RESPONSIVENESS OF URBAN LANDSCAPE AND FLYOVER

E.A.T. Suresh

What is Urban Landscape?

"Urban landscapes are storehouses for these social memories, because natural features such as hills or harbours, as well as the streets, buildings and patterns of settlement, frame the lives of many people and often outlast many lifetimes." (Hayden1995, p.9)

Hayden refers *"these social memories"*, to the memories of the histories of families, neighbourhood, fellow workers, and ethnic communities. Further the author mentions that urban renewal and redevelopment are also creating the memories with urban landscape in its evolution. The generated architecture must be enhancing the lives of the people than over govern it. So that urban landscape is the overall architecture of the context and the links in the urban communities.

"There will always be landscapes which are intended as settings for architecture, where Formal, Virginian, Picturesque, Deconstructed or whatever." (Jellicoe1992, p.24)

The urban landscape depicts the particular urban spatial flow including each and every element which is static in the context like buildings, bridges, flyovers, trees, etc. The elements like people vehicles and even pets which are moving included in this. The classification can be done in different ways.

As an example living elements and the non living elements, but these classifications should be done focusing the final objective. Present landscape was not emerged suddenly but with a continuous evolution of time. This evolution is about people and their perception of these issues. Different concepts, trends related to their lives change the built environment and the urban landscape.

Factors affecting the emergence of the cities and its structure

Physical factors

From the beginning of civilization, people were bound to the natural environment and its physical structure. Earlier, nature was for their survival. They were depending on resources of nature; rivers, water bodies and forests. Later, with the improvements in tools and weapons to defend the growing boundaries against enemies, emperors thought of the more secure places for their civilization to live in. Again, they used the

natural barriers and followed the patterns of the nature; further developments were according to these patterns. Later, people tried to conquer nature for example, in overcoming constrains of the connectivity the tunnel and the bridges were erected by them.

Social factors

To understand the urban areas and its landscape, the vision of the society and its social links become worthy aspects of study.

"The more we know about the cultures, about the structure of society in various periods of history in different parts of the world, the better we are able to read their built environment."(Kostof 1991, p.10)

The society and its perception never stagnated within its history even when there were more disastrous events. There are also examples, though the context was totally destroyed and people have reconstructed themselves not wanting to lose the social and their moral links due to such eventualities. The same architecture was repeated again as they wanted to see that their community were not affected, which can be witnessed in the city of Munster, Germany.

Economic factors

This is the reality and the main factor when considering the capabilities of development of a city or a certain precisely defined area. The constructive ability and the needs of adding or removing elements from the landscape depended on its economic conditions. This is common scenario from history to date.

Since citizenry is vital are concerned, while building up the city it is important to identify the potentials for urban development and how it can be interpreted in a spatial manner than giving priority to the economics.

According to *Kostof* 1991, p11, the subject of the legal and the economic factors is colossal and it is having a greater impact on formation of the cities and its environments.

The quality of the environment and the care of citizens are merely a matter of the economic factors of a city. As an example the urban left over spaces, common in most of the developing countries, in the contemporary developed countries it is well managed and conceived as user friendly.

Philosophical factors

In ancient cities people believed that the cardinal directions and the water bodies seems relevant whilst locating the settlements. Some river banks were considered auspicious and were selected as the living city while letting the opposite bank to be the dead city. Sometimes the directions in relation to the sun was considered essential when laying out to cities and its entrances.

E.g.:- Anuradhapuara, Sri Lanka
Ancient capital of Egypt

Kostof 1991, p.11 reveals that the cities are shaped by different categories of people. For example ship gunner's (early port cities of India), military engineers, etc. So it is clear that the urban context is formed with the philosophies followed by the creator.

Elements of the Urban Landscape

Several scholars have looked at the urban context; cities in different perspectives. Looking deeper into it, as Kostof, 1992 mentions there is the urban process. This is the contribution of the man and his activities responding to the environment surrounded and the factors described above. The process also contributed to the vivacity of the urban landscape.

Krier, 1975 argues that the urban space is twofold; the Squares and the Streets. It is more conceptual because the built masses are identified as the periphery of the square which generates the ambience in the urban square and the open space are such enclosed by the peripheral buildings.

"I shall attempt to discern this quality whatever we are dealing with physical features and of the spatial nature two basic elements are the streets and squares" (Krier 1984, p.16)

But Kostof describes it in a different way going into further detail of a city in "City Assembled", reveals that the Edge, Divisions, Public spaces, Streets and Urban process is vital. The importance of this classification is that it describes about the living nature of the city as an urban process. Besides both Lynch, 1979 was thinking of an image of a city by handling five elements; Paths, Edges, Districts, Nodes and the Landmarks. This is more detailed and almost covers the whole fabric. As Lynch reveals that this is about imaging a city and it is the real time experience of the city landscape; the urban landscape. Further Bentley strengthens this idea of these elements as it very relevant to a responsive environment and these are used to discuss the responsiveness of an environment by him.

Evolution of Urban Landscape

"The specific organization of the city, and the behaviour in it, are the result of interaction of environmental characteristics, the choice processes of individuals and groups, and various constrains." (Rapoport 1977, p.81)

The performances of the spaces and the capability of tolerating the new functions are significant throughout the evolution. Therefore each function may change or may not, but it has to accommodate new functions as well as the traditional at the same time. That the society, urban form, urban spaces, activities and their expressions are creating a base to explore how the evolution took place in urban landscape than going for an elementary evolution.

Society

The change of the people in different eras reveals facts about the socio-spatial connections they had and proved the evolution of urban landscape had a direct impact on communities. Generally the attitude of people influenced the urban landscape and was similar to human relationships. Earlier the man was more community oriented and their landscape was depicting the sense of community. It was evident as they settle in a particular place as well as they grow in the context.

"The land prices are high and going up as they raise higher the buildings get taller. The poor people, of course, get pushed out either in to the far-off suburbs or to live in the crevices here and there- in illegal shanty towns, on the pavements, whatever. - Charles Correa" (Editor 1986, p.11)

While cities are becoming more complex in its conditions people got lost in urban landscapes because the cities are not much responsive enough to guide them. Then people tried to find different methods to improve the sensitivity of it, they defined and tried to arrange the paths, demarcations, segments, nodes and landmarks to make the cities more people oriented, with more population there were more and more activities gathered, and for the functionality of it different layers emerged.

Sometimes there are evidences that these structures are defining the spaces for different user categories. Such common example can be found in New Delhi where the flyover easily forgets the community under it; sometimes it is the social attitude.

Urban Built Mass

Urban form must be expressive to have a better communication with the people who live there. It creates the image of the city as people experience it with the several elements according to Kevin Lynch. Also they are the elements which bring up the features of urban landscape in more details.

The urban form can be divided in to two categories for better understanding; the urban built mass and non-built spaces. Generally the built masses may affect on segmentation of the cities, its edges and landmarks. Paths and nodes deal with the non-built urban spaces as these are open free spaces, but these are parts of a single entity as each of these having strong connections and being influenced by each.

As Relph, 1987 reveals the modern form of urban contexts had undergone many criticisms and arguments since the architecture changed the landscape. As a first step after the modernism with the post-modern concepts the landscape was much expressive than the modern urban landscape generated by the built masses. Christopher 1981 sees it is not people oriented even today.

"By comparison, the developments of today are not human in their origin. They are too often created by cooperation that manipulate stock for profit at long distance or decided by comities concerned with abstract social welfare. They are too often grey and colourless." (Christopher 1981, p.55)

The viaducts in that sense are defined vital as its built mass comprised with different interpretations in the urban landscape since these are emerging and flowing through the city making problems even with its scale. This is proved as the research done for Seattle in United States, where it reveals public life and the surrounded cultural masses were affected by the new viaduct.

Urban non Built Spaces

There are mainly two types of urban spaces, interior and the exterior. The exterior influenced by the forms or the built masses surrounded by it. As the Krier 1984, classifies the urban space is streets and squares. So it said that squares are both the built mass and the space trapped. The interior spaces are defined by the buildings itself most of the times, and it is secured by the weather and the threats from outside. But as a part of the whole it may not merely defined by a single building but other buildings around being interconnected.

"Urban space... This space is geometrically bounded by a variety of elevations. It is only the clear legibility of its geometrical characteristics and aesthetic qualities which allows us consciously to perceive external space as urban space" (Krier 1984, p.15)

The evolution of the urban spaces, both the interior and the exterior are depends on the time and the changing need of the dwellers being guided by their psyche.

The viaducts created another layer to the urban landscape while rendering different types of urban spaces in the contemporary world. Different elements with varying definitions were making the essence of the space which is positive and negative. The viaducts offered such varieties on demarcations, channels, segments, nodes and landmarks, which seems challenging to the functionality as well as to the existing urban non built spaces. These structures most of the time making lost spaces, especially considering the third world cities. These are affecting the urban form as well to the urban non built spaces and the activities of their contexts.

Functions / Activities

"In addition to the geographical factor the individual character of the towns will also have been shaped by their activities and buildings related to them." (Tugnett 1987, p.25)

The activities can be public and private. The public functions hold the importance in the urban context than the private functions. The transportation, recreation and commercial activities are such which evolve rapidly in the broader sense. These different functions have affected the organization of the urban landscape. So the evolution of the urban landscape can also evaluate with the functions of the context periodically.

"It commonly thought that before the industrial revolution on people had a sense of equilibrium, which the pace of modern life has destroyed through dislocation, industrialization and specialization. Disequilibrium is a powerful motivating force in human society, it is what makes people drive to conquer nature in order to rationalize and control the conditions of life.- Tay Keng Soon" (Editor 1986, p.33)

Expressions

The expressions of the cities change as dramas or other forms of arts according to the time of performance. It is hard to find two cities with the exact identical expression because it is a matter of time in the macro level. But in micro level there are common features in cities though these are suggested by distance.

"The 1980's have witnessed a celebration of differences, of poly-centralism, of variety, of style and stylishness, and post modern townscapes are a clear expression of this celebration."(Relph, 1989)

The buildings, the structures developed for the functioning of the cities are quite common currently. The monorails and the flyovers for vehicles attributed influence to the urban landscape. These structures are rigid but more flexible in its use and form; though these individually aid people by its own expression, considering the collective impression it holds in this context.

Responsiveness of the Urban Landscape Responsiveness

"The relationship in the physical environment is spatial. Basically objects and people are related through representation in and by space."

"Space is experienced as three dimensional extension of the world which is around us. - the intervals, relationships and distance between people and people, people and thing, things and things and space is at the heart of the built environment." (Rapoport 1977, p.9)

As Rapoport 1970 reveals in *"Human Aspects of Urban Form"* it is necessitated to consider about the social values, other such attributes; *human aspects*, and the quality of the physical erection of the environment in urban contexts; the *urban form*. This is quite compatible with the urban landscape also, as it is a facilitator for human performances in public and private life.

Social and Cultural Responsiveness.

"In any ideal situation each group of people would move to match their preferences and the city would consist of a set of areas expressing the social identity, status and preferences of various groups." (Rapoport 1977, p.12)

Financial and the political responsiveness are always dependent on society, cultures and different ideologies. More than the political and financial responsiveness of the urban landscape, social/cultural responsiveness and environmental responsiveness became crucial because it breeds the others.

Environmental Responsiveness.

The environmental responsiveness refers how and to what extent it communicates and allows people to perform their activities as preferred in a particular defined environment. These appear veritable in the urban contexts because the complexity of issues which are supposed to minimize the diverse effect on citizens; since the urban landscape is the platform where people celebrate the urbanity.

"The spatial characteristics of built environment also greatly influence and reflect the organization of communication. Thus who communicates with whom, under what condition, how, then, where and which context in one important way in which the built environment and social organization are linked and related." (Rapoport 1977, p.12)

The landscape is derived by its physical elements. This responsiveness too is required towards urban landscape as people affected by their surrounding than in other environments. Further, responsiveness means creating dialogues between people and their surroundings. So positive responsiveness creates more connectivity with the landscape and stresses/ joys being a part of the environment as these are being shared.

"This means, of course, that physical elements in the environment take on varying meaning and their influence and importance, and their effect on behaviour, changes accordingly." (Rapoport 1977, p.12)

Environmental Responsiveness

The responsiveness is vital considering the living environment; the urban landscapes, on which the populace live, experience and enjoy their daily life. The responsiveness of the urban landscape will enhance the communication with the citizens; lack of environmental responsiveness is a threat that leads towards deserting of the public spaces and public life, which is vital in the urban contexts. Here the environmental responsiveness is evaluated with different physical factors found in the urban landscape. Bentley 1975 describes seven factors of environmental responsiveness as permeability, variety, legibility, robustness, visual appropriateness, richness, and personalization concerning about the communication of man with the surrounding environs in relation to its physical attribute. These factors are also described with the Lynch's categorization of the urban elements.

Permeability

Permeability is the quality which enhances the choice of fenestration or accessibility in the urban landscape. When the permeability is more it means that the context is more porous and less cohesive, if permeability is to be promoted with control to generate private and public activities separately in the same landscape, so there should be an interface since those are contrary and the permeability level must keep appropriate.

Variety

Different uses, forms, meaning and the expressions which creates a variety in the urban landscape is considered here. Different variety levels of above mentioned forms, meanings and expressions is automatically enhanced by the variety of uses prior to the functions. The different approaches of accommodating uses will create different forms, meanings and expressions in the urban landscape automatically.

Legibility

Legibility is the ability of understanding or reading a structure or perceiving it in mind. In general terms, this is reviewing a layout of the landscape elements in mind, as the memories gained through experience directly and indirectly. If the landscape is legible, people may tend to flow freely enjoying without any conflict because they know where these are leading to, besides references from the context. When the elements are supporting to evoke memories through experience the landscape is more legible.

Robustness

Robustness provides the association of more functions at a single space at the same time. In simple terms it supports multifunctional requirements in a single space for a larger user category. Robustness will promote and enhance the mix of uses in the urban landscape. Participation of different social categories will animate the urban landscape and it shall always gain the attention of the people.

Visual Appropriateness

Visual appropriateness is the determinant factor of the responsiveness in more detailed version. This strongly affects the interpretations of a particular place through the visual media on the urban landscape obviously. The meanings of the places and the elements are by these visual interpretations, so meanings help people to make their choices.

Visual appropriateness is vital in the places with a great public participation, where many people are from many different backgrounds. As people are the living part of the urban landscape, this quality is important in terms of animating the urban landscape by influencing people.

Richness

Richness will contribute to the sense-experience that users can enjoy.

"For most people, sight is the dominant sense. Most of the information we handle is channelled through our eyes..... visual richness."(Bentley 1975, p.89)

But the visual experience is not mere experience, but there are other experiences as well; sense of motion, smell, hearing and touch as Bentley describes.

Visual experiences created by the environments are twofold; firstly by focussing the attention on different sources, and secondly by moving away from a source towards another. Bentley, 1975 mention two factors as the basis of the richness. The orientation of the surfaces concerned and the likely position from it will be viewed.

Personalization

In the urban landscape, personalization becomes purposeful because people are having the intension of keeping a stamp on places where their demeanour abides. y behaves. Therefore this is having a direct impact on the responsiveness of the urban landscape, so in each place it is necessary to

let personalization to some extent, regarding making such places functional. Sometimes it is automatically personalized by selecting the most suitable place for each one, but this is not a passive personalization on urban landscape.

Case Study1: Analysis of the Responsiveness of Flyover, Demetagoda. Role Plays by the Flyover in the Urban Context

Urban Location

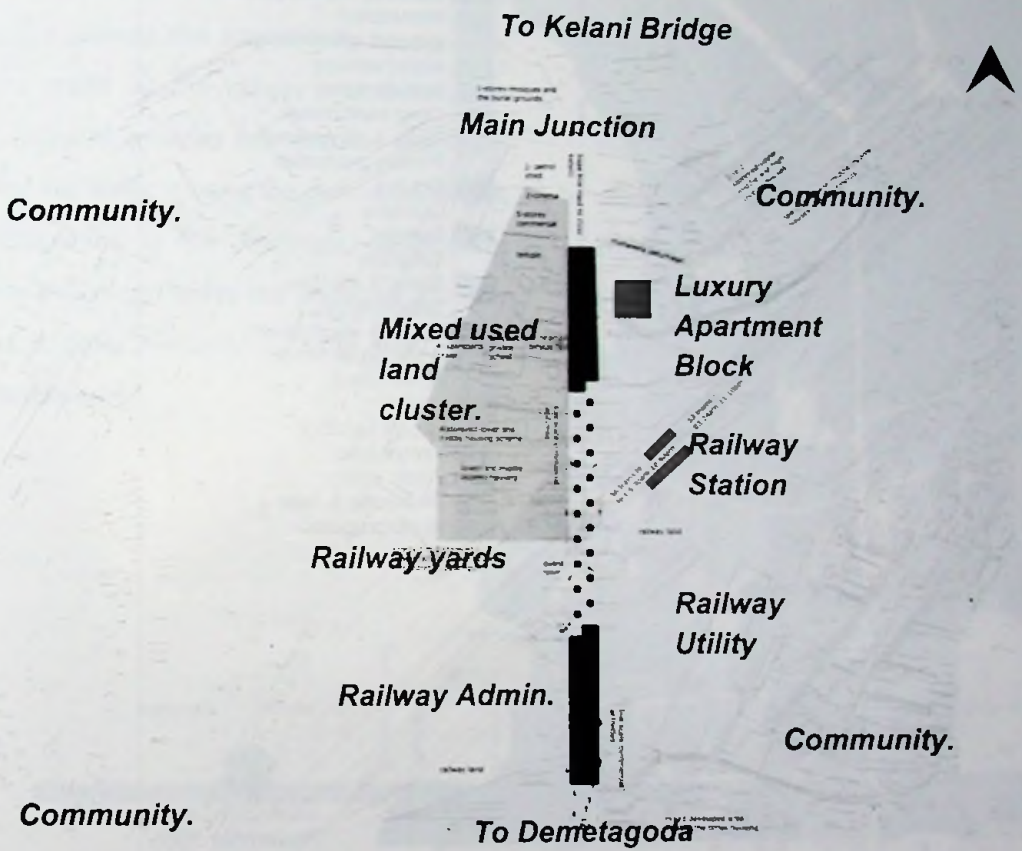


Fig. Layout map of the context

Flyover, which is approx. 82 feet wide and 1635 feet long, locates with the Base Line road at the crossing of Demetagoda railway lines flanking the railway yards. Demetagoda can be identified as an area which is most of the times residential, where the other activities such as commercial and industrial too thrive. Major land use is by the railway as a sole authority and the residents mostly are low income personnel.

The commercial activities are evident along the Base Line road while the residential and industries are further detached from the Base Line.

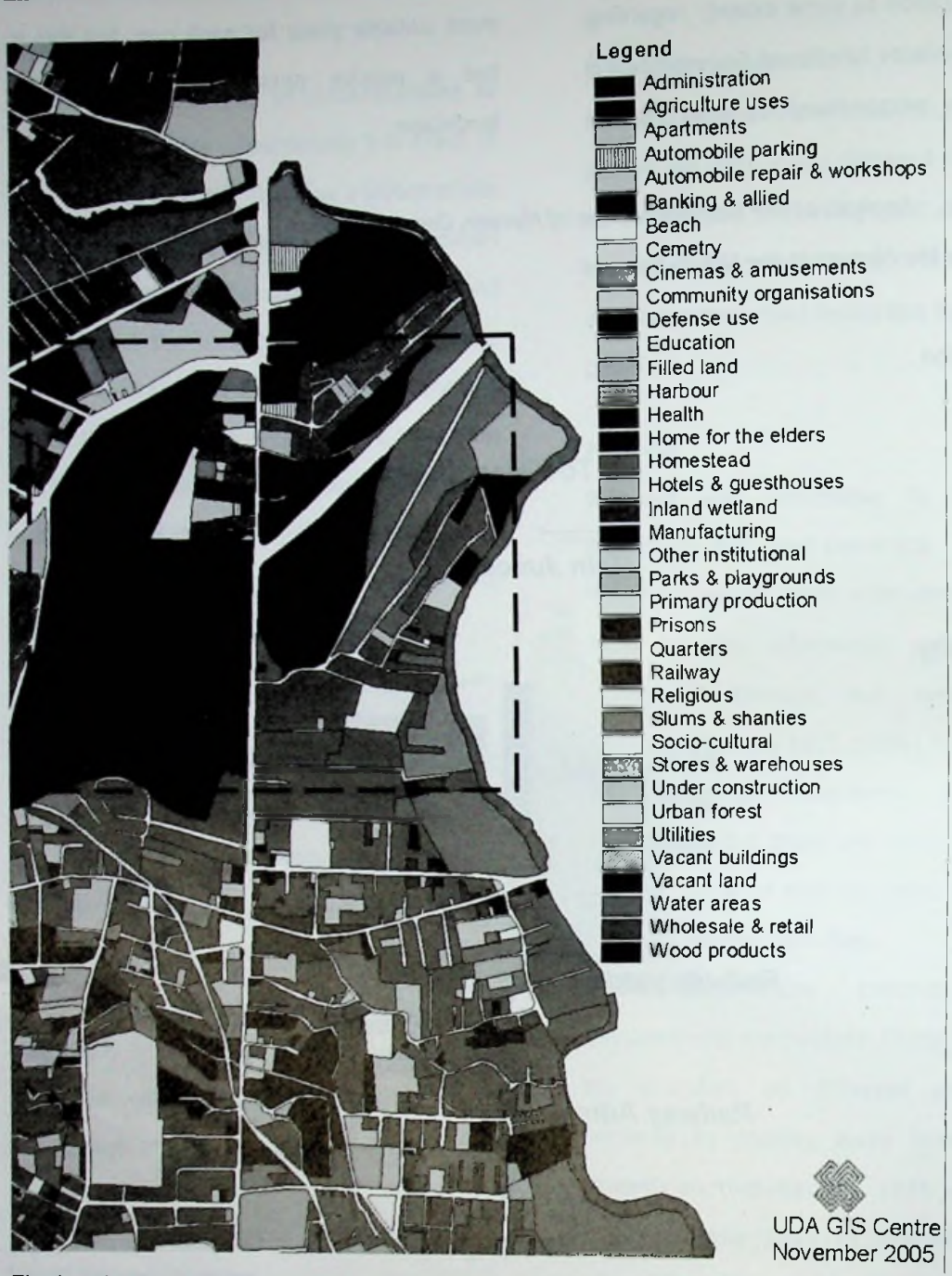


Fig: Land use map; Demetagoda flyover and surrounding.

The starting and the end of the flyover connect diverse characters of the landscape and even different functions. One end of it is a junction which connects one of the main transport lines from Fort towards the suburbs and major towns like Kandy, Kurunegala and Gampaha. The other end is the town centre of Demetagoda a few hundred metres away.

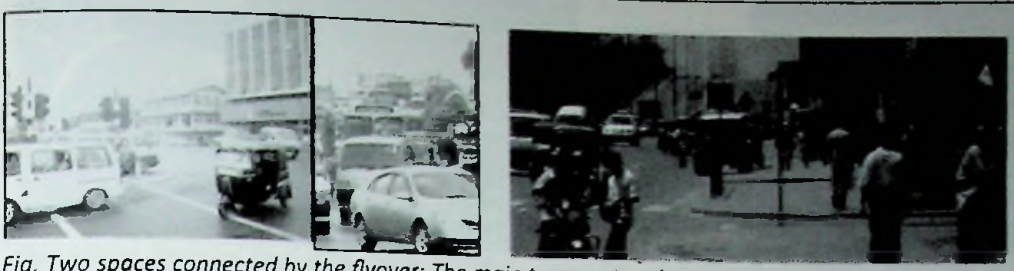


Fig. Two spaces connected by the flyover; The main transport node toward Kelani bridge which is more traffic centred and the Demetagoda junction a distance of few hundred metres which is more community oriented.

The flyover is not letting any road to cross, but a railway line intentionally to minimize the traffic at the railway intersection. So, besides all activities this vehicular circulation and the traffic is being the most dynamic and dominating in the landscape design. This dynamism segregates the landscape into two as it holds similarity on both side of the Baseline road.

Considering Demetagoda it is a sort of under developed poorly utilized landscape. This can be observed by the land use and the quality of the built and non built environments. The density is much higher in the area because of shanties, squatters and sheds, prevalent in this residential district, where the commercial activities are focussed on the land price.

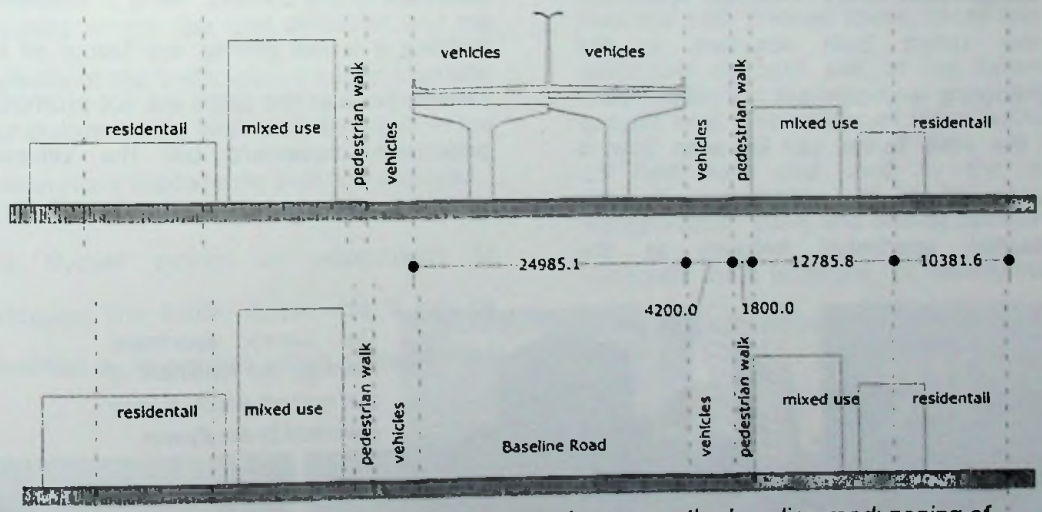


Fig. Typical section across the flyover and a section across the baseline road; zoning of activities

Low income developments and the commercial activities; the density is high due to the land prices, the commercial activities are varied from small shop to the multi storied commercial functions.

The next important feature is the dominance of the railway with its character in the context, as it accommodates the highest portion of land being its sole owner; the railway sheds, administration, factory and tracks. The railway station is less significant since it is not prominent and defined in the existing landscape though it is a recognized transport terminal.

Fig. Dominating usage of the Railway; their Sheds, Tracks, Administration and Factory.

The conspicuous luxury residential apartment is the tallest built structure in the neighbouring landscape but Jaic Hilton Tower and the HNB Tower can be seen from a distance of a few kilometres, to this residential apartment behaves as the landmark in the context. Being a residential building it is not getting any favour of the context because the paths are not promoting pedestrian movement but the vehicular primarily.

The Luxury Apartment Building; the landmark of the context which is over governed by the flyover.

The next biggest sole ownership of open land extent in the landscape is for the manufacturing. Every other land is also protected individually and there is no connection with the overall landscape as there are paths even for human use than the vehicles. Such uses are access ways by foot for public and for the individual use.

Fig. Special block of land with many activities; Land use, Commercial activities, Religious and Residential

There locates cluster of land which is identical with its mixed use locates in between the Base Line and the railway sheds. It cannot be identified as a district but it contains almost all the functions there; the residential apartments for low, middle and high income people, religious, small industrial activities, commercial activities, utilities and even the administration.

Pedestrian paths; by the heavy traffic, vehicles are a threat, setbacks as design considerations

Since it is difficult to identify where what happens where, the land utilization and the legibility of the landscape are not appropriate. The division of the lands and the layout of the buildings are haphazardly built and arranged.

The flyover creates an opportunity to overcome the traffic delays and it can be identified as an element which is used for the efficiency and un-interrupted flow of traffic, thus the path created above, there are two paths laid on both side of the flyover at ground level. The widths of these paths are 15' feet each and used by the public transportation buses and also by pedestrians, especially those accessing the railway station at the ground level by crossing those roads.

Fig. The paths at the both side of the flyover at the ground level, the access path to the luxury residential apartment and the path at the opposite side of it.

The flyover is allowing people to cross it, by crossing the side roads, through its lifted and supported column structure which creates physical and visual links to certain extent.

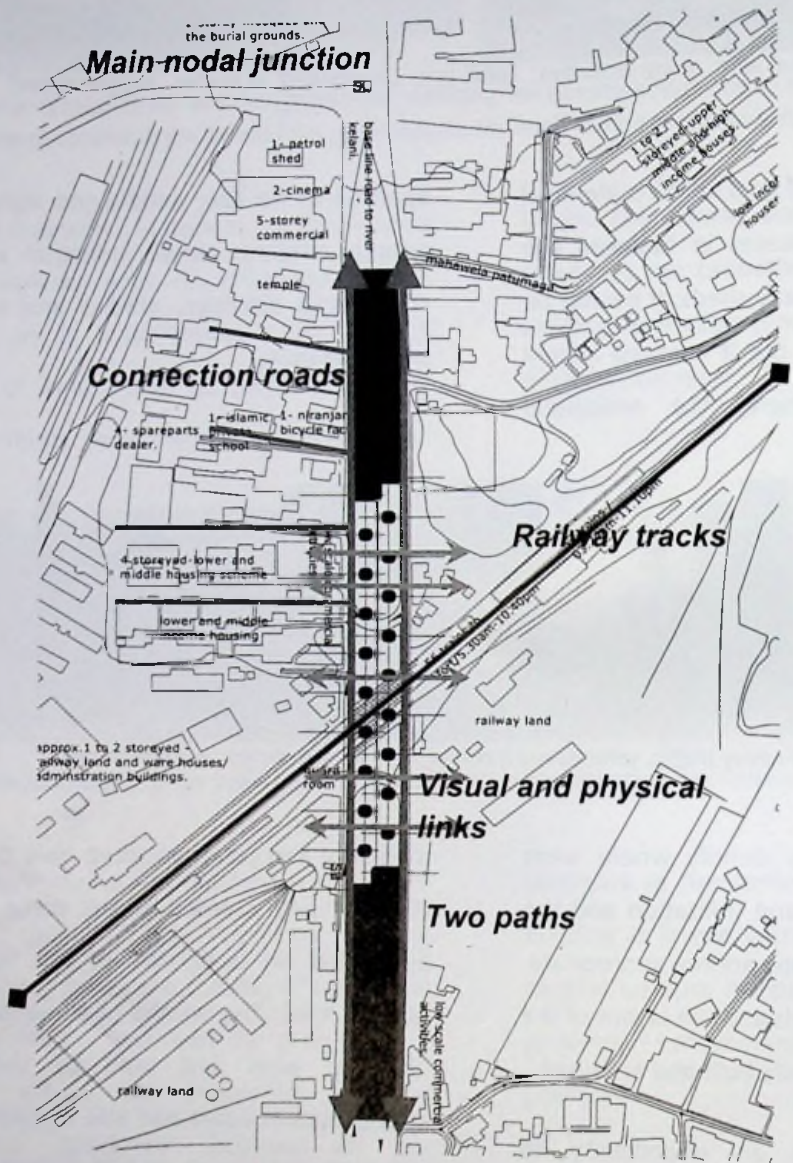
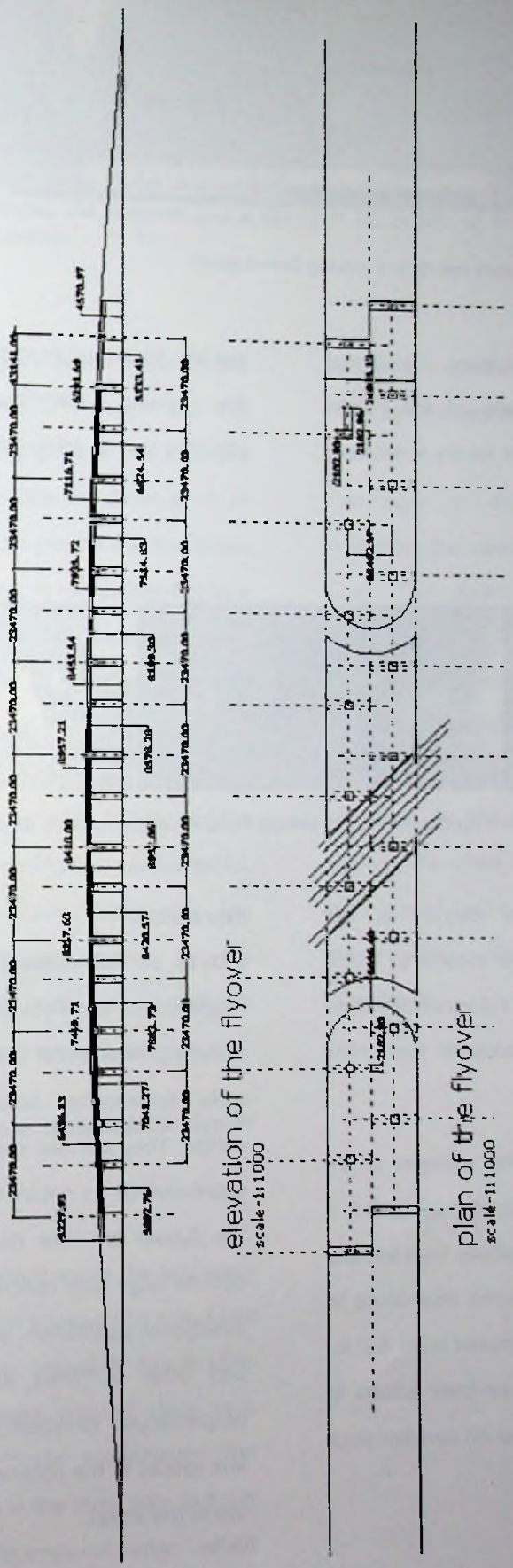


Fig. Layout and the connectivity of the neighborhood context of the flyover

Figure of the Flyover

Fig. Section



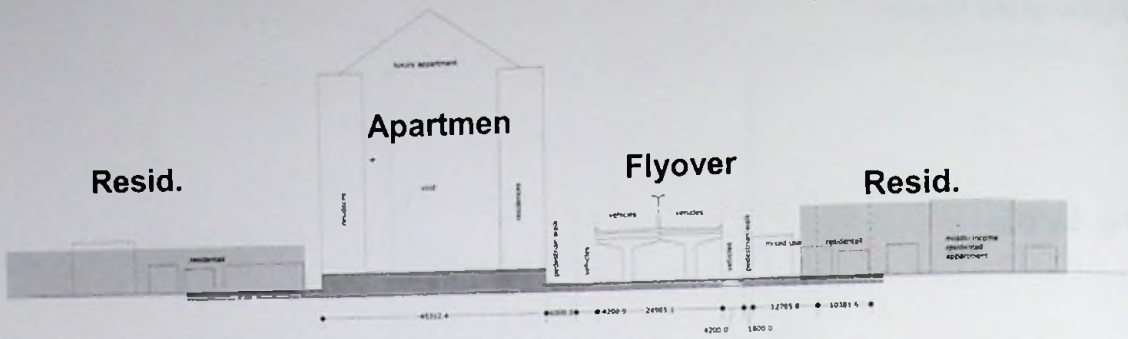


Fig. Section across the luxury apartment looking Demetagoda.

prominent than the luxury residential building. In the dominance of the height (vertical direction) is by the luxury apartment and the horizontal dominance by the scale of the flyover. Therefore the pedestrian activities are not gaining any prominence.

How it Functions

Different functions of the flyover; Bypass the traffic, Vehicle Park, Payment hawkers, beggars and community.

The functioning of the flyover is not determined merely by the means of traffic control, since it has other responsibilities and a role to play as it stands in the urban landscape.

The Flyover is a contrasting element in the Demetagoda landscape, for the vehicles it is an option of crossing the railway lines without any delay, and it is a dynamic experience to cross it above the normal ground level. But for the pedestrians who put up their efforts to the urban landscape receive no concern since its nude concrete structure.

Expressions

Instead of the railway, the functions that neighboured the flyover are the pedestrian activities, residential access and the small scale commercial activities as discussed earlier. They are not sophisticated but more expressive by its nature than the flyover. But the flyover is more dominant and a clear definite edge with concrete which makes the directional qualitative where as the access and other activities are happening in a perpendicular direction. Even it has created lost spaces in the context used by those who live in the street.

Fig, Different expressions of the flyover; A dominant path, Definition of edges which is on ground as well as above ground, The landmark and a district in the middle of the road, expressive buildings in the near context.

Considering the role play by the flyover in the Demetagoda landscape, it is evident that it is created and acts as a path. It has a clearly defined edge in two different dimensions; at the below level, on the ground and the above head which is inclining. It has an identity as a landmark though it is not dominant by its height but because of its function, scale and the structure.

Even though the functions like railway and the other means of transportation amalgamated, there is no significant experience like gathering or breathing, created by the landscape for people, such spaces and the nodal character are not encouraged.

Responsiveness of the Demetagoda Flyover to its Landscape

Permeability

The Baseline road distinguishes the landscape into two as mentioned above by its layout and function. Considering layout it has a clear definition of the edges created along as a demarcation for vehicular movements. The flyover also behaves in the same way. But it is having a three dimensional edge which inclines and declines along the base line road. This edge defines the path of the flyover.

This edge or the path created is not promoting the connectivity physically on both sides. The station is just hiding in the landscape without any significance and it is more encouraged by the less permeability of the flyover and the activities around it. The paths which connect to the Baseline road are disturbed by the mass of the flyover as a barrier. Therefore the permeability has been discouraged in the landscape as they are not functionally, visually and physically connected.

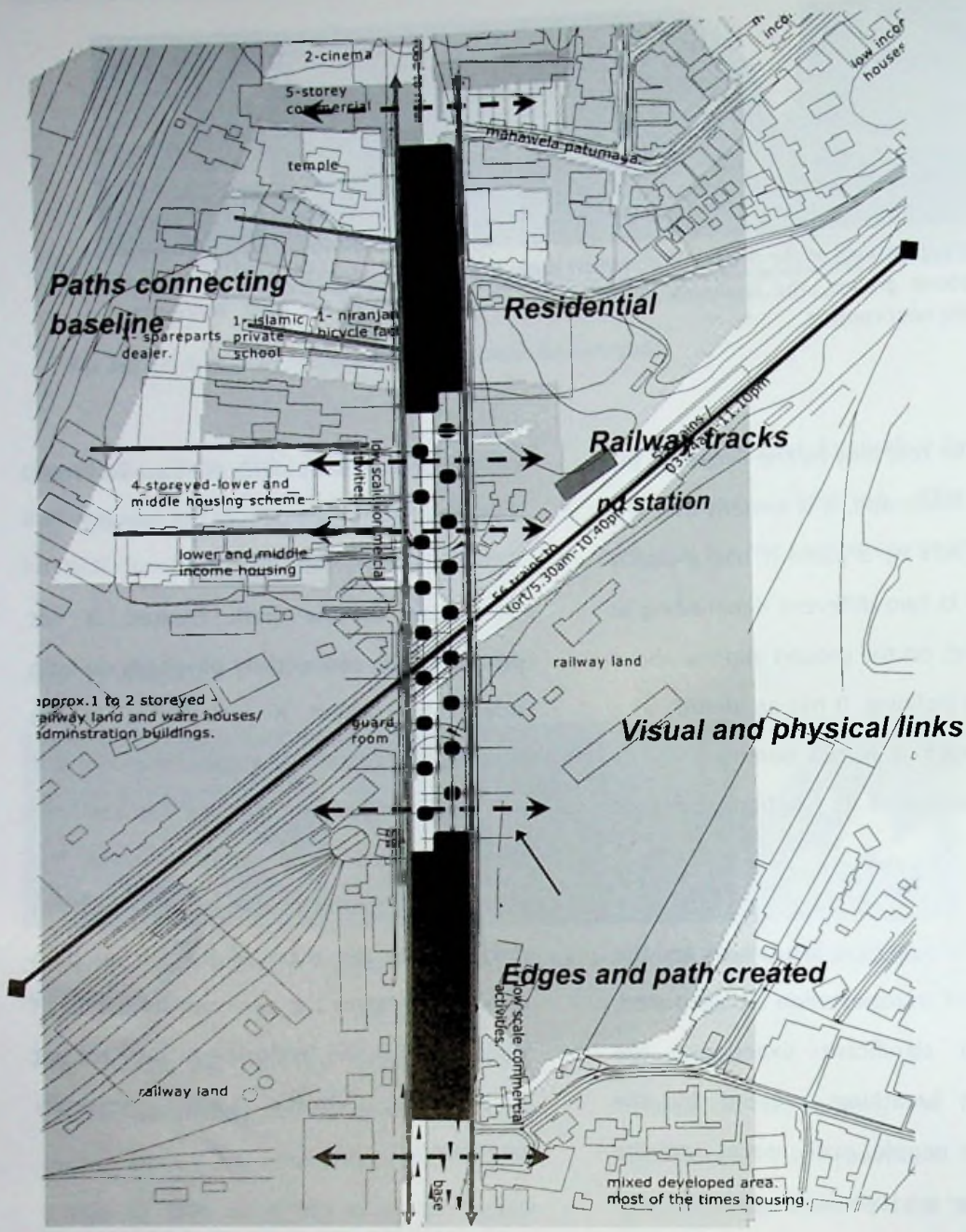


Fig.Merged Land Use map, Layout and the connectivity of the neighborhood context of the flyover

"The second common cause of misalignment to the rest of the city was the sharp separation of a path from surrounding elements."(Lynch, p.56)

Fig. Visual and the physical barrier created by the flyover which reduces the contacts of landscape visually and physically. Therefore the permeability of the context is damaged.

Flyover also encourages the directional movement and there is no response to the other directions. But it is necessary for the responsiveness of the landscape where there are many other streets. So the other directions will not get any clue or an influence to enhance the experience through the landscape.

The flyover structure lies along the road for many hundred feet and because of its three dimensional character; the edge which is elevated gradually from the ground disturbs the physical links with the surrounding, but to some extent the visual links are promoted with the voids underneath.

Solid barriers and the voids for visual contacts through the supportive structure of the flyover.

This visual barrier has already affected the residential buildings in the surrounding as the flyover get focus on their windows. So this visual barrier obstructs the view of the urban landscape as well as created arid view of the vehicles speeding and sound.

Fig. Physical and the visual berries created by the heavy traffic functions over the flyover and on the ground level as well.

Because of the intensity of the dynamism of the activity; transportation, also enhances this separation and reduces the permeability on landscape. Even the space created below it is not allowing people to be associated as it is naked structural supports. That space can be an intermediate space for better connection with th both sides of the landscape.

Variety

Unlike the buildings, flyover is a special kind of a contrasting element. Within the whole landscape and enhances the variety by its form being contrasting. It is hard to identify a functional variety which welcomes people to get involved. The form is derived considering the engineering construction; it is just a concrete mass with no variety in its form.

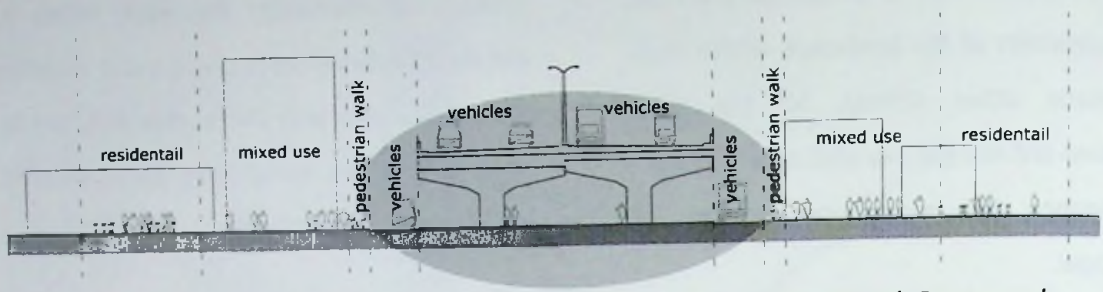


Fig. Typical activity flow of the landscape cross the flyover, section looking towards Demetagoda.

The using of the flyover by vehicles will make a different experience through the landscape because it facilitates the vehicles to pass above the railway and the neighbouring context at a higher elevation. The flyover can contribute to variety than the mere Baseline road laid along, because it keeps a structure in-between the two separated landscapes by the road at the ground level.

Therefore it is not lending a glance to promote variety of activities connecting both landscapes, though it is having the potential. It is possible to cross the ground laying roads as there is no much vehicular traffic, and get involved with the activities transpiring. The design of the flyover is not sensitive enough to do so, though many such spaces are left devoid. Therefore the spaces are not used by the people as it belongs to them. So it has created more leftover spaces in the context which is not acceptable in the urban context.

There is no contribution to the public activities because the dynamism of the context it over governing the people, all the priorities are set for traffic concerns and it is not penetrating though the spaces are created under it.

The activities at the edge of the curb can be penetrated in to the space under the flyover in terms of improving variety and the interconnection, but it has been neglected because the under space is not well treated.

Because of the heavy structure and the separation of the paths at both sides of the flyover the space has been isolated. Hence people are not moving into it gradually and therefore such premises are dormant. But there are potential promoting terms of

railway activities, since the length of the flyover (1635 feet), which is having the same character dissolved the variety of form and even the function.

Because of the directional quality of the flyover, and the traffic it is hard to see people are waiting and participating in way side activities; but in front of the luxury apartment there is a 20 feet setback which creates a breathing space for the landscape. It hardly contributes to the landscape because there are no other activities nearby to get the benefit of it.

Fig. Flyover with no variation, Set back of the building as a urban response, when there is no set back more tension and isolated. So people hardly stay in such spaces.

Mobility of the pedestrian is lacking in the neighbouring context though there is a major railway station located there as the flyover has diluted the variety of activities and the permeability of the urban landscape.

The flyover seems to have no mutual compatibility with the context itself as it doesn't promote people to be close enough to promote activities around it. There is no potential created for the neighbouring small scale commercial activities by the flyover, so these are isolated and struggling to survive, with even the separations to both sides of the road having adverse effects on these mutual interrelated functions.

Legibility

"The desire to separate the vehicles and the pedestrian routes makes both central and the suburban areas far less legible." (Bentley 1975, p.43)

The legibility of the landscape is having the negative and the positive effects from the flyover. According to Bentley as mentioned above with the separation of the different uses and the users the legibility has been damaged even considering the width of the Baseline road. The whole Demetagoda context, flyover as a landmark, is making landscape more legible, though it is different considering the neighbourhood context since it disturbs, cuts off the visual links and the physical access to the neighbouring landscape with the edge that it creates.

Fig. The pedestrian, vehicle segregation; discourage legibility, the as a Landmark; improves the legibility of the landscape.

While travelling in a vehicle by whichever route taken; on the flyover or on the ground routes, when the flyover is passed it evokes images about the different links and the places associated with the place, making it a legible image to some extent with distant landmarks and the view of the connecting routes which can be perceived.

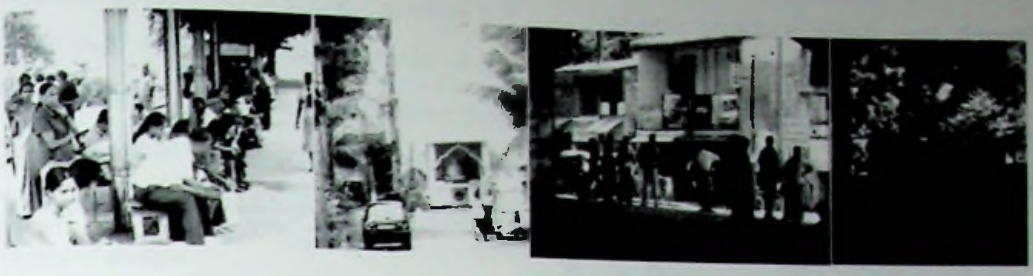
Legibility is encouraged; distance landmarks and the connecting routes, Legibility is discouraged; the visual barriers created by the structure.

The people who are on the ground are disturbed visually for having neighbouring links by the built masses.

The landscape seems like it is squeezed by the issues of the traffic and the human congestion. So the public relevance is not considered in the landscape. Even there is no legibility of the activities as it is not visually and physically well connected through the space under the flyover. The railway station seems a hideout which is not legible at all as it is neglected by the flyover, being evident that it even didn't give clues about the activities surrounded or about the experience of the landscape.

Railway station is hiding in the landscape with no significance in its use, The vehicles damage the legibility; the street is inaccessible and hiding in the urban landscape.

Robustness

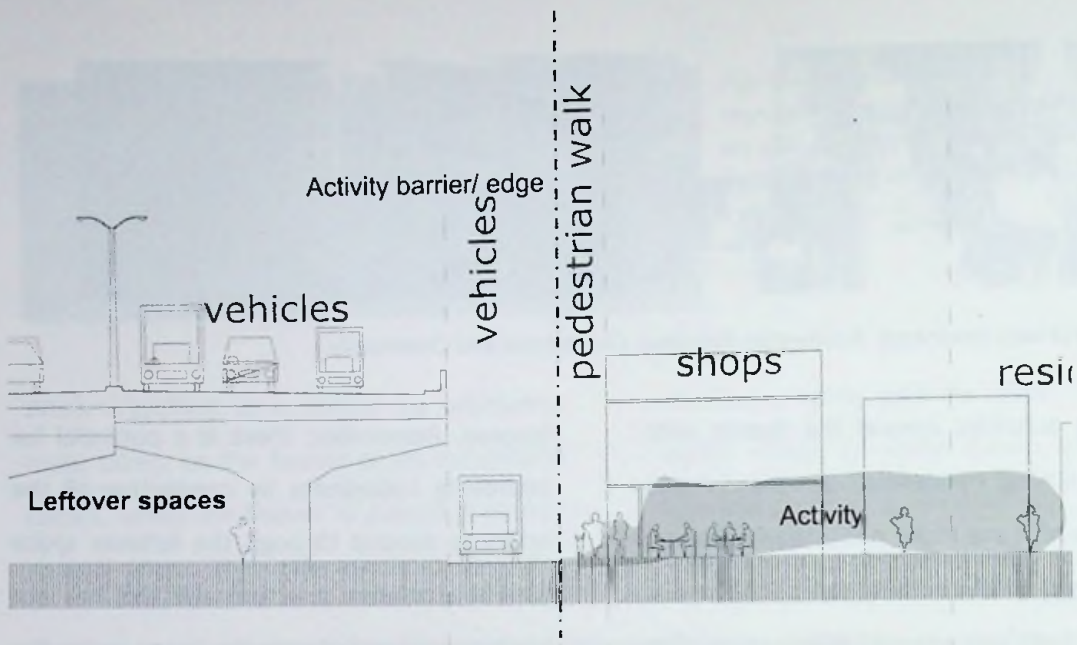


Activities; Railway passenger, Residential, Religious, Commercial and Community.

There are activities around the flyover with different scales; residential, commercial and religious which are more pedestrian oriented. This diversity of the activity can be even seen from the land use map of the context. The flyover as it creates a visual and a functional barrier for those activities, and because these are separated without any physical access, therefore the basics of robustness are ignored. Remember, there is a potential for improving robustness by connecting all the activities around through the leftover space with the column structure and this has not been considered. Hence the space under the flyover is a vacuum which is not promoting any positive activity in terms or responsiveness to the environment.

Fig. Connection of the activities and the space under the flyover; small scale trading, commercial activities in the surrounding with no attachment with the flyover, leftover space under the flyover.

The definite edge of it is not creating a potential for the activities to link with each other or to make relationships with the structure itself. The structure is having texture created purposely to drop the weight in visual means but the expressionless nature of the front is avoiding people as barrier. The streets which connect the baseline are not connected through the spaces under, even with visual links which enhance the functional nature of the space. So the flyover is over governing and the robustness is lacking there.



The edge of the pavement is creating an activity barrier which reduces the flow of the activities.

Along the foot walk by the sides of the flyover at the ground level, the activities are of a communal nature, these are small scale commercial activities with the residential spaces. The activities are not limited to the interiors but they are happening on the outside of the built environment too. This is positive in terms of robustness, but the flyover is a separate element by its expression and it is not supporting such activities.

Fig. Directionality of the flyover reduces the robustness; the solid ramp which inclines, the overhead edge runs, the narrow paths at the both side of the flyover.

Though there is no much space between the pedestrian path and the edge of the flyover there promotes only the movement in one direction and this is negative in terms of robustness.

The layout of the flyover seems that it can be developed to gain the large scale robustness as Bentley reveals. The space under the flyover can be detailed with different links to it and make the public activities happening there. But the designing of the flyover have

no options for such which enhance the responsiveness of its structure. Therefore it is clear that the flyover merely thinks of the functionality of the traffic flow because there is no potential that it created on the urban landscape to be meaningful or responsive in terms of people.

Visual Appropriateness

At the first sight the flyover occupies a conspicuous position in the Demetagoda landscape being a landmark as well as a contrasting structure because of its scale and the function. Visually it is a single object, a dynamic structure which runs through the landscape.

The visual appropriateness can be analysed in different ways as Bentley mentions; by its form in terms of legibility, supporting variety, and robustness.

The form of the flyover is not complex and it is easily graspable. But it is monotonous along the full length of the structure as it repeats the same elements disastrously.

Fig. Form of the flyover is easily graspable, the elements consisting in the form

The colour of the structure is grey, which is fare faced, and there is no special variation in its colour. The textures and colours make the structure more solid, heavy and less contrasting, it depicts its functionality or the use, with its form it is quite legible. The appearance of the flyover seems like an elevated road and even the colour of it is matching with the function of it but in its context it relates with a community living under it. The use of the spaces below is also to be considered, therefore the visual appropriateness is a vital concern.

Considering the neighbouring context it is low scale built structures and more community oriented and some are religious. The flyover is being the focus from such spaces. But the structure hasn't paid any concern on it. The rigid, formal dull, impression of the elevation of flyover is conflicting the context by contrast and in its scale even.

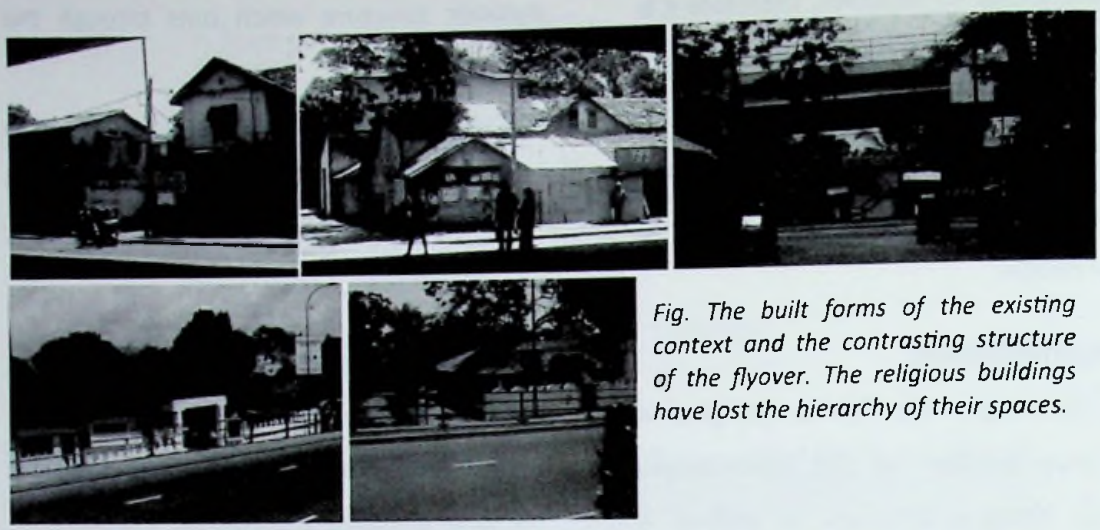


Fig. The built forms of the existing context and the contrasting structure of the flyover. The religious buildings have lost the hierarchy of their spaces.

As analysed earlier it is evident that the flyover is not promoting variety by its form. It is just a concrete structure which stands on the pillars which are repeating at 24.7m. But with the form the activity is not conflicting which is positive in terms of visual appropriateness.

Though there is a potential to develop robustness in the context the flyover and the spaces it created haven't been looked into adequately, and the robustness of the landscape is discouraged and the activities are happening individually though these are supportive to each other.

Fig. Inclinations, Declinations and the Intermediate columns of the flyover.

Considering the public vision, the façade of the flyover is not identical, as it runs along the direction of the movement, but for the pedestrians it is much important as the flyover starts people have to walk along a narrow path which is demarcated by the façade of the flyover and the boundary of the lands of the context.

The façade of the flyover transforms to a void which is with columns in-between, from the solid wall of the ramp. Repeating column structure as the flyover flies at a higher elevation creates a leftover space with no function identified. This space is presently used by the beggars and for informal activities, and it would be negative in terms of visual appropriateness.

Fig. The change of the column heights, The leftover spaces created and the visual disturbances from the interiors.

The columns can be identified with different heights but the similar in all the other measures, so it creates a façade with different relationships, even here the elements are same; as it disturbs the view of the bedroom in flats as discussed earlier, the visual appropriateness of the total landscape has an impact.

Richness

The richness has two main factors; the orientation of the surface and the position of viewing.

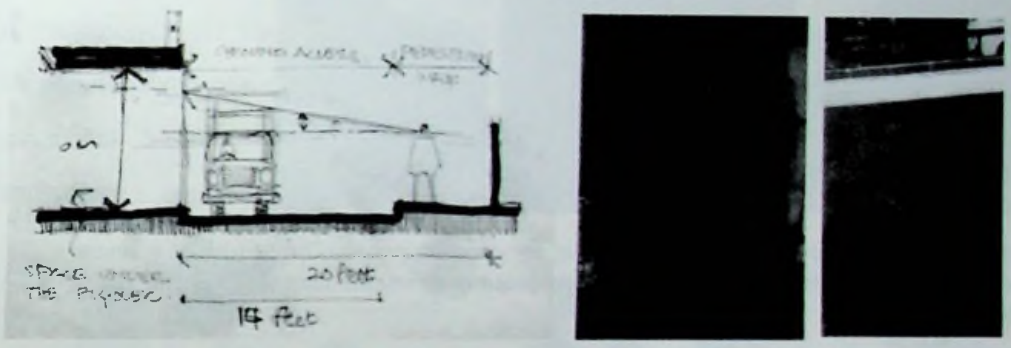


Fig. Distance and the angle of viewing; Distance is very less to observe the flyover as its height, and the viewing angle is very less as the mobility is very high but the pedestrians are viewing it perpendicularly.

Flyover at Demetagoda has its surface oriented along with the moving direction, and has not much contribution to the landscape because there are no prominent (obviously visible) visual angles towards, because the viewing distance is the width of the side roads with the pavement almost 20 feet. Even the pavement, where the people are behaving and seeing, is nearly 6 feet. So there is no much space to stay and to experience the façade of the flyover. But the treatment of the surface of the bare skeleton in the middle of the road is not considered. The repetition of the same column with different heights is the only objects which catches the eye.

The detailing of the columns expresses the huge strength that it has but the masculine appearance of it is by pure geometric forms and these have no expression of the location where it stands, activities happening around and the people who live there. To reduce the weight of the columns, strips are carved on it in the vertical direction, this can also be seen on the ramp ending wall.

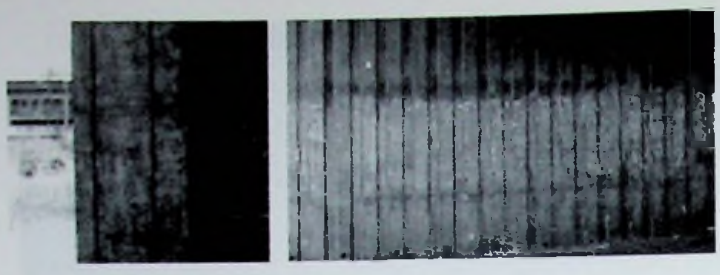


Fig. The texture of the concrete; the column and the ramp ending wall with the striped carved in the vertical direction.

Rhythms of changing height of the columns are not much significant. The whole structure seems one thing altogether and there is not much to be experienced by the people who bind with the landscape because they experience the whole object instead of each element.

The material of it is expressed by exposure in fare face. Fare faced concrete and the rough, rustic look of it is not contributing to the richness of the environment as it is not detailed well but expresses it as a stubborn concrete giant

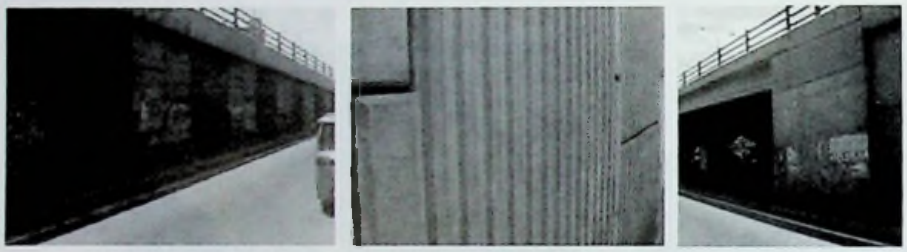


Fig. Concrete on the ramp wall; the vertical pattern of the concrete panels, The texture of a single concrete panel, Breaking of the pattern with a exposed concrete panel, the illustration of the visual properties of the panel.

Even the flyover is not creating any positive sensory experience so the spaces are dull and abandoned. Inside walls on ramp are treated with different patterns to dilute the visual impact. The concrete panels are used on wall to create a vertical pattern with two different textures. One panel is plain with no texture and the other is with trips carved on it in the vertical direction, the expression of the ramp will be experienced as a single solid where the texture of the panels are not making such a contrast on surface.

Considering the distant experience it is much interesting in its form. But when it is closer the flyover is dumb. There is no play with the visual elements which makes visual complexities, visual riddles, and interpretations which enhances the richness.

Personalization

The analysis is based on the contribution of the flyover on landscape regarding the personalising of the spaces in it. The structure of the flyover has two main figures; the solid ramp and the see through column array. Therefore the more

potential is in the space with the columns as it can contain people and activity. The width of

the space under is 82 feet, and the height varies between 12 feet to 29 feet approximately and columns are at 27.4m c/c in a single row.

The structure of the flyover; the space created with column structure, The solid ramping unit, the space under the flyover.

It is not possible to consider the personalization of the flyover by the community as it is separated with the edge, which is not penetrating and discourage people from accessing, created by the paths at the ground level. The space is not used by the people effectively in a meaningful way the space has became a lost space in the landscape.

Considering the elements that are under the flyover it is too rigid and solid with no variation. The less public access is vital but even the similar elements with no variation and visually not aesthetical has also deserted the space with no personalization. It seems nobody's space and socially not related.

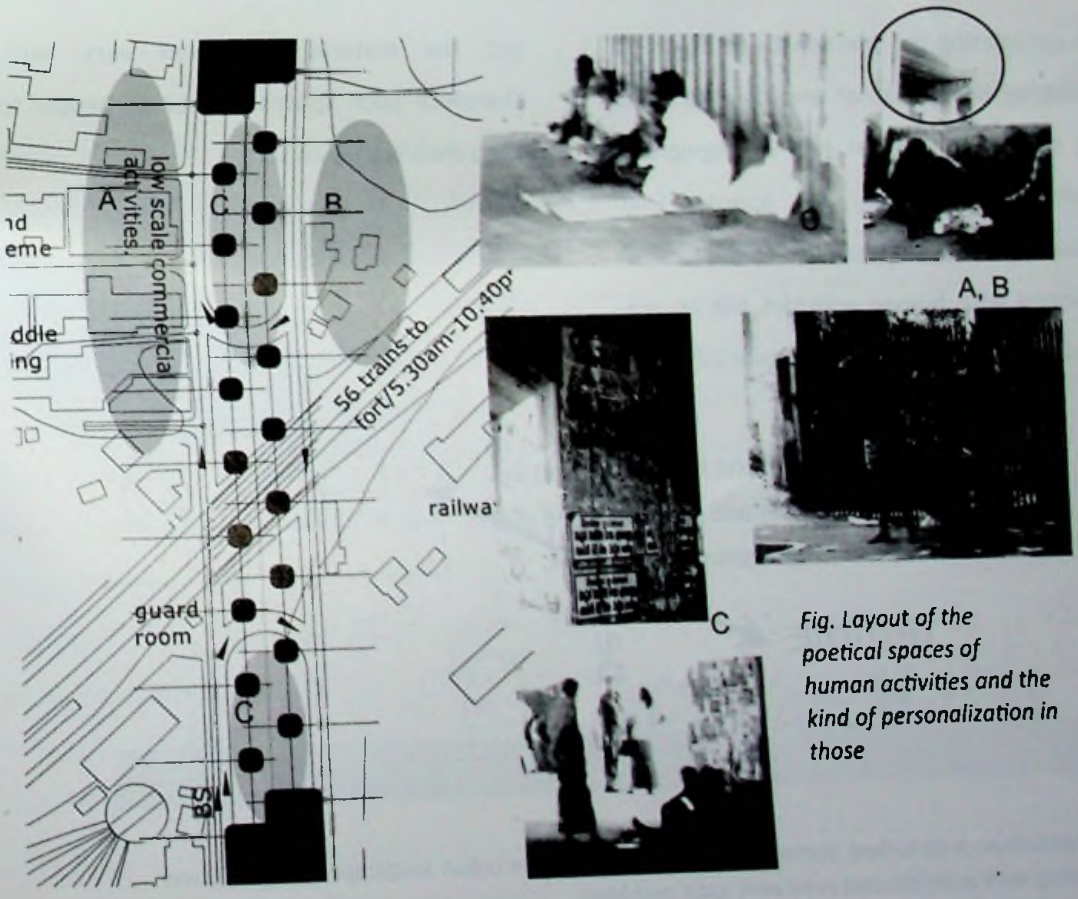


Fig. Layout of the poetical spaces of human activities and the kind of personalization in those

Considering personalization it is vital to cater a mutual variation where different people from different backgrounds will feel to be involved. But the regular location of the elements with the same character will dilute this special quality, because it is equal everywhere though the people are not. This sort of issues are evident in the history where the modern landscape was deserted because it was inhuman and so contribution to be personalized with its clear edges and dominating quality.

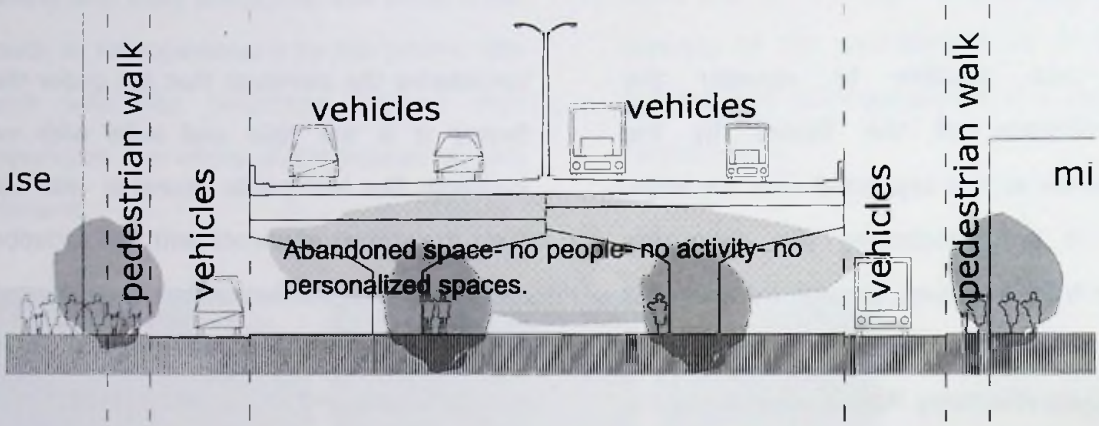


Fig. Personalization of the spaces is hard due to congestion of traffic and pedestrian movement. The space under the flyover is abandoned.

Even considering the immediate context it is contrasting being regular and definite in its form so people will not feel belongingness, therefore they avoid such spaces. Even considering the immediate context it is developed with human activities but no pre-consideration or a plan, so it is more informal and the materials also not very hard. Therefore such spaces encourage people to keep their stamp on such.

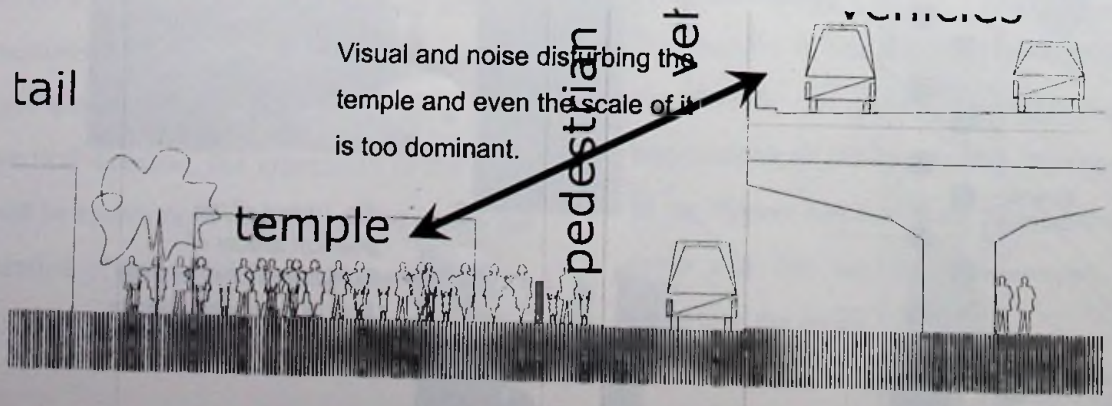


Fig. Personalization is disturbed; Socially important spaces of the urban landscape and the flyover are conflicting with activities and even with scale and form.

The spaces in the urban landscape around the flyover have become hard to personalise since the flyover is overlooking those. The temples are the most damaged since the flyover damaged its spatial properties with religious consideration. It also disturbed the views through bedroom windows of residential apartments.

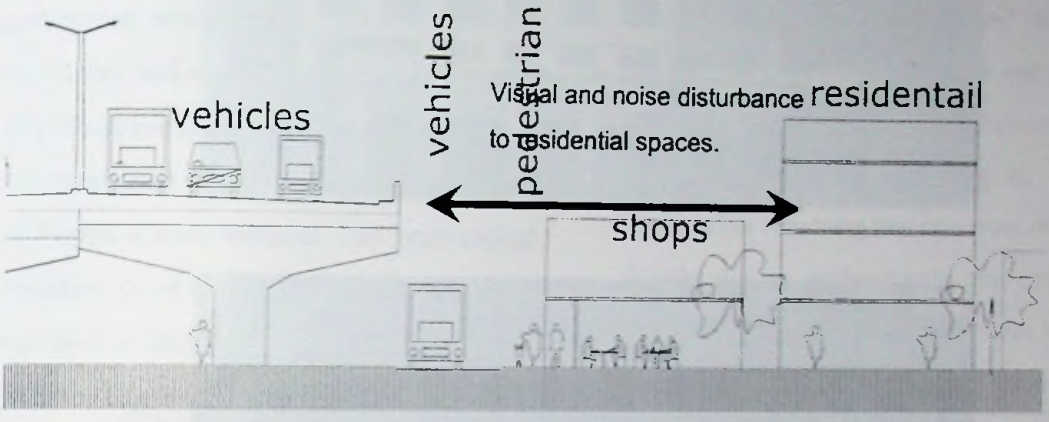


Fig Visual and noise disturbance to residential spaces discourage the personalization and improve more stress.

Case Study2: Analysis of the Responsiveness of Flyover, Seattle Monorail/ Green Line Viaduct

Role Plays by a flyover in the Urban Context

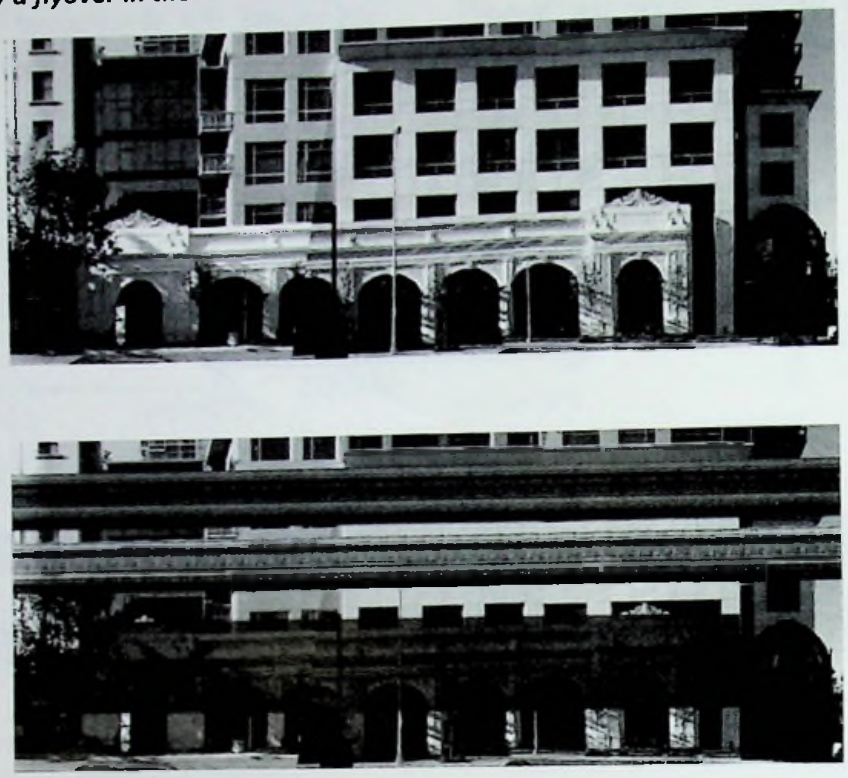


Fig. Existing situation and situation after erecting the flyover

The analysis here is done by the following professionals;

Stephen M. Antupit, Robert Aujla, AIA, Fred Bassetti, FAIA, Philip Beck, AIA, Greg Belding, AIA, Tracey Belding, Jeanette Benton, Rachel Birch,David Boone, Kenneth Bowles, R.A.,Don Brubeck, AIA,Richard Cardwell, James Castanes, PS, AIA, David Coleman, AIA, Dan Corson, Phillip Decker, Frank Y. Dill, III, William E. Endelman, AIA, Steven A. Erickson, AIA,John Eskelin, AICP,Marni Evans, Assoc. AIA, Michael Fajaris, Nils Finne, AIA, Friends of Post Alley, R.David Frum AIA, Pam Gazale, Carolyn Geise, FAIA, Bob Glanzman, William Gottlieb, Chris Hawley, Michael Herschensohn, John W. Hoffman, AIA AICP, Connie Holloway, AIA, Ginger Huebner, Scott Huebner, Nora Jaso, AIA, Stevan Johnson, Norman J. Johnston, FAIA, Billy King, Laura Lee, Monika Lidman, Jack Mackie, Jud Marquardt, FAIA, Susan Millinich, Jeremy Miller, Andy Mitton, Mike Moedritzer, Erika Morin, Jason Morse, Jeffrey Karl Ochsner, FAIA, Sheri Olson, FAIA, Shawna O'Neal, Mahalie Pech, David Peterson ,William M. Polk, FAIA, Teresa Rancourt Gilbert Recla, Mark Reddington, FAIA, Paul Reinhart, Tim Rice, Bruce P. Rips, AICP, Iain M Robertson, ASLA, Bridget Rogler, Jim Rothwell, Norie Sato, Walter Schacht, Jerry Schneider, George Shaw, AIA, Buster Simpson, Laura Sindell, Ellen Sollod, Mark Speidel, Dana Staikides, Elizabeta Stacishin, Liza Stacishin, Dr. Sharon E. Sutton FAIA, Hal Tangen, Steve Tatge, AIA, Sherine Tully, Terri Watson, Rob Widmeyer, AIA, Bill Whipple, Eugenia Woo, Judson Youell.

Here are their concerns,

Why oppose the Green Line?

"The Green Line monorail will have severe negative impacts on neighborhoods, parks, and our city streets."

The Green Line monorail will damage our pedestrian environment. Massive concrete structures and speeding trains do not belong directly above city sidewalks.

The proposed route through Seattle Center will spoil a civic treasure. The International Fountain Court is an essential gathering place for people, and an important neighborhood park for Queen Anne; it should not be turned into a transportation corridor.

Seattle should respect its historic resources. The proposed route on 2nd Avenue through downtown and Pioneer Square is unacceptable. Concrete monorail structures will wall off historic gems like the Exchange Building and King Street Station, and will destroy views of Pike Place Market from many points in the city.

Monorail structures will degrade open space. Seattle needs to protect the parks - like the Garden of Remembrance at Benaroya Hall - that help make our dense city center livable for residents and workers.

The Green Line will block views to our natural surroundings. We should preserve the view corridors to mountains and water that previous generations worked hard to protect.

The proposed **750-foot skybridge** at Westlake Center violates Seattle's successful tradition of downtown urban design. Skybridges have largely been prohibited in our city, because they damage the vitality of sidewalks and streets.

How "green" is the Green Line? Not very. Clearly, the Green Line monorail will damage irreplaceable civic, cultural, historic, and environmental resources along its 14-mile route, while removing few cars from the road. Seattle design professionals are concerned that the monorail planning process is being undermined by the lack of good visual information. The SMP (Seattle Monorail Project) has not provided the public the visual representations it needs to understand the Green Line proposal. The SMP has produced diagrammatic plans and sections, but has consistently avoided showing elevation drawings of the monorail structure in context. This is a critical omission, and has been recognized as such on many occasions by the Monorail Review Panel (MRP), an advisory board that is evaluating the proposed design. Without legible elevations, both MRP and the public are left flying blind through the design review process. The information contained in elevation drawings is essential even now, in this early phase of design, when we are primarily focused on large-scale issues.

Why are elevations important?

Elevation views are absolutely essential to convey a true sense of the scale and bulk of an elevated, linear structure like the monorail.

Elevations are also needed to describe the relationship of the monorail structure to its surrounding context: the buildings and open space that make up neighborhoods along the fourteen-mile monorail route.

What would elevations show us?

Here are some examples:

- Monorail guide beam depth, and how it varies along the route-
- Guide beam height above grade, and how it varies along the route
- Relationships of scale and proportion between guide beams and adjacent buildings
- Impact of guide beams on views from buildings
- Impact of monorail on the privacy of building occupants
- Visual impact of monorail structure on historic facades
- Positions of monorail columns relative to buildings and open space
- Scale of monorail structure relative to pedestrians and sidewalks
- Views blocked by monorail structure along its route
- Size and bulk of monorail switches
- Relationship of switches to adjoining buildings
- Size and bulk of catwalks and various other system elements

What is still missing from the picture is a general understanding of what the monorail structure looks like in the built environment. This is troubling, given the serious visual impacts associated with an elevated system. The guide beams are rising and falling, switching from one track to two in some places, interrupted frequently by large switch platforms: what does it all look like, and how does it relate to the city?

The monorail authority has managed to move through the design process not by clarifying, but by concealing basic information - while imposing an accelerated, unrealistic schedule. This undermines the MRP's ability to conduct a meaningful review process. Furthermore, it makes it very difficult for members of the public, particularly those who are not design professionals, simply to understand what is being proposed. The public has no way of evaluating what it cannot see. As a result, citizens are effectively kept out of the loop in the monorail planning process.

Conclusion

The flyovers are vital in the contemporary urban contexts as another stage of the evolution. With the growing population and the activities the mobility considered important. Flyovers as a solution to the less efficiency of functions prove that it enhance mobility and reduce congestion.

It is true that it enhances the accessibility of two points and it has neglected the environments of the urban landscape in-between. Though it is the responsibility of the engineers, it is crucial when it is erected on the landscape, since conflicting with the responsiveness. According to the analysis the flyover is enhancing the legibility of the

context as it is contrasting in the urban landscape as a landmark which will be experienced at the ground level as well when it is using. It is positive to some extent but the adverse effects are more because it the lack of the sensitivity in it.

The urban landscape is a social responsibility where people celebrate the urbanity. So the flyovers must be responsible and sensitive enough to be responsive towards them being meaningful. Though legibility is improved by its form, physical and visual permeability, and the nodal activities are discouraged. Therefore the considered legibility is very less and inappropriate.

Considering about the elements of it and the space that it creates, there is much more potential for those being deserted if the flyovers are not thought in terms of environment responsiveness. The lessons of such urban issues can be identified form the history where people abandoned spaces in such landscapes.

Though the structure is primarily derived based on the Imagineering of the engineers, the spaces created and the form must be with a sensitive architectural thought and the positioning of should be evaluated by the planners as well as the urban designers. Even the form of the flyover as well as the elements of it is to be detailed and designed in a way to achieve environment responsiveness.

But in the present context considering the responsiveness is more critical having many diverse effects on the responsiveness. People are discouraged to perform their public life and it has added more tension to the landscape because there is less responsiveness. At the same time the activities around also was disturbed and the created barriers to the potential of robustness and the legibility.

As the urban context is getting more tensed day by day it is important to have more responsive spaces and the structures which are coming to the urban landscape must be well thought and designed according to enhance the quality of the landscape.

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