) ID-14	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	Yes	Yes -faded	Yes-faded	No	Yes	No	No	No
		West	No	Yes –faded	No	No	No	No	No	No

Sl	Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)
10	Kamalapur Station ID-48	North	Yes	Yes	Yes-faded	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		West	Yes –faded	Yes –faded	No	No	No	No	No	No
11	Kamalapur Container ID- 26	North	No	No	No	Yes	No	No	No	No
		South	Yes	No	Yes	No	No	No	No	No
		West	No	Yes	No	Yes	No	No	No	No
12	Zero point ID-	North	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
13	Gulistan ID- 25	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	Yes	No	Yes-faded	No	No	No	No	No
14	Mohakhali	North	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
15	Chairman Bari	North	No	No	No	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
16	Bonani Kakoli	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	Yes	Yes	Yes	Yes	No	No	No	No
17	Mohakhli Amtoli	North	Yes	Yes	No	No	No	No	No	No
		South	Yes	No	No	No	No	No	No	No
		East	Yes	No	No	No	No	No	No	No
18	Firmgate	North	Yes	No	Yes	No	Yes	No	No	No
		South	Yes	Yes-faded	Yes	No	Yes	No	No	No
		West	No	Yes	No	No	No	No	No	No
19	Bijoy Sarani	North	Yes	No	Yes	Yes	Yes	No	No	No
		South	Yes	No	Yes	No	Yes	No	No	No
		East	Yes	No	Yes	No	No	No	No	No
		West	No	No	Yes	No	Yes (faded)	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
20	PM Office	North	Yes	No	Yes	Yes	Yes	No	No	No
		South	Yes	No	Yes	Yes	Yes	No	No	No
		West	No	No	Yes	Yes	Yes	No	No	No
21	Jahangir Gate	North	No	No	Yes	Yes	No	No	No	No
		South	No	No	Yes	Yes	No	No	No	No
		East	No	No	Yes	Yes	No	No	No	No
22	Moghbazar	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
23	Mirpur-1	South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
24	Darussalam (TTC)	North	No	No	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
25	Mirpur Mazar	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
26	Dhanmondi Road 10	North	No	No	Yes	Yes	No	No	No	No
		South	Yes	No	Yes	Yes	No	No	No	No
		West	No	Yes-faded	No	Yes	No	No	No	No
27	Dhanmondi Road .6&7	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
28	Science Lab.	North	No	No	Yes	No	No	No	No	No
		South	No	No	No	Yes	No	No	No	No
		East	No	No	No	Yes	No	No	No	No
		West	No	No	No	No	No	No	No	No
29	**New Market**	North	Yes	Yes	Yes	Yes	Yes	No	No	No
		South	Yes	Yes	Yes	Yes	Yes	No	No	No
		East	Yes	Yes	Yes	Yes	Yes	No	No	No
		West	Yes	Yes	Yes	Yes	Yes	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
30	**Azimpur**	North	Yes	Yes	No	Yes	No	No	No	No
		South	No	Yes	No	Yes	No	No	No	No
		East	Yes	Yes	No	Yes	No	No	No	No
		West	No	No	No	Yes	No	No	No	No
31	**Palashi**	North /Nilkhet	No	No	No	No	No	No	No	No
		South / Chankharpul	No	No	No	No	No	No	No	No
		Dhaka medical	Yes	Yes (wrong)	Yes	No	Yes	No	No	No
		Azimpur	No	No	No	No	No	No	No	No
		Dhakessori	No	No	No	No	No	No	No	No
32	**Agargaon**	North	Yes	No	Yes	Yes	No	No	No	No
		South	Yes	No	Yes	Yes	No	No	No	No
		East	No	No	Yes	Yes	Yes	Yes	No	No
		West	No	No	No	Yes	Yes	No	No	No
33	**Khamar Bani**	North	No	No	No	No	No	No	No	No
		Firmgate	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	Yes	Yes	No	No	No	No
34	**Bijoy Sarani(Aeroplane)**	North	Yes	No	Yes	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	Yes	No	No	No	No
		West	No	No	No	No	No	No	No	No
35	**Parliament**	North	No	No	No	No	No	No	No	No
		East	Yes	Yes	Yes	Yes	No	No	No	No
		West	Yes	Yes	Yes	Yes	No	No	No	No
36	**Hotel Sonargaon**	North	Yes	Yes	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	No	No	No	No
		Hatirpool	Yes	Yes	No	No	No	No	No	No
		East	Yes	Yes	No	No	No	No	No	No
		West	Yes	Yes	No	No	No	No	No	No
37	**Bangla motor**	North	No	No	No	No	No	No	No	No
		South	Yes	Yes	No	No	No	No	No	No
		East	Yes	Yes	No	Yes	No	No	No	No
		West	No	No	No	Yes	No	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
38	**Hotel Sheraton**	North	Yes	No	Yes	No	Yes	No	No	No
		South	Yes	Yes	Yes	No	Yes	No	No	No
		East	No	No	No	No	No	No	No	No
39	**Shahbagh**	North	Yes	Yes	Yes	Yes	Yes	No	No	No
		South	Yes	Yes	Yes	No	No	No	No	No
		East	Yes	Yes	Yes	Yes	No	No	No	No
		West	Yes	Yes	No	No	No	No	No	No
40	**Katabone**	North	No	No	No	Yes	No	No	No	No
		South	Yes-faded	Yes-faded	No	Yes	No	No	No	No
		East	Yes	No	No	Yes	Yes	No	No	No
		West	Yes-faded	Yes-faded	No	Yes	Yes	No	No	No
41	**Bata crossing**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
42	**Matshaw Bhaban**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	Yes	Yes	No	No	No	No	No	No
		West	Yes	Yes	Yes	No	No	No	No	No
43	**KadamChattar**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
44	**Curzon Hall**	North	Yes	Yes	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	Yes	Yes	Yes	No	No	No	No	No
45	**Basun-dhara**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
46	**Mojub Avenue (Natun Bazar)**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
47	**Gulshan- 1**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	Yes	Yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
48	**Gulshan- 2 Intersection**	North	Yes	Yes	Yes	Yes	Yes	No	No	No
		South	Yes	Yes	Yes	Yes	Yes	No	No	No
		East	Yes	Yes	Yes	No	Yes	No	No	No
		West	Yes	Yes	Yes	Yes	Yes	No	No	No
49	**Nabisco**	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		East	Yes (Faded)	Yes (Faded)	No	No	Yes (Faded)	No	No	No
50	**Tongi Diversion**	North	No	No	No	No	No	No	No	No
		South	No	Yes	No	No	No	No	No	No
		West	Yes	Yes	Yes	No	No	No	No	No
51	**Shanti- Nagar**	North	No	No	No	No	No	No	No	No
		South	Yes	Yes	No	No	No	No	No	No
		East	Yes	Yes	No	No	No	No	No	No
		West	Yes	Yes	Yes	Yes	No	No	No	No
52	**Kakrail Mosque**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
53	**Gulistan Square**	North	No	No	Yes	Yes	No	Yes	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	Yes	Yes	No	Yes	No	No
		West	No	No	No	No	No	No	No	No
54	**Zahir Raihan**	North	No	No	No	No	No	No	No	No
		South	Yes	Yes	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
55	**Bangshal Road**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
56	**Sadarghat Road**	North	Yes	Yes	Yes	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	Yes	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
57	**Dholikhal**	North	No	No	No	Yes	No	No	No	No
		South	Yes	Yes	No	Yes	No	No	No	No
		East	No	No	No	Yes	No	No	No	No
		West	Yes	Yes	No	Yes	No	No	No	No
58	**English Road**	North	Yes	Yes	Yes	Yes	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	Yes	Yes	No	No	No	No	No	No
		West	No	No	No	Yes	No	No	No	No
59	**Shapla Chattar**	North	No	Yes	Yes	No	No	No	No	No
		South	Yes-faded	Yes-faded	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	Yes-faded	Yes-faded	Yes	Yes	Yes	No	No	No
60	**Ittefaq**	South	No	No	Yes	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No
61	**Tejgaon Rangs Link Road Intersection**	North	Yes	No	Yes	No	No	No	No	No
		South	Yes	Yes	Yes	No	Yes	No	No	No
		East	Yes	Yes	Yes	No	Yes	No	No	No
		West	Yes	No	Yes	Yes	No	No	No	No
62	**Green Road (Panthpath)**	North	Yes	Yes	Yes	No	Yes	No	No	No
		South	Yes	Yes	No	No	No	No	No	No
		East	Yes	Yes	Yes	No	Yes	No	No	No
		West	Yes	Yes	Yes	No	Yes	No	No	No
63	**Rassel Square**	North	Yes	Yes	Yes	Yes	Yes	No	No	No
		South	No	No	Yes	Yes	Yes	No	No	No
		East	Yes	Yes	Yes	Yes	Yes	No	No	No
64	**Dhanmondi-27**	North	No	No	No	No	No	No	No	No
		South	No	No	Yes	Yes	No	No	No	No
		West	No	No	No	No	No	No	No	No
65	**Manik Mia Avenue**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	No	Yes	Yes	No	No	No	No

Sl	Inter-section	Approach	Stop line (Yes/ No)	Pedestrian crossing, (Yes/ No)	Lane Line (Yes/ No)	No parking (Yes/ No)	Traffic lane arrows (Yes/ No)	Chevron Marking (Yes/ No)	Yellow Box (Yes/ No)	Special speed limit (Yes/ No)
66	**Asad Gate**	North	No	No	No	Yes	No	No	No	No
		South	No	No	No	Yes	No	No	No	No
		West	No	No	No	No	No	No	No	No
67	**Mohammadpur Thana Crossing**	North	No	No	No	No	No	No	No	No
		South	Yes	Yes	No	No	No	No	No	No
		East	No	No	No	No	No	No	No	No
		West	Yes	Yes	No	No	No	No	No	No
68	**College Gate (Sohrawardi hospital)**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		West	No	No	No	No	No	No	No	No
69	**ShishuMela**	North	No	No	No	No	No	No	No	No
		South	No	No	No	No	No	No	No	No
		East	No	Yes(faded)	No	Yes	No	No	No	No
70	Shamoli Cinema Hall	North	No	No	Yes	No	No	No	No	No
		South	No	No	Yes	No	No	No	No	No
		West	No	No	Yes	No	No	No	No	No

9. Footpath, median, Pedestrian refuge condition at intersections

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
1	13	BijoyNagar	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
2	12	Kakrail (rajmoni)	North	Yes	Ok	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			East	Yes	Some uni-block missing	Yes	Yes	
			West	No – Left side	Ok	Yes	Yes	
3	16	Malibagh	North	Yes	Broken	Yes	No	
			South	Yes	Some uni-block missing	Yes	Yes	
			East	No	Broken	Yes	No	
			West	Yes	Ok	Yes	No	
4	17	Rajarbagh	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Some uni-block missing	Yes	Yes	
5	15	Mouchak	North	Yes	Ok	Yes	Not applicable	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Broken	Broken	
6	27	Malibagh Rail Gate	South	Yes	Ok	Broken	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
7	47	Pir Jongi Mazar	North	Yes	Broken	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
8	06	Fakirapul	North	Yes	Ok	Yes	Yes	
			South	Yes	undulation	Yes	Yes	
			East	Yes	Some uni-block missing	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
9	14	Palton /(Topkhana)	North	Yes	Ok	Yes	Yes	
			South	Yes	Some uni-block missing	Yes	Yes	
			East	Yes	Ok	Yes-broken	Yes-broken	
			West	Yes	Ok	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
10	48	Kamalapur Station	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
11	26	Kamalapur Container	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	barricade and electric pole presence in place of pedestrian crossing in the left side.
			West	Yes	Ok	Yes	Yes	
12	24	Zero point	North	Yes	Broken	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
13	25	Gulistan	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
14	32	Mohakhali	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
15	35	Chairman Bari	North	Yes	Ok	Yes (Broken)	Yes	
			South	Yes	Some uni-block missing	Yes	No	Road cutting
			East	Yes	Ok	Yes	No	
16	34	Bonani Kakoli	North	Yes	Yes (Broken)	Yes	Yes	
			South	Yes	Yes (Broken)	Yes	No	
			East	Yes	Yes	Yes	No	
			West	Yes	Some uni-block missing	Yes	yes	
17	31	Mohakhli Amtoli	North	Yes	Broken	Yes	Yes	
			South	Yes	Broken	Yes (Broken)	Yes	
			East	Yes	Some uni-block missing	Yes (Broken)	Yes	
18	42	Firmgate	North	Yes	Ok	Yes	No (Not applicable)	Foot over bridge
			South	Yes	Ok	Yes	No (Not applicable)	Foot over bridge
			West	Yes	Ok	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
19	38	Bijoy Sarani	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Broken	Yes	
20	60	PM Office	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	No	
21	36	Jahangir Gate	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
22	30	Moghbazar	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	No	
			West	Yes	Ok	Yes	No	
23	05	Mirpur-1	South	Yes	Broken	Yes	Yes	
			East	Yes	Ok	Yes	No	
			West	Yes	Ok	Yes	Yes	
24	03	Darussalam (TTC)	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
25	04	Mirpur Mazar	North	Yes	Ok	Yes	Yes	
			South	Yes	Broken	Yes	Broken	
			East	Yes	Ok	Yes	Yes	
26	54	Dhanmondi Road 10	North	Yes	broken	Yes	No	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Ok	No	No	
27	53	Dhanmondi Road .6&7	North	Yes	Broken	No	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Broken	No	No	
			West	No	No	No	No	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
28	22	Science Lab.	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Broken	Yes	No	
			West	Yes	Broken	Yes	No	
29	**18**	New Market	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
30	**33**	Azimpur	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
31	**59**	Palashi	North /Nilkhet	Yes	Broken	Yes	Yes	
			South / Chankharpul	Yes	Broken (in left side)	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West / Azimpur	Yes	Broken	Yes	Yes	
			Dhakessori	Yes	Ok	No	Yes	
32	**39**	Agargaon	North	Yes	Yes(narrow -one meter)	Yes	No	No pedestrian crossing facility
			South	Yes	Yes(narrow -one meter)	Yes	No	No pedestrian crossing facility
			East	Yes	Yes(narrow -one meter)	Yes	Yes	
			West	Yes	Yes(narrow -one meter)	Yes	Yes	
33	**41**	**Khamar Bani**	North	Yes	Ok	Yes	Yes	
			Firmgate	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
34	**40**	**Bijoy Sarani(Aeroplane)**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	No	
35	**37**	**Parliament Intersection**	North	Yes	Ok	No	No	
			East	Yes	Ok	Yes	No	
			West	Yes	Ok	Yes	No	
36	**43**	**Hotel Sonargaon**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			Hatirpool	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Yes	Yes	Yes	
37	**21**	**Bangla motor**	North	Yes	Narrow (Foot over bridge)	Yes	No	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
38	**19**	**Hotel Sheraton**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	Broken	
			East	Yes	Ok	Yes	No	
39	**44**	**Shahbagh**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
40	**07**	**Katabone**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
41	**50**	**Bata crossing**	North	Yes	Broken	Yes	Broken	
			South	Yes	Broken	Yes	Broken	
			East	Yes	Broken	Yes	Broken	
			West	Yes	Broken	Broken	Broken	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
42	**45**	**Matshaw Bhaban**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
43	**10**	**KadamChattar**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	No	
44	**46**	**Curzon Hall**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
45	**02**	**Basundhara Intersection**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
46	**01**	**Mojub Avenue (Natun Bazar) Intersection**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	No (Not applicable)	
47	**57**	**Gulshan- 1 Intersection**	North	Yes	Ok	Yes	Yes (Broken)	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Yes (Broken)	Yes	Yes (Broken)	
48	**58**	**Gulshan- 2 Intersection**	North	Yes	Yes (Broken)	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes (Broken)	
			West	Yes	Ok	Yes	Yes	
49	**43**	**Nabisco Intersection**	North	Yes	Broken	Yes	Yes (Broken)	
			South	Yes	Broken	Yes	No	
			East	Yes	Broken	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
50	**29**	**Tongi Diversion Intersection**	North	Yes	Broken	Yes	No	
			South	Yes	Broken	Yes	Yes	
			West	Yes	Broken	Yes	Yes	
51	**55**	**Shanti Nagar Intersection**	North	Yes	Yes	No	Yes	
			South	Yes	Yes	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West	Yes	Broken	Yes	Broken	
52	**20**	**Kakrail Mosque Intersection**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
53	**57**	**Gulistan Square Intersection**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
54	**50**	**Zahir Raihan Intersection**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	No	No	
			West	No	-	No	No	
55	**51**	**Bangshal Road Intersection**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	No	
			East	No	No	No	No	
			West	No	No	No	No	
56	**52**	**Sadarghat Road Intersection**	North	Yes	Broken	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes (Left side)	Ok	No	No	
57	**08**	**Dholikhal Intersection**	North	Yes	Ok	No	No	
			South	Yes	Broken	Yes	Yes	
			East	Yes	Broken	Yes (Broken)	Broken	
			West	Yes	Ok	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
58	**11**	**English Road Intersection**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
59	**09**	**Shapla Chattar Intersection**	North	Yes	Broken	Yes	Yes	
			South	Yes	Broken	Yes	Yes	
			East	Yes	Broken	Yes	No	
			West	Yes	Broken	Yes	Yes	
60	**23**	**Ittefaq Intersection**	South	Yes	Ok	No	No	
			East	Yes	Left side broken	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
61	**61**	**Tejgaon Rangs Link Road Intersection**	North	Yes	Broken	Yes	No	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Broken	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
62	**62**	**Green Road (Panthpath)**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	No	
			East	Yes	Ok	Yes	broken	
			West	Yes	Ok	Yes	Yes	
63	**63**	**Rassel Square**	North	Yes	Ok	Yes	Yes	
			South	Yes	Yes (broken)	Yes	Yes	
			East	Yes	Yes (broken)	Yes	Yes	
64	**64**	**Dhanmondi-27**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Yes (broken)	Yes	Yes	
65	**65**	**Manik Mia Avenue**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes (broken)	Yes	
66	**66**	**Asad Gate**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	No (N/A)	Foot over bridge
			West	Yes	Broken	Yes	Yes	

SL	ID	Intersections	Approach	Footpath (Yes/NO)	Footpath condition (Ok/Broken)	Median (Yes/NO/ condition)	Pedestrian refuge (Yes/NO)	Remarks
67	**67**	**Mohammadpur Thana Crossing**	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			East	Yes	Ok	Yes	Yes	
			West	Yes	Ok	Yes	Yes	
68	**68**	**College Gate (Sohrawardi hospital)**	North	Yes	Ok	Yes	No	
			South	Yes	Ok	Yes	Yes (Broken)	
			West	Yes	Yes (Broken)	Yes	Yes (Broken)	
69	**69**	**ShishuMela**	North	Yes	Yes (Broken)	Yes	Yes	
			South	Yes	Yes (Broken)	Yes	Yes (Broken)	
			East	Yes	Ok	Yes	Yes	
70	70	Shamoli Cinema Hall	North	Yes	Ok	Yes	Yes	
			South	Yes	Ok	Yes	Yes	
			West	Yes	Yes (Broken)	Yes	Yes	

10. Pedestrian signal condition

Physical deficiency

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
1	13	BijoyNagar	North	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
			South	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
2	12	Kakrail (rajmoni)	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Wrong	Ok	
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Yes	
			West	Yes	Yes	No	No	Yes	Ok	Ok	Yes	Ok	Ok	
3	16	Malibagh	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Ok	Ok	Ok	
			West	No signal										
4	17	Rajarbagh	North	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	Ok	Ok	Broken	(Two lights are missing)
			South	No signal										
			East	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Yes	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Broken	
5	15	Mouchak	North	No signal										
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
6	27	Malibagh Rail Gate	South	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
			East	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
7	47	Pir Jongi Mazar	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	Head is not visible due to electric pole
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/not)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
8	06	Fakirapul	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
9	14	Palton (Topkhana)	North	Yes	Yes	Yes	No	No	Tilted	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Broken (One light missing)	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Broken	(One light missing)
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
10	48	Kamalapur Station	North	Yes	Yes	Yes	No	Yes	Tilted	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Very near to the curve	No	Yes	Ok	Ok	No	Ok	Ok	
11	26	Kamalapur Container	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong	Ok	
12	24	Zero point	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
13	25	Gulistan	North	Yes	Yes	Yes	No	Yes	Ok		Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Tilted	Ok	Yes	wrong	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
14	32	Mohakhali	North	No Signal										
			South	Yes	Yes	Yes	No	Yes	Ok	color less	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
15	35	Chairman Bari	North	Yes	Yes	Yes	No	Yes	Ok	color less	No	Ok	Ok	
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/not)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
16	34	Bonani Kakoli	North	No signal										
			South	No signal										
			East	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	color less	No	Ok	Ok	
17	31	Mohakhli Amtoli	North	Yes	Yes	Yes	No	Yes	Ok	pole color less	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
18	42	Firmgate	North	No signal										
			South	No signal										
			West	Yes	Yes	No (barrier in front of pedestrian signal)	No	Yes	Tilted	Ok	No	Ok	Ok	
19	38	Bijoy Sarani	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	No					Ok	Ok				
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
20	60	PM Office	North	No signal										
			South	No signal										
			West	No signal										
21	36	Jahangir Gate	North	No signal										
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Wrong	Ok	
22	30	Moghbazar	North	Yes	Yes	No	No	Yes	Tilted	Ok	Yes	Wrong		
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
23	05	Mirpur-1	South	No Signal										Foot over bridge
			East	No Signal										Foot over bridge
			West	No Signal										Foot over bridge

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/not)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
24	03	Darussalam (TTC)	North	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Wrong	Ok	
25	04	Mirpur Mazar	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
26	54	Dhanmondi Road 10	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
27	53	Dhanmondi Road .6&7	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
28	22	Science Lab.	North	No Signal									Foot over bridge	
			South	No Signal										Foot over bridge
			East	No Signal										Foot over bridge
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
29	**18**	New Market	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	direction is wrong	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	Ok	Broken	
30	**33**	Azimpur	North	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	Yes	Ok	head is broken	
			South	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	color less	No	Ok	Ok	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
31	**59**	Palashi	North /Nilkhet	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	Yes	Ok	Ok	
			South / Chankharpul	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	Head is not visible for temporary shop
			Dhaka medical	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	direction is wrong	head is broken	
			West / Azimpur	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	Ok	Ok	
			Dhakessori	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	Yes	Ok	Broken	
32	**39**	Agargaon	North	Yes	Yes	wrong	No	Yes	Ok	Ok	No	Ok	Broken	
			South	No signal										No pedestrian crossing facility
			East	Yes	Yes	Wrong- 4m ahead from refuse	No	Yes	Ok	Pole colorless	No	Direction wrong	Ok	
			West	Yes	Yes	Wrong	No	Yes	Ok	Pole colorless & corroded	No	Wrong	Ok	No pedestrian crossings facility
33	**41**	Khamar Bari	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			Firmgate	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
34	**40**	Bijoy Sarani(Aeroplane)	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
35	**37**	Parliament Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	No signal										
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	head direction is wrong	Broken	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
36	**43**	Hotel Sonargaon	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			Hatirpool	Yes	Yes	Yes		Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
37	**21**	Bangla motor	North	Yes	Yes	No	No	Yes	Ok	Ok	Yes	Ok	Ok	Light is not visible
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	No signal										
38	**19**	Hotel Sheraton	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	No	yes	Ok	Ok	No	Ok	Head is broken	
39	**44**	Shahbagh	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	wrong	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	direction is wrong	Head is broken and	
40	**07**	Katabone	North	No Signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
41	**50**	Bata crossing	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	Ok	broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
42	**45**	Matshaw Bhaban	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong	Ok	
			South	No signal										have no pedestrian crossing facility
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Head is broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Head is broken	
43	**10**	KadamChattar	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Head is broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken in right side	
44	**46**	Curzon Hall	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong in right side	broken in traffic island	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Head is broken in traffic island	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Yes	
			West	Yes	Yes	Yes	No	Yes	Tilted	Ok	No	wrong	broken in right side.	
45	**02**	Basundhara Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	color less	No	wrong	Ok	
			East	No Signal										
46	**01**	Mojub Avenue (Natun Bazar) Intersection	North	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Yes	wrong	Ok	
			South	No signal										
			East	No signal										
			West	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Yes	wrong	Ok	
47	**57**	Gulshan- 1 Intersection	North	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	wrong	Broken	
			South	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	Light off
			East	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	Light off
			West	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	Light off

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
48	58	Gulshan- 2 Intersection	North	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Yes	Yes	Yes	Ok	Ok	No	Ok	Broken	
49	43	Nabisco Intersection	North	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Yes	Ok	Broken	
			South	No Signal										
			East	Yes	Yes	Yes	No	Yes			No	direction is wrong	Head is broken	
50	29	Tongi Diversion Intersection	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Broken	
51	55	Shanti Nagar Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	direction wrong	Head is broken ,	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Head is broken	
SL	**ID**	**Intersections**	**Approach**	**Presence (yes/no/ N/A)**	**Light Size [210mm](Yes/not)**	**Pole Positioning /placement (Yes/not)**	**push button (exist or not) Working/ not working**	**Pole Size (Yes/No)**	**Pole (Ok / tilted)**	**Pole (Ok / /colorless)**	**Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)**	**Head direction [Ok/ wrong]**	**Head /broken [Ok/ broken]**	**Remarks**
52	20	Kakrail Mosque Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Head is broken	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	head direction is wrong	Head is broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Yes	
53	57	Gulistan Square Intersection	North	No signal										Underpass
			South	No signal										Underpass
			East	No signal										Underpass
			West	No signal										Underpass

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
54	**50**	Zahir Raihan Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong	Ok	No head in left side
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	wrong	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	(Head is not visible for sign board)
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
55	**51**	Bangshal Road Intersection	North	Yes	Yes	Yes	No	Yes	Tilted	pole colorless	Yes	wrong	Ok	Head is not clean
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	Ok	Broken	
			West	Yes	Yes	Yes	No	Yes	Ok	Pole colorless	No	Ok	Broken	
56	**52**	Sadarghat Road Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	wrong	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	wrong	Ok	
57	**08**	Dholikhal Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	No	Ok	Colorless	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	Ok	Yes	
			West	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	wrong	Broken	
58	**11**	English Road Intersection	North	Yes	Yes	Yes	No	Yes	Ok	Colorless	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Tilted	Colorless	No	wrong	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Colorless	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Pole Colorless	No	Ok	Ok	
59	**09**	Shapla Chattar Intersection	North	Yes	Yes	Yes	No	Yes	Tilted	Color less	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	wrong	Head is broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	wrong	Head is broken	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
60	**23**	Ittefaq Intersection	South	Yes	Yes	Yes	Yes	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	Yes-Not working	Yes	Ok	colorless	Yes	wrong	Ok	
			West	Yes	Yes	Yes	Yes-Not working	Yes	Ok	Ok	No	Ok	Ok	
61	**61**	Tejgaon Rangs Link Road Intersection	North	No signal										
			South	Yes	Yes	No	Yes	Yes	Ok	Ok		wrong	Broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	direction is wrong	Head is broken	
			West	Yes	Yes	wrong	yes	yes	Ok	Ok	No	wrong	Broken	
62	**62**	Green Road (Panthpath)	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Broken	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
63	**63**	Rassel Square	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	No signal										
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
64	**64**	Dhanmondi-27	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
65	**65**	Manik Mia Avenue	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
66	**66**	Asad Gate	North	No signal										Foot over bridge
			South	No signal										Foot over bridge
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	In left side head direction wrong	Ok	

SL	ID	Intersections	Approach	Presence (yes/no/ N/A)	Light Size [210mm](Yes/not)	Pole Positioning /placement (Yes/no)	push button (exist or not) Working/ not working	Pole Size (Yes/No)	Pole (Ok / tilted)	Pole (Ok / /colorless)	Head placement/ mounting in pole [2. 5m from carriageway level] (Yes/No)	Head direction [Ok/ wrong]	Head /broken [Ok/ broken]	Remarks
67	**67**	Mohammadpur Thana Crossing	North	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
68	**68**	College Gate (Sohrawardi hospital)	North	No signal										
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	Yes	Ok	Ok	
			West	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
69	**69**	ShishuMela	North	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			South	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
			East	Yes	Yes	Yes	No	Yes	Ok	Ok	No	Ok	Ok	
70	70	Shamoli Cinema Hall	North	No signal										
			South	No signal										Foot over bridge
			West	Yes	Yes	wrong (Very near to curve)	No	Yes	Tilted	Ok	No	wrong	Ok	

Physical deficiency

11. Sight distance

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
1	BijoyNagar ID-13	North	No	No	No	No	No	
		South	No	No	Yes-Electric pole is in left side.	No	No	Bamboo structure
		West	No	No	Electric pole is in left side.	No	No	
2	Kakrail (rajmoni)	North	No	No	Electric pole is in left side.	Signboard is in left side.	No	
		South	No	No	Yes- Electric pole is in left side.	Yes- Signboard at median	No	
		East	Yes- police box at median	No	No	No	No	
		West	No	No	No	No	No	
3	Malibagh ID-16	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	Yes- police box at median	No	No	Yes	No	
4	Rajarbagh ID-17	North	No	No	No	Yes-Signboard is in left side.	Yes- Tree is in median	
		South	No	No	Yes-Electric pole is in left side.	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
5	Mouchak ID-15	North	No	No	No	Yes	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
6	Malibagh Rail Gate ID-27	South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
7	Pir Jongi Mazar ID-47	North	No	No	No	No	No	
		South	No	No	No	No	Tree is in left side	Shop is in left side
		West	No	No	Electric pole is in right side.	No	Tree is in right side	
8	Fakirapul ID-06	North	No	No	No	No	No	Left side- cabinet
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
9	Palton /(Topkhana) ID-14	North	No	No	Yes-pole, cable in the Left side	Yes- left side	No	
		South	No	No	Left side- pole, cable		No	
		East	No	No	Yes- left side	Yes- left side	No	
		West	No	No	No	No	No	
10	Kamalapur Station ID-48	North	No	No	Yes	No	No	
		South	No	No	No	No	No	Shop in left side
		West	No	No	Yes- left side	No	No	
11	Kamalapur Container ID- 26	North	No	No	No	No	No	
		South	No	No	left side- Electric pole	No	No	
		West	No	left side-wall	No	Yes- left side,	Yes- left side	
12	Zero point ID-	North	No	No		Yes- left side	No	
		South	No	No	Yes- left side	No	No	Shop in left side
		East	No	No	No	No	No	
		West	No	Yes	Yes	Yes	Yes	
13	Gulistan ID-25	North	No	Yes	No	No	Yes	
		South	Yes- police box at median	No	Yes	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
14	Mohakhali	North	No	No	No	No	No	
		South	Yes- police box at right side	No	No	No	No	
		East	No	No	No	No	No	
		West	Yes	No	No	No	No	
15	Chairman Bari	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
16	Bonani Kakoli	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	Yes – At left side	No	No	No	No	
17	Mohakhli Amtoli	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	Yes	No	Yes	No	No	
18	Firmgate	North	No	No	No	No	No	
		South	No	No	No	No	No	
		West	No	No	No	No	Yes (left side)	
19	Bijoy Sarani	North	No	No	No	No	No	
		South	No	No	No	Yes	No	
		East	Yes (left side)	No	No	No	No	
		West	No	No	No	No	No	
20	PM Office	North	**No**	**No**	**No**	**No**	**No**	
		South	**No**	**No**	**No**	**No**	**No**	
		West	**No**	**No**	**No**	**No**	**No**	
21	Jahangir Gate	North	**No**	**No**	**No**	**No**	**No**	
		South	**No**	**No**	**No**	**No**	**No**	
		East	**No**	**No**	**No**	**No**	**No**	
22	Moghbazar	North	No	No	No	No	No	
		South	No	No	No	No	Tree at median	
		East	No	No	No	No	No	
		West	No	No	No	No	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
23	Mirpur-1	South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	Yes-in left side	No	No	No	No	
24	Darussalam (TTC)	North	Police box in right side	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
25	Mirpur Mazar	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
26	Dhanmondi Road 10	North	No	No	No	No	No	
		South	No	No	No	No	No	
		West	No	No	No	No	No	
27	Dhanmondi Road .6&7	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
28	Science Lab.	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
29	**New Market**	North	No	No	Yes- in left side	No	No	
		South	No	Bamboo structure is in side	Electric pole is in left side	Signboard is in left side	Yes-Tree at median	
		East	Police box	No	No	No	No	
		West	No	No	No	No	No	
30	**Azimpur**	North	No	Wall in left side.	Yes	Yes	No	
		South	No	Bamboo structure	No	No	Yes- at left side	
		East	No	No	No	No	No	
		West	No	Bamboo structure and wall	Electric pole	Yes	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
31	**Palashi**	Nilkhet	No	Bamboo structure	Electric pole	No	No	
		Chankharpul	No	wall	Electric pole	No	No	
		East	No	Wall is in left side	Electric pole is in left side	No	Tree is in left side	
		Azimpur	No	No	Electric pole is in left side	No	No	
		Dhakessori	No	Bamboo structure	Electric pole	No	No	Temporary shop
32	**Agargaon**	North	No	No	No	No	No	
		South	No	No	No	Bill board is in left side	Tree is in left side	
		East	Police box is in left side	Building and police umbrella	Electric pole is in left side	Signboard is in left side	No	
		West	No	No	No	Bill board is in left side	Tree is in left side	
33	**Khamar Bani**	North	Yes	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	Yes	No	
34	**Bijoy Sarani(Aeroplane)**	North	No	No	Yes	Yes	No	
		South	No	No	Yes	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
35	**Parliament Intersection**	North	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
36	**Hotel Sonargaon**	North	No	Building is in left side	No	No	No	
		South	No	No	No	No	No	
		Hatirpool	No	No	No	Yes (left side)	Tree (Left side)	
		East	Yes (in median)	No	No	No	Tree (Left side)	
		West	No	No	No	Yes (left side)	No	
37	**Bangla motor**	North	No	No	Yes	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	Yes	
		West	No	No	No	No	Yes	
38	**Hotel Sheraton**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	Tree in left side	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
39	**Shahbagh**	North	No		Electric pole is in life side	signboard is in left side		
		South	No	No	No	No	No	
		East	Yes	Yes -shop	No	No	Tree is in left side	
		West	No	No	No	No	No	
40	**Katabone**	North	No	No	No	Billboard is in left side	No	
		South	No	No	Electric pole is in left side	No	No	
		East	No	No	No	Yes	No	
		West	No	No	Electric pole is in left side	No	No	
41	**Bata crossing**	North	No	No	No	Yes	No	
		South	No	No	No	No	No	
		East	No	No	No	Yes	No	
		West	No	No	No	No	No	
42	**Matshaw Bhaban**	North	No	No	No	No	Tree is in left side	
		South	No	No	No	No	No	
		East	No	No	Electric pole is in left side	Billboard is in left side	No	
		West	No	No	No	Billboard is in left side	No	
43	**KadamChattar**	North	No	No	No	No	No	
		South	No	No	No	No	Tree is in median	
		East	No	No	No	No	No	
44	**Curzon Hall**	North	No	No	No	No	Tree is in left side	
		South	No	No	Electric pole is in left side	Billboard is in left side	Tree is in left side	
		East	Police box in pedestrian crossing	Wall is in left side	Electric pole is in left side	No	No	
		West	No	No	No	No	No	
45	**Basundhara Intersection**	North	No	No	No	No		
		South	No	No	No	No	No	
		East		steel structure, in left side. wall & steel truss		Sign board in left side		

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
46	**Mojub Avenue (Natun Bazar) Intersection**	North	No	bamboo structure in left side	yes (left side)	yes	No	temporary shop
		South	yes	No	No	No	tree in left side	
		East	No	bamboo structure	No	Sign board in left side		
		West	No	No	No	No	tree in left side	
47	**Gulshan- 1 Intersection**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	yes - at median	No	No	No	No	
48	**Gulshan- 2 Intersection**	North	No	No	No	Sign board, tree in left side	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	Police box	No	No	No	No	
49	**Nabisco Intersection**	North	Police box in median	wall in left side	Electric pole in left side	No	No	
		South	No	No	No	No	No	
		East		Wall in left side	Electric Pole in left side	Signboard is in left side	No	
50	**Tongi Diversion Intersection**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	Shop in left side	Electric pole is in the left side	Bill board	No	
51	**Shanti Nagar Intersection**	North	No	No	Electric pole is in the left side	No	Tree in traffic Island	
		South	No	Shop bamboo structure	Electric pole is in the left side	Sign Board in left side	No	Electric box in left side
		East	No	Building structure in left side	Electric pole is in the left side	Sign Board in left side	No	Bamboo structure in right side
		West	No	No	No	No	No	Temporary shop

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
52	**Kakrail Mosque Intersection**	North	No	No	No	No	Tree is in left side	
		South	No	No	Yes	No	No	
		East	No	No	No	No	No	
53	**Gulistan Square Intersection**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	
54	**Zahir Raihan Intersection**	North	No	Temporary shop	Electric pole is in the left side	No	No	
		South	Yes	Building in left side	No	No	No	
		East	No	Temporary shop	Yes (Right side)	No	No	Temporary shop in right side
		West	No	Yes (Right side)	Yes (Left side)	No	No	
55	**Bangshal Road Intersection**	North	No	No	Yes (Left side)	No	No	
		South	No	No	No	No	No	
		East	No	Building in left side	Electric pole, wire in left side	No	No	
		West	No	No	Electric pole	No	No	
56	**Sadarghat Road Intersection**	North	No	Bamboo structure	Electric pole	No	Yes	
		South	No	Bamboo structure	Electric pole (left side)	Sign Board in left side	No	
		East	No	No	No	No	Tree in left side	Dust bin
		West	No	Structure, shop	No	Sign Board,	No	
57	**Dholikhal Intersection**	North	No	Yes (shop)	No	No	No	
		South	No	Bamboo structure	Yes (Pole)	No	No	
		East	No	Yes (Building)	Yes (Left side)	No	No	
		West	No	No	Yes (Left side)	No	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
58	**English Road Intersection**	North	No	Building in left side	Electric pole	No	No	
		South	Police box in median	Building in left side	Electric pole in left side	No	No	
		East	No	No	No	No	No	
		West	No	Building (shop)	Electric pole	No	No	
59	**Shapla Chattar Intersection**	North	No	No	Electric pole	No	No	Temporary shop in left side
		South	No	No	No	No	Tree in left side	
		East	Police Booth	Building structure in right side	Electric pole	Sign Board in right side	Tree in right side	Temporary shop in right side
		West	No	Building structure in left side	Electric pole in left side	Traffic sign	No	Temporary shop in left side
60	**Ittefaq Intersection**	South	No	No	Yes- left side,	No	No	
		East	No	Yes-building	No	No	No	
		West	No	No	No	No	No	
61	**Tejgaon Rangs Link Road Intersection**	North	No	Building in left side	No	bill board is in left side	tree in left side	
		South	No	No	Electric Pole	Signboard is in left side	No	
		East	No	building is in left side	No	No	No	
		West	No	Wall is in left side	No	No	tree in left side	
62	**Green Road (Panthpath)**	North	No	Shop	No	No	Tree is at left side in median	
		South	Yes	No	No	No	Tree at left side in median	
		East	No	No	Yes (left side)	No	No	
		West	No	No	Yes (left side)	No	No	
63	**Rassel Square**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	No	No	No	No	No	
		West	No	No	No	No	No	

SL	Intersections	Approach	Police Box/ booth (Yes/No)	Building/ structure (Yes/No)	Electric pole, wire (Yes/No)	Signboard or bill board, (Yes/No)	Tree (Yes/No)	Others (Yes/No)
64	**Dhanmondi-27**	North	No	No	No	No	No	
		South	No	No	Yes	No	No	
		East	No	Yes	No	No	No	
65	**Manik Mia Avenue**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	Yes	No	No	No	No	
66	**Asad Gate**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		West	No	No	No	No	No	
67	**Mohammadpur Thana Crossing**	North	No	Yes	Yes	No	No	
		South	No	No	**Yes**	No	No	
		East	No	No	No	No	No	
		West	No	No	No	Yes	No	
68	**College Gate (Sohrawardi hospital)**	North	No	No	No	No	No	
		South	No	No	No	**Yes**	No	
		West	No	**Yes**	**Yes**	**Yes**	No	
69	**ShishuMela**	North	No	No	No	No	No	
		South	No	No	No	No	No	
		East	Yes	No	No	No	No	
70	Shamoli Cinema Hall	North	No	No	No	No	No	
		South	No	No	No	No	No	
		West	Police box in right side	No	No	No	No	

12 Obstructed /poor visibility of signal light:

Physical deficiency

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
1	BijoyNagar ID-13	North	Yes	No	No	No	No	No	
		South	Yes	No	No	Yes- at median	No	No	
		West	Yes	No	No	Yes at median	No	No	
2	Kakrail (rajmoni)	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	Yes at island	Tree in front of signal at island	No	No	
		West	Yes	No	No	Yes	No	No	
3	Malibagh ID-16	North	No	No	No	Tree in front of signal at median	No	Yes- left side	
		South	Yes	No	No	Tree in front of signal at median	No	No	
		East	Yes	No	No	No	No	No	
		West	No signal						
4	Rajarbagh ID-17	North	No	No	Traffic sign is in front of signal.	No	No	No	
		South	No	No	Traffic sign is in front of signal.	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
5	Mouchak ID-15	North	No	No	No	No	No	Yeas	
		South	No	No	No	Tree in front of signal	No	Cable is in front of signal in left side.	
		East	No	No	No	Tree in front of signal in left side	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
6	Malibagh Rail Gate ID-27	South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	No	No	Yes	
7	Pir Jongi Mazar ID-47	North	Yes	No	No	No	No	No	
		South	No	No	No	Tree in front of signal at median	No	No	
		West	No	No	No	Yes	No	No	
8	Fakirapul ID-06	North	No	No	No	Yes	Left side pole	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
9	Palton /(Topkhana) ID-14	North	No	No	No	No	No	Yes- left side	
		South	Yes	No	No	No	No	No	
		East	No	No	No	No	No	Yes	
		West	Yes	No	No	No	No	No	
10	Kamalapur Station ID-48	North	No	No	No	Yes	No	No	
		South	No signal						
		West	No	No	No	Yes – left side	Yes	No	
11	Kamalapur Container ID- 26	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
12	Zero point ID-	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes	Yes	No	
13	Gulistan ID-25	North	Yes	No	Yes	Yes	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
14	Mohakhali	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
15	Chairman Bari	North	Yes	No	No	No	No	No	
		South	No	No	Yes	No	No	No	
		East	Yes	No	No	No	No	No	
16	Bonani Kakoli	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
17	Mohakhli Amtoli	North	No	No	Yes	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
18	Firmgate	North	No	No	No	Yes	No	No	
		South	Yes	No	No	No	No	No	
		West	No	No	Yes	No	No	No	
19	Bijoy Sarani	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
20	PM Office	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
21	Jahangir Gate	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
22	Moghbazar	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
23	Mirpur-1	South	Yes	No	No	No	No	No	
		East	No	No	No	Tree in front of signal at median	No	No	
		West	No	No	No	Tree in front of signal at median	No	No	
24	Darussalam (TTC)	North	No	No	No	Yes	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
25	Mirpur Mazar	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	No	No	Yes	No	Yes	No	
26	Dhanmondi Road 10	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
27	Dhanmondi Road .6&7	North	No	No	No	Yes at median	No	No	
		South	No	No	No	Yes at median	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
28	Science Lab.	North	No	No	No	Yes at median	No	No	
		South	No	No	No	Yes at median	No	No	
		East	No	No	No	Yes at median	No	No	
		West	Yes	No	No	No	No	No	
29	New Market	North	Yes	No	No	No	No	No	
		South	No	No	No	Yes at median	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes at median	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
30	Azimpur	North	Yes	No	No	No	No	No	
		South	No	Bamboo structure is in front of signal	No	No	No	No	
		East	No	Bamboo structure	No	Yes at median	No	No	
		West	No	No	No	Yes at median	No		
31	Palashi	North /Nilkhet	Yes	No	No	No	No	No	
		South / Chankharpul	Yes	No	No	No	No	No	
		East	No	No	No	No	Yes	No	
		West / Azimpur	No	Bamboo structure	No	No	No	No	Traffic sign in front of signal
		Dhakessori	Yes	No	No	No	No	No	
32	Agargaon	North	No	No	Yes	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Tree is in front of signal	No	No	
33	Khamar Bani	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
34	Bijoy Sarani(Aeroplane)	North	Yes	No	No	No	No	No	
		South	No	No	Yes	Yes	No	No	
		East	No	No	Yes	No	No	No	
		West	No	No	Yes	Yes	No	No	
35	Parliament Intersection	North	Yes	No	No	No	No	No	
		East	No	No	No	Yes	No	No	
		West	No	No	No	Ye- at median	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
36	Hotel Sonargaon	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		Hatirpool	No	No	No	Yes	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Ye- at median	No	No	
37	Bangla motor	North	No	No	Yes	No	No	Yes	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes	No	No	
38	Hotel Sheraton	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
39	Shahbagh	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes-at medium	No	No	
40	Katabone	North	Yes	No	No	No	No	No	
		South	No	No	No	Yes- at median	No	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	No	No	Cable in front of signal in left side	
41	Bata crossing	North	No	No	Yes	Yes	No	Yes	
		South	Yes	No	No	No	No	No	
		East	No	No	Yes	Yes	No	No	
		West	No	No	Yes	No	No	Yes	
42	Matshaw Bhaban	North	Yes	No	No	No	No	No	
		South	No	Bamboo structure is in front of signal	No	No	No	No	
		East	No	No	No	Yes-at medium	No	No	
		West	Yes	No	No	No	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
43	KadamChattar	North	No	No	No	Yes-at medium	No	No	
		South	No	No	No	Yes-at medium	Yes	No	
		East	No	No	No	Yes-at medium	No	Yes- at left side	
44	Curzon Hall	North	No	No	No	Yes-at medium	No	No	
		South	Yes	No	No	No	No	No	
		East	No	No	No	Yes-at medium	No	No	
		West	No	No	No	Yes-at medium	No	No	
45	Basundhara Intersection	North	Yes	No	No	No	No	No	
		South	No	No	No	No	No	Yes- at left side	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
46	Mojub Avenue (Natun Bazar) Intersection	North	No	No	No	No	Yes	No	
		South	Yes	No	No	No	No	No	
		East	No	bamboo structure	No	No	No	No	
		West	Yes	No	No	No	No	No	
47	Gulshan- 1 Intersection	North	No	No	No	No	No	No	
		South	No	No	No	No	No	No	
		East	No	No	No	No	No	No	
		West	No	No	No	No	No	No	
48	Gulshan- 2 Intersection	North	No	No	No	No	No	No	
		South	No	No	No	No	No	No	
		East	No	No	No	No	No	No	
		West	No	No	No	No	No	No	
49	Nabisco Intersection	North	No	No	No	Yes at median	Yes	No	
		South	Yes	No	No	No	No	No	
		East	No	No	Sing board in fornt of signal at left side	Yes at median	No	No	
		West	Yes	No	No	No	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
50	Tongi Diversion Intersection	North	No	No	No	No	No	Cable is in front of signal	
		South	No	No	No	No	Yes	No	
		East	Yes	No	No	No	No	No	
		West	No	No	No	Trees are in front of signal	No	No	
51	Shanti Nagar Intersection	North	No	No	No	No	No	No	
		South	No	No	No	No	No	No	
		East	No	No	No	No	Yes	No	
		West	No	No	No	No	No	No	
52	Kakrail Mosque Intersection	North	No	No	No	Yes at median	Yes	No	
		South	No	No	No	No	Yes	No	
		East	No	No	No	No	Yes	No	
53	Gulistan Square Intersection	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
54	Zahir Raihan Intersection	North	Yes	No	No	No	No	No	
		South	No	No	No	No	Yes-left side	No	
		East	No	No	Traffic sign in front of signal & pedestrian signal	No	No	No	Temporary shop
		West	No	No	No	No	Yes	No	
55	Bangshal Road Intersection	North	No	No	Sign Board in front of signal	No	No	No	
		South	No	Bamboo structure in front of signal	No	Tree in front of signal	No	No	
		East	No	No	No	No	Yes	No	
		West	No signal						

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
56	Sadarghat Road Intersection	North	No	Bamboo structure in front of signal	sign board in front of signal	Tree in front of signal	Yes	Yes	
		South	No	No	No	Tree in front of signal	Yes	No	
		East	No	No	No	Tree in front of signal at left side	No	Yes	
		West	Yes	No	No	No		No	
57	Dholikhal Intersection	North	No	No	No	No	Yes	No	
		South	No	No	No	No	Yes	Yes	
		East	No	Bamboo structure is in front of signal	No	No	Yes	No	
		West	Yes	No	No	No	No	No	
58	English Road Intersection	North	No	No	No	No	No	Cable is in front of signal	
		South	No	No	No	No	No	No	Temporary shop
		East	Yes	No	No	No	No	No	
		West	No	Bamboo structure in front of signal	No	Tree is in front of signal	No	No	
59	Shapla Chattar Intersection	North	No	Building/ Structure is in front of signal	No	No	Yes	Cable is in front of signal	
		South	No	No	No	No	No	No	Temporary shop is in front of Signal
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes at median	Yes-left side	Cable is in front of signal	Temporary shop is in front of Signal

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
60	Ittefaq Intersection	South	No signal						
		East	Yes	No	No	No	No	No	
		West	No	No	No	Yes	No	No	
61	Tejgaon Rangs Link Road Intersection	North	No	No	sign board in left side	No	No	yes	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
62	Green Road (Panthpath)	North	No	No	No	Tree at median in front of signal	No	Yes	
		South	No	No	No	Tree in front of signal	No	No	
		East	No	No	No	Tree in front of signal	No	Cable in front of signal	
		West	Yes	No	No	No	No	No	
63	Rassel Square	North	No	No	No	Tree in front of signal	No	No	
		South	Yes	No	No	No	No	No	
		East	No	No	No	Tree is in front of signal	Yes	Cable is in front of signal	
64	Dhanmondi-27	North	Yes	No	Sign Board is in front of signal	No	No	No	
		South	No	No	No	Tree is infront of signal	No	No	
		West	Yes	No	No	No	Yes	Yes	
65	Manik Mia Avenue	North	No	No	Sign board is in front of signal	Tree in front of signal	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
66	Asad Gate	North	Yes	No	No	No	No	No	
		South	No	No	Sign board is in front of signal	Tree is in front of signal	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	

Sl	Intersections	Approach	clear view (Yes/No)	Building/ structure (Yes/No)	Signboard or bill board (Yes/No)	Tree (Yes/No)	Electric pole (Yes/No)	Cable (Yes/No)	Remarks
67	Mohammadpur Thana Crossing	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
		West	Yes	No	No	No	No	No	
68	College Gate (Sohrawardi hospital)	North	No		Sign board is in front of signal,	Tree is in front of signal	Yes	No	
		South	Yes	No	No	No	No	No	
		West	No		Sign board is in front of signal,	No	No	No	
69	ShishuMela	North	Yes	No	No	No	No	No	
		South	Yes	No	No	No	No	No	
		East	Yes	No	No	No	No	No	
70	Shamoli Cinema Hall	North	Yes	No	No	No	No	No	
		South	No	No	No	Yes	No	No	
		West	No	Bamboo structure is in front of signal	No	No	No	No	

APPENDIX B

OPERATIONAL DEFICIENCY OF TRAFFIC SIGNAL

01. Poor lane discipline at intersections:

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Mix	No	
			South	Mix	No	
			West	Mix	No	
2	12	Kakrail (rajmoni)	North	Motorized	Yes	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
3	16	Malibagh	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
4	17	Rajarbagh	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
5	15	Mouchak	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
6	27	Malibagh Rail Gate	South	Mix	No	
			East	Mix	No	
			West	Mix	No	
7	47	Pir Jongi Mazar	North	Mix	No	
			South	Mix	No	
			West	Mix	No	
8	06	Fakirapul	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
9	14	Palton (Topkhana)	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
10	48	Kamalapur Station	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
11	26	Kamalapur Container	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
12	24	Zero point	North	Mix	No	
			South	Mix	No	
			East	Motorized	No	
			West	Motorized	No	
13	25	Gulistan	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
14	32	Mohakhali	North	Motorized	No	
			South	Motorized	No	
			West	Motorized	No	
15	35	Chairman Bari	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
16	34	Bonani Kakoli	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Mix	No	
17	31	Mohakhli Amtoli	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
18	42	Firmgate	North	Motorized	No	
			South	Motorized	No	
			West	Motorized	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
19	38	Bijoy Sarani	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Motorized	No	
20	60	PM Office	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
21	36	Jahangir Gate	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
22	30	Moghbazar	North	Mix	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Mix	No	
23	05	Mirpur-1	South	Mix	No	
			East	Mix	No	
			West	Mix	No	
24	03	Darussalam (TTC)	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
25	04	Mirpur Mazar	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
26	54	Dhanmondi Road 10	North	mix	No	
			South	mix	No	
			East	mix	No	
			West	mix	No	
27	53	Dhanmondi Road .6&7	North	mix	No	
			South	mix	No	
			East	mix	No	
			West	mix	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
28	22	Science Lab.	North	mix	No	
			South	mix	No	
			East	motorized	No	
			West	mix	No	
29	**18**	**New Market**	North	mix	No	
			South	mix	No	
			East	mix	No	
			West	mix	No	
30	**33**	**Azimpur**	North	mix	No	
			South	mix	No	
			East	mix	No	
			West	mix	No	
31	**59**	**Palashi**	North /Nilkhet	mix	No	
			Chankharpul	mix	No	
			East	mix	No	
			Azimpur	mix	No	
			Dhakessori	mix	No	
32	**39**	**Agargaon**	North	mix	No	
			South	mix	No	
			East	Motorized	No	
			West	mix	No	
33	**41**	**Khamar Bari**	North	mix	No	
			South	Motorized	No	
			East	mix	No	
			West	mix	No	
34	**40**	**Bijoy Sarani(Aeroplane)**	North	mix	No	
			South	mix	No	
			East	Motorized	No	
			West	Motorized	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
35	**37**	**Parliament Intersection**	North	Motorized	Yes	
			East	Mix	No	
			West	Mix	No	
36	**43**	**Hotel Sonargaon**	North	Motorized	No	
			Hatirpool	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Motorized	No	
37	**21**	**Bangla motor**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Motorized	No	
38	**19**	**Hotel Sheraton**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
39	**44**	**Shahbagh**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Mix	No	
40	**07**	**Katabone**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
41	**56**	**Bata crossing**	North	Mix	No	
			South	Mix	No	
			East	Motorized	No	
			West	Mix	No	
42	**45**	**Matshaw Bhaban**	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
			West	Motorized	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
43	**10**	**KadamChattar**	North	Motorized	No	
			South	Mix	No	
			East	Mix	No	
44	**46**	**Curzon Hall**	North	Mix	No	
			South	Mix	No	
			East	Motorized	No	
			West	Mix		
45	**02**	**Basundhara Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
46	**01**	**Mojub Avenue (Natun Bazar) Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
47	**57**	**Gulshan- 1 Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
48	**58**	**Gulshan- 2 Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
49	**28**	**Nabisco Intersection**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
50	**29**	**Tongi Diversion Intersection**	North	Motorized	No	
			South	Motorized	No	
			West	Motorized	No	
51	**55**	**Shanti Nagar Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
52	**20**	**Kakrail Mosque Intersection**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
53	**57**	**Gulistan Square Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
54	**50**	**Zahir Raihan Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
55	**51**	**Bangshal Road Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
56	**52**	**Sadarghat Road Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
57	**08**	**Dholaikhal Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
58	**11**	**English Road Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
59	**09**	**Shapla Chattar Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
60	**23**	**Ittefaq Intersection**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	

SL	ID	Intersection	Approach	Motorized/ mix	lane discipline(Yes/No)	Remarks
61	**61**	**Tejgaon Rangs Link Road Intersection**	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
			West	Motorized	No	
62	**62**	**Green Road (Panthpath)**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
			West	Mix	No	
63	**63**	**Rassel Square**	North	Motorized	No	
			South	Motorized	No	
			East	Motorized	No	
			West	Not applicable	Not applicable	
64	**64**	**Dhanmondi-27**	North	Motorized	No	
			South	Motorized	No	
			West	Motorized	No	
65	**65**	**Manik Mia Avenue**	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
66	**66**	**Asad Gate**	North	Motorized	No	
			South	Motorized	No	
			West	Mix	No	
67	**67**	**Mohamrnadpur Thana Crossing**	North	Motorized	No	
			South	Motorized	No	
			East	Mix	No	
			West	Mix	No	
68	**68**	**College Gate (Sohrawardi hospital)**	North	Mix	No	
			South	Mix	No	
			West	Mix	No	
69	**69**	**ShishuMela**	North	Mix	No	
			South	Mix	No	
			East	Mix	No	
70	70	Shamoli Cinema Hall	North	Motorized	No	
			South	Motorized	No	
			West	Mix	No	

2. Lack of discipline/rules :

Operational deficiency

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	Stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Remarks
1	13	Bijoy Nagar (Night Angel)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	No	
2	12	Kakrail (rajmoni)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
3	16	Malibagh	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
4	17	Rajarbagh	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
5	15	Mouchak	North	Follow	No	Yes	
			South	Follow	Yes	Yes	
			East	Follow	No	Yes	
6	27	Malibagh Rail Gate	East	Follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
			North	Do Not follow	Yes	No	
7	47	Pir Jongi Mazar	North	Do Not follow	Yes	No	
			South	Do Not follow	Yes	NO	
			West	Do Not follow	No	No	
8	06	Fakirapul	North	Follow	Yes	Yes	
			South	follow	No	No	
			East	follow	Yes	No	
			West	follow	No	No	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
9	14	Palton /(Topkhana)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	No	No	
			West	Follow	Yes	Yes	
10	48	Kamalapur Station	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
11	26	Kamalapur Container	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
12	24	Zero point	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
13	25	Gulistan	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
14	32	Mohakhali	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
15	35	Chairman Bari	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
16	34	Bonani Kakoli	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
17	31	Mohakhli Amtoli	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
18	42	Firmgate	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
19	38	Bijoy Sarani	North	Follow	No	No	
			South	Follow	No	Yes	
			East	Follow	No	No	
			West	Follow	Yes	Yes	
20	60	PM Office	North	Follow	Yes	Yes	
			South	Follow	No	No	
			West	Follow	Yes	Yes	
21	36	Jahangir Gate	South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
22	30	Moghbazar	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow			
			West	Do Not follow	Yes	Yes	
23	05	Mirpur-1	South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
24	03	Darussalam (TTC)	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
25	04	Mirpur Mazar	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
26	54	Dhanmondi Road 10	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
27	53	Dhanmondi Road .6&7	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
28	22	Science Lab.	North	Follow	Yes		
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
29	**18**	**New Market**	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
30	**33**	**Azimpur**	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
31	**59**	**Palashi**	Nilkhet	Follow	Yes	Yes	
			Chankharpul	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			Azimpur	Follow	Yes	Yes	
			Dhakessori	Follow	Yes	Yes	
32	**39**	**Agargaon**	North	Follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
33	**41**	**Khamar Bari**	North	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
34	40	Bijoy Sarani(Aeroplane)	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
35	37	Parliament Intersection	North	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
36	43	Hotel Sonargaon	North	Follow	No	No	
			South	Follow	No	No	
			East	Follow	No	No	
			Hatirpul	Follow	No	No	
			West	Follow	No	No	
37	21	Bangla motor	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
38	19	Hotel Sheraton	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	No	Yes	
39	44	Shahbagh	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
40	07	Katabone	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
41	56	Bata crossing	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
42	45	Matshaw Bhaban	North	Follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
43	10	KadamChattar	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
44	46	Curzon Hall	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
45	02	Basundhara Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
46	01	Mojub Avenue (Natun Bazar) Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
47	57	Gulshan- 1 Intersection	North	follow	No	No	
			South	follow	No	No	
			East	follow	No	No	
			West	follow	No	No	
48	58	Gulshan- 2 Intersection	North	follow	No	No	
			South	follow	No	No	
			East	follow	No	No	
			West	follow	No	No	
49	28	Nabisco Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
50	29	Tongi Diversion Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
51	55	Shanti Nagar Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
52	20	Kakrail Mosque Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
53	57	Gulistan Square Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
54	50	Zahir Raihan Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
55	51	Bangshal Road Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
56	52	Sadarghat Road Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
57	08	Dholaikhal Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
58	11	English Road Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
59	09	Shapla Chattar Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
60	23	Ittefaq Intersection	South	No Signal			
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
61	61	Tejgaon Rangs Link Road Intersection	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
62	62	Green Road (Panthpath)	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
63	63	Rassel Square	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
64	64	Dhanmondi-27	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			East	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	
65	65	Manik Mia Avenue	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	

SL	ID	Intersection	Approach	Following of signal light (Red /yellow/green or Primary signal/Police indication) [Follow/Do Not follow]	stop line violation (Yes/No)	Pedestrian crossing Violation Yes/No	Others
67	**67**	**Mohammadpur Thana Crossing**	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
68	**68**	**College Gate (Sohrawardi hospital)**	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
69	**69**	**ShishuMela**	North	Follow	Yes	Yes	
			South	Follow	Yes	Yes	
			East	Follow	Yes	Yes	
			West	Follow	Yes	Yes	
70	70	**Shamoli Cinema Hall**	North	Do Not follow	Yes	Yes	
			South	Do Not follow	Yes	Yes	
			West	Do Not follow	Yes	Yes	

3. Illegal parking and bus stoppage at signalized intersections

Operational deficiency

SL	ID	Intersection	Illegal parking (Yes/No)	bus stoppage in signalized intersections (Yes/No)	Others
1	13	Bijoy Nagar (Night Angel),	Yes	Yes	
2	12	Kakrail (rajmoni),	Yes	Yes	
3	16	Malibagh,	Yes	Yes	
4	17	Rajarbagh,	Yes	Yes	
5	15	Mouchak	Yes	Yes	
6	27	Malibagh Rail Gate	Yes	Yes	
7	47	Pir Jongi Mazar	Yes	Yes	
8	6	Fakirapul	Yes	Yes	
9	14	Palton /(Topkhana)	Yes	Yes	
10	48	Kamalapur Station	Yes	Yes	
11	26	Kamalapur Container	No	No	
12	24	Zero point	Yes	Yes	
13	25	Gulistan	Yes	Yes	
14	32	Mohakhali Railcrossing	Yes	Yes	
15	35	Chairman Bari	No	No	
16	34	Bonani Kakoli	No	Yes	
17	31	Mohakhli Amtoli	No	No	
18	42	Firmgate	No	Yes	
19	38	Bijoy Sarani	No	No	
20	60	PM Office	No	No	
21	36	Jahangir Gate	No	No	
22	30	Moghbazar	Yes	Yes	
23	05	Mirpur-1	Yes	Yes	
24	03	Darussalam(TTC)	No	Yes	
25	04	Mirpur Mazar	Yes	Yes	
26	54	Dhanmondi Road 10	No	Yes	
27	53	Dhanmondi Road .6&7	No	No	
28	22	Science Lab.	Yes	Yes	
29	18	New Market	Yes	Yes	
30	33	Azimpur	Yes	No	
31	59	Palashi	Yes	No	
32	39	Agargaon	No	Yes	

SL	ID	Intersection	Illegal parking (Yes/No)	bus stoppage in signalized intersections (Yes/No)	Others
33	41	Khamar Bari	No	No	
34	40	Bijoy Sarani(Aeroplane)	No	No	
35	37	Parliament Intersection	No	No	
36	43	Hotel Sonargaon	No	No	
37	21	Bangla motor	No	No	
38	19	Hotel Sheraton	No	Yes	
39	44	Shahbagh	Yes	Yes	
40	07	Katabone	Yes	No	
41	56	Bata crossing	Yes	No	
42	45	Matshaw Bhaban	No	No	
43	10	KadamChattar	No	No	
44	46	Curzon Hall	Yes	No	
45	02	Basundhara Intersection	No	Yes	
46	01	Mojub Avenue (Natun Bazar) Intersection	Yes	Yes	
47	57	Gulshan- 1 Intersection	Yes	No	
48	58	Gulshan- 2 Intersection	No	No	
49	28	Nabisco Intersection	Yes	Yes	
50	29	Tongi Diversion Intersection	No	Yes	
51	55	Shanti Nagar Intersection	Yes	Yes	
52	20	Kakrail Mosque Intersection	No	No	
53	57	Gulistan Square Intersection	Yes	Yes	
54	50	Zahir Raihan Intersection	Yes	Yes	
55	51	Bangshal Road Intersection	Yes	Yes	
56	52	Sadarghat Road Intersection	Yes	Yes	
57	08	Dholaikhal Intersection	Yes	Yes	
58	11	English Road Intersection	Yes	Yes	
59	09	Shapla Chattar Intersection	Yes	Yes	
60	23	Ittefaq Intersection	Yes	No	
61	61	Tejgaon Rangs Link Road Intersection	No	Yes	
62	62	Green Road (Panthpath)	No	No	
63	63	Rassel Square	No	No	
64	64	Dhanmondi-27	No	No	
65	65	Manik Mia Avenue	Yes	No	
66	66	Asad Gate	No	No	
67	67	Mohamrnadpur Thana Crossing	No	No	

SL	ID	Intersection	Illegal parking (Yes/No)	bus stoppage in signalized intersections (Yes/No)	Others
68	68	College Gate (Sohrawardi hospital)	Yes	Yes	
69	69	ShishuMela	Yes	Yes	
70	70	Shamoli Cinema Hall	Yes	Yes	

4. Signal lamp / light condition at intersectios

Operational deficiency

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
1	13	Bijoy Nagar (Night Angel)	North	On (right arrow light is off)	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
2	12	Kakrail (rajmoni)	North	Off (All lights are off)	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
3	16	Malibagh	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	No signal		
4	17	Rajarbagh	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
5	15	Mouchak	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
6	27	Malibagh Rail Gate	South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
7	47	Pir Jongi Mazar	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
8	06	Fakirapul	North	On (One Light is off)	Ok	Ok
			South	On (2 Lights are off)	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
9	14	Palton /(Topkhana)	North	On (1 Light is off)	Ok	Ok
			South	On (2 Lights are off)	Ok	Ok
			East	On	Ok	Ok
			West	On	(Amber light is blinking.)	Ok

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
10	48	Kamalapur Station	North	Off (All lights are off)	Ok	Ok
			South	No signal		
			West	Off (All lights are off)	Ok	Ok
11	26	Kamalapur Container	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
12		Zero point	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
13	25	Gulistan	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
14	32	Mohakhali	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	OK	Ok
15	35	Chairman Bari	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
16	34	Bonani Kakoli	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
17	31	Mohakhli Amtoli	North	On (1light is off)	Ok	Ok
			South	On (in left side 1 light is off)	Ok	Ok
			East	On	Ok	Ok
18	42	Firmgate	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
19	38	Bijoy Sarani	North	On (One light is off)	Ok	Ok
			South	On (One light is off)	Ok	Ok
			East	On (Two lights are off)	Ok	Ok
			West	On (Two lights are off)	Ok	Ok

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
20	60	PM Office	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On (Two lights are off)	Ok	Ok
21	36	Jahangir Gate	North	On	Ok	Ok
			South	On (One light is off)	Ok	Ok
			East	On (Two lights are off)	Ok	Ok
22	30	Moghbazar	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
23	05	Mirpur-1	South	On	Ok	Ok
			East	On (In left side two lights are off)	Low illumination	Ok
			West	On	Ok	Ok
24	03	Darussalam (TTC)	North	On	Ok	Ok
			South	On (In right side one light is off)	Ok	Ok
			East	On (In right side one light is off)	Ok	Ok
25	04	Mirpur Mazar	North	On (In left side one light is off)	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
26	54	Dhanmondi Road 10	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
27	53	Dhanmondi Road .6&7	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
28	22	Science Lab.	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
29	**18**	**New Market**	North	On	Lights are blinking	Ok
			South	On	Lights are blinking	Ok
			East	On	Lights are blinking	Ok
			West	On	Lights are blinking	Dirty

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
30	**33**	**Azimpur**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	On (Three lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
31	**59**	**Palashi**	North /Nilkhet	On	Ok	Ok
			Chankharpul	On	Ok	Ok
			East	On (Amber light is off)	Ok	dirty
			West / Azimpur	On	Ok	Ok
			Dhakessori	On	Ok	Ok
32	**39**	**Agargaon**	North	On	Ok	dirty
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	dirty
33	**41**	**Khamar Bari**	North	On	Ok	Ok
			(khamarbari)	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
34	**40**	**Bijoy Sarani(Aeroplane)**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
35	**37**	**Parliament Intersection**	North	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
36	**43**	**Hotel Sonargaon**	North	On	Ok	Ok
			South	On	Ok	Ok
			Hatirpool	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
37	**21**	**Bangla motor**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
38	**19**	**Hotel Sheraton**	North	On	OK	Ok
			South	On	OK	Ok
			East	On	OK	Ok
39	**44**	**Shahbagh**	North	On	Illumination low	Ok
			South	On	Illumination low	Ok
			East	On	Illumination low	Ok
			West	On	Illumination low	Ok
40	**07**	**Katabone**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
41	**56**	**Bata crossing**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
42	**45**	**Matshaw Bhaban**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
43	**10**	**KadamChattar**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
44	**46**	**Curzon Hall**	North	On	Ok	Lamp is dirty
			South	On	Ok	Lamp is dirty
			East	On	Ok	Lamp is dirty
			West	On	Ok	Lamp is dirty
45	**02**	**Basundhara Intersection**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
46	**01**	**Mojub Avenue (Natun Bazar)**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
47	**57**	**Gulshan- 1 Intersection**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
48	**58**	**Gulshan- 2 Intersection**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
49	**28**	**Nabisco Intersection**	North	On	Ok	dirty
			South	On	Ok	dirty
			East	On	Ok	dirty
50	**29**	**Tongi Diversion Intersection**	North	On	Ok	dirty
			South	On	Ok	dirty
			West	On	Ok	dirty
51	**55**	**Shanti Nagar Intersection**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
52	**20**	**Kakrail Mosque Intersection**	North	On(One amber light is off)	Ok	Ok
			South	On(One amber light is off)	Ok	Ok
			East	On(One amber light is off)	Ok	Ok
53	**57**	**Gulistan Square Intersection**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
54	**50**	**Zahir Raihan Intersection**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
55	**51**	**Bangshal Road Intersection**	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	No signal		

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
56	52	Sadarghat Road Intersection	North	Off (All lights are off)	Ok	Ok
			South	Off (All lights are off)	Ok	Ok
			East	Off (All lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
57	08	Dholaikhal Intersection	North	On (Red phase on for all time)	Ok	Ok
			South	On (Red phase on for all time)	Ok	Ok
			East	On (Red phase on for all time)	Ok	Ok
			West	On (Red phase on for all time)	Ok	Ok
58	11	English Road Intersection	North	All light off (5 light)	Ok	Ok
			South	All light off (5 light)	Ok	Ok
			East	All light off (5 light)	Ok	Ok
			West	All light off (4 light off)	Ok	Ok
59	09	Shapla Chattar Intersection	North	Off	Ok	Ok
			South	Off	Ok	Colorless and dirty
			East	Off	Ok	Dirty
			West	Off	Ok	Dirty
60	23	Ittefaq Intersection	South	No signal		
			East	Off	Ok	Ok
			West	Off	Ok	Ok
61	61	Tejgaon Rangs Link Road Intersection	North	On	Ok	Dirty
			South	On	Ok	Dirty
			East	On	Ok	Dirty
			West	On	Ok	Dirty
62		Green Road (Panthpath)	North	On (3 LED Lights are off in left side)	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
63		Rassel Square	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
64		Dhanmondi-27	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok

Sl	ID	Intersection	Approach	light (on/off)	lamp / light illumination (OK/Blinking/illumination low)	Lamp cleanliness (Ok/dirty)
65		**Manik Mia Avenue**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
66		**Asad Gate**	North	On	Ok	Ok
			South	On (Two lights are off)	Ok	Ok
			East	On (Two lights are off)	Ok	Ok
			West	Off (All lights are off)	Ok	Ok
67		**Mohamrnadpur Thana Crossing**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
			West	On	Ok	Ok
68		**College Gate (Sohrawardi hospital)**	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok
69		**ShishuMela**	North	On	Ok	Ok
			South	On	Ok	Ok
			East	On	Ok	Ok
70		**Shamoli Cinema Hall**	North	On	Ok	Ok
			South	On	Ok	Ok
			West	On	Ok	Ok

Operational deficiency

5. Police Control signal at intersections

Sl	ID	Intersection	No. of police	Maintaining [manually by hand / Auto signal	Timing control (Police/DCC)	both auto signal and police control by hand (Yes/No)	Remarks
01	13	Bijoy Nagar (Night Angle)	03	By hand	Police	No	
02	12	Kakrail (rajmoni)	04	By hand	Police	No	
03	16	Malibagh	04	By hand	Police	No	
04	17	Rajarbagh	03	By hand	Police	No	
05	15	Mouchak	03	By hand	Police	Yes	
06	27	Malibagh Rail Gate	04	Auto	Police	Yes	
07	47	Pir Jongi Mazar	02	Auto	Police	Yes	
08	06	Fakirapul	04	Auto	Police	Yes	
09	14	Palton (Topkhana)	04	By hand	Police	No	
10	48	Kamalapur Station	02	By hand	Police	No	
11	26	Kamalapur Container	03	By hand	Police	No	
12	24	Zero point	04	By hand	Police	Yes	
13	25	Gulistan/Golapshah Mazar	04	By hand	Police	No	
14	32	Mohakhali Rail crossing	4	By hand	Police	No	
15	35	Chairman Bari	2	By hand	Police	Yes	
16	34	Bonani Kakoli	2	By hand	Police	No	
17	31	Mohakhli Amtoli	4	Auto	Police	No	
18	42	Firmgate	3	Auto	Police	No	
19	38	Bijoy Sarani	4	Auto	Police	Yes	
20	60	PM Office	3	By hand	Police	Yes	
21	36	Jahangir Gate	3	Auto	Police	No	
22	30	Moghbazar	4	Auto	Police	Yes	
23	05	Mirpur-1	2	By hand	Police	No	

Sl	ID	Intersection	No. of police	Maintaining [manually by hand / Auto signal	Timing control (Police/DCC)	both auto signal and police control by hand (Yes/No)	Remarks
24	03	Darussalam(TTC)	**4**	Auto	Police	Yes	
25	04	Mirpur Mazar	**3**	Auto	Police	Yes	
26	54	Dhanmondi Road 10	**3**	Auto	Police	Yes	
27	53	Dhanmondi Road .6&7	**3**	Auto	Police	No	
28	22	Science Lab.	**2**	By hand	Police	No	
29	**18**	New Market	**5**	By hand	Police	Yes	
30	**33**	Azimpur	**3**	By hand	Police	No	
31	**59**	Palashi	**3**	By hand	Police	No	
32	**39**	Agargaon	**5**	Auto	Police	Yes	
33	**41**	Khamar Bari	**4**	Auto	Police	Yes	
34	**40**	Bijoy Sarani(Aeroplane)	**4**	By hand	Police	Yes	
35	**37**	Parliament Intersection	**3**	By hand	Police	No	
36	**43**	Hotel Sonargaon	**5**	Auto	Yes	Yes	
37	**21**	Bangla motor	**6**	By hand	Police	Yes	
38	**19**	Hotel Sheraton	**3**	Auto	Police	Yes	
39	**44**	Shahbagh	**4**	Auto	Police	Yes	
40	**07**	Katabone	**4**	Auto	Police	Yes	
41	**56**	Bata crossing	**5**	By hand	Police	Yes	
42	**45**	Matshaw Bhaban	**3**	Auto	Police	Yes	
43	**10**	KadamChattar	**3**	Auto	Police	Yes	
44	**46**	Curzon Hall	**3**	Auto	Police	Yes	
45	**02**	Basundhara Intersection	**3**	By hand	Police	No	
46	**01**	Mojub Avenue (Natun Bazar) Intersection	**4**	By hand	Police	No	
47	**57**	Gulshan- 1 Intersection	**4**	Auto	Police	No	
48	**58**	Gulshan- 2 Intersection	**2**	Auto	Police	No	

Sl	ID	Intersection	No. of police	Maintaining [manually by hand / Auto signal	Timing control (Police/DCC)	both auto signal and police control by hand (Yes/No)	Remarks
49	**28**	Nabisco Intersection	**3**	Auto	Police	Yes	
50	**29**	Tongi Diversion Intersection	**3**	Auto	Police	Yes	
51	**55**	Shanti Nagar Intersection	**4**	Auto	Police	Yes	
52	**20**	Kakrail Mosque Intersection	**4**	Auto	Police	Yes	
53	**57**	Gulistan Square Intersection	**4**	By hand	Police	No	
54	**50**	Zahir Raihan Intersection	**4**	By hand	Police	No	
55	**51**	Bangshal Road Intersection	**3**	By hand	Police	No	
56	**52**	Sadarghat Road Intersection	**4**	By hand	Police	No	
57	**08**	Dholaikhal Intersection	**3**	By hand	Police	No	
58	**11**	English Road Intersection	**6**	By hand	Police	No	
59	**09**	Shapla Chattar Intersection	**4**	By hand	Police	No	
60	**23**	Ittefaq Intersection	**02**	By hand	Police	No	
61	**61**	Tejgaon Rangs Link Road Intersection	**4**	Auto	Police	Yes	
62		Green Road (Panthpath)	**2**	Auto	DCC	Yes	
63		Rassel Square	**4**	Auto	DCC	Yes	
64		Dhanmondi-27	**2**	Auto	DCC	Yes	
65		Manik Mia Avenue	**6**	Auto	DCC	Yes	
66		Asad Gate	**4**	Auto	DCC	Yes	
67		Mohamrnadpur Thana Crossing	**4**	Auto	DCC	Yes	
68		College Gate (Sohrawardi hospital)	**2**	Auto	DCC	Yes	
69		ShishuMela	**4**	Auto	DCC	Yes	
70		Shamoli Cinema Hall	**3**	Auto	DCC	Yes	

Operational deficiency

6. Preemption / Priority

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
1	13	Bijoy Nagar (Night Angel)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
2	12	Kakrail (rajmoni)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
3	16	Malibagh	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
4	17	Rajarbagh	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
5	15	Mouchak	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
6	27	Malibagh Rail Gate	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
7	47	Pir Jongi Mazar	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
8	06	Fakirapul	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
9	14	Palton /(Topkhana)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
9	14	Palton /(Topkhana)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
10	48	Kamalapur Station	North	No	No	
			South	No	No	
			West	No	No	
11	26	Kamalapur Container	North	No	No	
			South	No	No	
			West	No	No	
12		Zero point	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
13	25	Gulistan	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
14	32	Mohakhali	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
15	35	Chairman Bari	North	No	No	
			South	No	No	
			East	No	No	
16	34	Bonani Kakoli	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
17	31	Mohakhli Amtoli	North	No	No	
			South	No	No	
			East	No	No	
18	42	Firmgate	North	No	No	
			South	No	No	
			West	No	No	
19	38	Bijoy Sarani	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
20	60	PM Office	North	No	No	
			South	No	No	
			East	No	No	
21	36	Jahangir Gate	North	No	No	
			South	No	No	
			East	No	No	
22	30	Moghbazar	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
23	05	Mirpur-1	South	No	No	
			East	No	No	
			West	No	No	
24	03	Darussalam (TTC)	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
25	04	Mirpur Mazar	North	No	No	
			South	No	No	
			East	No	No	
26	54	Dhanmondi Road 10	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
27	53	Dhanmondi Road .6&7	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
28	22	Science Lab.	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
29	**18**	**New Market**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
30	**33**	**Azimpur**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
31	**59**	**Palashi**	Nilkhet	No	No	
			Chankharpul	No	No	
			East	No	No	
			Azimpur	No	No	
			Dhakessori	No	No	
32	**39**	**Agargaon**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
33	**41**	**Khamar Bari**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
34	**40**	**Bijoy Sarani(Aeroplane)**	North	No	No	
			Firmgate	No	No	
			East	No	No	
			West	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
35	**37**	**Parliament Intersection**	North	No	No	
			East	No	No	
			West	No	No	
36	**43**	**Hotel Sonargaon**	North	No	No	
			Hatirpool	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
37	**21**	**Bangla motor**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
38	**19**	**Hotel Sheraton**	North	No	No	
			South	No	No	
			East	No	No	
39	**44**	**Shahbagh**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
40	**07**	**Katabone**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
41	**56**	**Bata crossing**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
42	**45**	**Matshaw Bhaban**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
43	**10**	**KadamChattar**	North	No	No	
			South	No	No	
			East	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
44	**46**	**Curzon Hall**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
45	**02**	**Basundhara Intersection**	North	No	No	
			South	No	No	
			East	No	No	
46	**01**	**Mojub Avenue (Natun Bazar) Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
47	**57**	**Gulshan- 1 Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
48	**58**	**Gulshan- 2 Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
49	**28**	**Nabisco Intersection**	North	No	No	
			South	No	No	
			East	No	No	
50	**29**	**Tongi Diversion Intersection**	North	No	No	
			South	No	No	
			West	No	No	
51	**55**	**Shanti Nagar Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
52	**20**	**Kakrail Mosque Intersection**	North	No	No	
			South	No	No	
			East	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
53	**57**	**Gulistan Square Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
54	**50**	**Zahir Raihan Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
55	**51**	**Bangshal Road Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
56	**52**	**Sadarghat Road Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
57	**08**	**Dholaikhal Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
58	**11**	**English Road Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
59	**09**	**Shapla Chattar Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
60	**23**	**Ittefaq Intersection**	South	No	No	
			East	No	No	
			West	No	No	

Sl	ID	Intersection	Approach	Emergency vehicle- fire service, ambulance (Yes/No)	Bus-transit vehicle (Yes/No)	Remarks
61	**61**	**Tejgaon Rangs Link Road Intersection**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
62		**Green Road (Panthpath)**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
63		**Rassel Square**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
64		**Dhanmondi-27**	North	No	No	
			South	No	No	
			West	No	No	
65		**Manik Mia Avenue**	North	No	No	
			South	No	No	
			East	No	No	
66		**Asad Gate**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
67		**Mohamrnadpur Thana Crossing**	North	No	No	
			South	No	No	
			East	No	No	
			West	No	No	
68		**College Gate (Sohrawardi hospital)**	North	No	No	
			South	No	No	
			West	No	No	
69		**ShishuMela**	North	No	No	
			South	No	No	
			East	No	No	
70		Shamoli Cinema Hall	North	No	No	
			South	No	No	
			West	No	No	

7. Signal mode

Operational deficiency

Sl	ID	Intersection	Flashing amber mode (Yes/No)	All red phases (Yes/No)
1	13	Bijoy Nagar (Night Angel)	No	No
2	12	Kakrail (rajmoni)	No	No
3	16	Malibagh	No	No
4	17	Rajarbagh	No	No
5	15	Mouchak	No	No
6	27	Malibagh Rail Gate	No	No
7	47	Pir Jongi Mazar	No	No
8	6	Fakirapul	No	No
9	14	Palton /(Topkhana)	No	No
10	48	Kamalapur Station	No	No
11	26	Kamalapur Container	No	No
12		Zero point	No	No
13	25	Gulistan	No	No
14	32	Mohakhali Railcrossing	No	No
15	35	Chairman Bari	No	No
16	34	Bonani Kakoli	No	No
17	31	Mohakhli Amtoli	No	No
18	42	Firmgate	No	No
19	38	Bijoy Sarani	No	No
20	60	PM Office	No	No
21	36	Jahangir Gate	No	No
22	30	Moghbazar	No	No
23	05	Mirpur-1	No	No
24	03	Darussalam(TTC)	No	No
25	04	Mirpur Mazar	No	No
26	54	Dhanmondi Road 10	No	No
27	53	Dhanmondi Road .6&7	No	No
28	22	Science Lab.	No	No
29	18	New Market	No	No
30	33	Azimpur	No	No
31	59	Palashi	No	No
32	39	Agargaon	No	No
33	41	Khamar Bari	No	No

Sl	ID	Intersection	Flashing amber mode (Yes/No)	All red phases (Yes/No)
34	40	Bijoy Sarani(Aeroplane)	No	No
35	37	Parliament	No	No
36	43	Hotel Sonargaon	No	No
37	21	Bangla motor	No	No
38	19	Hotel Sheraton	No	No
39	44	Shahbagh	No	No
40	07	Katabone	No	No
41	56	Bata crossing	No	No
42	45	Matshaw Bhaban	No	No
43	10	KadamChattar	No	No
44	46	Curzon Hall	No	No
45	02	Basundhara Intersection	No	No
46	01	Mojub Avenue (Natun Bazar) Intersection	No	No
47	57	Gulshan- 1	No	No
48	58	Guishan- 2	No	No
49	28	Nabisco Intersection	No	No
50	29	Tongi Diversion	No	No
51	55	Shanti Nagar	No	No
52	20	Kakrail Mosque	No	No
53	57	Gulistan Square	No	No
54	50	Zahir Raihan	No	No
55	51	Bangshal Road	No	No
56	52	Sadarghat Road	No	No
57	08	Dholaikhal Intersection	No	No
58	11	English Road	No	No
59	09	Shapla Chattar	No	No
60	23	Ittefaq Intersection	No	No
61	61	Tejgaon Rangs Link Road Intersection	No	No
62		Green Road (Panthpath)	No	No
63		Rassel Square	No	No
64		Dhanmondi-27	No	No
65		Manik Mia Avenue	No	No
66		Asad Gate	No	No

Sl	ID	Intersection	Flashing amber mode (Yes/No)	All red phases (Yes/No)
67		Mohamrnadpur Thana Crossing	No	No
68		College Gate (Sohrawardi hospital)	No	No
69		ShishuMela	No	No
70		Shamoli Cinema Hall	No	No

8. Pedestrian Signal

Operational deficiency

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
1	Bijoy Nagar (Night Angel)	North	Off	Yes	Dirty	
		South	No signal			
		West	On	Signal indication is unclear	Ok	
2	Kakrail (rajmoni)	North	Off	Signal indication is unclear	Ok	
		South	No signal			Foot over bridge
		East	On	Yes	Ok	
		West	On	Signal indication is unclear	Ok	
3	Malibagh	North	Off	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	Off	Yes	Ok	
		West	No signal			
4	Rajarbagh	North	Off	Signal indication is unclear	Dirty	
		South	No signal			
		East	Off	Signal indication is unclear	Dirty	
		West	Off	Signal indication is unclear	Ok	
5	Mouchak	North	No signal			Foot over bridge
		South	No signal			
		East	On	Signal indication is unclear	Ok	
6	Malibagh Rail Gate	South	On	Yes	Ok	
		East	No signal			
		West	On	Signal indication is unclear	Ok	
7	Pir Jongi Mazar	North	On	Signal indication is unclear	Ok	
		South	Off	Yes	Ok	No lights are found.
		West	Off	Yes	Ok	
8	Fakirapul	North	Off	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	Off	Signal indication is unclear	Ok	
		West	Off	Signal indication is unclear	Ok	
9	Palton /(Topkhana)	North	On	Yes	Ok	
		South	Off	face Not clear	Ok	
		East	Off	face Not clear	Ok	
		West	Off	face Not clear	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
10	Kamalapur Station	North	Off	face Not clear	Ok	
		South	Off	face Not clear	Ok	
		West	Off	face Not clear	Ok	
11	Kamalapur Container	North	Off	face Not clear	Ok	
		South	Off	face Not clear	Ok	
		West	Off	face Not clear	Ok	
12	Zero point	North	Off	face Not clear	Head is dirty	
		South	Off	face Not clear	Head is Not clean	
		East	Off	face Not clear	Head is Not clean	
		West	On	face Not clear	Ok	
13	Gulistan	North	Off	Yes	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Yes	Ok	
14	Mohakhali	North	No signal			
		South	Off	face Not clear	Ok	
		West	Off	face Not clear	Ok	
15	Chairman Bari	North	Off	face Not clear	Ok	
		South	No signal			
		East	Off	face Not clear	Ok	
16	Bonani Kakoli	North	No signal			
		South	No signal			
		East	No signal			
		West	Off	face Not clear	Ok	
17	Mohakhli Amtoli	North	On	Yes	Ok	
		South	On	Yes	Ok	
		East	On	Yes	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
18	Firmgate	North	No signal			Foot over bridge
		South	No signal			Foot over bridge
		West	Off	Yes	Ok	
19	Bijoy Sarani	North	Off	Signal indication is unclear	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Signal indication is unclear	Ok	
20	PM Office	North	No signal			
		South	No signal			
		West	No signal			
21	Jahangir Gate	North	No signal			
		South	No signal			
		East	Off	Yes	Ok	
22	Moghbazar	North	On	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	Off	Signal indication is unclear	Ok	
		West	Off	Signal indication is unclear	Ok	
23	Mirpur-1	South	No signal			Foot over bridge
		East	No signal			Foot over bridge
		West	No signal			Foot over bridge
24	Darussalam (TTC)	North	Off	Signal indication is unclear	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	On	Yes	Ok	
25	Mirpur Mazar	North	No signal			
		South	Off	Signal indication is unclear	Ok	
		East	Off	Signal indication is unclear	Ok	
26	Dhanmondi Road 10	North	No signal			
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Yes	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
27	Dhanmondi Road .6&7	North	Off	Yes	Ok	
		South	No signal			
		East	Off	Yes	Ok	
		West	Off	Yes	Ok	
28	Science Lab.	North	No signal			Foot over bridge
		South	No signal			Foot over bridge
		East	No signal			Foot over bridge
		West	On	Signal indication is unclear	Ok	
29	**New Market**	North	Off	Signal indication is unclear	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Signal indication is unclear	Ok	
30	**Azimpur**	North	Off	Signal indication is unclear	Head is dirty	
		South	Off	Signal indication is unclear	Head is dirty	
		East	Off	Signal indication is unclear	Head is dirty	
		West	Off	Signal indication is unclear	Head is dirty	
31	**Palashi**	North /Nilkhet	Off	Signal indication is unclear	Ok	
		South / Chankharpul	Off	Signal indication is unclear	Head is dirty	
		East / Dhaka medical	Off	Signal indication is unclear	Ok	
		West / Azimpur	Off	Signal indication is unclear	Head is dirty	
		Dhakessori	Off	Signal indication is unclear	Ok	
32	**Agargaon**	North	Off	Signal indication is unclear	Ok	
		South	No signal			
		East	Off	Yes	Ok	
		West	Off	Signal indication is unclear	Ok	
33	**Khamar Bari**	North	On	Yes	Ok	
		Firmgate	On	Face Not clear	Ok	
		East	On	Yes	Ok	
		West	On	Face Not clear	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
34	**Bijoy Sarani(Aeroplane)**	North	Off	Yes	Ok	
		South	Off	Yes	Ok	
		East	Off	Face Not clear	Ok	
		West	Off	Yes	Ok	
35	**Parliament Intersection**	North	Off	Face Not clear	Ok	
		East	No signal			
		West	Off	Yes	Ok	
36	**Hotel Sonargaon**	North	On	Yes	Ok	
		South	On	Signal indication is unclear	Ok	
		Hatirpool	On	Yes	Ok	
		East	Off	Signal indication is unclear	Ok	
		West	Off	Signal indication is unclear	Ok	
37	**Bangla motor**	North	Off	Face Not clear	Ok	Foot over bridge
		South	Off	Face Not clear	Ok	
		East	Off	Face Not clear	Ok	
		West	No signal			
38	**Hotel Sheraton**	North	Off	Face Not clear	Ok	
		South	Off	Face Not clear	Ok	
		East	Off	Face Not clear	Ok	
39	**Shahbagh**	North	On	Face Not clear	Ok	
		South	Off	Face Not clear	Ok	
		East	On	Face Not clear	Ok	
		West	Off	Face Not clear	Ok	
40	**Katabone**	North	No signal			
		South	On	Face Not clear	Ok	
		East	Off	Face Not clear	Ok	
		West	On	Yes	Ok	
41	**Bata crossing**	North	Off	Yes	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Yes	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
42	**Matshaw Bhaban**	North	On	Face Not clear	Ok	
		South	No signal			
		East	On	Face Not clear	Ok	
		West	On	Face Not clear	Ok	
43	**KadamChattar**	North	Off	Yes	Ok	
		South	Off	Face Not clear	Ok	
		East	On	Yes	Ok	
44	**Curzon Hall**	North	Off	Face Not clear	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Pedestrian signal indication is unclear	Ok	
45	**Basundhara Intersection**	North	Off	Worn-out	Ok	
		South	Off	Signal indication is unclear	Ok	
		East	No signal			
46	**Mojub Avenue (Natun Bazar) Intersection**	North	Off	face Not clear	Ok	
		South	No signal			
		East	No signal			
		West	Off	face Not clear	Ok	
47	**Gulshan- 1 Intersection**	North	Off	face Not clear	Ok	
		South	Off	Worn-out	Ok	
		East	Off	Yes	Ok	
		West	Off	Worn-out	Ok	
48	**Gulshan- 2 Intersection**	North	Off	Yes	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Yes	Ok	
49	**Nabisco Intersection**	North	Off	Signal indication is unclear	Ok	
		South	No Signal			
		East	Off	Signal indication is unclear	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
50	Tongi Diversion Intersection	North	No Signal			
		South	Off	Pedestrian signal indication is unclear	Ok	
		West	Off	Yes	Ok	
51	Shanti Nagar Intersection	North	Off	Pedestrian signal indication is unclear	Ok	
		South	Off	Pedestrian signal indication is unclear	Ok	
		East	Off	Pedestrian signal indication is unclear	Ok	
		West	Off	Pedestrian signal indication is unclear	Ok	
52	Kakrail Mosque Intersection	North	On	Yes	Ok	
		South	On	Yes	Ok	
		East	On	Yes	Ok	
53	Gulistan Square Intersection	North	No signal			Underpass
		South	No signal			Underpass
		East	No signal			Underpass
		West	No signal			Underpass
54	Zahir Raihan Intersection	North	Off	Yes	Ok	
		South	Off	Yes	Ok	
		East	Off	Yes	Ok	
		West	Off	Yes	Dirty	
55	Bangshal Road Intersection	North	Off	Yes	Dirty	
		South	No Signal			
		East	Off	Signal face Not clear	Dirty	
		West	Off	Signal face Not clear	Ok	Signal is Not visible
56	Sadarghat Road Intersection	North	Off	Signal face Not clear	Dirty	in median & right side there is No signal
		South	Off	Signal face Not clear	Dirty	
		East	Off	Signal face Not clear	Dirty	
		West	All off	Signal face Not clear	Dirty	
57	Dholaikhal Intersection	North	On	Signal face Not clear	Dirty	
		South	Off	Signal face Not clear	Dirty	
		East	Off	Signal face Not clear	Dirty	
		West	Off	Signal face Not clear	Dirty	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
58	**English Road Intersection**	North	Off	Signal face Not clear	head dirty	
		South	Off	Signal face Not clear	head dirty	Foundation is broken
		East	Off	Signal face Not clear	head dirty	
		West	Off	Signal face Not clear	head dirty	
59	**Shapla Chattar Intersection**	North	Off	Signal face Not clear	Ok	
		South	Off	Signal face Not clear	Ok	
		East	Off	Signal face Not clear	Ok	
		West	Off	Signal face Not clear	Ok	
60	**Ittefaq Intersection**	South	Off	Yes	Dirty	
		East	Off	Yes	Ok	
		West	Off	Yes	Dirty	
61	**Tejgaon Rangs Link Road Intersection**	North	No Signal			
		South	On	Yes	Ok	
		East	On	Yes	Ok	
		West	On	Yes	Ok	
62	**Green Road (Panthpath)**	North	Off	Signal face Not clear	Ok	
		South	Off	Signal face Not clear	Ok	
		East	On	Yes	Ok	
		West	On	Yes	Ok	
63	**Rassel Square**	North	Off	Yes	Ok	
		South	No signal			
		East	Off	Yes	Ok	
64	**Dhanmondi-27**	North	No signal			
		South	On	Yes	Ok	
		West	On	Yes	Ok	
65	**Manik Mia Avenue**	North	On	Yes	Ok	
		South	On	Yes	Ok	
		East	On	Face Not clear	Ok	
66	**Asad Gate**	North	No signal			
		South	No signal			
		East	Yes	Yes	Ok	
		West	Yes	Yes	Ok	

Sl	Intersection	App-roach	Light Condition (On/off)	Pedestrian signal indication (Yes / No) (signal face Not clear/ Pedestrian signal indication unclear)	Head condition (Ok /dirty)	Remarks
67	**Mohamrnadpur Thana Crossing**	North	On	Yes	Ok	
		South	On	Yes	Ok	
		East	On	Yes	Ok	
		West	On	Yes	Ok	
68	**College Gate (Sohrawardi hospital)**	North	No signal			
		South	Off	Yes	Ok	
		West	Off	Yes	Ok	
69	**Shishu Mela**	North	On	Yes	Ok	
		South	On	Yes	Ok	
		East	On	Yes	Ok	
70	**Shamoli Cinema Hall**	North	No signa			
		South	No signa			Foot over bridge
		West	Off	Face Not clear	Ok	Foundation broken