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Top: Bakikhanov Bridge near the Hyatt Hotel passes over Tbilisi Avenue. Above: Baghirov Railway Bridge (underpass) on Heydar Aliyev Avenue (formerly Moscow Avenue) on the route toward the airport. This underpass was built in 1953 because Mir Jafar Baghirov, First Secretary of Communist Party and Stalin's right-hand man in Azerbaijan, got stuck waiting for a train to pass while he was rushing to the airport. Baku has fewer than half a dozen overpasses and underpasses. Bridges are essential for facilitating traffic flow.

the necessity of pulling over to the side of the road and stopping to let emergency vehicles pass, etc. The widespread repetition of public announcements would go a long way to educate the general public, raise safety standards and facilitate traffic flow.

LONG-TERM SOLUTIONS

After short-gap measures are put in place, more thorough studies should be carried out and fundamental long-term plans should be implemented.

Fundamental reforms and changes are needed to Azerbaijan's municipality to make it an effective governing body. Presently, the mayoral position is an appointed post and there is no Advisory City Council to support the immense job of governing the city. No doubt these are national political issues that must be decided on a governmental level. Establishing a system of accountability of officials is critical to the efficient administration of any city.

Departments in the mayor's office relate to architecture, planning, engineering, public works and building construction. However, the guidelines under which they work continue to be based on outmoded Soviet models and Soviet styles of management. Baku needs modern, well-trained managers, administrators, engineers and architects to lead the city. It is a well-known fact that corruption runs rampant throughout all levels of City management. Such a situation precludes the ability of the City to function with integrity and leaves the entire population exposed and at enormous risk because safeguards in the building process have not been followed. The following suggestions could lead to strengthening these governmental entities.

1. BUILDING AND SAFETY DEPARTMENT (B&SD)

The current crisis within the City provides ample proof that Baku's Building and Safety Department does not function well. No city can develop unless such responsibilities are assigned to an integral part of the governing infrastructure and are strictly adhered to and followed.

It is the Building and Safety Department, which must take on the responsibility of issuing Building Permits and in providing controls, related to the safety and compliance of all construction. It is their responsibility to enforce building regulations through a system of Plan Checks and Inspections at every major step of the construction process.



In essence, such a vital department does not exist in Baku today. A Building and Safety Department should be created that truly functions in this capacity. The key to its success would be in hiring recently trained technical staff, who are both knowledgeable and conscientious. Perhaps their training could take place in one of the major cities such as Los Angeles or San Francisco, which deals with seismic conditions similar to Baku's. Such possibilities should be explored.

2. MASTER PLAN

Baku needs a modern Master Plan like every other well-functioning cosmopolitan center. The Master Plan should be designed to provide guidelines and a working basis for the city's present requirements, as well as its future needs and development. During this past decade, Baku's existing Master Plan has neither been adhered to, nor has it been updated to reflect the reality of an independent nation based on an entrepreneurial market economy.

Construction and development activities that are currently being implemented have not followed the existing Master Plan. For example, even public parks and open public spaces are being privatized and built up by private developers! Zoning Ordinances have completely been ignored which regulate and deal with issues such as urban densities, building heights, and the land use of residential, commercial, public buildings, industrial areas, parks and green zones.

A carefully thought-out Master Plan would provide direction so that the city could make critical decisions that benefit the population as a whole. The most efficient way to create a Master Plan would be to create a commission, comprised of expert consultants in Architecture and Planning Engineering from the private international sector. Such professionals should be chosen who could bring considerable experience and expertise to this complex task.

Model cities should be studied. For example, the city of Dubai (United Arab Emirates) is an excellent example of how a rather simple, small city has been transformed into an incredibly sophisticated and dynamic international cosmopolitan within less than 30 years. China is another example of a country, which is undergoing major urban development and is in the process of total transformation. In the process, China has hired some of the world's top experts in the fields of architecture, planning and engineering.

3. BUILDING CODES (REGULATIONS)

Azerbaijan desperately needs to adapt modern National Building Codes, which would satisfy contemporary needs. A commission consisting of well-



Top: Ceremonial funeral tents are often erected in the narrow streets in front of the apartment buildings of the deceased. Such practices are viewed as normal despite the fact that traffic may be obstructed from one to three days. Since Baku is becoming so densely populated, this tradition could be carried out in designated halls inside buildings which could accomodate such crowds.

Above: Parking—double, triple, angular, irregular or "anyway you can"—is one of the primary causes of traffic jams in Baku. Such parking is so commonly an accepted practice that it even goes unnoticed and unticketed by the traffic police. The Baku Municipality has not yet designated parking spaces on the streets or introduced parking meters—both of which would help establish some order to this chaotic situation.

trained and experienced architects, planners and engineers should be created and new Azerbaijani Building Codes should be formulated.

In this regard, it's not necessary for Azerbaijan to "reinvent the wheel". Azerbaijan can draw upon the global achievements in architecture, planning, engineering, as well as the building and construction industry. Building Codes could be studied and evaluated that have been successfully implemented in other exemplary modern cities throughout the world, especially those which mirror seismic conditions similar to Azerbaijan's.

For example, the California chapter of Uniform Building Code (UBC) could provide a basic model since it already addresses serious seismic conditions. Then these regulations could be modified to take into account specific variances and differences in Azerbaijan, which relate to architectural style, culture, climatic and environmental factors.

4. NATIONAL STANDARDIZATION

There is an urgent need to establish a National Institute of Standardization in Azerbaijan. Such an institute would be responsible for the regulation of every product that is marketed in the country, whether it be produced locally or imported from abroad. Every product would require the Institute's certificate ascertaining that it had met the required criteria for quality and safety. Building materials such as cement, steel and glass would need licensed approval from this Institute.

This nationally recognized agency would test all products in its departmental labs in every field from pharmaceuticals to building materials and electrical appliances to ensure that each product fulfilled its stated function and met safety requirements. Such an authority would seek to prevent unsafe, substandard goods from being dumped on the market in Azerbaijan.

5. AESTHETICS

Many of the newly designed buildings lack from good architectural design, especially in terms of the massing (forms and proportions) of buildings. In addition, there are situations when the design bears no relationship to its cultural or architectural context. Buildings are often finished with cheap, low quality materials such as stucco claddings painted in a range of bizarre colors. This results in a strange cluster of eclectic buildings, which offer no sense of unity and cohesion in relationship to their context. Given Baku's rich architectural heritage, this is extremely unfortunate and disappointing.

An effective, well qualified Architectural and Planning Commission could help to remedy this problem and raise the level of aesthetics in building design throughout the city. Such a commission would have the responsibility of approving each project at the initial stage of every project, and of organizing public

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Fortunately, some of Baku's early 20th century residential buildings are being restored. A Commission for the Preservation and Restoration of Baku's Architectural Heritage should be established that actively functions to preserve these fine buildings.

hearings to which the community would be invited. This commission could even draw attention to some of the existing towers and recommend redesign or "face lifts" for those, which have become an embarrassment to the city's appearance. Sometimes major visual improvements can be achieved with minimal changes and expense. For example, merely repainting the facade or re-applying higher quality cladding materials can often transform a bad design into one that is acceptable.

6. PARKING

Baku's traffic problem will never be completely resolved until parking requirements for new buildings are enforced. Building Codes should stipulate the minimum parking requirement that each building must provide. For example, in the US, the Uniform Building Code (UBC) requires two covered parking spaces per single-family dwelling. The same requirement is applicable for multi-unit apartments. Additional parking is also calculated for Visitor and Handicapped Parking. Generally, office buildings require three parking spaces per 100 square meters, and three to five spaces are mandatory per 100 square meters of retail commercial buildings.

But this does not solve the parking dilemma for hundreds of buildings that have already been erected, whose developers did not provide parking for their residents and clients. For these situations, the city should construct public parking structures in the city center, funded by those building towers, which did not make adequate plans for parking. Residents could rent long-term, permanent parking spaces and thus provide additional revenue for administering the city.

Once sufficient public parking spaces were provided throughout the city, designating "Restrictive or Limited Drive Zones" in the city center or applying "Congestion Fees" for private cars could also alleviate heavy traffic in the center of town.

Such cities as London and New York have recently implemented these practices and begun charging tolls when cars are driven into certain districts of the city. Cities are discovering that, indeed, such practices really do cut down on the complications brought on by everworsening traffic and pollution. There are many advantages: traffic is reduced, speed is increased, noise level is decreased and pollution reduced. At the same time, funds are raised to help sustain the administration for the city.

7. TRAFFIC FEASIBILITY STUDIES

A comprehensive Transportation and Traffic Engineering Feasibility Study should be conducted. A traffic engineering consultant company with broad international experience and expertise should be hired to tackle such a large-scale project.

The study should seek to find solutions to facilitate the flow of traffic, recommend efficient methods of connecting various districts of city, propose various modes of connectivity via highways, freeways, connector bridges, underpasses and overpasses. Also it should explore

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- 1. "The Terrifying Escape: Eye Witness Accounts of Baku's Metro Accident" by Chris Cannon. Al 3.4 (Winter 1995).
- "Baku's Metro Accident: A Challenge to Strategize" by Pirouz Khanlou and Elisabeth Atwell. Al 3.4 (Winter 1995).
- 3. "The First Car in Baku" by Manaf Suleymanov. AI 7.3 (Autumn 1999).
- 4. "Water: Not a Drop to Drink. How Baku Got Its Water. The British
- Link—William H. Lindley" by Dr. Ryszard Zelichowski. AI 10.2 (Summer 2002).
- Also: "Building Infrastructure: Taghiyev's Commitment to the Water Problem" by Manaf Suleymanov. AI 10.2 (Summer 2002).
- "Baku's Search for Water: A Brief Chronology" by Mammad Mammadov. AI 10.2 (Summer 2002).
- 5. "Architecture: Prominent Oil Baron Mansions. A Glimpse Inside" by Betty Blair and Dr. Farid Alakbarli. Al 13.2 (Summer 2005).
- 6. "The Metamorphosis of Architecture and Urban Development in Azerbaijan" by Pirouz Khanlou. AI 6.4 (Winter 1998).
- "Women Drivers: 'Hey Dragon! Need a Driver?'" by Arzu Aghayeva. AI 11.4 (Winter 2003).
- 8. "Perennial Water Shortages in Baku" by Betty Blair. AI 2.3 (Autumn 1994).
- 9. "Earthquake Rocks Azerbaijan". AI 8.4 (Winter 2000).
- 10. "'Green Goddesses' to the Rescue", SOCAR Section. AI 4.3 (Autumn 1996).



An example of one of the new Metro Liner bus stops in Los Angeles which offers an excellent example of a new public transportation system. Its design incorporates safety, efficiency, comfort and aesthetics. The pavilion provides shelter, illumination, route map, automatic ticket machine, computerized display screen indicating the arrival of next bus, audio announcement system, seating, public telephone and several trash cans.

the possibility of building inner or outer Ring Roads around the city.

Ring Roads are deliberately designed to bypass city centers. They detour vehicular traffic so that it doesn't have to go through the city center to reach its destination. Historically, this is still an opportune time for the Azerbaijani government to undertake the construction of Ring Roads, as much of the land still belongs to the government from the Soviet period and has not yet been privatized.

Baku has three distinct city districts that have been built in concentric rings from the center. The inner core consists of the Old City (Ichari Shahar), dating back to medieval times. The second ring was developed during the Oil Boom period (European architecture of the late 19th and early 20th century). The third, or outer ring consists of those parts of the city that were developed during the Soviet period. Generally called "micro regions", they consist primarily of massive housing projects.

These Ring Roads could first be built in the micro regions. The first Ring Road could connect the district of Ahmadli in the east to Micro Region No. 9 in the west. These Ring Roads could be freeways

with limited entrances and exits so traffic could move quickly. In the future, another Ring Road might be considered even further out on the periphery.

The feasibility study should also evaluate existing public transportation systems and recommend new means of transportation according to both the city's present as well as its future needs.

CONCLUSION

Growth and development are inevitable and denote progress, but they need to be regulated and structured, following a careful scientific approach, which is governed by rules of urban planning and design. Baku has a unique history. The discovery of oil transformed the sleepy little mid-19th century town into a sophisticated cosmopolitan center within less than 40 years (1880-1918). Early industrialists and authorities had the wisdom and vision to understand the limitations of their technological competence. That's why they invited experts-some of the best architects and engineers that Europe could offer-to help them develop a sophisticated and elegant city, and to seek solutions to the problems that they didn't have experience and knowhow to handle themselves.

Unfortunately, today's reality is quite different. The new Oil Boomers have not followed the judicious path of their ancestors. The present state of affairs bears witness to their negligence.

It's easy to point fingers, placing blame on the present-day municipal leaders, but this will not resolve the issues that Baku faces today. Practical and constructive solutions must be found. A serious disaster in a country as small and fragile as Azerbaijan could bring the country to a halt, resulting in incalculable loss and suffering and making recovery virtually impossible.

Officials and "nouveau riche" developers of this country can fool themselves as much as they want. But their negligence in addressing such issues will not change the bitter truth about Baku's future. One should not be blind to the fact that one day, sooner or later, Nature will insist on abiding by its own rules. Tomorrow may be too late to correct today's mistakes and negligence and avoid catastrophe.

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