

GHAT FOR EVERYONE AT VARANASI

(A Universal Design Approach)

1-Anil Bharti , 2 Ex-Prof. S.Y. Kulkarni

1-Ph.D scholar - Department of Architecture & Planning, Himgiri Zee University Dehradun, India –E-Mail anilbharti100@gmail.com

2-Professor -Department of Architecture & Planning, IIT Roorkee-India - E-Mail -prof.syk.iitr@gmail.com

ABSTRACT:

Varanasi is known for the very famous river Ganga .it is called as a religious capital of India. It has its affluent culture and opulent heritage value but now a day the scenario of Ghat area are completely chaotic and facing multiple problem for the physically challenge people. As per Indian census 2011 India has 2.68 Crore physically challenge people at certain level. Walk ability can be definition technically: "The extent to which the built environment is friendly to the presence of people living, shopping, visiting, enjoying or spending time in an area". Factors affecting walk ability include, but are not limited to: step, temple, shop, seating, entrance, houses, Havelis etc.



Figure 1-Disable person

This paper discusses about the accessibility at Ghat area of Varanasi which are the part of universal design concept. With the increasing the interest of people on urban and environment issue, the infrastructure has to design in such a way so as to promote the space for physically challenge people.

KEYWORDS: *Universal design, Workability, Public space, Ghatscape Accesibility, Pedestrian friendly.*

VARANASI GHAT

The Kashi (Varanasi) has been the ultimate pilgrimage spot for Hindus since the time was immortal. Often referred to as Benares, Varanasi is the one of the oldest living city in the world. These few lines by Mark Twain say it all: "Banaras is older than history, older than tradition, older even than legend and looks twice as old as all of them put together" .As per Hindus mythology if someone who is liberate their sole at the bank of Varanasi Ghat would get salvation from the cycle of life and death.



Figure 2-Ghat view

ACTIVITIES ON GHAT AREA

The Ghats are a way of life for the people around the Ghats. These Ghats are involved with the life of people in many ways, like daily routine, religious activities, daily wage earning and tourism. One can come across small children playing on Ghats, Chillum smoking Sadhus, busy boaters, herds of cows, painters, musicians, students and many others on the Ghats. To have a close look at the Ghats and its lifestyle, one should take a walk from Assi Ghat to Manikarnika Ghat.



Figure 3-Chanting



Figure 4- Aarti Flame



Figure 5-Worship



Figure 6- Ritual Activity



Figure-7- Flying of Kite

THE SURROUNDINGS

There are some very good hotels, restaurants, cafes, book shops, music shops on these Ghats. Luxury and budget accommodations are also available on the Ghats. Small stalls, selling religiously important things, like chains, stones, idols and religious books, are in plenty. Old houses and buildings on the Ghats makes the Ghats more beautiful. The Ghats looks very busy and bustling with crowd, but the life is very slow and very calm on the Ghats.

WHY IS GHAT FOR EVERYONE?

As per Census 2011, in India, out of the 121 Cr population, about 2.68 Crore persons are 'disabled' which is 2.21% of the total population. Across the country, the highest number of disabled has been reported from the state of Uttar Pradesh 16% (4.16 million). Significant numbers of disabled have also been reported from the state like Bihar (1.9 million), West Bengal (1.8million), Tamil Nadu and Maharashtra (1.6 million each). Tamil Nadu is the only state, which has a higher number of disabled females than males.

Among the states, Arunachal Pradesh has the highest proportion of disabled males (66.6%) and lowest proportion of female disabled.”

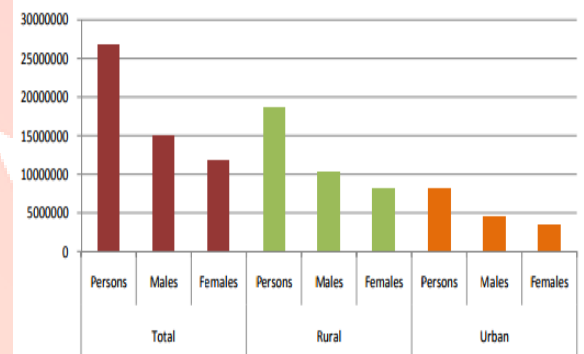


Figure-8-Disabled Population in India –Census 2011

TYPES OF DISABILITY

The Census 2011 revealed that, In India, 20% of the disabled persons are having disability in movement, 19% are with disability in seeing, and another 19 % are with disability in hearing. 8% has multiple disabilities. The physically challenge people are facing the problem of accessibility to the Ghat. This approach promotes the concept and philosophy of universal design and encourages developers, designers, builders to be innovative and think creatively about solutions that meet the needs of all users of Ghat regardless of their age, size, ability or disability.

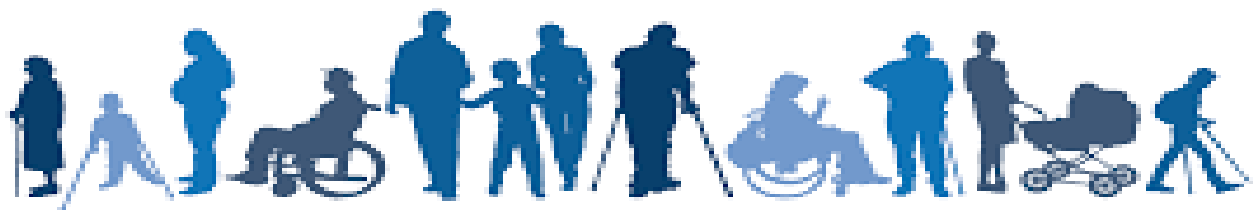


Figure-9-Disable Person

UNIVERSAL DESIGN FOR DASHASWAMEGH GHAT AT VARANASI



Figure-10-Varanasi City Map

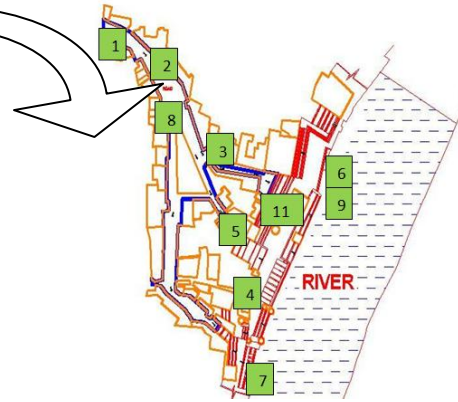


Figure-11-Dashashwamegh Ghat at Varanasi

KEY ASPECT OF UNIVERSAL DESIGN

- 1-Parking
- 2-Entry
- 3-Pathways
- 4-Curb Ramp for Temples /shops and shops
- 5-Stair wheelchair lift
- 6-Pool hois
- 7-Ramp in water
- 8-Pedestrian crossing
- 9-Modular floating dock
- 10-Signage
- 11-Public space (toilet /shop/ritual space etc)

1-PARKING

The current scenario of Ghat area are too crowded, But we may provide some parking facility to the disable person. We may complete this function to receive parking facilities. The management will receive disable placard which may be used by disable person.

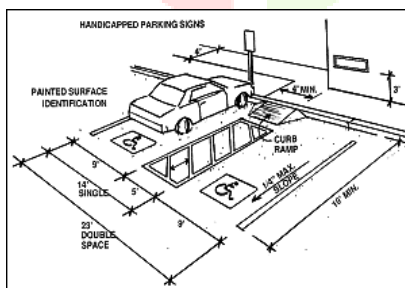


Figure-12-Parking

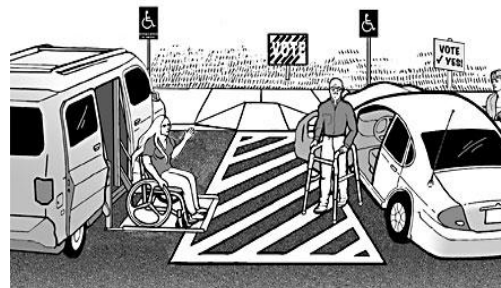


Figure-13-Reserve Parking for Disable person

2-ENTRY

Access control by the local authority for the disable person is move to the low floor vehicles. A further aspect may be the entrance and corridors are wide enough to accommodate a wheelchair. The wheelchair may connect properly to the pathway without having any obstacles on pathways.



Figure-14-Access to Ghat



Figure-15-Door entry for Disable person

3-PATHWAYS

Currently all the pathways are encroached by the local vender/retailer .Government should rehabilitate them some other place so that the space for the pedestrian would be free. A common person may use this space.

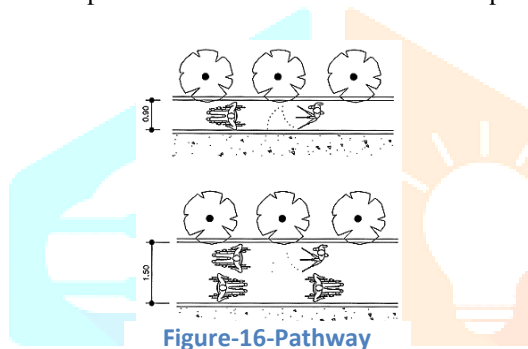


Figure-16-Pathway

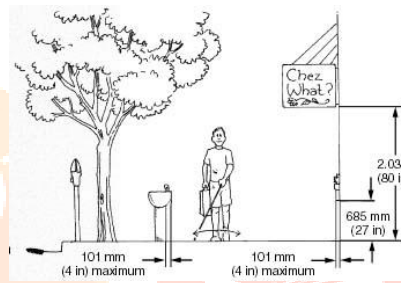


Figure-17-Cross section of Pathway

4-CURB RAMP FOR TEMPLES /SHOPS ETC

The curb ramp design such a way so that accessibility of wheelchair, Segway, cart etc. May access to the temples/shops etc. which must be treated by anti skid tiles.

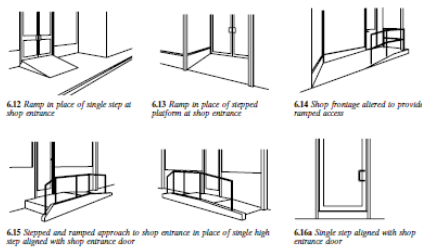


Figure-18-Curb Ramp

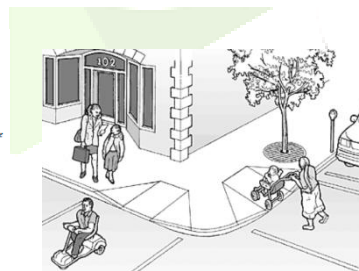


Figure-19- Ramp-Road to Pedestrian

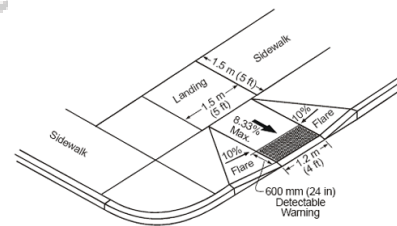


Figure-20- Road to Pedestrian

5-STAIR WHEELCHAIR LIFT

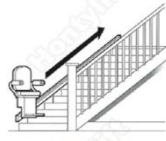
Varanasi is specially known for steps and narrow street .It is the common problem for the entire Ghats .Its riser and tread are very different to each other. The access for the disable person , we may provide wheelchair lift ,so that the disable person may use it and get the access to the Ghat area .This wheelchair lifts are available in various form and it may move circular ,straight etc.



6.28 Stair wheelchair platform lift



6.29 Chair stairlift



Straight stairs



Curves and spirals



Straight stairs with flat or sloped landing

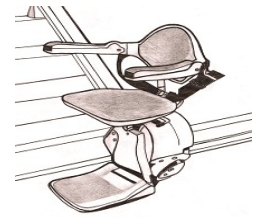


Figure-21-Wheelchair Lift

Figure-22-Types of Wheelchair Lift

Figure-23- Attachment of Wheelchair Lift

6-POOL HOIST

The people who do not get the holy dip while they reach at the bank of Ganga. They may use Pool Hoist and get the bath into Ganga River at Varanasi Ghat. Earlier most of the people they used to take holy bath but it were very risky. But now it is very simple to using of pool hoist.



Figure-24- Pool Hoist

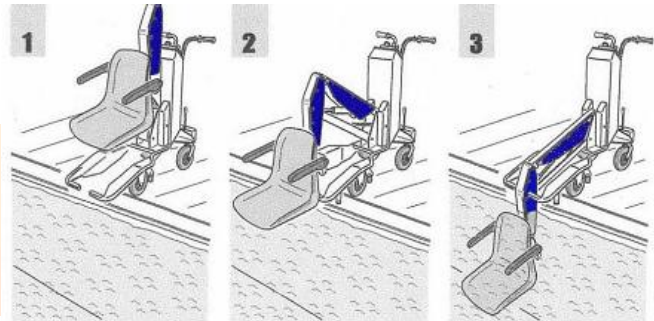


Figure-25- Function of Pool Hoist

7-RAMP IN WATER

The place where the disable person may use the gradual slop (maximum 1:12 slope) of ramp. We may create the ramp in such way so that it would connect the Ghat to Ganga river with the non slipper stone paving .We May use aquatic wheelchair because in most cases, it is not appropriate to submerge personal wheelchairs and mobility devices in water. Some have batteries, motors, and electrical systems that can be damaged or contaminate the pool.



Figure-26- Ramp into water



Figure-27- Anti skid Ramp

8-PEDESTRIAN CROSSING

Pedestrian crossing design with the traffic light, So that the certain time period disable person may access to the space also. The design in such a way they reduce the length of crossing road, Ghat etc. A guide strip should lead the pedestrian light pole with the visual disable and signal should be cleared audible. The time adjust in such away so that a slowest person may cross the road.



Figure-28- Pedestrian Crossing at Junction



Figure-29- Zebra crossing for disable person

9-MODULAR FLOATING DOCK

If somebody wishes to get bathing facility from one side to other side .they may go with the boat by the using of Modular Floating dock. This way a disable person may take the panoramic view of the Varanasi Ghat. Dock may change its position as per water level. This all sections are design proper in modules so that anybody can lock it and open it as per their need.

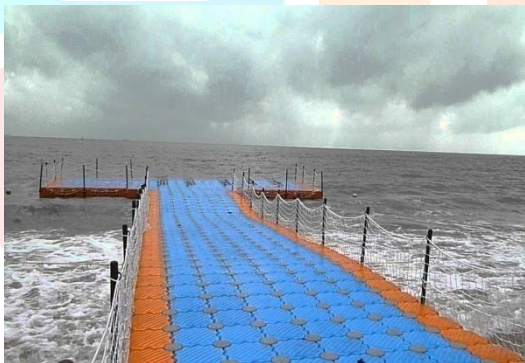


Figure-30- Floating Dock



Figure-31- Disable parson at Floating Dock

10-SIGNAGE

It is play the important role for the access the whole area .The crowd may segregate them, if they read all the instruction at entry level. Most of the person who do not know the use of graphic etc may seek the things here and there. By the help of signage anybody may easily get the right direction and get their all the ritual, work, etc. very well.



Figure-32- Signage for Disable people

11-PUBLIC SPACE (SHOP/ TOILET /RITUAL SPACE ETC.)

As a general rule, one should remove physical barriers that make it difficult for a handicapped or disabled person to access the property or enjoy its various other services. Barriers include bottle neck entry, temple, shop, toilet etc., round door knobs and handles and crowded or narrow checkout areas. Removing a barrier may not be required, however. As somebody will come to the Ghat area they may access shops, temples, Havelis, toilet and other public spaces as per their need. We must be very careful while we design these types of spaces.

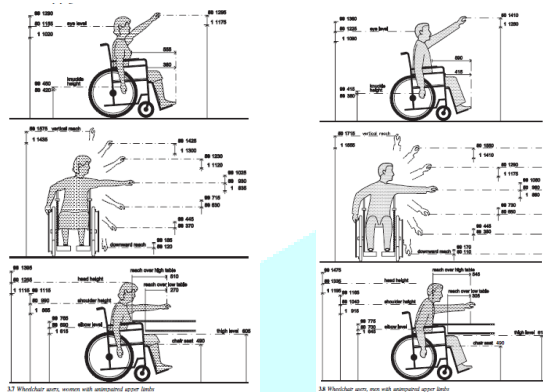


Figure-33- Wheelchair for various uses

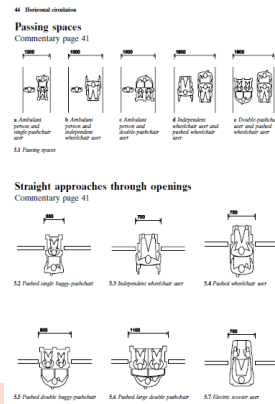


Figure-34- Passing spaces

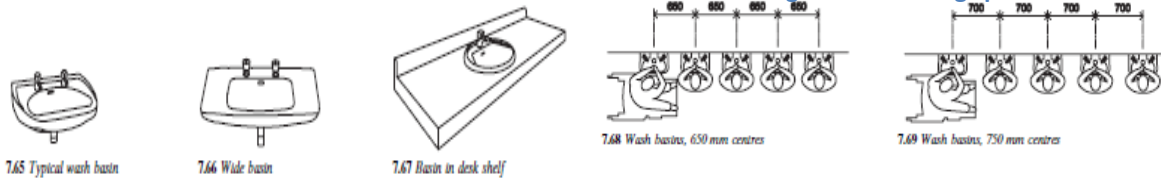
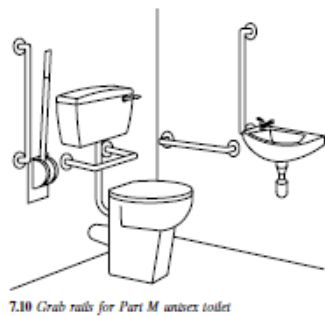
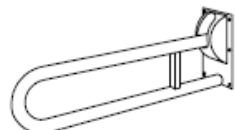
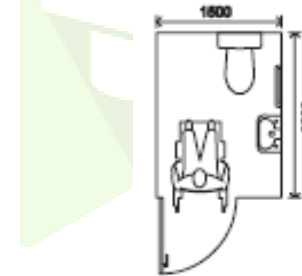


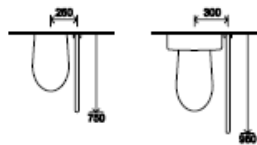
Figure-35- Wash Basin



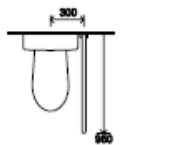
7.10 Grab rails for Part M unisex toilet



7.19a Drop-down side rail

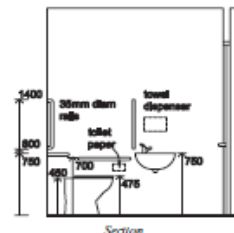


7.19b Drop-down side rail to wc with external cistern

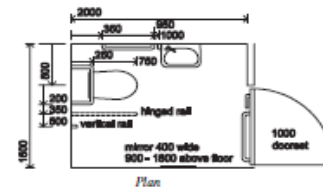


7.19c Drop-down side rail to wc with close-coupled cistern

70 Sanitary facilities



Section



Plan

7.4 The Part M unisex toilet

Figure-36- Toilet Details for Disable

CONCLUSION

A future scenario of Ghat area will be incomplete without the significant of universal design. Its approach is a very able technique to access at every part of our society in many countries. The People do not bother about the disable person in India, they thought about the disable person useless but that is not the good practice. The Ghat area of Varanasi is bound for disable people. While they are part of our nation. Few spaces need to be studied in details and improve before the execution at the every bit of the human life.

BIBLIOGRAPHY

BOOKS

1. Banz, George, 1970, 'Element of Urban Form': Mc Graw-hill Book Company, New-York.
2. Heinrich, Zimmer, 1946,'Myths and Symbols in Indian art and civilization'.
3. E.B. Havell, 1905,'Benaras- thesacred city'. Jagmohan Mahajan, 2004, 'The trail of Ganges':
4. Dhar D.N, 1987,' thought on Architecture': sterling publication Ltd, New –York,
5. Al Ansari, Fuad, 2009 ' Public Open Space on the Transforming Urban Waterfronts of Bahrain – The Case of Manama City' Newcastle University – England
6. Bajpai ,Shiva , 2011 'The History of Hindu India - published by Himalayan Academy'-USA
7. Sinha, Amita and Kamlapurkar ,Shubhada 2014,Ghats of Varanasi on the Ganga in India The Cultural Landscape Reclaimed- - by the Board of Trustees of the University of Illinois, USA
8. Leuven , K.U , 2008 'WATER AND URBAN DEVELOPMENT PARADIGMS' Editors-Jan Feyen- Belgium

REPORTS

1. Singh, Rana P.B. (chairman and editor) and Dar, Vrinda (associate & co-editor) 2002 (March 20).Varanasi: Heritage Zones and Sites. Varanasi Development Authority, Varanasi (India). 110pp +18pp appendices + 70 figs./ maps (locational, site plans, cross sections), 45 plates of photographs,including historical outline and Selected Bibliography. 1st Report. © Rana P.B. Singh.
2. Vardia, Shweta, 2008, BUILDING SCIENCE OF INDIAN TEMPLE ARCHITECTURE.
3. Ghats and Palaces of Varanasi. 2006, ISG Magazin (Internationales Städteforum Graz; Forum der historischen Städte und Gemeinden; Hauptplatz 3, A-8010 Graz, Austria; eds. Hohmann, Hasso, et. el.), 4 (December): 9-11.
4. Jayadevi, venugopal, June 2012, VASTU PURUSHA MANDALA- A HUMAN ECOLOGICAL FRAMEWORK FOR DESIGNING LIVING ENVIRONMENTS.
5. Carl, Bovill, Volume 4 (2000), Fractal Geometry as Design Aid
6. UNESCO Conf. on „Network for Indian Cities of Living Heritage“, 2006, Jawahar Kala Kendra, Jaipur: 25-27 Sept.; presented the case of “Banaras Ghats and Old City heritage”.
7. Guideline of Namami Gange: Status Update -15thMarch 2016 Ministry of Water Resources, River Development & Ganga Rejuvenation,India
8. City Development plans of Varanasi - JNNURM -2006, Municipal Corporation, Varanasi-India