

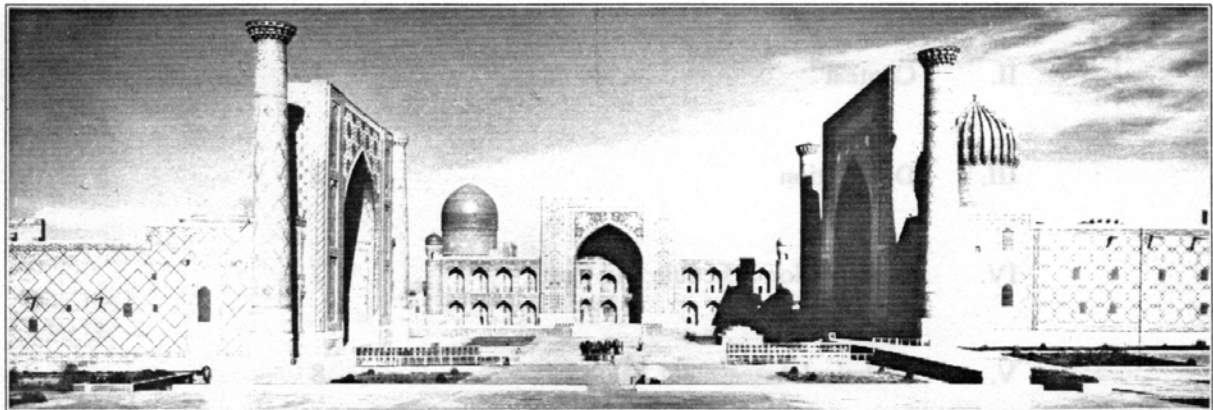


1992 Technical Review Summary
by *Yildirim Yavuz*

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Registan Square and Tashkent Street

Samarkand, Uzbekistan



Architects
(Registan Square)

Pulat Sh. Zahidov, Konstantin S. Krukov and Nematjan Sadikov

Architects
(New Tashkent Street)

Nematjan Sadikov, Abdurrazak Ammanov, Omon Koshnazarov and Alexander Atuchun

Client

Chief Board for the Protection of Monuments of Uzbek SSK Ministry of Culture
Tashkent, Uzbekistan

&

Municipality of the Siab region
Samarkand, Uzbekistan

Completed
1987 ongoing

Registan Square, Samarkand, Uzbekistan

I. Introduction

The ensemble of buildings on Registan Square in Samarkand consists of the 15th Century *madrasa* of Ulugh Beg, the 17th Century *madrasa*-mosque of Tillya Kari, the 17th Century *madrasa* of Shir Dor and the 18th Century market building called Chor Su (*Chahar su*).

Together, these large and imposing buildings form one of the most stately and ceremonial public spaces in the Islamic World. Highly affected by harsh climatic conditions, earthquakes, and the wear and tear of time, the then dilapidated monuments were encompassed by the Soviet Government's programme of restoration in 1923. The aim was to revitalise this group of internationally acclaimed Islamic monuments, and to save them from complete destruction.

After preliminary repairs in the 1920's and the 1930's, the most comprehensive restoration of the complex took place between 1967 and 1987, when the Tillya Kari *madrasa* was totally re-constructed. More recently, Tashkent Street, which connects the Bibi Khanum complex to Registan Square, has been converted to a pedestrian mall aligned with new, low-rise, commercial buildings; the intention is to revitalise this ancient shopping street and to create a pedestrian zone between the two important monuments of Samarkand.

II. Context

a. Historical Background

Situated on the ancient Silk Route, in Zarafshan valley, Samarkand is one of the oldest cities of Transoxiana. Also called Maracanda by the invading armies of Alexander the Great in the fourth century B.C., the city was a fortified town to the north of present day Samarkand and was then known as Afrasiyab. After Alexander the Great, Afrasiyab and other regions of Central Asia formed part of the Seleucid Kingdom.

The Arabs conquered Afrasiyab in 712 and it became the centre of struggle for liberation from the Caliphate. This period witnessed urban expansion and many mosques, bath-houses and *madrasas* were built within the boundaries of the city. During this period, the area to the south, which is the present day Samarkand, was still cultivated land and provided the agricultural products for Afrasiyab. In the spring of 1220, when the hordes of Genghis Khan over-ran the Zarafshan valley and destroyed the city of Afrasiyab, the central functions of the city were moved south, into the plains that had once been agricultural land. The new city of Samarkand began to be formed.

From the end of the 14th Century to the middle of the 15th Century, Samarkand witnessed economic, political and cultural development as the capital of the Timurid Empire. In 1371-72, the city was surrounded by a massive wall 7 km in length with six major gates. On the western edge of the town, on a slight hill, was built the citadel, with 8 m high walls, to protect the *Kok Sarai*, Timur's famed palace-residence. Registan Square became the official centre of the city where royal decrees were proclaimed and public executions were held. It was during this period that some of the most impressive monuments of the city, such as the mausoleums of Shah-i-Zindeh, Bibi Khanum and Gur-i-Amir, were built. Timur's death in 1405 led to internal strife and feudal unrest.

After five years of struggle for power between his descendants, his son Shahrukh ascended the throne, but chose to live in Herat. In 1409, Shahrukh passed the rule of Transoxiana and its capital city Samarkand to his son Ulugh Beg. Until his assassination in 1449, Ulugh Beg developed Samarkand into an important centre of culture and medieval science where many prominent astronomers, mathematicians and scientists met and discussed their theories. The young ruler, who himself was an astronomer, poet and scholar, embellished the capital with further monuments during his reign. His *madrasa*, which forms part of Registan Square, was conceived as an ensemble that also included a *khanaqah*, a caravanserai and a mosque.

Half a century of internal strife followed the death of Ulugh Beg in 1449. Samarkand became the capital of the Shaibanids in 1500 and remained so until the end of the 16th Century. During this period, the city retained prominence as the economic and political centre of the region. The Uzbek Astarhanide dynasty ruled Samarkand during the first half of the 17th Century. Its leader Yalangtash Bahadur replaced Ulugh Beg's caravanserai at Registan Square with the Tillya Kari *madrasa*. The *khanaqah* was replaced by the Shir Dor *madrasa*. Today these three monumental buildings form the main composition of the renowned Registan Square.

At the beginning of the 19th Century when separate *khanates* began to emerge in Turkestan and when Bukhara, Ferghana and Khiva became separate entities, Samarkand was absorbed in the *khanate* of Bukhara. Towards the mid-19th century, the city became part of the Russian Empire. The take-over of the town by the Czar's armies caused considerable damage to the historical monuments, including those at Registan Square.

In 1868, Samarkand was made the administrative centre of the Zarafshan district and, in 1887, the centre of the Samarkand region. This also marked the beginning of colonial architecture in the city. The re-planning of Samarkand during these years was very similar to the colonial towns of the east. The city was divided into two parts: the native, or old town, and the so-called new European town. In the new districts of the city, 19th Century European eclecticism was preferred to the Central Asian building styles. A new, radial street system was created within the new city. In the meantime, Timur's citadel was also occupied by the Czar's soldiers and drastically altered.

After the October Revolution of 1917, the Uzbek Soviet Socialist Republic was formed with Samarkand as its capital between 1924 and 1930. In 1930, Tashkent was made the new capital and Samarkand continued to live on as a provincial centre of industry and culture with its large university.

Local Architectural Character and Immediate Surroundings

Registan Square, which constitutes the historical centre of Samarkand, lies at the junction of two important new arteries: Registan Street to the south and Tashkent Street to the east. Other than these recent thoroughfares, the housing districts around Registan Square have retained their traditional urban character, with irregular pedestrian streets and *cul-de-sacs*, occasional small timber mosques which have been dispersed regularly throughout the homogeneous fabric, and single or two-storey courtyard houses whose roofs have recently been covered with metal sheeting.

This fabric, which apparently has encircled the Registan Square area for centuries, was cleared from the immediate vicinity of the monuments during the 1950's, laying bare the surrounding areas of Registan Square. This gave the complex a different sense of scale and made it possible to observe the monuments from a distance. To the south of the square, on the other side of Registan Street, the traditional fabric was destroyed and replaced with 4-5 storey, rectangular apartment blocks. Further to the west, beyond Dagbitski Street, lies the devastated historical citadel area, part of which is built over with high-rise government buildings in modern glass and concrete.

The Registan Square monuments, as well as the traditional housing districts around them, are largely built of brick. Where timber is used (columns, windows, doors and balustrades) it is either painted or left untreated. The metal roofs of the houses have mostly rusted under heavy winter conditions, and this gives an untidy look to the environment. The large, rectangular form of the museum building on the east side of Tashkent Street also competes with the masses of the monuments in Registan Square.

The present Tashkent Street is a widened version of the historical bazaar street of Samarkand which used to connect the Bibi Khanum complex just inside the Tashkent gate of the city with the Registan Square at its centre. Cutting through the traditional fabric as a major shopping street, it has always been a busy thoroughfare of Samarkand. Today, it has been converted into a pedestrian mall aligned with old and new buildings.

Factory-made brick, yellow in colour, is the predominant building material. It is used with consistency on façades to achieve coherence among diverse structures from different periods and of differing materials and styles.

c. *Climatic Conditions*

At an altitude of 150 m above sea level, Samarkand has a continental climate with large variations in temperature. During the hot and dry summers, temperatures may rise to 41°C, while in winter light snow and -25°C temperatures are common. The average yearly rainfall is around 380 mm and the main wind direction is from the east and south-east, at an average speed of 5-10 km per hour.

d. *Topography*

Samarkand is built over 15'000 hectares of undulating land at the foot-hills of Tien-Shan mountains in the middle reaches of the Zarafshan valley. The altitude in the city varies with the topography. The city has an inclination from 750 m in the south-east to 660 m in the north-west.

Registan Square displays several levels, on which the major monuments sit. The general inclination of the site is from east to west, where the Chasma stream, that once skirted the walls of the citadel, is canalised northward in underground pipes parallel to Dagbit Street. Due to this gradual, almost unnoticeable inclination, the Ulugh Beg *madrasa* sits at a level which is almost 2.5 m lower than Shir Dor and Tillya Kari *madrasas*. Registan Street to the south is almost 5 m higher than the level of the square, to which the land descends in landscaped terraces.

III. Description

a. *Background to the Project*

At the initiative of Lenin, the Soviet State took responsibility for the protection of architectural monuments in Central Asia immediately after the 1917 October Revolution. Conservation and restoration were placed on a scientific basis. Prominent researchers, engineers and designers were invited to participate in the restoration project; among them V. Shukhov, V.V. Yarkin and M. Masson. Many well known traditional craftsmen also participated in the work. Abdulkadir Bakiyev, Shirin Muradov, Abdullah Baltayer and others helped revive the traditional arts in Samarkand.

With the rediscovery of lost techniques for the manufacture of coloured tiles, it was possible to restore the monuments not only in Samarkand but also in other Turkestan cities. Given its importance as the main public square of Samarkand since the 15th Century, restoration work on the Registan ensemble began as early as 1923. Early restoration works were realised by a group of local craftsmen and masters born before the Revolution. This group constitutes the first teachers to teach how to work with traditional means.

Many prominent engineers and architects taught at the restoration school established in Registan Square in 1940; however, the school was closed in 1942 because of the Second World War. Later, the students of the school continued to be taught by elder craftsmen and masters.

The most recent official centre for restoration was established 12 years ago in Tashkent. It is known as the Uzbek Research Institute for Restoration (UZNIP) whose director is Professor Zakhidov. Recent restoration work carried on in Registan Square between 1967 and 1987 has concentrated on Tillya Kari *madrasa*.

b. General Objectives

- Restoration and rehabilitation of the Registan Square complex, which is invaluable not only as the historical centre of Samarkand but also as one of the most stately and monumental examples of urban design in the history of Islam.
- Consolidation of the monuments in Registan Square, which have suffered from the ravages of time and the harsh climate.
- Reconstruction of parts of these monuments that have suffered total destruction, such as the dome of Tillya Kari *madrasa* and the upper floor of Ulugh Beg *madrasa*.
- Installation of the missing decorative, ceramic tiles, glazed *majolica* and carved *kashi* in-lay on the exterior walls, and the carved stucco, gilding and paintwork of the interiors.

c. Functional Requirements

- After restoration, the Registan Square complex has become a popular tourist attraction, with regular light and sound performances for 20'000 spectators on summer evenings. The square is also used for folk festivals.
- Tillya Kari *madrasa* houses the offices of the Inspectorate for the Protection of City Monuments of Samarkand. Part of it is also used by a group of designers from the Uzbek Institute of Restoration, in Tashkent. A permanent exhibition on the history of the restoration of the Samarkand monuments has been installed in the mosque. In the courtyard, several rooms of the *madrasa* have been transformed into souvenir and craft shops to cater for visitors. The building is expected to be given back to the Muslim community for use as the *juma* mosque.
- The Ulugh Beg *madrasa*, where restoration work is ongoing, is expected to be used as a centre of Oriental Studies.
- The Shir Dor *madrasa* has been converted into a cultural centre where there will be art studios. The courtyard is used for open-air concerts.

d. Building Data

The Registan complex is composed by the large, rectangular masses of Ulugh Beg, Shir Dor and Tillya Kari *madrasas*, that close three sides of an almost square open space which is known as the Registan Square (Place of Sand). The total complex covers an area approximately 250 m x 250 m, or approximately 6.25 hectares. All three *madrasas* on the site have a rectangular plan with a central open court; the longer axes lie east-west.

Each of the three *madrasas* have their entrance from the square, in the form of an imposing portal with a high *pishtaq* and a deep *iwān*. The portals are covered with polychromatic ceramic tiles. Ulugh Beg and Shir Dor *madrasas* have rather flat side and rear façades with polychromatic glazed-brick decoration. Tillya Kari *madrasa*, to the rear, has an extrovert front façade with has a series of small, *iwān*-type balconies on two floors. This aspect emphasises the importance of the façade. Ulugh Beg *madrasa* is 58 x 76 m in size, Shir Dor *madrasa* is 60 x 72 m and Tillya Kari *madrasa* is 50 x 73 m. Combined, the monuments total 6'100 m² of built area.

e. Structure, Materials, Technology

Interventions

The three major monuments of Registan Square were heavily damaged due to long centuries of earthquakes, and the natural decay of materials due to the extreme temperature differences of the

region, as well as the economic difficulties of the past two hundred years which prevented proper maintenance of the monuments.

In the Ulugh Beg *madrasa*, the whole of the upper floor, together with the four domes on the corners, was completely destroyed. External and internal portals were partially destroyed. The main portal was in a dilapidated state and the two minarets that flank the main portal were dangerously inclined. Two other minarets were partially destroyed. Almost 70% of the tile work on the façades had fallen.

In the Shir Dor *madrasa*, the vaults above the first floor rooms were destroyed together with part of the arched *loggias*. The main portal was in a ruinous state and almost 70% of the tile decoration was lost.

In the Tillya Kari *madrasa*, the main portal, together with the tile - covered dome over the prayer hall, had been destroyed by earthquake. The small chambers were in a ruinous state. A substantial amount of the polychromatic tile-work was also lost. In all of the monuments, rising ground water has created problems.

The process of restoring the Registan monuments began early in 1923, with major repairs and reinforcement of the structures. In 1932, the north-eastern minaret of Ulugh Beg *madrasa* was straightened. The south-eastern minaret was consolidated in 1965.

After the rediscovery of lost techniques for the manufacture and fabrication of tiles, most of the missing tile decoration was restored. Unfortunately, tiles were fixed to the reinforcement layer of concrete plaster, which held dampness inside and weakened bondage with the tiles. The restoration work on Ulugh Beg and Shir Dor *madrasas* continued after 1956, particularly the consolidation of the walls and completion of the tile facings. Between 1967 and 1987, Tillya Kari *madrasa* was completely restored. The dome of the mosque and the *pishtaq* of the grand portal were structurally reinforced with ribbed, ferro-concrete skeletons which were covered with bricks both inside and outside.

The square and surrounding areas were cleared of debris accumulated over centuries and approximately 120'000 tons of earth to a depth of three metres was removed, laying bare the original pavement of the square. While the site was cleared of accumulated earth, the underlying service lines, such as water, sewage, gas, electricity, and telephone, were diverted and the central plaza was cleared of service networks.

Tashkent Street, the major shopping street between the Bibi Khanum complex and Registan Square has been considerably altered since the 1950's. Some of the less important historical buildings such as the caravanserai at the south end of the street - which has been transformed into (USTO) Crafts Workshops - and the adjacent small *madrasa* have been incorporated in the renovation project. The historical Bibi Khanum *madrasa* and the mausoleum across from the mosque are also being re-constructed according to the excavation results in the area. The series of small shops and most of the old buildings that lined the street have disappeared. A few buildings built by the Russians during the 19th Century are incorporated in the design. The project aims to visually enclose the empty areas on the street, as well as around the monuments of Registan Square and Bibi Khanum mosque. These areas were demolished during the 1950's, to clear around the monuments and make them more visible from a distance.

Materials

The structural consolidation of the monuments in Registan Square used rubble stone and cement mortar at foundation level. Local brick, which replicates the original brick, is used for walls and superstructure. The same brick is also used as roofing material, again to replicate original conditions. Gypsum mortar is used for bonding. The use of reinforced concrete wall plaster to hold tiles in place can be observed on the lower levels of Ulugh Beg *madrasa*. This technique, which was used during earlier restoration efforts, has now been abandoned.

During the more recent restoration of Tillya Kari *madrasa*, a ribbed ferro-concrete structure was utilised inside the dome and inside the *pishtaq* of the main portal to strengthen the building

against earthquake. Ancient timbers from the monuments are cleaned by local craftsmen and the missing parts are completed to match with the existing models. Replicas are produced for the missing timber elements.

Pavements are restored according to existing examples with marble and square bricks. On Tashkent Street, the historical monuments are being restored according to the same principles employed in the restoration of the Registan monuments. New buildings are usually executed in reinforced concrete. Infill is of yellow coloured brick, as a reminder of the traditional building material of the town. Simple, decorative brick courses, the occasional use of turquoise glazing and simple, *muqarnas*-type corner treatments are used consistently to give the street an homogeneous appearance and quality.

Landscaping is deliberately simple and consists of surface pavement in stone and brick, flower boxes in concrete, bench seating and street lamps purpose-designed and executed from sheet metal. Timber posts with traditional, carved decorations are employed in the open-air terraces of the *chaykhanas*, built at various points along the street.

Decoration

The Registan monuments are renowned for the polychromatic tile decoration of their façades. These consist of blue-green and white glazed early examples, which are predominant in Ulugh Beg *madrassa*, and of more colourful examples developed in the 17th Century, under the influence of the Safavids. After laboratory analyses of the original clays and glazes, the tiles for early restorations were reputedly re-produced unsuccessfully in a ceramics factory in Ukraine. Local craftsmen were more successful in creating new tiles which have been employed in later restoration work.

For the restoration of the decorated brick walls, monochromatic glazed bricks were also produced locally, with a slight degradation of colour, to distinguish new materials from the originals. This kind of tone difference does not exist in the polychromatic ceramic tiles or the carved *kashi* inlay. The interior of the prayer hall at Tillya Kari *madrassa* is highly embellished with hand-painted floral designs and geometric patterns. The walls of the domed chamber and the dome are painted and gilded according to original samples. Mineral paints are employed for interior paintings of the restored buildings. Painted and gilded areas within the Tillya Kari mosque total almost 1000 m².

g. Origin of Technology, Materials and Expertise

Technology

One of the main aims of the project is to revive the traditional crafts of the region and to train new craftsmen in traditional techniques. When the restorations began in 1923, local, traditional master craftsmen were employed to train younger disciples to continue the work using the same, traditional techniques. Recently, with the establishment of the crafts workshops of USTO in the historical *caravanserai* at the southern end of Tashkent Street, this aim has been fulfilled.

The carpentry workshops which revive the traditional wood-working techniques are situated on the outskirts of the town. Even though traditional techniques and materials have largely been employed in the restoration of the monuments, occasionally more contemporary techniques have been used, such as reinforced concrete and ribbed concrete dome skeletons, hidden behind traditional brick facings. In the Tashkent Street project, both old and new building techniques have been employed.

Materials

Local stone, brick and gypsum were used in the entire restoration process of the Registan Square monuments. The ceramic tiles, glazed *majolica* and carved *kashi* inlay were also locally produced by Uzbek craftsmen. Gypsum mortar replaced the traditional earth mortar as bonding material

for the bricks. The decorative, vaulted stucco ceiling of the Tillya Kari mosque with *muqarnas* ornament was also restored to its original condition.

Labour and Expertise

For the Registan Square area restorations, approximately 25% of the labour force consisted of local skilled workers, craftsmen, and master craftsmen. Unskilled labour also came from Samarkand. Experts were supplied from the capital. Among them, the engineer E. Gendel came from Moscow and the painter A. Stupin from Leningrad for the last phase of the restorations. During the earlier stages of the programme, a larger number of Russian experts were involved to prepare drawings, make excavations and collect necessary information. For the ongoing Tashkent Street project, the total work force, including the experts, are of local origin. Around 20% of the workers are expert artisans. Among them are Abdulgaffar Khakkulov and Anwar Kuliev who also worked on the Registan Square restorations.

IV. Construction Schedule and Costs

a. History of the Project

Interest in the preservation of the architectural heritage of Samarkand and Central Asia dates to immediately after the October Revolution of 1917, when the Soviet State took responsibility for the protection of architectural monuments in Samarkand. Restoration projects were prepared by some of the most prominent engineers, designers and researchers of the period, such as V. Shukhov, M. Mauer, V. Vyatkin, V. Shiskin, V. Zasipkin, M. Bochinsky, and M. Masson. Well known local artisans such as Abdulkadir Bakiyev, Shirin Muradov, Abdulla Baltayer, Kuli Djalilov and Shamukhitdin Gafurov took part in the work. Structural reinforcements and major repairs commenced in 1923. Initially, restoration work concentrated on the Ulugh Beg *madrasa*. This was hindered by the Second World War. The bulk of the restoration work was carried out between 1967 and 1987, when the Tillya Kari *madrasa* was exhaustively restored.

The Tashkent Street project is a more recent venture that aims at the reconstruction of the historical core of Samarkand which was largely demolished between 1950 and 1970. It is planned to convert the historical commercial street of the city into a pedestrian alley with old and new buildings incorporated into one coherent whole. Since 1950, there have been several projects for the reconstruction of the historical core of Samarkand. These were prepared by a variety of architectural organisations within the Soviet government, such as CNIAP6 in Moscow, Lenproekt in St.Petersburg, CNIIP for tourist affairs in Moscow and UzNIIP6 in Tashkent.

These projects were mostly rejected due to their shortcomings. The design for the new project, which covers an area of 50 ha, started in 1983. Project implementation commenced in 1984 and the first phase was completed in 1989. The project is ongoing.

b. Total Costs and Sources of Finance

The total cost for the restoration of the Registan Square monuments between 1967 and 1987 is SUR 1'200'000 allocated from the state budget of the USSR. Ninety per cent (90%) of funds came from the national sources and 10% from local sources. The cost of the earlier restorations is not available. The total cost for the Tashkent Street project (1983 - 1989) is SUR 5'300'000. Eighty per cent (80%) of these funds are from local public sources and 20% from private sources.

c. *Analysis of Costs*

The total budget of SUR 1'200'000 for the restoration of Registan Square monuments is distributed as follows:

Soviet Union Roubles	
Infrastructure	300'000
Labour	120'000
Materials	444'000
Landscaping	200'000
Professional fees	36'000
Other	100'000

For Tashkent Street, the budget is distributed as follows:

Soviet Union Roubles	
Infrastructure	900'000
Labour	1'000'000
Materials	2'000'000
Professional fees	1'100'000
Cost per m ²	150

USD = variable SUR, Soviet Union Roubles (SUR 1.1 to SUR 1.65 between 1967 and 1987).

V. **Technical Assessment**

a. *Functional Assessment*

Registan Square, with its historical monuments, functions as an open-air museum. The courtyard of the Shir Dor *madrasa* is used for open air concerts but the intended art workshops in the courtyard chambers are yet to be opened. As the restoration work continues in Ulugh Beg *madrasa*, the Oriental Studies Centre does not yet operate, except for occasional exhibitions in the garden. The Tillya Kari *madrasa* has several souvenir shops in the spaces that give onto the courtyard. Some of the exterior rooms are occupied by the offices of Uzbek Institute of Restoration in Tashkent. The mosque houses a permanent exhibition on the restoration of Samarkand monuments; however, the Muslim community will soon have use of the structure when the mosque assumes its original rôle. The 18th Century Char-Su shall in turn be restored.

Tashkent Street, now a pedestrian mall, is one of the busiest arteries of the city. People of all ages meet on this street to shop and socialise. The absence of traffic, the placement of benches, and the location of several *chaykhanas* at various points give the street particular appeal for recreation.

b. *Choice of Materials, Level of Technology*

Materials for the restoration of Registan Square monuments have been produced according to existing examples. The glazed tiles and *kashi* inlay, in particular, are quite expert. The bricks and the timber elements are also reproduced to accord with the ancient examples; thus, the technique and materials employed in the restoration are all traditional, except for occasional use of reinforced concrete, which has demanded more sophisticated technology. The materials employed in Tashkent Street are also traditional, with the exception of metal sheets in garden fences and in street lamps.

c. Ageing and Maintenance Problems

Seepage of rain-water from roofs is due to the crumbling of the protective brick layer; this is a problem which needs to be resolved. The new glazed tile dome of Tillya Kari *madrasa* is overgrown with weeds because of birds who peck and break the glaze, and seed the area with excrement. Ulugh Beg *madrasa* is in need of urgent repairs due to the missing upper level, which lets in rain-water. The walls have large cracks and undulations and are seriously inclined. On the roof of the Tillya Kari *madrasa*, the cast-iron tie bars that hold the *pishtaqs* in place are rusted and need to be replaced.

VI. Users

a. Identification of Users

Registan Square was used as a meeting place and a bazaar area in ancient times. Today, it is mainly visited by tourists who want to study its historical content. With the sight and sound programme, it serves approximately 20'000 spectators a day on summer evenings. However, the most impressive use is during the *Eid* prayer when it is open not only to the citizens of Samarkand but also to the Muslim population of the surrounding countryside, who arrive in bus-loads, to perform this important ritual twice every year. Tashkent Street is also used not only by the citizens of Samarkand but also by the people of the surrounding villages.

b. Response to Project

The Samarkand citizens and the people of Uzbekistan are particularly proud of the restoration of the Registan Square monuments, which they feel are extremely important for their national and historical identity. Since 1950, several projects for the revitalisation of the historical centre of the city have been prepared by various organisations in Moscow, Saint Petersburg, Tashkent and Samarkand. Since the dissolution of the Soviet States, the client for the project has changed. Different opinions have been expressed about these various projects and how appropriate they may be for the historical centre. The present client is the mayor of the Siab region of the City of Samarkand. The present project is considered as the most appropriate project for the historical character of the town. It has financial support from the mayor's offices. The citizens, however, seem to be unaware of architectural deliberations.

VII. Persons and Institutions Involved

a. Client

- Chief Board for the Protection of Monuments of Uzbek SSR Ministry of Culture (prior to the dissolution of the USSR).
- Farouk Hashimov, Mayor of the Siab region of the City of Samarkand (after the independence of Uzbekistan).

b. *Architect*

Russian and Uzbek experts and local craftsmen, and various consultants - too numerous to name, have contributed to the restoration of the Registan monuments at various periods. The following are the names of those who were involved with the project after 1960:

- Pulat Sh. Zakhidov	Architect	Tashkent
- Konstantin S. Krukov	Architect	Tashkent
- Nematjan Sadikov	Architect	Samarkand
- Abdulgaffar Khakkulov	Master craftsman	Samarkand
- Anwar Kuliev	Craftsman	Samarkand.

The experts who were involved with the reconstruction of the Tashkent Street are:

- Nematjan Sadikov	Architect	Samarkand
- Usta Nasrullah	Craftsman	Samarkand
- Abdulgaffar Khakkulov	Craftsman	Samarkand
- Anwar Kuliev	Craftsman	Samarkand
- Ergash Abdulraupov	Craftsman	Samarkand.

Yildirim Yavuz
Samarkand, May 1992