

## Conservation of Chauburji, Lahore in Relation to Orange Line

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### Abstract

Lahore is known to be second largest city in Pakistan and is well-known for its historical sites. Developmental schemes implemented by the Punjab Government can affect the cultural ethics of historic sites. This research classifies the issues regarding conservation of the historic monument with the reference of orange line project and prepares a conservation proposal for the historic monument of Chauburji, following the historical evidence from Archaeology Department Punjab. After the complete observation of rapid transit train project, recommendations and proposals will be useful for forming a shield zone knowing to be the main issue for conservation. The study will help in protecting the rich history of the city.

**Keywords:** Historical evidence, orange line, Chauburji Lahore

### Introduction

Lahore was known as Paris of the east<sup>1</sup>; and it is a city of attraction for a few decades. Lahore is categorized in to three different regions. The ancient city occupied for hundred decades, sited near the circular road. Another area was occupied by British covering from Canal bank to Mayo hospital on east. The



third area includes Bahria town, and DHA including other area, developed after partition. The city is the large one in Pakistan, and it is known as Punjab's capital as well. Geographically the city of Lahore remained important and has been the center of everyone in many ways. It is a well-known city for its historical monuments like, Mughal Gardens, Tombs, Punjab University, Parks, Changa Manga forest, all these attracts the visitors around the Pakistan and as well around the world. Lahore is also famous for being the city of Sufi and religious personalities. The Mausoleum of Data Ganj Bakhs is visited daily by thousands of locals throughout the year.<sup>2</sup> Lahore is like a well-ordered city, having pavilions and large gateways of different colors. Several pleasure gardens are located on riverside, canal, lake, spring, or a waterfall. In the historic Lahore, road leading to Multan on south, it has a Chauburji gateway a well-known garden of Mughal Era. The name Chauburji is comprised of two words, "Chau means four and Burj mean tower." It is a famous building among all of those built by Mughal's in the beautiful city of Lahore.

#### **Location of Chauburji**

The gateway of Chauburji is a historic monument provides majestic look of that time architecture. It is locating on South of the old Lahore city on the roadside leading Multan, but in the old time its location was the western side of road, near Ravi River until 18<sup>th</sup> Century AD. After that the river changed its course. In Modern days walled city is situated on this route. It can be noticed in the different paintings which was documented in British Era.<sup>3</sup> However, the beautiful monument is decaying but it has not lost its grace, standing alone on the roadside hoarded and busy route on the Multan Road now a day. According to Dr. Ajaz Anwar Hyderabad Deccan Char Minar was built in 1591 AD by Muhammad Quli is a prototype of Chauburji gateway, has the triumphal arches on the four sides of the road.

#### **Restoration of Chauburji**

Department of Archaeology, Government of Punjab owned this monument and as well as doing maintenance. It is protected by the Antiquity Act 1975, listed in category-I with notification No.47 dated 09-01-1913 acquiring the land of about 0.16 acres.

### **Architecture**

The Architectural layout of the monument is decorated with Quranic verse about paradise. It is a good example of Persian architecture with reference to Charbagh monument. These gardens are known Char Bagh in Persian language, containing the water channels on each side enclosed in a wall. Overall, the layout of the proposed garden is ornamented with cut brick and mosaic, currently most of the detail has been lost due to decay. The brick structure is completely decorated with glazed tile work or Kashi Kari varying different colors like, blue, green, white, yellow, and turquoise. All these used as a typical decoration in the Muslim era buildings around subcontinent; Entrances and window of the interior corridors showing the living style of Mughals. A similar structure to Chauburji is Gulabi Bagh gateway, in term of its exterior with small changes and excluding turrets and was constructed after 10 years of Chauburji.

### **Plan**

It is square in plan and has dimension toward south and north is about 57 feet where to the eastern and western side the dimension is approximately same. It is reflecting the rare style of Mughal Era architecture. It suggests that this was planned for several pleasure activities within the monument. The main object of erection of this monument was to refresh the soul and the calm.

### **Ground Floor Plan**

It is located on the raised platform at a height of 8 feet including plinth about 3 feet 6 inches in height. The Dado level of the monument is decorated with rectangular panels. Embedded borders provide the light and shade concept. At the entrance, it has two sitting areas mainly north and south built

in burnt bricks in a continuation of the plinth about 3 feet 6 inches in height and 2 feet 10 inches by 7 feet 10 inches in width. Around the sitting area lotus design is carved to form "Dassa" that moves along the building as a boarder. The corners of sitting area are decorated with a vase design "Guldan" creating an admirable ornamentation.

#### Antechamber

A rectangular hall measuring about 14 feet by 6 feet having a large opening is a passageway in entrance and internal structure. Its southern and northern walls are damaged with traces of red bricks mixed with limestone. Antechamber has a height of 17 feet with curved ceiling and dome. There is only plastered damaged with algae are present. To the gate there are two holes approximately 6 inches in diameter are present at the corners.

#### Main Chamber

After antechamber there is a main chamber next to it, in a square with a measurement of 16 feet by 16 feet. The main chamber has two platforms, plinth's continuation about 3 feet 6 inches in height, covered the area on both sides, south and north of entrance having two chambers toward east and has an entree from west via platform. The interior of the platform has recessed niches, curved ceiling with dome and with remnants of Muqarnas or Ghalib Kari as well as glazed work. The main chamber's roof is on the pendentives over the corners while the ceiling of dome has the remain of honeycomb or Muqarnas. The maximum height of corbel dome's ceiling is 25 feet. The Arch on the west has an open arch that leads to the garden. The raised platform of the main chamber provides entrance to room and small cells known as chamber to the east. The chamber to the south is dark without any light source but the entrance. A chamber to the north with a staircase locked by a door to stop public from getting inside. There is a two-sided vestibule and complex arch to the western side of the main entrance. It means that a main arch is divided into further two arches.

#### Mezzanine Floor Plan

The mezzanine floor is arranged in manner that its lower elevation has a regular interval on the upper floor. On the antechamber, a small space with three Tudor arches on eastern central bay. A flat open arch is on the southern and northern side in eastern elevation, smaller in size than on the ground floor arch. The balconies are decorated with latticework, wall have niches and Muqarana in dome. It has maximum height the Deorhi can be seen downward. To the north and south it has flat arches provided for the light source in stairs. The elevation on the west side is like the east and first floor.

### **Roof Plan**

Stairs leading to the roof, to north on first floor and on south of the structure. The center of the roof is octagonal. It also has the spiral staircases coming down from the rooftop.

### **Front or Eastern Elevation**

The path leading to the interior of Chauburji has different arches in various dimensions. Everything thing is enclosed in arches like niches, windows, doors known as Tudor style or Mihrab. It is adopted in Sub-continent during the Mughal period in mosques, palaces, and mausoleums. There are three bays in the main façade with different panels including squares and rectangular. It is outlined by a timber frame; the central bay has double arches in the center of the structure. The makes the Aiwan as a rectangular hall, having three wall, one side is open. In Muslim architecture this type of frame enclosing the arch are associated with Aiwan and Pishtaq. Both arches are decorated with calligraphy on glazed tiles. The dome of the Aiwan orated with Muqaranas and master work of Ghalib Kari. There are four arched windows in the Chauburji. In the elevation of the first-floor recessed arches are its regular intervals. But these arches are smaller in size and height. The flat arched opening is decorated with lattices in red sandstone with octagonal design, half of the portion is missing. The important factor is that turrets are provided to the sides of gates ornated with glazed tiles and some portions are framed in squares and rectangular panels.

### **West Elevation**

Western elevation has an entrance to the garden and like the eastern elevation but a bit lower side of arches with entrances on the parallel sides having complex arch divided by further two arches. The upper arch has the division of flat arch, and it is Tudor. To the northwest somehow it is restored.

### **Elevation of north and south**

The wall originates from the southern and northern elevations to the focal entrance, built directions. It has not any walking track in the ground of their elevation. It has a light source through a flat arch for the staircases going up to the roof. The garden's wall is built with recessed arches. To the south elevation have some traces of dampness caused by the rainwater leakage forming cracks.

### **Turrets**

The Turret is octagonal and is 10 feet in diameter, it is a unique feature of Chauburji gateway. It is expanding from the top cannot be observed anywhere else in around sub-continent. It is understood that these turrets have cupolas, collapsed with time. The turrets are richly decorated, top has the geometrical decoration in the form of Kashi Kari or glazed tiles in a variety of colors. Below them there are Muqaranas decorated with glazed tiles in geometric and floral designs. Down to the Muqrana the turret's diameter shrinks, it is decorated with recessed arch with floral glazed tile work. Turrets become smaller and have the geometrical part in artificial brickwork. Then the eight recessed arches have no decoration complementing the upper section. In the last there is a band a Kashi Kari, that end at the other cornice. The lower part of the building is ornated with geometrical and floral design in the form of squares and rectangular panels. A turret is a vertical small minaret, or it is attached to the structure as in medieval castle or can be observed in Bukhara, Samarkand. Turrets are to offer prominent defensive position, that allows to cover fire during the military protection can be observed in Topkapi gateway located in Istanbul. In Bukhara this was built as a decorative element.

In later Mughal Era, octagonal minarets adopted with corners at the tomb of Mughal emperor Jahangir. It was even used by Jahangir itself in the mausoleum built in white marble. This is added into the category of motif and used in Taj Mahal where the corners of the platform are flanked by the minarets. The turrets along with cupola on top are provided to the gateway of Taj Mahal. In the tomb of Itimad ud Duala the octagonal towers can be observed in white marble decoration. Minarets of the Masjid Wazir Khan's projecting platform look similar. To the Northern side of Chauburji the turret has been collapsed because of floor. In the year of 1973 Department of Archaeology Govt. of Punjab started the conservation and restoration and completed in 1979.

### **Architectural Decorations**

The dominating features of the monument are the entrances and the gateways, and it remained throughout the time. Even in the Greek and Egyptian architecture their monuments were decorated with different stylistic figures, motifs, and panel on different sections of the building including exterior and interior. There are different traditional techniques introduced by each culture that can be examined around the world, providing an idea about the style of ornamentation of that time.

At the gateway of Chauburji it is a good example of the ornamentation technique in glazed tiles or Kashi Kari, fresco, faux and cut brickwork. Most of the monuments built during the reign of ShāhJahān like Masjid Dai Anga, Masjid Wazir Khan, tomb of Asif Khan and Gulabi Bagh situated in Lahore has the blend of all Tazakari (faux brickwork)

Overall, on the top of a plinth cut bricks can be seen, borders are carved in leave or lotus design the vessel shape design are decorated the corners of sitting area to the entrance. The Turrets are clad with brickwork designed in geometrical patterns in the form of octagonal stars. The patterns are like the Kashmiri mirrorwork filled with glazed work. It has resemblance to the Qutab Minar of Qutub ud din aibak's carvings. The lattice work on the first

floor is the only element which is done in red sandstone. Though a lot of the details of decoration are missing.

### **Kashi Kari (Glazed Tiles Work)**

Glazed tile work or kasha Kari (Persian word) is the craft of making enameled and glazed tiles and introduced in subcontinent during 12th Century AD. It was adopted to decorate mosques, tombs, palaces, and gateways. The earliest use of the Kashi Kari for the decoration of exterior can be seen in the tomb of Shah Musa built during reign of Ibrahim Lodhi in 1519 AD. The real decorative art developed in Mughal Era and got its perfection during Shah Jahan period. The remains of the Chauburji gateway is still shiny colors like blue, oranges, yellow, green and white.

### **Geometrical Kashi Kari**

The turret of Chauburji is decorated with brown geometric pattern on each side. A turquoise blue star in octagonal shape, surrounded by the bricks in geometrical octagonal pattern, filled with yellow-ochre plaster.

The Muqaranas are decorated with some geometrical pattern in polygonal shape using glazed tile. The turret has geometric patterns in different colors are paved on the top.

### **Floral Kashi Kari**

Turrets and faced are ornated with panels, above and below the arches have beautiful fruit basket type motifs, plant motifs, and geometrical patterns. The stylized floral motifs are provided to the spandrels of the arches. The cypress trees in turquoise blue with green colors have a gapes vine twirling around it provided with the brown grapes. It is rendered artistically with variations of multi colors and decorative elements on turret is quite like Masjid Wazir Khan's minarets. Quoting the Kamil Khan Mumtaz, the cypress tree presents a perfect man in the world, the Prophet Muhammad (S.A.W), and the sign of eternity. A minor bend is present on the top that shows the submission of Prophet Muhammad (S.A.W) to the will of Allah. The tall cypress tree erected with gymnosperm's species, the tree with seeds. It spills as it rises and



joins into the sky. There is a variety of element that can be explained further as cypress tree.

The construction of the Masjid Wazir Khan completed in seven years in 1637-1635 AD during the period of Mughal Emperor Shahjahan. It was built by the Shaik ilm ud din Ansari or Wazir Khan as a Governor of Lahore. The similarity between these two monuments shows the artisan were the same on both historic monuments because there is not a big gap between the constructions of these monuments.

### **Calligraphy in Kashi Kari**

On the double arch to eastern side has the decoration of calligraphy in Ayat ul Kursi on the top, Islimi Khatami design are provided to a passageway in blue colour and yellow-ocher background. The Ayat ul Kursi inscribed is on the glazed tiles. On the lower part of the main arch a date is inscribed i.e., 1050 AH is related to its construction.

Quranic verses on glazed tiles is fabricated. A date i.e., 1056 A.H is inscribed on the lower central arch about the year of its construction.

The garden was given to Miyan Bhai Fakhar-un-Nisa, By Sahiba i Zaibinda, Begam e Duran. The Name of Allah is inscribed on the spandrels of first floor bay arches to the eastern façade in blue color surrounded by a circle. The background of the name is yellow-ochre color.

### **Project of Metro Train**

#### **Background**

The Punjab Mass Transit Authority started the Orange Line project. It was designed to provide comfort, security, and a reasonable transport system to the public of Lahore. The whole project area was about 27.1 kilometers from Ali town along with Multan Road, McLeod and Grand Trunk Road. The plan of the orange train was designed in manner to minimize the maximum land acquisition for the project. The Lahore Rapid Mass Transit System is a long-time plan that indicated the orange line project are shown in. There are four corridors which were planned as a part of project are.

## Conservation of Chauburji, Lahore in Relation to Orange Line

**Green Line:** From Ferozpur Road (Kahana to Shahddara) 27 kilometers (Accomplished)

**Orange Line:** From Ali Town – Dera Gujran 27.1 kilometers (executed)

**Blue Line:** From Jinnah Hall - Green Town, 20 kilometers (Upcoming)

**Purple Line:** From Data Darbar - Airport, 19 kilometers (Upcoming)

The Orange Line as a project of LRMTS will be placed as south –north passage passing from Ali Town Rawind Road and has a terminal at Dera Gujran, it has the length of about 27.1 Km.

This project has elevated and underground stations having the total number of 26.

### **Location of The Elevated Stations**

The Location and type of elevated stations of Orange Line Stations are listed in **Table I**.

*Table I: Location and type of Elevated Station*

SR.	NAME OF STATIONS
1.	ISLAAM PARK
2.	SALAAMAT PURA
3.	MEHMUD BOOTI
4.	PAKISTAN MINT
5.	SHALIMAR GARDEN
6.	BAGHBAAN PURA
7.	U.E.T
8.	SULTAN PURA
9.	CHAUBURJI

I0.	GULSHAN-I-RAVI
II.	SAMANAAABAD
I2.	BAND ROAD
I3.	SALAHUDIN ROAD
I4.	SHAHNOOR
I5.	SABZAZAAR
I6.	AWAN TOWN
I7.	WAHADAT ROAD
I8.	HANJARWALL
I9.	CANAL VIEW
20.	ALI TOWN
21.	DERA GUJJRAN
22.	RAILWAY STATION
23.	NIAZ BAIG
24.	LAKSHMI CHOWK

### Location of Under Ground Stations

The Location underground stations of Orange Line Stations are listed in Table 2

*Table 2: Location of Underground Station*

SR.	STATION NAME
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## Conservation of Chauburji, Lahore in Relation to Orange Line

I.	ANAARKALI
2.	CENTRAL

The Northern side termination of the track, a Rolling Stock Depot cover around 19h is planned to the eastern Ring Road, whereas southern end has a Stabling Yard cover about 6.33 hectares is planned to the southern side of Ali Town. The accessing track in the Depot has the length of 0.56 kilometers and 0.49 kilometers in the stabling Yard. The whole orange line project is planned with 2 substations. A center for safety and control is designed within the yard.

### **Architectural Plan Criteria for Building of Station**

#### **Architecture of Station**

The concrete architectural plan of typical raised stations with two subversive stations are Anarkali in addition with Central Station agreed by M/s. CR-NORINCO JV in their procedural proposed plan is the base of our architectural design, All the technical, public and operational sections are planned according to the Chinese standards. The standards are equivalent to international standards. Since all the electromechanical equipment will be provided by the M/s. CR- NORINCO JV, we need to conform with their complete plan layouts. However, all the plans are developed keeping in view different structural, functional, and aesthetic requirements.

#### **Elevation structure of stations.**

The elevated structure of the station is comprised of two levels, in the mid and on the carriageway, it has a support of columns in the middle of road, at the end of the service roads.

The chief Minister of Punjab has decided to raise all technical rooms that are planned inside of the building's entrance proposed by M/s. CR-NORINCO JV on the ground. It was to minimize the acquisition of lands.

#### **Entrance Level**

Entrances to both side of the track that lead to the Concourse level with bridges that is also serve as connection to contradictory roadsides. The

entrance contains lobbies at +4.50 level from the walkways. It has staircases about 2600 mm wide with two escalators provided on each entrance of the station. There are toilets for the travelers and a vending machine for the tickets at concourse level. The entrance remained operational during working hours. An entrance with elevator for the disabled persons is in a distinct entrance reachable from the pathway level.

### **Concourse Level**

The elevation station is on the first level and about +8.0 concourse level has a division of three different zones like Public paid area, public unpaid area, and operational/technical sections. The movement of the public is to decrease overcrowding at any area.

The access of the public to the unpaid section from the concourse via security walk through gates, to purchase the ticket from vending machine of office and enter the paid section via turnstiles.

In front of turnstiles there are two sets of escalators and staircases measuring 1750mm leads to +14.3 platform. There are two staircases measuring 1750mm on the opposite sides. Two automatic elevators track for disabled are situated in the centre, Both side of the paid area. It permits vertical entrance to both sides of the Podium level. The Public unpaid/ paid sections are air-conditioned as well as some operational and technical sections are air-conditioned.

### **Platform Level**

The platform of the elevated structure of the stations is the second level at +14.2 m from the ground level. It has automatic gates 1.8m in height to prevent accidents. The escalator is provided on the floor level for going up. For going to the ground there are two stairs provided individually.

The overpass passes through the raised stations located at the platform. As there are two paths separately for each direction.

### **Underground Stations**

Two subversive stations are situated in the mid of the Orange Line project, these are:

- Station of Anarkali
- Central Station

The visual impression of the subversive stations is less than the raised stations. Their plan is settled to merge with the built environment and the external finishing materials will same as the in-line buildings. Ventilators are provided in the sides of the pathway to merge with buildings in the built environment.

### **Anarkali Station**

The station is air-conditioned and has two levels. The concourse level and the entrance level are planned at grade, where the basement level has platform. The station has two entrance structures, to the Lower Mall and Chauburji. The Unpaid and paid public areas are placed on the at the ground level. The public buy a ticket from vending machine and office and go down through turnstiles to platform. It is air-conditioned and environmental control rooms are situated on four comers. It has four light shafts in the viaduct area.

The architectural plan of the entrance at Anarkali station is advance from the local architecture of the area. The material used for exterior finishing is a special type of brick and it is the same material used in the structure in this station.

### **Central Station**

Central station is at level one and the public can access it through staircases and escalators design at four different locations. There are two lifts designed at the ground level to facilitate the disabled person. Both platform and the concourse are at the basement level. It has all the operational areas including public paid and unpaid areas. One important feature of the platform is that is has underground link between two platform. Staircases leading downward to access other areas via underground tunnel. The station is centrally air conditioned.

The architectural form has only the staircase and escalator on its entrance are visible. The station is near to the General Post office and its architectural layout is similar architectural features.

### **Orange line track and Building of Chauburji**

Current Condition of Chauburji with reference to Orange line (**figure 26**).

There are several cracks and stress which is been developed on some place. A drain is going very close to it about 15 feet from the main building causing cracks to the historical monument.

### **Excavated Area for Orange Line Track**

The excavated area for construction of orange line track at Chauburji is shown in .

### **Photographic Documentation of building**

In view from the top of Chauburji shows how the construction of orange line train track will hinder the view of historical monument.

### **Main issue regarding orange line Construction**

Along with the advantages of this project it has some disadvantages and controversies linked to it. In a general the project is discussed in the Lahore court and civil society about critical issues. Some of the issues are raised by Civil Society and Lahore Bachaao Tehrik referring the orange line construction. The orange line construction project's case is submitted in the court and Lahore court took a by Lahore Bachaao Tehrik and Civil Society of Lahore. The work of orange line project is stopped on the three different stations on metro line and platform of Chauburji.

Several problems from orange line construction are.

- Construction of the orange line in the prohibited zone that has protected sites is the antiquity act's violation
- "Environment" Validity of environmental approval agency
- Lahore is losing its natural environment in the form of 620 trees, and it is a serious issue as the Lahore environment is already contaminated.

Article published in Dawn Newspaper by Khalid Hasnain on 26 June 2015 regarding this issue.

- This issue is not about the protection of historical monument but the public who get affected by this project and lost their houses as well as business. The other issue is the whole project will be damaged and destruct about 26 monuments of Lahore. The concerned authorities must take expert opinions about heritage sites, that require expertise and techniques. So, Heritage impact Assessment must be conducted by an expert's team.
- Another issue of this project is noise pollution as well as vibration affecting the heritage site can lead to sever cracks. The safety measure needs to apply for protection, nobody even discussed this matter except crossing paths and parking area.
- This problem was raised because the orange line project is totally grounded on wishes and there is no report submitted to show effects of project on cultural heritage sites. Therefore, there is not any expert judgement and views are available to prosecute the feasibility and alignment impact.

#### **Legal Protection Status of Chauburji**

- The gateway of Chauburji is legally protect by the Antiquity Act of 1975 and Special Premises ordinance of Punjab
- The Special Premises ordinance of Punjab Clause II cites:

“Execution of development projects and newly constructions in closeness to special premises - no development scheme or newly constructions on, or within a area of 200 ft of a special premise will be assumed or executed except with the approval of the Government or committee.”<sup>4</sup>

- Also, the Antiquity Act Clause 22:

“No development scheme or newly construction on, or with in area of 200ft of a protected immovable monument/antiquity will be assumed or executed excluding the permission of the Director General.”<sup>5</sup>



- Fixed monuments as per section 2 of antiquity Act, 197 and special premises under section 2(a) of the Punjab special Premises (Preservation) Ordinance, 1985 need to be conserved and also protected and no structure's construction are allowed within 60.96 meters of distance these possessions are compulsory as per section 22 of Act of 1975 and section II of Ordinance of 1985.
- The Chauburji building is 53ft far from the orange line.
- The Department of Archaeology granted the No Object Certificate for the construction, but the problem is that certificate was granted after the work was started.
- Cultural and national heritage is carried out by the Government, and it is the responsibility of state to conserve and protect during the developments.

### **Conclusion**

The city of Lahore is progressive and built of the area of historic Lahore; Therefore, the people of the city have not left their traditions and norms even with adopting the modern traditions and culture. The people feel proud in their old tradition and customs and love to practice it. The main purpose of the study is to recommend strategies which can be helpful for the conservation of gateway of Chauburji. Analyzing the collected data and even the site observation, suggestion the recommendation. There must be a probability report earlier than any developmental project of the city. It is observed that the metro line's construction is an important factor for the development of Lahore and necessary for the transportation requirements for the public. Along with these developments the value of the cultural heritage site is also important and not to be ignored. The solution of this issue was to put an underground tunnel and it has more life than a viaduct. The construction of orange line train track has adverse valuation effects on cultural heritage structure. The track will go about 53 feet close to the cultural heritage site of Chauburji the high worth resource. During the

operation and construction work the vibration of the equipment shall not be more than the permitted limits; other impacts like water, dust, noise, and fire can be eased. Monitoring should be carried out during the whole project to ensure compliance. The drainage lane is close to the cultural heritage site and damaging the structure it should be sealed or removed to protect the site.

### **Recommendations**

For the protection and the preservation of the heritage site and here are the recommendations.

### **Detailed Graphic Documentation**

Proper systematic documentation of the monument of Chauburji is necessary because the monument's character and value will be the same after the Metro line's construction. It is also important to prepare a proposal for the conservation. The monument should be fully scanned with laser technology and complete video documentation of exterior and interior.

### **Proposal for the conservation**

A complete visual analysis of the structure has been done during the inspection of the monument. It includes the interior and exterior of the structure as well material used for decoration and construction. The analysis directs that the structure is not in a good condition

- Curative measures need to be start for structural cracks in the minarets
- The structure issues of the three minarets and walls must be examined by the expert before practicing any curative measures.
- Restoration and conservation of brick masonry
- Restoration and preservation of brick tile known as Dassa
- Protection and repair of Ghalib Kari work
- Protection and repair of Aiyena Kari or mosaic according to its original design and colors.
- Protection and repair of lattice made of red sandstone as their original patterns and design.
- Conservation of Lime Terracing

- Conservation of deteriorated bricks
- Protection of plinth for the conservation of the monument from water penetration and moisture.
- Cleaning exterior and interior decorative elements
- Construction of new waterspout in its original place
- Proposal of oval garden to maintain the historical reputation of Chauburji.

#### **Adaptive use of building**

- The first commendation is to adaptive use it can raise the historical importance of the cultural heritage and add a life to it. After the completion of orange line project Chauburji structure can be utilized a mosaic art related gallery, it is also for the display and souvenir shops
- Another option is to convert it into a cafeteria which will be a good place for meeting and experiencing the heritage.

#### **Manual for the Conservation and Supervision of Monument**

The DG Archaeology Punjab doing their efforts to conserve, protect and the maintain the archaeological heritage of Pakistan built in Mughal era.

Conservation of the Historical monument of Chauburji has an estimated cost of 51 million but all this conservational work must be done after the construction of organ line. It the conservation process is applied earlier than the construction of orange line.

#### **Proposal to fix the damage of buffer zone 200'**

As the monument of Chauburji is protected and it has cultural and historical importance that needs to be protected and preserved rather giving value to other structure that is erected adjacent to the heritage monument. To attain the safe zone the track could be relocated 60.96 meters away from the cultural site on western side orange line track as shown in figure 30.

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