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Accessibility Audit Report

Name and Location of the Facilities Assessed

Khulna BNSB Eye Hospital, Phultala, Khulna

Date of Assessment

October 10, 2021

Accessibility Audit Team Members

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Four individuals with disabilities (Persons with physical, visual, intellectual and hearing disabilities)	

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Executive Summary

Persons with disabilities need eye care services like the rest of the population, but the maximum time it is hard to secure their health rights because of non-compliance with the existing laws and policies both in government and non-government institutions. Inclusive development means that the needs of persons with disabilities must be addressed equally in designing and implementing the development programmes and infrastructure facilities.

Comprehensive accessibility is a prerequisite for inclusion; without access to buildings along with transportation, social services, and information, participation and full inclusion of persons with disabilities cannot be ensured in the health sector. Furthermore, accessibility should not be seen as an option, but rather as an essential human rights, which is clearly stated in the both UN Convention on the Rights of Persons with Disabilities and Rights and Protection of Persons with Disabilities Act, 2013.

Without ensuring an accessible environment in the eye hospitals, all people especially persons with disabilities, the elderly, and other marginalized populations will not be able to access eye care services, and then it will be hard to achieve the goals related to eye health e.g. Vision 2020 and 'Right to Sight'. Based on the accessibility audit conducted at the Khulna BNSB Eye Hospital, Khulna, a comprehensive findings and recommendations have been provided in this report, which will help the authority to make the hospital accessible. To execute the accessibility features of the hospital, a prioritization exercise is carried out based on the assessment mentioning priorities of work under high-medium-low along with a tentative budget under the level of priority. Please see the annex as attached.

1. Background

Center for Disability in Development (CDD) and Sightsavers Bangladesh Country Office (BCO), recognize the importance of collaborative endeavors for comprehensive disability-inclusive Eye Health service programs in Bangladesh; therefore, both parties entered into a technical partnership to conduct accessibility audit/assessment at the selected eye hospital.

Accessibility Specialist and Assist. Coordinator from Centre for Disability in Development (CDD), and three staff from Khulna BNSB Eye Hospital and Sightsavers, conducted the accessibility assessments in where four individuals with different types of disabilities including physical, visual, and speech & hearing disabilities were involved during the assessment at the Khulna BNSB Eye Hospital.

The details of this assessment are outlined below and the recommendations that have been made here are according to the Universal Design Principles, and Bangladesh Building Code 2020, Americans with Disabilities Act, Sightsavers Accessibility Guidelines. Universal Design is the design of products, environments, programs, and services to be usable by all people, to the most significant extent possible, without the need for adaptation or distinct design (UN Convention on the Rights of People with Disabilities). Part III, Appendix D of the Bangladesh Building Code 2020 provides minimum requirements for buildings to be accessible and has also been used within these recommendations.

2. Purpose of the Accessibility Audit

The purpose of the accessibility audit of Khulna BNSB Eye Hospital in Khulna was to determine the current accessibility status and gaps and make recommendations considering the principles of universal design and reasonable accommodation to build the facilities disability-inclusive.

3. Organizational Profile of CDD

The Centre for Disability in Development (CDD) has been working towards an inclusive society for persons with disabilities in Bangladesh since 1996. With its many partner organizations, CDD has been working to promote participation and rights for individuals with disabilities in Bangladesh. The vision of CDD is "Equal opportunities and full participation for persons with disabilities in all spheres of life"; and its mission is "to include disability issues in mainstream development to enable individuals with disabilities to obtain equal opportunities and full participation." CDD works in seven key focus areas including health and rehabilitation, disability-inclusive education, rights and empowerment, livelihood and employment, disaster management, deaf-blindness, and inclusive local government.

To know more about CDD, please visit our website: www.cdd.org.bd

Organization Name	Centre for Disability in Development (CDD)
Year of establishment	1996
Vision	Establishing equal opportunities and full participation for persons with disabilities in all spheres of life.
Mission	Include disability issues in mainstream development to enable persons with disabilities to obtain equal opportunities and full participation.
Contact Address	A-18/6, Genda, Savar, Dhaka-1340, Bangladesh
Telephone number	+8801713021695 (Office)
Website	www.cdd.org.bd
Date of registration	On 31/07/1996 - Under Department of Social Services & On 31/12/1996 - Under NGO Affairs Bureau
Country of registration	Bangladesh
Registration number and Issuing Authority	Dha-03632 of Department of Social Services & 1115 of NGO Affaires Bureau
Person Legally Responsible for CDD	Name: A.H.M. Noman Khan Designation: Executive Director Contact number: +8801711538021 Email ID: cdd@banqla.net
Primary Contact Person at CDD	Nazmul Bari, Designation: Director Contact number: +8801710851504 Email ID: nazmul.bari.cdd@gmail.com
Special Achievement	The Executive Director of CDD was awarded the Ramon Magsaysay Award (Asian Version of the Noble Prize) in 2010. The Centre for Disability in Development (CDD) has been awarded as one of the best organizations in the country working for persons with disabilities in December 2018.

4. Organizational profile of Khulna BNSB Eye Hospital, Khulna

Khulna BNSB Eye Hospital is a registered Trust organization, also registered with the Social Welfare Department and NGO Affairs Bureau of the Govt. of Bangladesh, located at Shiromoni, Khulna, the southwestern district of Bangladesh. Khulna BNSB Eye Hospital, a non-govt., non-profitting voluntary organization established in the year 1976 with a view to contribute to the national blindness prevention program as cataract blindness considered to be the major cause of blindness worldwide as well as in Bangladesh. In a developing country like ours it was beyond capacity to combat the situation by the government alone. Realizing the depth of the situation a group of kindhearted people came forward to set up an organization in the name & style, Khulna BNSB Eye Hospital with a view to supplement the government efforts as well as serving the needy poor people to preserve their sight. (Ref. <https://kbsnbeyehospital.org/>)

5. Legal Aspects of Accessibility for Persons with Disabilities

Article 25 of the UN Convention on the Rights of Persons with Disabilities reinforces the rights of persons with disabilities to attain the highest standard of health, without discrimination by disability. In particular, Article 9 (Accessibility) outlines the measures to be taken to ensure that persons with disabilities have access, on an equal basis with others, to the physical environment, transport, information and communications, and other facilities and services open or provided to the public, in both urban and rural areas. Rights and Protection of Persons with Disabilities Act, 2013, Bangladesh also highlighted to create the accessible environment in the services and facilities provided by the related organizations.

6. Methodology of the Accessibility Audits

6.1. Facility Assessment

The resource person of CDD has conducted the assessment involving four types of person with disabilities, Management staff and head mason of the hospital, Project Manager, and Project Implementation Officer of SSI BCO. Undertook a physical survey of the building using the checklist, examined external environment, horizontal and vertical circulation, interior design, facilities, communication, and evacuation. Measured aspects that were found to be obstacles and inaccessible and made recommendations in reference to Universal Design Guideline (UDG). A detailed, objective

measurement at the various facilities took place by using measurement tape and photographs. The measure aimed to determine the existing status of the accessibility of the hospital facilities.

6.2. Interview

During the accessibility audit, related staff and people with disabilities in the audit team were interviewed to explore the perception of the individuals on disability, and potential challenges faced by the people with disabilities using the various facilities at the hospital.

6.3. Recommendations

The recommendations for accessibility made in this report are based on the Universal Design Principles, Bangladesh Building Code 2020, Americans with Disabilities Act, and Sightsavers Accessibility Guidelines.

7. Findings and Recommendations

7.1. Outside the health centre

Findings:

Location and main entrance:

The hospital is located on the outskirts of Khulna town adjacent to the Khulna Jessore highway. The reputation of the hospital is acknowledged by the service recipients which helps patients and their caregivers to identify the hospital quickly. But there is no visible signpost marking 'Eye hospital ahead' at the intersection of the highway and the sub road of the hospital. However, there is a visible signpost on the main gate but no directional signage of the hospital found at the main gate.



Pic-1: No directional signage/information board at the main entrance gate

The surface of the pathway to the hospital is even and made of concrete (Pic-1). The main entrance gate is wide enough for the barrier-free movement of people with disabilities.

Parking:

There is general parking in the hospital compound however no particular parking places are assigned for people with disabilities.

Pathway to the entrance of the main building:

The pathway is wide enough, flat, concrete, non-slippery, obstacles, and hazards free for users of all abilities to move along to get to the main entrance of the building. However, no tactile ground surface indicators are present on the pathway leading to the entrance of the reception and main building (Pic-2).



Pic-2: Pathway does not have any tactile ground surface indicators

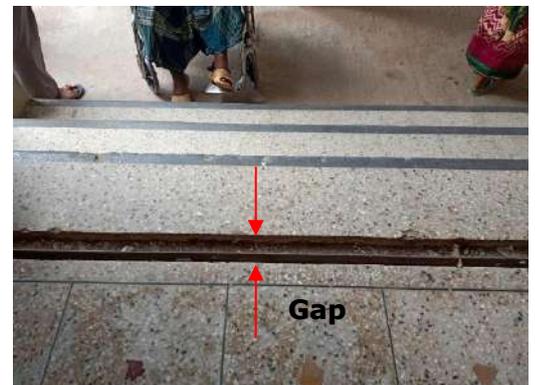
Entrance of the Hospital Building:

There is three entrance gate alongside the main entrance which have three steps to enter the hospital building. The width of each gate is 3480 mm wide. The height of each step/stair is 152 mm high and 305 mm deep. The pathway in front of the entrance is 4572 mm wide. The edge of the stairs is covered with metal which is in contrast in color with stairs. There is no ramp at the entrance. So that elderly person, persons with disabilities, pregnant women, etc. face difficulties during accessing eye care services (Pic-3).



Pic-3: No ramp at the entrances

There are collapsible gates at each entrance which are open during the service hour. A gap of 76 mm between the floors is dangerous for everyone (Pic-4).



Pic-4: People can be injured by stumbling in the gap

There is no directional signage at the entrance.

The hospitals have wheelchairs that are not in useable condition and no wheelchairs available near the entrance for the patients who needed them.

Recommendations:

1) Appropriate color contrasted signboard at the main gate and directional signage throughout the hospital considering the following considerations mentioned below (points a-d).



Pic-6

- a) The color of the characters should contrast with the background (Pic-6).
- b) Characters should not be *italic*, highly decorative or of other unusual forms, and a sans-serif typeface should be used.

I am sans.
I am serif.

Characters should have a minimum height of 5.1 cm minimum and adequate thickness.

There should be adequate spacing between individual characters and between the baselines of separate lines of characters within a message.

- c) The signage should include pictograms or other visual information (Pic-7)



Pic-7

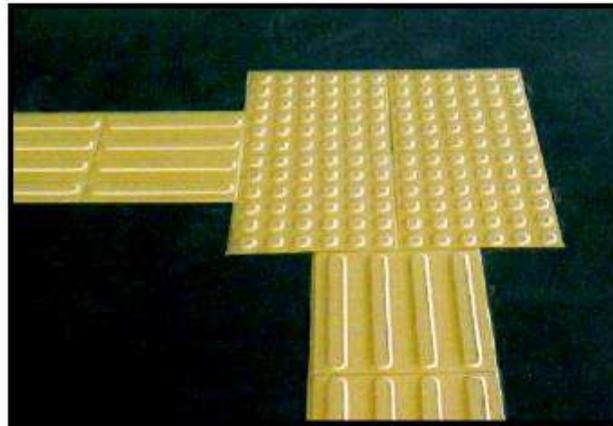
- d) The surface of the signage should be non-glare (Pic-8)



Pic-8

2) Installing tactile ground surface indicators on the pathway (pic-9).

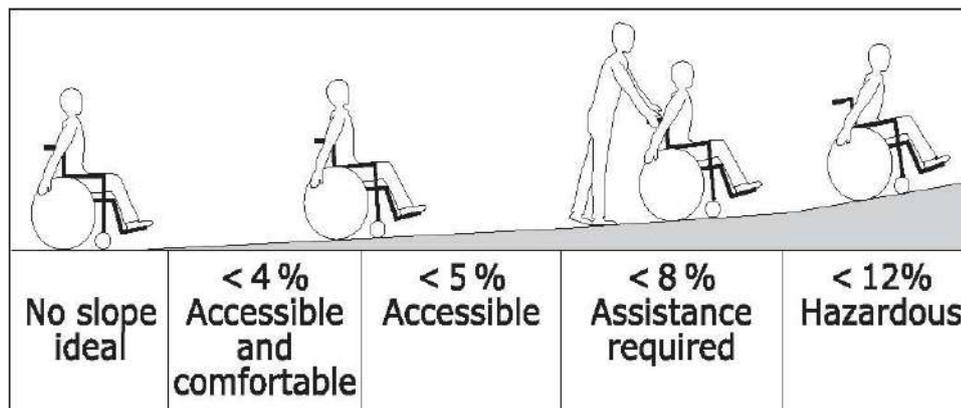
Tactile ground surface on the ramps, public paths, corridors, rooms helps to guide a visually impaired person.



Pic-9: Tactile Ground Surface Indicators

3) A straight run ramp at the first entrance gate (Pic-10)

- A straight run ramp (minimum of 3480mmx2096mm platform along with a 5486mm long slope) is recommended at the first entrance gate (Annexure-1). The width of the slope will be 1524mm. Ensure the ramp has a maximum gradient of 1:12 ratio. The 1:12 gradient (Pic-10) will allow wheelchair users to propel their chairs independently on the ramp. The bottom landing of the ramp should be 2096mmx1524mm free space. This will allow the wheelchair user to full turns.



Pic-10: Different gradients of the ramp.

Table-1 shows the maximum lengths of ramps for different slopes.

Slope of ramp	Maximum Length	Recommended use
10% (1:10)	Less than 1 m	Very short distances only
8% (1:12)	2 m	Maximum slope for general use
5% (1:20)	Up to 10 m	Preferred slope

Table 2: Recommended slopes and lengths of ramps

- On both sides of the ramp, there will be handrails with a height of 900mm and extend it to be beyond 300mm from the beginning of the ramp (Annexure-1).
- The shape of handrails should be circular to facilitate the grasp (diameter between 40 mm and 50 mm).
- The surface of the ramp should be non-slip and well-drained.
- There should be tactile ground surface indicators on the ramp and at the top and bottom landings for people with visual impairment (Pic-11).

4) At least one wheelchair should be available near the entrance for the patients who need it. The place must be marked with a sign according to the consideration of the signage. Staff also should be trained to assist patients for transferring and mobility.

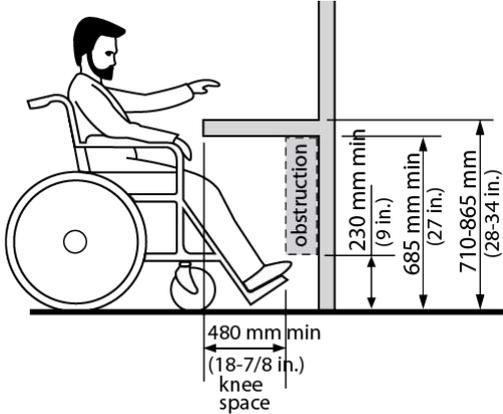
5) Must use a temporary wooden slab (yellow color) for covering the gap during the collapsible gate is open. It will protect people's stumble.



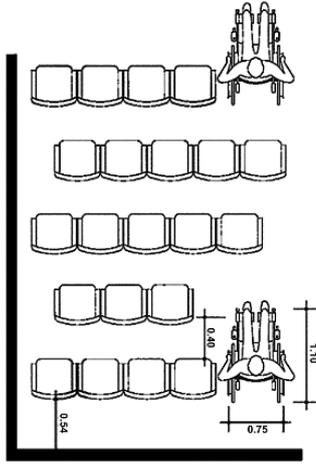
Pic-11: Tactile ground surface guides person with visual impaired

7.2. Reception and Waiting Area

SL No	Findings	Recommendations
1.	<ul style="list-style-type: none"> ➤ There is three different counter e.g. information desk, ticket counter, and billing counter in the hospital. The counters are not clearly identifiable by directional signage from the entrance. ➤ None of the counters is accessible for persons with disabilities, older people, and pregnant women. ➤ There is the signage of 'Male' and 'Female' on the ticket counter which is not visible to everyone. But no 	<ul style="list-style-type: none"> ➤ All signage including 'Male' and 'Female' should be made as per recommendation-1, page-6 &7 so that it will be visible to everyone. ➤ There should be signage of priority (Pic-12) lane at all the counters that indicate giving priority service delivery for people with disabilities, older people, and pregnant women. <div style="text-align: center;">  </div> <p>Pic-12: Priority sign for persons with disabilities, older people, and pregnant women</p>

SL No	Findings	Recommendations
	<p>such signage on the information and billing counter.</p> <ul style="list-style-type: none"> ➤ There are no signs at the counter that give priority to persons with disabilities, older people, and adults with children, and pregnant women. 	
2.	<ul style="list-style-type: none"> ➤ The height of the information desk is 1219mm. There is no knee clearance for a wheelchair user who might face difficulties using the counter comfortably (Pic-13).  <p>Pic-13: Inappropriate height and lack of knee clearance is a problem for wheelchair users</p> <ul style="list-style-type: none"> ➤ The height of the ticket counter and billing counter is 1143mm and 1041mm respectively and there is no knee clearance for a wheelchair user except the billing counter. (Pic-14). 	<ul style="list-style-type: none"> ➤ Considering the limitations to renovating all the desks and counters accessible for all, it is highly recommended to set up a one-stop service desk/counter instead of the information desk. The one-stop service desk will be dedicated to providing services to persons with disabilities, older people, adults with children, pregnant women and injured person. <i>Ensure the front elevation of the reception counter would be straight instead of a curve shape.</i> ➤ The one-stop service desk will be accessible for the wheelchair user as the measurement considerations shown in Pic-15. The counter should have accessible height with knee clearance space.  <p>Pic-15: Measurement of wheelchair accessible counter</p>

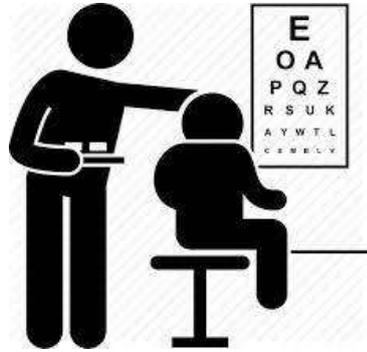
SL No	Findings	Recommendations
	 <p>Pic-14: Ticket counter is not wheelchair user friendly</p> <ul style="list-style-type: none"> ➤ As the ticket counter is on the side of the corridor, the service recipients have to stand in a queue in the corridor that interrupts movement on the corridor. 	<ul style="list-style-type: none"> ➤ Corridor must be free of all obstacles and hazards. It is recommended to shift the ticket counter to a suitable place to avoid the crowd on the corridors.
3.	<ul style="list-style-type: none"> ➤ There is not enough space at the counter area to allow privacy in communications. 	<ul style="list-style-type: none"> ➤ Limited space is a concern; however, staff training on promoting privacy in communications of the client may improve the situation.
4.	<ul style="list-style-type: none"> ➤ There is no designated waiting area. However, there are chairs on both sides of the corridor where patients and caregivers sit. Inadequate space on the corridor restricts movement through the corridors (Pic-16).  <p>Pic-16: Inadequate space on the corridor restricts movement</p>	<ul style="list-style-type: none"> ➤ It is recommended to create a separate waiting area if possible. ➤ Waiting areas may equip with visual and acoustic calling systems. Appointment call announcements should be given both audibly and visually for the deaf, hard of hearing, blind, and partially sighted people (Pic-17).  <p>Pic-17: Electronic display</p>

SL No	Findings	Recommendations
	<p>➤ There is also no particular space for wheelchair users on the corridors or other waiting areas for patients waiting.</p>	<p>➤ Provision for reserve seats (with clear signage, pic-18) for people with disabilities, older people, pregnant women, and the injured person.</p> <div data-bbox="1066 488 1326 734" style="text-align: center;">  </div> <p style="text-align: center;">Pic-18: Signage for reserve seats</p> <p>➤ At least two wheelchairs reserve space; length 1100mm X width 750mm free space for one wheelchair (Pic-19). A clear Wheelchair accessible mark on the reserved floor space is also necessary (Pic-20).</p> <div data-bbox="906 1128 1222 1592" style="text-align: center;">  </div> <p style="text-align: center;">Pic-19: Wheelchair reserve space</p> <div data-bbox="1050 1704 1297 1944" style="text-align: center;">  </div> <p style="text-align: center;">Pic-20: International symbol of accessibility</p>

SL No	Findings	Recommendations
5.	<ul style="list-style-type: none"> ➤ There was no information on the services at the health centre available in easy-to-read and large print format for patients with cognitive disabilities and or impairments. 	<ul style="list-style-type: none"> ➤ Materials in an easy-to-read format (Pic-21) should be available to support communication with patients with cognitive difficulties. ➤ For example, different leaflets or booklets (in Bengali) should be available, focusing on the different activities conducted in the facility (such as registration, eye exam, blood test, etc.).
<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="width: 45%; text-align: center;">  <p>You will be asked to wait for a while until your name is called.</p> </div> <div style="width: 45%; text-align: center;">  <p>Measurements may be taken of your height and weight.</p> </div> <div style="width: 45%; text-align: center;">  <p>A Nurse will be told of your arrival and will call you into a clinic room. You will need some tests.</p> </div> <div style="width: 45%; text-align: center;">  <p>You may need a blood test.</p> </div> <div style="width: 45%; text-align: center;">  <p>You may be asked lots of health questions. The questions will help the Doctor decide if you are well enough for surgery.</p> </div> <div style="width: 45%; text-align: center;">  <p>You may even need a urine test.</p> </div> <div style="width: 45%; text-align: center;">  <p>You will need to have your blood pressure taken</p> </div> <div style="width: 45%; text-align: center;">  <p>You may be screened for any infection/germs usually from the nose and thigh. This only takes a few seconds</p> </div> </div> <p style="text-align: center;">Pic-21: Communication materials for patients with cognitive difficulties</p>		
6.	<ul style="list-style-type: none"> ➤ At the hospital, there is no facility for sign language interpretation for related patients such as an individual with the deaf. 	<ul style="list-style-type: none"> ➤ Provide Sign Language Training to related staff such as Receptionists, and other medical and healthcare professionals.
7.	<ul style="list-style-type: none"> ➤ The floor surface of the hospital is level, smooth, and non-slippery. 	<ul style="list-style-type: none"> ➤ Maintain level, smooth, and non-slippery floor surface always.
8.	<ul style="list-style-type: none"> ➤ Lack of natural lighting at the information and billing counter area. ➤ People cannot make conversation clearly in all 	<ul style="list-style-type: none"> ➤ Ensure adequate artificial lighting in all areas where natural lighting is limited. ➤ The recommended separate waiting area can solve this problem.

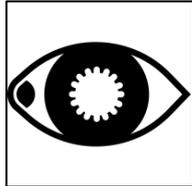
SL No	Findings	Recommendations
	counters areas due to mass gatherings.	➤ Broadcasting different videos on eye care management may reduce loud background noises.
	➤ Only one person was providing services at each counter which was taking a long time to serve people.	➤ Adequate staff is needed to involve in all counters for providing faster services. ➤ All the counters should be marked with the necessary signage.

7.3. Rooms and Halls

Vision Test Room (Room-9 & 17)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ Vision test room no. 9 is for females and room no. 17 is for the male patient. ➤ The doors remain close during service hours, opens inward and their width is 864mm which is enough for passing through all types of wheelchairs. ➤ The room dimension (room no. 9) is 3150mm long and 2362mm wide. ➤ The room dimension (room no. 17) is 3048mm long and 2667mm mm wide. ➤ The space inside the vision rooms (room 9 & 17) is enough for a wheelchair user to full turns. ➤ The signage of 'vision test' and room no. is written in Bangla in big font size and contrast in color which is visible to everyone but positioned above eye level which is difficult to mark many others. ➤ The floor is level without any threshold and non-slippery. 	<ul style="list-style-type: none"> ➤ The ideal position of signage is 1524 mm from the floor. ➤ The signage should be Pictorial too (Pic-22). <div style="text-align: center;">  </div> <p style="text-align: center;">Pic-22: Pictograph of vision test</p> <ul style="list-style-type: none"> ➤ Provide Disability Orientation Training of the staff. ➤ Room no. 9 & 17 must be dedicated to providing services to persons with disabilities, older people, pregnant women, and injured people as the door width and the dimension is accessible for persons with special needs.

<ul style="list-style-type: none"> ➤ The room is also clear of obstructions or hazards. ➤ The furniture color, equipment color, floor, and wall color are well contrasted. ➤ People with different types of disabilities may use the relevant equipment in the room; however, Disability Orientation training is needed for the staff for providing better services to the patients. 	
Pharmacy (Room-11)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The pharmacy is marked with Bangla signage but their position is not at eye level. ➤ The door width is 864mm and remains open inward. ➤ The height (940mm) of the counter is not convenient for wheelchair users even the counter has no knee clearance. ➤ The space between the counter and the sidewall is 1194mm which is not enough for a wheelchair user for a full turn (Pic-23). ➤ There is no sign at the counter that gives priority to persons with disabilities, older people, and adults with children, and pregnant women. 	<ul style="list-style-type: none"> ➤ At least one counter should accommodate a wheelchair user as the measurement considerations shown in Pic-15, page no. 10. The counter should have an accessible height (865mm) with knee clearance space and be marked with an international symbol of accessibility (Pic-20, page no. 12). ➤ There should be signage of priority (Pic-12, page no. 9) lane at the Pharmacy shop that indicates giving priority service delivery for people with disabilities, older people, and pregnant women. ➤ Provide disability orientation and Basic Bangla Sign Language training to the related staff.
<div style="text-align: center;">  </div> <p>Pic-23: Narrow space inside the pharmacy restricts wheelchair full turns</p>	

Dr. Room (Room-12)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ There is a total of five doctors room in the hospital. ➤ The features of both rooms are the same e.g. door width, door lock, room dimension, furniture, equipment, etc. ➤ The door lock is knob type (twist) and its height is 1067 mm. ➤ The door opens inward and is 864mm in width of each door. ➤ The room dimension is 4115 mm long and 3556 mm wide. ➤ The space inside the rooms is enough for a wheelchair user to full turns (Pic-24). <div style="text-align: center;">  </div> <p style="text-align: center;">Pic-24: Enough space inside the doctor's room</p> <ul style="list-style-type: none"> ➤ There are two wooden chairs inside the room near the slit-lamp which occupied the space in front of the slit-lamp. 	<ul style="list-style-type: none"> ➤ At least one Dr. room must be designated for persons with disabilities. This room is ideal for persons with disabilities. ➤ There should be signage of priority service (Pic-12, page 9) on the door that indicate giving priority service delivery for people with disabilities, older people, and pregnant women. ➤ The wooden chairs must be rearranged considering 1500mm diameter free space to maneuver a wheelchair to access services when the doctor will examine the eyes of the person using the slit-lamp. ➤ The use of pictorial signage on the door is more visible to the person who cannot read the signage (Pic-25). <div style="text-align: center;">  </div> <p style="text-align: center;">Pic-25: Pictorial signage of slit-lamp examination</p> <ul style="list-style-type: none"> ➤ All signage should be positioned at 1524 mm from the floor. ➤ Disability Orientation Training is needed for the staff to support persons with disabilities as per their needs.

Post-surgery Eye Test (Room-14)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The door width is 864 mm and opens inward. ➤ The room has enough space for easy movement, especially for wheelchair users. ➤ There is enough space inside the room for full turns a wheelchair. ➤ There is no extra furniture in the room. ➤ There is no signage indicating 'Post-surgery Eye Test' outside the room. 	<ul style="list-style-type: none"> ➤ There should be signage of 'Post-surgery Eye Test' on the door. ➤ Signage should be put on the door positioned at 1524 mm from the floor. Or it can be attached to the sidewall of the door. ➤ Pictorial signage on the door is recommended (Pic-25). ➤ Disability Orientation Training is needed for the staff to support persons with disabilities as per their needs.
Cornea Clinic (Room-15)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The door width is 864 mm and opens inward. ➤ The room has enough space for easy movement, full turns, especially for wheelchair users. ➤ The signage of 'Cornea Clinic' and room no. is written in Bangla in big font size and contrast in color which is visible to everyone but positioned above eye level which is difficult to mark many others. 	<ul style="list-style-type: none"> ➤ The ideal position of signage is 1524 mm from the floor. <div style="text-align: center;">  <p>Pic-26: Icon of the cornea</p> </div> <ul style="list-style-type: none"> ➤ Disability Orientation training is needed for the staff for providing a better service to the client.
Dressing Room (Room-24)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The door width is 864 mm and opens inward. ➤ The room has enough space but the partition near the entrance door creates obstacles for wheelchair maneuvering (Pic-27). ➤ Two dressing beds have a fixed height of 838mm which is too high for a wheelchair user for 	<ul style="list-style-type: none"> ➤ The partition must be reorganized to ensure adequate space for wheelchair users. ➤ Replace at least one wooden dressing bed with a height-adjustable bed (hydraulic). This will help a person who needs to transfer from wheelchair to bed.

<p>transferring from wheelchair to bed (Pic-27).</p>  <p>Pic-27: Fixed height wooden bed</p> <ul style="list-style-type: none"> ➤ The signage of 'Dressing Room' and room no. is written in Bangla in big font size and contrast in color which is visible to everyone but positioned above eye level which is difficult to mark many others. 	<ul style="list-style-type: none"> ➤ The ideal position of signage is 1524 mm from the floor. ➤ Disability Orientation training is needed for the staff for providing a better service to the patient.
Refraction Room (Room-29)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The door opens inward. The door width is 762 mm which is acceptable for passing through and the inner space is wide enough for turning a wheelchair. ➤ The room dimension is 3581mm x 2565mm. ➤ This room has a lack of natural air ventilation. 	<ul style="list-style-type: none"> ➤ The ideal door width is 900 mm. It allows all types of wheelchair users to easily enter the room. ➤ Comparing with other this refraction room is ideal for persons with disabilities, aged persons, pregnant women, etc. ➤ Disability Orientation and Sign Language training is needed for the staff for providing a better service to the patient.
Counselling Room (Room-19A)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The room dimension is 2616mm x 2057mm. ➤ There is a sliding door. The door width is 889 mm which is 	<ul style="list-style-type: none"> ➤ Signage should be positioned at 1524 mm from the floor level. Please refer to recommendation-1

<p>accessible for passing through and the inner space is wide enough for turning a wheelchair.</p> <ul style="list-style-type: none"> ➤ There is a table that has appropriate leg space for a wheelchair user. ➤ The room name and number are posted over the glass frame which is above eye level. The font size of 'Counselling' is not visible to everyone. 	<p>on page-6 & 7 for the considerations of accessible signage.</p>
Moderate Cabin	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ There is four single bed cabin in this block which are attached to a common toilet. ➤ The room dimension of each cabin is 3277mm long x 1829mm wide. ➤ The door has a 610mm width and opens inward. ➤ The room dimension of the toilet is 1880mm x 1651mm and has a squat toilet. ➤ The door width of the toilet is 610mm which is not wheelchair accessible. ➤ There is a separate chamber of washbasin outside the toilet. The room dimension is 1651mm x 1118mm. ➤ There is a washbasin on the pedestal which restricts the footplates of the wheelchair. ➤ The bottom height of the washbasin is 660mm. ➤ The height of the electric switchboard in the cabin is 1346mm. 	<ul style="list-style-type: none"> ➤ At least one cabin is recommended to reserve for persons with disabilities. ➤ Must change the existing cabin door (reserve for persons with disabilities) with a sliding door which width will be 864mm. ➤ A renovation is needed to make the toilet accessible for wheelchair users. The ideal room dimension is 2134mm x 1524mm. In this case, the wall between the toilet and the washbasin needs to be removed 10 inches to ensure 2134 mm space. ➤ It is recommended to replace the existing toilet door with a sliding door. At least a 762 mm clear opening (door width) will be needed. ➤ The existing low commode should be replaced with a high commode to ensure accessibility. ➤ Washbasin without a pedestal is ideal for a wheelchair user. A Washbasin on the cantilever is recommended (Pic-28).

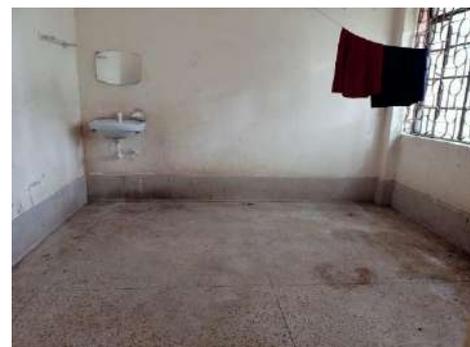
	 <p>Pic-28: Washbasin without pedestal</p> <ul style="list-style-type: none"> ➤ The electric switchboards should be located within the range of 900mm to 1200mm above the floor finish.
VIP Cabin (AC)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ There is two AC cabin. ➤ The door has 864 mm clear width and opens inward. ➤ There is two bed in the cabin. One is height adjustable and another one is fixed height. ➤ The fixed bed height is 635 mm (including mattress). ➤ The distance between the two beds is 1600mm which is enough for wheelchair movement. ➤ There is an attached toilet which dimension is 1727mm X 1600mm and the door width is 635mm, door opens inward which is narrow for a wheelchair user. ➤ The toilet floor is 114 mm higher than the cabin floor. ➤ There is a high commode and a pedestal washbasin inside the toilet. ➤ Commode, washbasin, and fittings are not contrasted color with the background. ➤ The electric switchboard height is 1448mm high from the floor. 	<ul style="list-style-type: none"> ➤ At least one AC cabin should be accessible and allocated for persons with disabilities. ➤ A renovation is needed to make the toilet accessible for wheelchair users. ➤ The toilet floor must be on the same level as the cabin floor. ➤ It is recommended to replace the existing toilet door with a sliding door. At least a 762 mm clear opening will be needed. ➤ All the fittings for inside the toilet should be in contrast color with background (Pic-29).  <p>Pic-29: Fittings are contrasted color with the background</p> <ul style="list-style-type: none"> ➤ The electric switchboards should be located within the range of 900mm to 1200mm above the floor finish.

Paying bed (Male), & Toilet	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The room has a fixed height of four beds. But no particular bed for the person with disabilities. ➤ The beds were not marked with any numbers. ➤ The room has two doors. One is for entering the room and the other one is for going to the toilet. Each door is 889mm wide which is convenient for wheelchair users. ➤ The front door lock is a knob lock type which height is 1016mm. ➤ There are three toilets beside the paying bed. Among them, no one is accessible for all. ➤ There is a space beside the toilet block which dimension is 2743mm x 2134mm (Pic-30). <div style="text-align: center; margin-top: 10px;">  </div> <p style="text-align: center; margin-top: 5px;">Pic-30: Unused space beside the toilet block</p>	<ul style="list-style-type: none"> ➤ Accessible bed height should be between 508mm to 635mm including the mattress. ➤ A hydraulic bed should be reserved for patients with disabilities. ➤ Each bed should be marked with a serial number. ➤ Lever handle door lock is recommended to use for all doors (Pic-31). <div style="text-align: center; margin-top: 10px;">  </div> <p style="text-align: center; margin-top: 5px;">Pic-31: Lever handle door lock is easy to use</p> <ul style="list-style-type: none"> ➤ The unused space beside the toilet block can be used to make an accessible toilet. This accessible toilet will be used by the patient of the cabin and paying bed. ➤ The existing dimension is enough to build a such toilet. For this civil work is needed. ➤ Ensure proper door width, fittings, high commode, signage, etc. for the toilet. The measurement and features of an accessible toilet are described on page no. 29,30,31.
General Ward (Male), General Ward (Female)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ Each door has an 864 mm clear width and opens inward. ➤ There is a minimum of fourteen patient beds in each ward and no space between the beds. 	<ul style="list-style-type: none"> ➤ Accessible bed height should be between 508mm to 635mm including the mattress. ➤ At least two beds in each ward should be reserved for patients with disabilities. In this case, the bed

- There is no bed specified for the person with disabilities.
- The beds were not marked with any numbers.
- The room has insufficient natural and artificial light.
- There are attached toilets in the male and female ward but not a single toilet is accessible for persons with disabilities.
- In the male ward, there are toilets on both sides of the room.

which is near the door is recommended to reserve for patients with disabilities. The space beside the bed is suitable for wheelchair circulation.

- Each bed should be marked with a serial number.
- Ensure appropriate fluorescent lighting (200-750 lux), without glare or shadows.
- **Accessible Toilet for male ward:**
 - There is a toilet in the right corner of the mail ward that can be converted into an accessible toilet. For this civil work is needed.
 - Ensure proper door width, fittings, high commode, signage, etc. for the toilet. The measurement and features of an accessible toilet are described on page no. 29,30,31.
 - As the toilet floor is higher than the ward floor, a 1:12 ratio ramp will be needed in front of the toilet chamber.
 - A sliding door is recommended instead of the existing door.
- **Accessible Toilet for female ward:**
 - The unused space beside the toilet block can be used to make an accessible toilet.



Pic-32: Unused space can be used to build an accessible toilet

	<ul style="list-style-type: none"> ▪ The existing dimension (3556mm x 2007mm) is enough to build such a toilet. For this civil work is needed. ▪ Ensure proper door width, fittings, high commode, signage, etc. for the toilet. The measurement and features of an accessible toilet are described on page no. 29,30,31??. <p>➤ Nametag and pictorial signage should be positioned at 1524 mm from the floor. Please refer to recommendation-1 on page-6 & 7 for the considerations of accessible signage.</p> <div style="text-align: center;">  <p>Pic-33: Signage of ward</p> </div>
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7.4. Waiting Area

Waiting Area (Ground floor)	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The waiting area in front of room no. 21 is spacious but crowded. The floor surface is level, smooth, and non-slippery. ➤ There are sufficient chairs contrasted in colors but no priority seating for elderly people, pregnant women, and persons with disabilities (Pic-34). 	<ul style="list-style-type: none"> ➤ Signage of reserved seats (Pic-18, page 12) for people with disabilities, older people, and pregnant women must be posted in the right place on the wall. ➤ At least two wheelchairs reserve space; length 1100mm X width 750mm free space for one wheelchair (Pic-19). A clear Wheelchair accessible mark on the reserved floor space is also necessary (Pic-20). ➤ Ensure sufficient lighting in the waiting area. ➤ For ease of reach, the electric switchboards should be located

 <p>Pic-34: No priority seating</p> <ul style="list-style-type: none"> ➤ There is no sufficient natural and artificial lighting in the waiting area. 	<p>within the range of 900mm to 1200mm above floor finish.</p> <ul style="list-style-type: none"> ➤ For switches (dark switch and socket plates) should be used for light backgrounds or vice versa.
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7.5. Corridors

Corridors	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ All corridors are wide, level, smooth, and non-slippery. ➤ The corridor is crowded with patients and their attendants.  <p>Pic-35: The corridor is overcrowded</p> <ul style="list-style-type: none"> ➤ The way of natural air ventilation is Okay. ➤ No priority seating for elderly people, pregnant women, and persons with disabilities. ➤ There was no directional signage in the corridor to assist people to go specific places. ➤ No wastebasket was on the corridors. 	<ul style="list-style-type: none"> ➤ Signage of reserved seats (Pic-18) for people with disabilities, older people, and pregnant women must be posted in the right place on the wall. ➤ At least two wheelchairs reserve space; length 1100mm X width 750mm free space for one wheelchair (Pic-19, page no. 12). A clear Wheelchair accessible mark on the wall is also necessary (Pic-20, page no. 12). ➤ Directional signage should be put in place for easy movement of the service recipients. Appropriate signage of the related facility is shown in Pic-36.

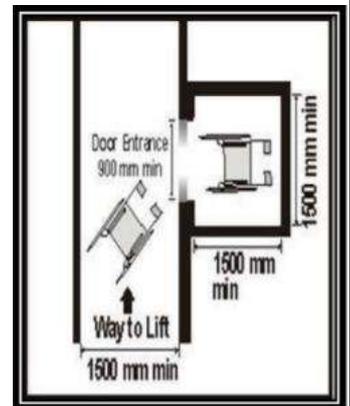
	 <p>Pic-36: Directional signage helps a person to reach the destination</p> <ul style="list-style-type: none"> ➤ Ensure an adequate number of wastebaskets in the corridors to maintain hygiene.
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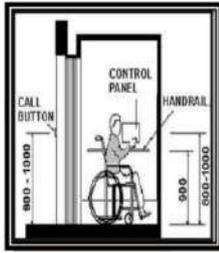
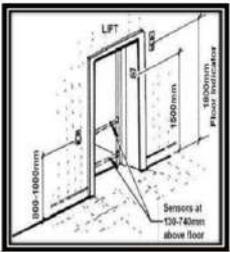
7.6. Optics shop

Optics shop	
Findings	Recommendations
<ul style="list-style-type: none"> ➤ The floor space in front of the Optics area is wide enough and free of hazards and obstacles. ➤ The counter height is 1067mm. ➤ The height of the counter is not convenient for wheelchair users even the counter has no knee clearance.  <p>Pic-37: The counter is not accessible for all</p> <ul style="list-style-type: none"> ➤ There is no sign at the counter that gives priority to persons with disabilities, older people, and adults with children, and pregnant women. 	<ul style="list-style-type: none"> ➤ At least one counter should accommodate a wheelchair user as the measurement considerations shown in Pic-15, page no. 10. The counter should have an accessible height (minimum 762 mm) with knee clearance space and be marked with an international symbol of accessibility (Pic-20, page no. 12). ➤ There should be signage of priority (Pic-12, page no. 9) lane at the Optics shop that indicates giving priority service delivery for people with disabilities, older people, and pregnant women. ➤ Provide disability orientation and Basic Bangla Sign Language training to the related staff.

7.7. Elevator

Elevator	
Findings	Recommendations
<p>➤ There is no elevator in the hospital building.</p>	<p>➤ If there is a plan to install a lift be confirm that the lift is accessible for all.</p> <p>➤ A built-in audio call system in the elevator will help the visually impaired person for getting up and down.</p> <p>➤ Each landing area in front of the elevator must have at least 1500mm X 1500mm free space.</p> <p>➤ The height of the control buttons will be 914 mm from the floor level.</p> <p>➤ Tactile ground surface indicators (length 610 mm, width 914 mm) are available at all landings.</p> <p>A Universal Design Recommendations for an Accessible Lift:</p> <p>To ensure the lift is accessible for all types of users, please consider the following recommendations:</p> <ul style="list-style-type: none"> • Ensure lift is clearly signed from the building entrance and other key areas. • Install lift with the size and capacity to suit building type and occupancy. • Keep to a recommended minimum internal dimensions of 1500mm x 1500mm. • Incorporate a clear door opening width of 900mm (min). • Ensure lift doors remain open for a minimum of eight seconds. • Include clear landing space of 1800mm x 1800mm. • Ensure the lift signaling system is both visual and audible.



	<ul style="list-style-type: none"> • Provide an emergency communication system that is suitable for all users (a clear instruction board or a leaflet with an emergency contact number).   <ul style="list-style-type: none"> • Design lift interior to minimize glare and reflection. • Use an even level of illumination of 100 lux. • Install handrails on all walls without doors. • The control panel should be placed at a height of between 800 mm and 1000 mm from the floor level and have buttons with Braille/raised letters and in sharp contrast from the background to aid people with visual impairments • The lift should have a voice announcement system along with a visual display to indicate the floor level and also the information that the door of the cage is open or closed for entrance or exit. • The announcement system should be clearly audible, i.e. the announcement should be 50 decibels. • Mirror on the rear wall to be provided. It should not extend below 900 mm from the lift floor to avoid confusing people with impaired sight. • Directional and informational signage with international symbol should be provided • Sign indicating the number of the floor should be provided on each lift landing on the wall opposite the lift. <p>Ref:</p> <ol style="list-style-type: none"> 1. https://www.rickhansen.com/sites/default/files/downloads/acp-862-universal-design-recommendationsaccessible-lifts.pdf 2. Accessibility Audit Report of Civil Hospital, Shillong, 2016, CBM India Trust, Bangalore.
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7.8. Stairs

Findings:

The measurements of staircases e.g. width (1626mm wide), tread, riser are okay considering the universal design standard. There are no handrails except one side concrete railing which height and gripping space are not good for grasping. However, the edge of the stairs is covered with metal which is in contrast in color with stairs.



Pic-38: No handrails on the stairs

Recommendations:

Few accessible features can adapt to the existing stairs, in particular, color contrast and tactile ground surface indicators; however, other accessible design considerations are given below.

- Handrails will be continuous on both sides 900 mm high and circular in section (diameter of 40-45mm as this will allow for a better grip).
- Tactile ground surface indicators (length 610 mm, width 1626 mm) are available at the top and bottom landing and at every change in direction of the stairs to alert people with visual impairments.
- Staircases should be well illuminated during day and night when in use (level of illumination preferably between 150 and 200 lux).
- The lighting in staircases should create contrast between treads and risers while providing a uniform overall level of illumination.

7.9. General Toilets

Findings:

- There are toilets in two different areas on the ground floor.
- None of them are accessible for all e.g. narrow door width and room dimensions, the door opens inward, low commode, inappropriate fittings, etc.
- There is a separate toilet for 'Male' & 'Female' next to room no. 11.
- There are signages of 'Male' & 'Female' posted on each toilet door.
- No grab rails in the toilet.
- No sanitary bin is available.



Pic-39: Narrow door width restricts wheelchair

Recommendations for all existing toilets:

- Clear directional signage indicating the location of the toilet.
- Toilets should be separated by gender and clearly signed.
- Toilets should have doors that can be locked from the inside.
- Toilet doors should be easily released from outside by authorized staff in case of emergency.
- The floor material should be well-drained, waterproof, non-slip, and non-glare.
- There should be sanitary bins in the toilets
- There should be running water and a washbasin with soap and toilet paper.
- The color of the squat toilet, urinal, and washbasin should contrast with the background.
- There should be a functioning fire alarm installed in the toilet.
- The toilets should be clear of any obstructions or hazards.
- There should be enough light.
- The toilets should be clean and free from strong smells. Strong smells can be can cause stress and anxiety.

Recommendations for an accessible toilet :

It is highly recommended to build at least one accessible toilet on the ground floor and for other floors including ward in separated male and female signage. There is a store room next to room no. 11. This room can be converted to an accessible toilet for the ground floor. The existing dimension is enough to build a such toilet. And this will require civil works.

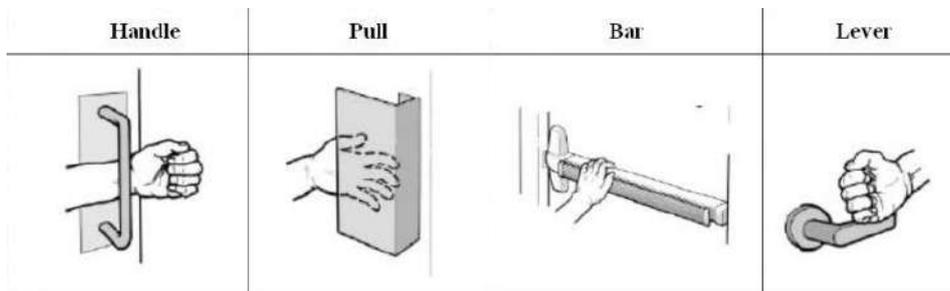
1. The existing room dimension is 3531mm x 2896mm which is bigger than the ideal room dimension of an accessible toilet.
2. The door has a threshold and must be removed for wheelchair access.
3. Clear directional signage indicating the location of the toilet/accessible toilet.
4. The door should have-
 - a) Clear opening width of 900mm;
 - b) A clear space on both sides of the door that allows a wheelchair to approach the door and open it;



Pic-40: Proposed space for accessible toilet

- c) Handle—a 'D'-shape, or lever, circular section handle positioned 900mm from the floor, 50mm (min) from the door frame;

Examples of accessible handles:



- d) Door locks—that are located 900mm high as far from the opening edge as possible. The toilet door should be locked from inside and also the door should be released from outside by authorized staff in case of emergency;

e) Ensuring color contrast with the surrounding walls.

- 5. Room dimensions**—a minimum of 2100mm x 1800mm (length x width) is recommended.

- 6. Clear turning area**—inside the cubicle of 1500mm in diameter that is free of obstructions.

- 7. Commode:** (a) 450-500mm high; (b) with the center of the pan 500mm from the sidewall; (c) with 800mm clear space in front of the pan; (d) with 750mm clear space to the non-wall side of the pan.

- 8. Two fixed horizontal grab rails**—one grab rail should be on the wall of the non-transfer side of the toilet pan fixed firmly at a height of approximately 700mm and projecting 100mm over the front edge of the toilet pan. Similarly, at the same height, another folding grab rail should be mounted at the back wall of the toilet pan (Pic-41).



Pic-41: Grab bars

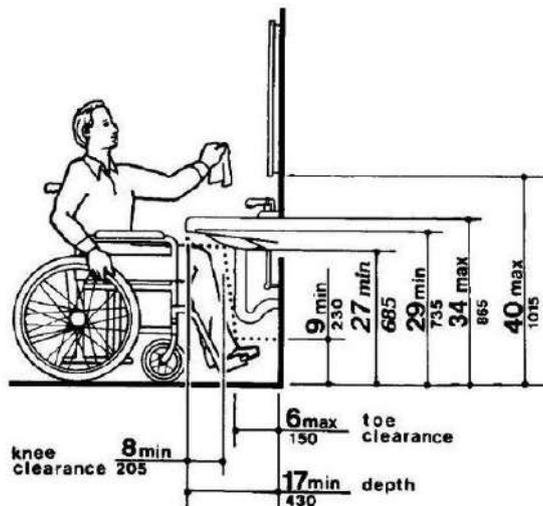
- 9. Size and spacing of grab bars and handrails**—the diameter or width of the gripping surfaces of a handrail or grab bar shall be 32 mm to 38 mm, or the shape shall provide an equivalent gripping surface. If handrails or grab bars are mounted adjacent to a wall, the space between the wall and the grab bar shall be 38 mm.

- 10. Toilet paper/water**—toilet paper and/or water hose/tap facilities located in easy reach of a person seated on the toilet at a height of approximately 800mm from the floor and approximately 100mm back from the front of the toilet pan.

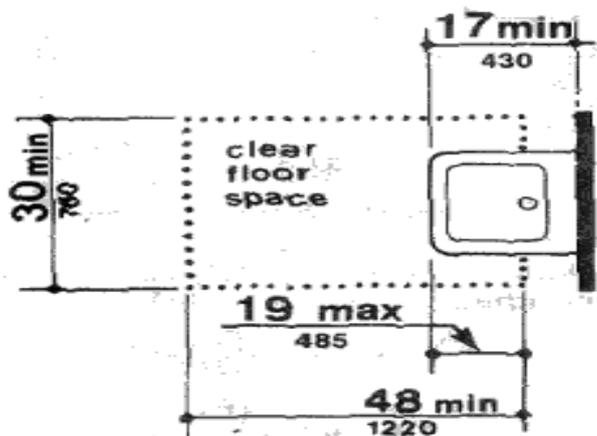
11. Washbasin—the washbasin can be mounted on the wall right opposite the door of the toilet. The washbasin should have lever taps (Pic-42), the bottom of the basin is 650mm from the floor and the top of the basin is approximately 750mm from the floor. The washbasin must be free of a pedestal, in particular, knee-foot clearance is important (Pic-43 a&b).



Pic-42



Pic-43(a): Measurement of washbasin



Pic-43(b): Floor space at the washbasin

- 12. Floor surface**—that is non-slip when wet.
- 13. Drainage**—adequate drainage and grading of the floor to prevent waterlog.
- 14. Color Contrast**— tiles on the floor and wall tiles should contrast in color. The commode should contrast in color from the floor and walls. Washbasin should contrast in color from the wall.
- 15.** Ensure regular cleaning of every toilet in the facility.

7.10. Moving around inside the health centre

Findings:

- The hospital paths and corridors have wide and turning spaces which is accessible for wheelchair maneuverings.
- Appropriate signage including accessible directional signage was absent in the facility.
- There were also no visual floor wayfinding signage and/or tactile paving with color contrast available.
- Not all the paths and corridors of the hospital building had enough light.
- There were no fire alarms.
- No emergency exit for different persons with disabilities was found.
- There is a ramp connecting the ground and first floor. But the collapsible gate was locked during the accessibility audit. The width of the ramp is 1524mm. It was not possible to measure the slope of the ramp. The ramp was crammed with hospital discarded items. No handrails on both sides of the ramp.

Recommendations:

- Paths and corridors should always be free of all obstacles and hazards.
- There should be clear signs providing directions to rooms with color contrast, non-glare, large print, and pictures.
- Tactile paving should be embedded in all main circulation paths that connect rooms, halls, ramps, stairs, counters, etc. The color of the tactile paving should contrast with the color of the floor (Pic-44).
- Appropriate fluorescent lighting (200-750 lux), without glare or shadows.
- Functioning fire alarms with both visual and audible signals should be available (Pic-45).



Pic-44: Tactile ground surface



Pic-45: Audible fire signal

- Emergency exit facilities should be available and contain clear signage indicating accessible escape routes (Pic-46).
- The ramp may use for an emergency exit. As such all discard items should be removed from the ramp and the collapsible gate must be always open.
- On both sides of the ramp, there will be handrails with a height of 900mm.
- It's useful to have visual information in both Bangla and English versions explaining how to maneuver the door.



Accessible fire exit

Pic-46: Signage

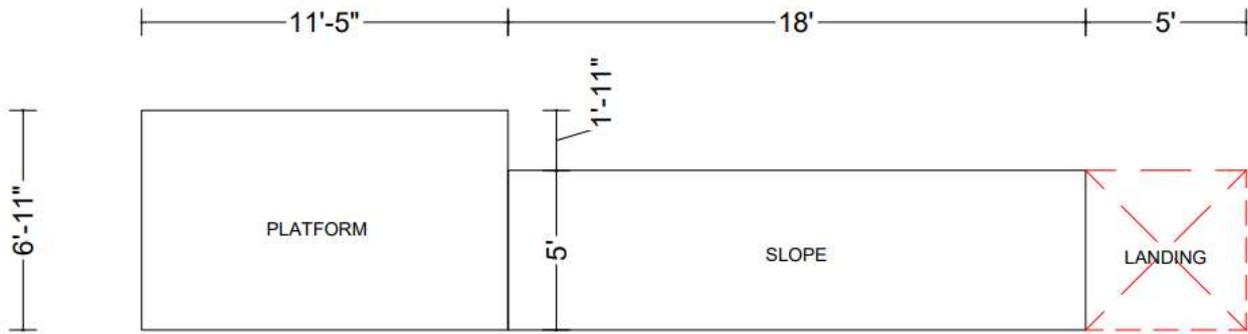


8. Audit Rating Score and Conclusion

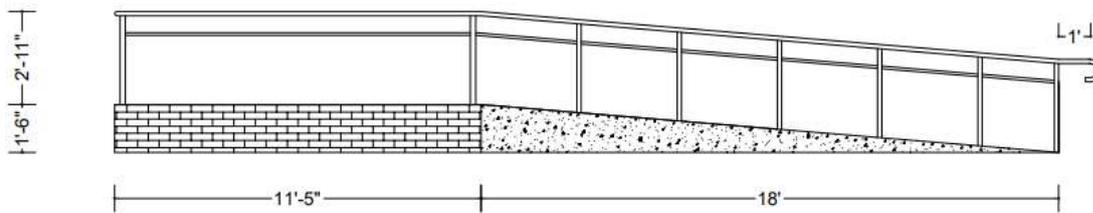
Considering the available accessibility features and facilities at Khulna BNSB Eye Hospital, the Audit Team including persons with disabilities rated as Minimal Accessibility (0% - 25%), precisely <25%. The major inaccessible features include absence of a ramp, ticket counter, stairs, small circulatory spaces of some service rooms, inaccessible toilets, no emergency exit way, lack of directional signages, and no reasonable modifications, etc. Individuals with different types of disabilities will not be able to access the hospital's service independently. However, accommodating the recommendations provided in this report will promote accessibility to a greater extent.

Appendix-1

Plan and elevation of the Ramp:



WORKING DRAWING OF RAMP: PLAN



WORKING DRAWING OF RAMP: FRONT ELEVATION

Activate
Go to Sett

Appendix-2

Glossary of key terms

In this report, the term 'accessible' means user-friendly for people with disabilities and all.

Accessibility

"Accessibility" means the right of persons with disabilities to get access, opportunity and treatment on an equal basis with others in all facilities and services available to the general public, including physical infrastructure, transportation, communication, information, and information and communication technology¹.

Accessible building

An accessible building is one that people with/without disabilities can readily enter, move around, comfortably use all internal facilities and exit safely.

Accessible communication

Accessible communication means communicating with people with disabilities in ways they can readily follow.

Accessible information

Accessible information means that people with disabilities can readily access and understand it.

Accessible service

An accessible service is one which is geared to serve people with disabilities alongside other service users.

Disability

The legal definition of disability, as set out in the Rights and Protection of Persons with Disabilities Act, 2013, Bangladesh, "Disability" means the results from the interaction between persons with long-term and/or permanent physical, mental, intellectual or sensory impairments and the attitudinal and environmental barriers that hinders their full and effective participation in the society on an equal basis with others.

¹ Rights and Protection of Persons with Disabilities Act, 2013, Bangladesh.

Persons with disabilities

“Person with disabilities” means a person who has any type of disability/disabilities described in clause 3, *Rights and Protection of Persons with Disabilities Act, 2013, Bangladesh*.

Universal design

Universal design refers to a broad-spectrum solution that produces buildings, products and environments that are usable and effective for everyone, not just people with disabilities.

Reasonable Accommodation

“Necessary and appropriate modification and adjustment not imposing a disproportionate burden”.

Appendix-3

Measures and equivalents

mm	cm	m	inch(es)	foot/ feet (ft)	yards (yd)
1	0.01	0.001	0.0394	-	-
10	1	0.01	0.3937	0.0328	0.0109
1000	100	1	39.37	3.280	1.0936
-	91.44	0.9144	36	3	1
-	30.48	0.3048	12	1	0.33

Appendix-4

Universal Accessibility Logos



The wheelchair symbol identifies accessible facilities for persons with limited mobility including wheelchair users. In the case of completely accessible buildings, only one explanatory sign at the principal entrance is needed.



This symbol indicates accessible services and facilities for persons who are blind or have low vision. This may include for instance a guided or tactile tour.



This symbol indicates that Sign Language Interpretation is provided for persons who are deaf or hard of hearing.



This symbol indicates on signage or on floor plans the location of an information desk where more detailed information on accessible services and features is available.



This symbol indicates systems that transmit amplified sound via hearing aids, headsets or other devices. They include infrared, loop and Frequency Modulation (FM) systems.

-----End of the Report-----