

ICOMOS

Report on the ICOMOS Advisory Mission to City of Quito (C 2)

7 to 10 December 2016



TABLE OF CONTENTS

ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

1. BACKGROUND OF THE MISSION

City of Quito

- Geographical location and its seismic condition
- The pre-Hispanic occupation of the territory
- The Hispanic occupation of the territory

Inscription of the property on the World Heritage List

- Justification for retrospective statement of Outstanding Universal Value
- Criteria on which the retrospective statement of Outstanding Universal Value is based
- Integrity and/or Authenticity

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE PROPERTY AS WORLD HERITAGE

- a. International legal framework
- b. National legal framework
- c. Local legal framework
- d. Institutional framework

3. EVALUATION ON THE STATE OF CONSERVATION OF THE PROPERTY

3.1. Metro of Quito

Actions and processes foreseen for the construction of the Metro of Quito

- Final Report on the Archeological Rescue Project of the San Francisco Subway Station, Metropolitan Public Company Metro of Quito
- Alternatives for the location of the stations of the QM in the Quito's Historic Center. Heritage Impact Assessment (HIA)
- Risk management for the proposed work

Final recommendation on the adequate location of the Metro Station in the Quito's Historic Centre

3.2. Management and conservation issues

State of conservation of the property, ICOMOS Advisory Mission in 2013

Integral Management of the property

- Special Plan for the Historic Urban Complex of Quito. First stage
- Prevention Plan, Emergency and Investment Programs. Management of risks in the cultural heritage of DMQ. IMPQ

Ongoing and planned projects

- Compañía de Jesús project
- New public spaces and projects
- Actions carried out by the IMPQ on the effects caused by the earthquakes occurred since April 2016

4. IDENTIFICATION OF THE FACTORS AFFECTING THE PROPERTY

5. EVALUATION OF THE STATE OF CONSERVATION. CONCLUSIONS AND RECOMMENDATIONS

6. ANNEXES

Annex I. Program and composition of mission team

Annex II. WHC Decision 40 COM 7B.5

Annex III. Terms of Reference of the Mission

Annex IV. ICOMOS Technical Review May 2016

Annex V. Geographical location and its seismic condition
Annex VI. The historical occupation of the territory
Annex VII. Analysis of the current Legal Framework
Annex VIII. Antecedents on the archaeological and historical interpretation of Plaza San Francisco
Annex IX. Metro of Quito
Annex X. Compañía de Jesús project
Annex XI. New Public Spaces and projects
Annex XII. Interventions on buildings affected by the earthquakes of 2016
Annex XIII Special Plan Schedule

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The mission also appreciated all the assistance provided by the staff, officials and professionals that accompanied the preparation and the developing of the mission.

To all, thank you very much.

LIST OF ACRONYMS

IMPQ	Instituto Metropolitano de Patrimonio del Distrito Metropolitano de Quito	Metropolitan Institute of Heritage of the Metropolitan District of Quito
INPC	Instituto Nacional de Patrimonio Cultural	National Institute of Cultural Heritage
MQ	Metro de Quito	Metro of Quito
EPMMQ	Empresa Pública Metropolitana Metro de Quito	Metro Quito Public Company
CHQ	Centro Histórico de Quito	Historic Center of Quito
DMQ	Distrito Metropolitano de Quito	Metropolitan District of Quito
FONSAL	Fondo de Salvamento del Patrimonio Cultural	Fund to Save the Cultural Heritage
COOTAD	Código Orgánico de Ordenamiento Territorial, Autonomía y Descentralización	Organic Code of Territorial Ordering, Autonomy and Decentralization
MPDTP	Plan Metropolitana para el Desarrollo y Ordenamiento Territorial 2015-2025	Metropolitan Plan for the Development and Territorial Planning 2015-2025
OUV	Valor Universal Excepcional	Outstanding Universal Value
HIA	Evaluación de Impacto Patrimonial	Heritage Impact Assessment
ICOMOS	Consejo Internacional de Monumentos y Sitios	International Council on Monuments and Sites
TOR	Términos de Referencia	Terms of Reference

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

This report describes the Advisory Mission carried out for the City of Quito, a property inscribed on the World Heritage List since 1978, which was carried out according to the program as provided in Annex I.

The Advisory Mission responds to the request made by the State Party to assess the following aspects recorded in **Decision 40 COM 7B.5** [Annex II], adopted by the World Heritage Committee at its 40th session (Istanbul, 10-20 July 2016).

The Advisory Mission Terms of Reference (TOR) are summarized as follows [see detailed TOR in Annex III]:

Metro of Quito

1. Discuss with the national authorities the appropriate actions which are required in order to ensure the adequate protection of the property and its Outstanding Universal Value (OUV), in the context of the developments foreseen for the construction of the **Metro of Quito (MQ)**;
2. Discuss with the local and national institutions possible **alternative locations for the MQ station proposed at Plaza San Francisco**, each of which should be subject to Heritage Impact Assessment (HIA), prepared in accordance with the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage properties* January 2011, to allow a thorough examination of the proposed options in order to determine which would not adversely impact on the property's OUV, before a recommendation on the preferred location for the subway station is taken;
3. Provide guidance to assist the State Party in addressing issues raised by the ICOMOS technical review transmitted in June 2016 on the **Heritage Impact Assessment (HIA) on the subway station at Plaza San Francisco** submitted by the State Party, including particularly reconsideration of the assessed 'magnitude' of potential heritage impacts.

Management and Conservation Issues

1. Evaluate the current state of conservation of the property including all the actions taken by the State Party in response to the recommendations made by the 2013 ICOMOS Advisory Mission;
2. Assess the overall management and protection arrangements for the property, including the new management and planning mechanisms, having particular regard to the process and timing for updating of the Management Plan for the property;
3. Consider the on-going and planned projects for the property, including the Compañía de Jesús project, to ascertain whether the project proposals might have adverse impacts on the attributes that convey the OUV of the property or on its conditions of authenticity and integrity, and to advise on the preparation of necessary HIAs.

In particular, the above-quoted decision recognizes the interest of the State Party to put into practice the recommendations of the World Heritage Committee, those recommended by the ICOMOS Advisory Mission 2013 and the subsequent technical revisions, and particularly the preparation of the Metropolitan Plan for The Development and Territorial Planning 2015-2025 (MPDTP) that explicitly incorporates the cultural heritage as one of its fundamental principles, and for advancing in relation to the elaboration of the Management Plan for the World Heritage property.

At the same time, Decision 40 COM 7B.5 for the World Heritage property City of Quito recognizes that to date the Metro of Quito project has only been aimed to develop the location of a single station in the City of Quito's historic center (Centro Histórico de Quito, hereafter CHQ) in the emblematic space of the Plaza San Francisco, with no viable alternative proposals.

The Decision recommends the review of previous recommendations for the World Heritage property and the review of the other projects planned and/or executed for the World Heritage property, such as that of the Compañía de Jesús project, taking into account the UNESCO Recommendation on the Historic Urban Landscape (2011).

The previous reports on the state of conservation of the World Heritage property called for integrating the various tools implemented in the safeguarding of the cultural heritage of Quito, generating a comprehensive management system that ensures the governance of the City of Quito in the long term. The reports submitted by the State Party and reviewed by ICOMOS between 2013 and 2016 addressed progress in this regard.

In this period of time, each report shows continuity in the State Party's interest historical conservation, but in an institutional framework that hinders the integral management of the World Heritage property, allowing the development of isolated projects that cause adverse impacts on its Outstanding Universal Value (OUV).

In relation to the above factors, the ICOMOS Advisory Mission proposes the following observations and recommendations:

Metro of Quito

- This Mission had to consider two aspects of the Metro of Quito Project:
 - On the one hand the progress with the works and archaeological studies carried out in Plaza San Francisco, although the World Heritage Committee did not consent to this location of the station and the passing of the subway through the historic center of the City of Quito (CHQ); ICOMOS and this Mission also do not agree with this location;
 - On the other hand, the technical and impact assessment of 11 alternatives¹ (which were narrowed to four possible alternatives) shows this location to be the most viable for the location of the Metro of Quito station in the CHQ;
- As the State Party and its competent authorities decide on the progress of the work, this Mission recognizes the two situations cited and:
 - a. Understands that the location of the Metro Station in Plaza San Francisco is not advisable in the current circumstances, since it puts the World Heritage property's Outstanding Universal Value at risk, and in particular threatens the integrity and the interpretation of the property;
 - b. Evaluates the progress of the work and the projects presented for the work, especially in relation to soil movements and seismic events;
- It is possible that the construction of the Quito metro, in the medium and long term, would lead to a reduction of risks regarding physical aspects of attributes such as environmental pollution and mobility, and that this favors the conservation of the OUV, as it would in any of the other locations evaluated. However, the social and historical aspects of the World Heritage property's attributes which contribute to its OUV are affected by and overlooked due to political and administrative pressure, which in the long term, will affect the OUV of the CHQ.
- It is recommended to immediately implement communication and broadcasting mechanisms to reduce disinformation levels on activities in the area of the square, regardless of the final location of the subway station;
- It is recommended that Anomaly 1 *in situ* be preserved and put into value, accompanied by its respective interpretation property;
- It is recommended to implement the recommendations of the 2017 Heritage Impact Assessment (HIA) report, in order to ensure verification of its assertions regarding the evaluation of the construction of the MQ and its coming into operation; a process that would show the State Party's interest to demonstrate the governance of the World Heritage property;
- **It is suggested that the State Party generate the necessary plans and projects to mitigate the many urban and architectural impacts, as well as the historical-social and economic-social impacts indicated in the aforementioned HIA Report.**
- It is necessary to establish a Committee integrated by Metro de Quito, ICOMOS and Quito's Instituto Metropolitano de Patrimonio (IMPQ) with the responsibility of daily reviewing operations and measures of instrumentation system. This Committee should have the ability to interpret and adjust during the work if the behavior of the excavation is not as expected, documenting its actions on a weekly basis.
- It is recommended to implement a system of geotechnical instrumentation and movement control, at the station to be built immediately before Plaza San Francisco, to measure and compare structural movements. The results of this study should be shared with the World Heritage Centre before starting the construction of the Plaza San Francisco station.
- It is suggested to take into account the recommendations made regarding control of soil displacement criteria, the addition of monitoring along the alignment of the tunneling machine and in the significant buildings of the area, as well as the action plan for seismic or construction eventualities.
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¹ Av. 24 de Mayo, a la altura de Venezuela y García Moreno, Plaza de San Francisco, Plaza de Santo Domingo, Plaza Grande, Estación de La Marín, Plaza del Teatro Sucre, Parque Gabriel García Moreno, Extremo Sur del parque de La Alameda, Intersección entre Av. 24 de Mayo e Imbabura, Plaza de Santa Clara, Plaza de la Merced

- It is requested to ensure an adequate depth for the installation of inclinometers, to avoid rotation and movement of their bases (i.e. to provide relevant measurements, the inclinometers must be installed deep enough to achieve base fixity). It would be desirable to verify the installation and measurement process of the inclinometers (and other monitoring systems) in the station nearest to Plaza San Francisco – before construction in the Plaza begins – and submit said data to the World Heritage Centre for the consideration of ICOMOS.

Management and conservation issues

Special Plan for the Historical Urban Set of Quito. First Stage

Previously referred to as the Plan Metropolitana para el Desarrollo y Ordenamiento Territorial 2015-2025 (or Management Plan), and now called Special Plan for the Historic Urban Complex of Quito (herein “Special Plan”), its elaboration has been divided into a first stage of Diagnostics, a second regarding the Proposal and Development of Strategic Lines of Action and a third one for the Management Model.

- Progress has been achieved in the development of the Special Plan in its First Stage, its theoretical approach and methodology. It is urgent to complete its drafting by strengthening the attributes and values of the property - particularly of those that support the Outstanding Universal Value, and the administration and legislation instruments;
- As an authority of mixed application among Nation and Municipality has been chosen - Instituto Nacional de Patrimonio Cultural (INPC) and the Instituto Metropolitano de Patrimonio (IMPQ) - it is strongly recommended to urgently define the administrative procedures for the World Heritage property so as to allow the sharing of decisions and reports, not to confront them, in order to guarantee the governability of the property;
- It is recommended to complete the process of updating the legislation and to avoid modifications that affect the management quality of the World Heritage property, understanding that both politicians and technical experts are needed for its conservation;
- It is suggested to define and consolidate the historical framework of the city in terms of its urban evolution and the historical density of the territory, giving importance to the overlapping of cultures that this entails, encompassing its tangible and intangible heritage. Both INPC and IMPQ have precedent background research on the subject that it would be essential to systematize together;
- It is proposed that the inventory system of the cultural property of the IMPQ be applied in the deepening of the analysis of the urban shape of CHQ - axis, plots, fabric - allowing its use not only at a theoretical or descriptive level, but as an analysis, control and management tool for future projects and interventions. It should be remembered that the CHQ is to be managed from a cultural and urban perspective at the same time;
- The importance of housing typology within the Special Plan is reiterated, both in its analysis and in its strategic management, since it focuses on concepts of co-responsibility in heritage conservation, sustainability and resilience;
- As far as possible, the retrospective statement of OUV of the World Heritage property should be incorporated at the beginning of the First Stage, and each System should have a closing summary, which can be linked to the proposed strategic lines, and the development of future stages;
- It is suggested to highlight in the diagnosis the seismic vulnerability of the property and its conditions, incorporating specific design requirements for historic buildings according to their construction system and materials, in connection with the provisions of the Ecuadorian Code of Construction for new constructions according to the seismic zones, and incorporating the current risk management measures that the Municipality already has;
- It is suggested to integrate worldwide standards into the Ecuadorian Code of Construction, including ASCE 31 and ASCE 41 or Euro code 8 Part 3.

Compañía de Jesús

The mission considers that the project in this final stage is an adequate response to the cultural, historical, artistic and architectural values of the Compañía de Jesús. Its execution does not jeopardize the OUV of the World Heritage property and positive impacts are expected in the process of integral recovery of the building.

In the development of the final report and during the execution of the work, the mission has the following recommendations:

- To provide the technical details of the elevators to verify that their installation does not compromise the structure of the building (especially the elevator in the Residence), as well as the final design of details and materials of the core stairwell and elevator of the North Patio, as requested by the Quito firefighters to comply with fire codes;
- It is recommended to include archaeological control in both Patios during the work so as to, in addition to complying with current legislation, contribute to the interpretation of the Compañía de Jesús Complex and the World Heritage property;
- The subsequent preparation of a Maintenance Manual - with the drawings in accordance to the work - to ensure continuity and quality of future interventions.
- To consider the global standards for the structural seismic-resistance calculation of the new work, (including ASCE 31 and ASCE 41 or Eurocode 8 Part 3), and those in force in Ecuador, as well as control of possible movements of the work.

New public spaces and projects

The execution of works previous reported on by the 2013 Advisory Mission is of concern to ICOMOS, as they evidence significant governance issues affecting the World Heritage property.

- There are dissonances between the authorities of the institutions that have shared management of the property, as well as regarding the criteria of intervention;
- It is strongly recommended to not allow interventions which have not previously been approved by the World Heritage Committee, and in particular until the Special Management Plan is elaborated
- It is recalled that interventions such as those executed for the creation of the squares alter the authenticity and integrity of the property, are usually ephemeral and scenographical and difficult to maintain, as well as demeaning the management thereof;
- It is recommended, if necessary, to continue with the implementation of Partial Integrated Plans, which may be incorporated into the final Special Management Plan;
- Recalling the recommendations of the 2013 ICOMOS advisory mission, it is recommended that the State Party continue consulting with the World Heritage Centre and Advisory Bodies on project proposals, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*, reporting on projects before they are implemented. Heritage Impact Assessments should also be carried out for all projects that relate to the World Heritage property and which may affect the property's OUV.

Damages caused by the earthquakes of 2016

The management before and after seismic events demonstrates correct intervention criteria, in accordance with original materials and respective constructive systems, and preserving the OUV of the World Heritage property.

- The mission recognizes the work developed by the IMPQ towards the prevention and management of risks, which has allowed them to face the 2016 earthquakes;
- The projects and budgets implemented, during the same year of the seismic events, for the buildings affected are praised;
- It is suggested to benefit from the experience gathered by the IMPQ in this field so as to establish intervention rules that would allow the strengthening of the conservation of the property against the frequent seismic events in the area, adding to this the recommendations of the Reference Manual on *Managing Disaster Risks for World Heritage*, (UNESCO / ICCROM / ICOMOS / IUCN, 2010).

1. BACKGROUND OF THE MISSION

Decision WHC 40 COM 7B.5 for the City of Quito, reiterates previous decisions and requires the State party to continue the development of the Management Plan and the elaboration of patrimonial impact assessments for the location of the passenger station of the Metro of Quito in its crossing through the historic center of the City of Quito (Centro Histórico de Quito, hereafter CHQ), taking as reference the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS, 2011)². It also insists on the review by this Mission of the Recommendations already issued by the previous Mission and other assessments, taking into account the UNESCO Recommendation on the Historic Urban Landscape (2011)³.

The Terms of Reference for this Advisory Mission focused on two topics: the Metro of Quito line crossing through the historic center and the state of conservation of the World Heritage property, in continuity with the observations and recommendations made at the Advisory Mission 2013, specifying the review of the progress of the Management Plan and the Project for the Compañía de Jesús.

The previous Report noted the need to understand that the study of urban shape was essential when developing the Management Plan for the City of Quito. Also as well are the geographical characteristics of the territory on which it is based and the historical thickness of that territory. In this opportunity, both the condition of seismic risk and the interpretation of the process of historical evolution of the city are items that form part of the projects of the property that are being evaluated.

City of Quito

– *Geographical Location and its seismic condition are developed in [Annex V]*

The City of Quito – located in the eastern slopes of the Pichincha volcano in the Western Cordillera of the northern Andes of Ecuador-, it occupies an irregular valley of the same name, of which average altitude reaches 2850 masl.

In this geological frame at least twenty-two seismic events have been registered with magnitude greater than 5 on the Richter scale, during the history of the capital; of them, ten events have had intensities greater than VI, and five with intensities of VII or more in the Mercalli scale. The strongest one, in 1859, reached an intensity of VIII. Earthquakes like that of 1987, with intensities greater than VI, are repeated on average every 46 years. This earthquake was the one that generated the greatest activity in pursuit of the conservation of Quito's cultural heritage, inspiring the creation of FONSAL (Fund to Save the Cultural Heritage).

In 2016, Several earthquakes affected the area - in April, August and September -, caused by the movement of the fault system that runs throughout Quito, from south to north: from the moment magnitude 7.8 earthquake that affected the area of coastal Ecuador to the 4.6 with epicenter near the city.

– *The pre-Hispanic occupation of the territory [Annex VI]*

The complex conditions of the territory offered, however, natural defenses for a human settlement, as well as good conditions of production.

The bibliography consulted and the presentations received during the mission indicate that the Quito, Quitwa or Kitu Property has been inhabited for thousands of years, especially as an exchange and sacred space. This preexisting occupation is the one that does not have an academic consensus for its interpretation, whose interpretation must be framed in the very process of conquest, of the interests at stake of the Incas, Quitus and Spanish, and in the archaeological investigations that allow to corroborate the hypotheses that can be derived from the stories.

The urban shape of the Inca Quito or the millenary Quito is what remains to be defined.

– *The Hispanic occupation of the territory [Annex VII]*

In the geographical context described and then superimposed on the quitu settlement occupied by the Incas, the city founded by Sebastián de Benalcázar in 1534, superimposing the checkerboard pattern to the pre-existences of Quitus and Incas.

But while the colonial urban layout is registered through numerous drawings of centuries XVII, XVIII and XIX, there are few sources that could recompose the evolution of the settlements that make up the historical thickness of the territory of Quito

² ICOMOS, 2011: *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*. Available at http://www.icomos.org/world_heritage/HIA_20110201.pdf

³ Available at http://portal.unesco.org/es/ev.php-URL_ID=48857&URL_DO=DO_TOPIC&URL_SECTION=201.html

In this context, it is necessary to compile existing archaeological and historical research on the occupation of Quito, to fill empty spaces of knowledge and to agree socially and academically the historical process of the city, as a baseline for its planning, conservation and management, not only at the urban level, but territorially, given the cosmology of the Andean culture.

Only the whole interpretation of the urban shape will allow managing this urban route, "intact, entire, complete", recognized as the "best preserved and least altered historical center of Latin America".

Despite the N-S longitudinal growth, the increase in transport services, the growth of its fleet, the depopulation of the HC and seismic events suffered, San Francisco de Quito maintains a constant development. At its center, the area of protection of the Historical Center of Quito encompasses 70.43 ha, reaching 302.82 ha by including the buffer zone, which contemplates the main historical districts.

Inscription of the property on the World Heritage List

The City of Quito was inscribed on the UNESCO's World Heritage List in 1978, being the first city of the Americas to receive the international recognition, together with Cracow.

According to the *Operational Guidelines*, its inscription in the World Heritage List responds to criteria ii and iv, within the framework of the retrospective statement of Outstanding Universal Value developed in 2010.

– Justification for the retrospective statement of Outstanding Universal Value

The City of Quito is characterized by maintaining unity and harmony in its urban, architectural and landscape structure. The construction of the city was based on the checkered layout of colonial origin, where the grid had to adapt to a terrain that bordered by ravines and hills. The intricate topography forced to develop and to solve problems of strong unevenness, with soil removal to create platforms, contention walls and fillings, to have a suitable space for the construction of buildings. This makes Quito a unique city.

The historic center of the City of Quito has evolved without major changes. It began in the sixteenth century with its foundation, the distribution of lots, the layout of blocks, streets and squares, until the beginning of the twentieth century, when the expansion began outside the limits of the Historic Center. Indeed, by the first known drawing of Quito of 1734, by Dionisio Alcedo y Herrera, we can verify that the original layout of the city has remained until today, with few exceptions.

The city houses historical-cultural values that are the product of a process of occupation and participation of populations that have diverse origins. This multiethnic presence has made it possible to create a city, where traditions, rituals and festivals persist which is part of the intangible cultural assets of the population. The material production that preserved in religious buildings, museums, libraries, etc., presents an outstanding artistic and historical value.

The Historical Center of Quito is one of the largest and best preserved in Latin America; as a place of human settlement, it is subject to changes that are regulated by existing ordinances and laws.

– Criteria on which the statement of Outstanding Universal Value is based

Justification of criterion ii. *To present an important exchange of human values, in a determined period or within a determined cultural area of the world, in the fields of architecture or technology, monumental arts, urbanism or landscape design.*

In Quito and its surrounding areas, vestiges of human occupation have been found, either permanently or temporarily, dating back to 10,000 BC. It offers a concrete vision of the influence of the Andes mountain range on the aboriginal ancestral peoples. Its location allowed the exchange of products and values with the different groups that inhabited pre-Hispanic Ecuador, crossing the mountain range both towards the Amazon slope and the tropical plains of the Pacific.

Of the Spanish foundation the original urban trace is conserved, which had to adapt to an irregular topography; the existing architectural complex in the Historic Center keeps its authenticity with few modifications. These models had great influence in other cities of the Real Hearing of Quito and were the product of the native and mixed workmanship.

Justification of criterion iv. *Be an Outstanding example on a type of building, an architectural or technological complex or a landscape that exposes a significant phase in human history.*

The Historic Center of Quito is an example of a Hispanic city in American territory that had to link up to a specific topography, this natural element was very important in the urban layout and in the construction of buildings and streets. The first monumental religious buildings were built with techniques and materials of great quality, the facades were executed with great craftsmanship under the influence of Mannerist patterns, the central naves were covered with Mohammedan coffered ceilings. In the seventeenth century the baroque style burst forth, producing barrel-vaulted churches and orange half-drum domes. The decoration of the surfaces became profuse and polychrome, stood out the use of gold leaf in altarpieces, pulpits and ornaments. At the end of the period of Hispanic domination the first neoclassical models were tested. The different artistic styles, which can be seen in the Historical Center, are a local reinterpretation of Europeans. The civil buildings contrast with the religious ones, because they were smaller and made with modest materials; the residential architecture characterizes by a central courtyard and peripheral corridors, a model that was repeated with great success until the beginning of the 20th century.

Three large squares open on the grid and through the streets they articulate smaller squares and atriums that develop as viewpoints taking advantage of the slopes of the terrain. The view along the streets ends in the nearby mountains that surround it, so that the surrounding landscape becomes part of the city. Leaving it, the vision widens towards the snowy volcanoes of the Andes mountain range. The urban complex, surrounded by a natural environment, has as backdrop the Pichincha volcano.

– Integrity and Authenticity

The original urban traces have remained almost unchanged since the founding moment; much of the architectural history of Quito has evolved around this central grid. Religious and civil monuments have undergone changes throughout its history, without affecting its unity. The Mohammedan style in the loops of some churches and baroque style remain defined in their monuments and plastic creations. These buildings contain numerous cultural assets such as paintings, sculptures, altarpieces, gold work, old books, etc., which present an artistic and cultural value representative of Latin American history.

The traditional neighborhoods of the Historical Center have undergone few architectonic transformations in and constitute a testimony of evolution of the city and its inhabitants. Through integral rehabilitation processes streets and neighborhoods have been rescued, the recovery of color in the façades endows an urban image that allows an assessment and identification of its residents with the environment; such as La Ronda street, San Marcos neighborhood or La Loma neighborhood.

As insistently the foundation criteria indicate, plus the values of authenticity and completeness, the insistence of the urban shape along the centuries is one of its main attributes and values, since its status as a historic city does not come from a simple aggregate of significant buildings, but of the harmonious relationship between different urban typologies and their complex geographical environment.

In this way, the resulting urban shape, whose authenticity and completeness is easily verified in the comparison of the historical planes of the city⁴⁵, and the visuals from and to it justify its Outstanding Universal Value.

It has become important in this last stage of the World Heritage property occupations previous to Hispanic domination, which determined uses and traditions that remain as part of its intangible heritage, being necessary its integration to the integral management of the World Heritage property, because as considered by the UNESCO Recommendation on the Historical Urban Landscape [2011], *"urban heritage is a social, cultural and economic capital characterized by the historical stratification of the various values generated by successive cultures and the accumulation of traditions and experiences, recognized as such in their diversity"*.

The traces, the plot and the urban layout of the Historical Center of Quito - both material and immaterial - are part of the attributes on which the *"degree of credibility or truthfulness"* of the World Heritage property rests, according to the Nara Document On Authenticity [ICOMOS, 1994], are *"the sources of information on these values"*. The same document also indicates that *"knowledge and understanding of these sources of information, in relation to the original characteristics and meanings of cultural heritage, it is a basic prerequisite for assessing all aspects of their authenticity."*

In the same way, the Brasilia Charter, as a Regional Document of the Southern Cone on Authenticity [ICOMOS, Brazil, 1995], insists on the topic of the meaning and on the cultural message of the good: *"Buildings and*

⁴ Trace of the foundation of Quito, according to the Relation of 1573; Map of the City of Quito, by Dionisio Alcedo y Herrera, Archivo General de Indias, Seville, 1734; Drawing of Quito. Academy of Sciences of Paris, 1736; Map of Quito by De la Harpe, about 1754; Drawing of Quito, Jorge Juan and Antonio de Ulloa, Archivo General de Indias, Seville, 1784; Drawing of Quito, anonymous author (attributed to Juan Pío Montufar), 1810; Drawing published by Antonio Gil, 1914; Map of the City of Quito, Military Geographical Service, 1947

Properties are material objects bearing a message or argument whose validity, in a determined social and cultural context and their understanding and acceptance by the community, transform them to heritage”.

In this property, the messages and arguments dialogue in every public space, contributing to the authenticity of the whole. Although the Historical Center of Quito has suffered throughout its history several seismic movements that made necessary interventions of consolidation, reconstruction and restoration, it is feasible to recognize the interrelationships between physical shapes, organization and spatial connections, its characteristics and natural environment and the social, cultural and economic values of the whole, which nowadays make possible its management from the historical urban landscape approach, which would allow the reversion of the current problem of the District in terms of depopulation, urban shape management, governance and quality of life of its inhabitants.

2. NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE PROPERTY AS WORLD HERITAGE

The analysis of the current legal framework for the preservation and management of the World Heritage property is detailed in [Annex VII]. According to this background, the following observations are made.

a. International legal framework

In 1975 the Republic of Ecuador ratifies the Convention of World Cultural and Natural Heritage of 1972. The National Institute of Cultural Heritage (1978) is the focal point of the Convention in Ecuador, which delegates to the Mayor of Quito the management of the World Heritage property. The Institute retains, by law and participation in various institutional instances, control over the property.

In 2008 the State Party also ratified the Convention for the Safeguarding of Intangible Cultural Heritage of 2003.

b. National legal framework

- Constitution of the Republic, 2008
- Modus vivendi and the Additional Agreement concluded between the Republic of Ecuador and the Holy See, 1937.
- Law No. 37/99. Environmental management
- Organic Code of Territorial, Autonomy and Decentralization Ordering, COOTAD. DE 1577/09.
- National Development Plan [Art. 260 of the CN]: National Plan for Good Living 2009 | 2013.
- Law No. 3501/79. Cultural Heritage of Ecuador. Regulation. Revoked?
- Declaration of 6.XII.1984. INPC. Declares the Historical Center of the City of Quito as "Cultural Heritage of the State"
- Executive Decree No. 816/07. Cultural Heritage State of Emergency.
- Resolution 4. Transfers competence to preserve heritage to autonomous governments. Official Register No. 514/03 June 2015
- Organic Law of Culture. Official Register No. 913 / December 30, 2016

The Constitution of the Republic of Ecuador of 2008 proposes a republican way of government, to be ruled in a decentralized way. The other national laws, incorporate the constitutional provisions on decentralization and regulate it, placing in the hands of municipalities the exclusive competence to "preserve, maintain and divulge the architectural, cultural and natural heritage of the canton and build public spaces for these purposes".

The Historical Center of Quito has been declared Cultural Heritage of the State since 1984 by provision of the INPC (National Institute for Cultural Patrimony).

The new Organic Law of Culture adheres to the decentralization of the powers of the State in matters of culture and cultural heritage, already initiated with the transfer of the management of the World Heritage property to the Municipality, although it is now general for all cultural property. It is noted that in the process it is still not clear the articulation of incumbencies between the NIPC and the municipalities, and especially the management of real estate, both in cultural and urban architectural aspects, which, although they are closely related, require physical interventions that the area of culture will not solve. It is interesting the intention to coordinate an integral system of culture and the main importance given to the social value of cultural property and its importance in the construction of memory.

c. Local legal framework

Since 1975, the Municipality of Quito has legal dispositions that allowed preserving the CHQ and other significant urban areas. The ordinances listed below, drawn up from 1975, establish dispositions regarding the regulation of the components of the urban shape and its special areas applying the recommendations of Quito's Standards.

- Metropolitan Ordinance 0143/00. Reformulation of OM 95. New Soil Regime, which regulates the use and protection of the public space of CHQ, particularly its use.
- Metropolitan Ordinance 0031/08. Land Use and Occupancy Plan POU
- Metropolitan Ordinance 0265/08. Creates the QMD Metropolitan Integrated Risk Management System
- Administrative Resolution of Mayor's Office No. A 0040/10. Creates the "METROPOLITAN INSTITUTE OF HERITAGE"
- Metropolitan Ordinance 0319/10. Institutionalizes the cultural meeting of the rural parishes

- Municipal Code for the Metropolitan District of Quito. Official Register 226/1997 Last Reform: 2011.
- Metropolitan Ordinance No. 0260/00. Patrimonial Areas is incorporated as Title II of Book Two of the Municipal Code for the Metropolitan District of Quito, in force.
- Metropolitan Ordinance 0057/11. Program Quito World Heritage. Scholarships
- Metropolitan Ordinance 0094/11. Reformulation of Section IV Chapter II Countless title
- Metropolitan Ordinance 0170/11. MDQ Metropolitan Development Plan. PMD 2012-2022.
- Metropolitan Ordinance 0171/11. Metropolitan Plan of Territorial Planning PMOT of MDQ 2012-2022.
- Metropolitan Ordinance 0265/12. Reformulation of Metropolitan Ordinance No. 265, in Section Two "On the Components of the Metropolitan System of Risk Management"
- Resolution C350 / 12. To declare Natural, Historical, Cultural and Landscape Heritage to the Quebradas' System of the Metropolitan District of Quito
- Metropolitan Ordinance 447/13. Reform Plan for Land Use and Occupation. Metropolitan Development and Territorial Planning Plan of the MDQ.
- Metropolitan Ordinance 003/14. Substitute of the Metropolitan Ordinances No. 140, 194, 197 and 297, that regulates the formation, functioning and operation of the Commissions of the Council of the Metropolitan District of Quito.
- Metropolitan Ordinance 0041/15. Metropolitan Plan for the Development and Territorial Planning of the MDQ. Diagnosis and Proposal. Development.

Ordinance No. 260 –as part of the Municipal Code for MQ-, defines the central core although its scope extends to the limits of the Metropolitan District of Quito. It focuses its development on the urban pattern of Patrimonial Areas, establishes the process of classification, inventory and cataloging of real estate, as well as administrative procedures, incentives and sanctions.

It establishes the correspondence with other planning instruments such as the Cultural Heritage Law, the General Plan of Territorial Development [GPTD], and the Master Plan for Integral Rehabilitation of the Historical Areas of Quito, and the Special Plan of the Historical Center of Quito. This Ordinance is incorporated as Title II of Book Two to the Municipal Code for the Metropolitan District of Quito, in force. To date there is a project to update this specific municipal legislation, in the process of drafting, with no date provided for submission and sanction. The updating of this ordinance and its link to the Special Development Plan is fundamental for the management of the World Heritage property, because they provide the institutional and technical approach for the future of CHQ, avoiding improvisations to the needs of the property.

The decentralization foreseen by the new National Culture Law does not affect in this case the urban regulation of the World Heritage property, since this process had already been carried out. However, the modifications affecting Metropolitan Ordinance 017/99 –part of the Municipal Code-, regulate the formation, functioning and operation of the Commissions of the Council of the Metropolitan District of Quito, carried out by Metropolitan Ordinance 003/14, which leave the decisions of this Commission only in the hands of the three councilors, without the indispensable balance of specialized professionals, in technical actions that clearly need more than information or advice to determine a decision. Moreover, by its own powers, the Commission is the last body that, by *"express delegation of the IMPQ analyzes the intervention projects in the historical and patrimonial areas, following a report of the Technical Subcommittee for the approval of the Council."* In other words, it is the last one to decide on the actions and interventions on the World Heritage property, but it does not allow the two institutions involved in its conservation – neither the INPC nor the IMPQ - to vote.

Based on past experiences, such as the Special Plan of the Historic Center 2003, the Metropolitan Heritage Institute, from an approach that implies looking at the Metropolitan District of Quito as *"millennial, historical, cultural and diverse"*, works goes on within the framework of the Rehabilitation Plan for the Historical Center, the **Metropolitan Plan of Territorial Order 2012-2022** and the **Metropolitan Development Plan 2012-2022**. Today, in relation to its management, a **Special Plan for the Historic Urban Complex of Quito** is elaborated within the framework of the attributions of the IMPQ.

This legal framework in force is applied in general, and in this mission the actions tending to the coordination of the different administrative levels are observed. The decentralization provisions, which highlight the figure of the municipality and concentrate on it the majority of management and control faculties were started in 2008 and will be consolidated from the Culture Law of 2016. However, it is vitally important to ensure that INPC and the IMPQ, -long with their management and regulation tools-, keep, within their respective

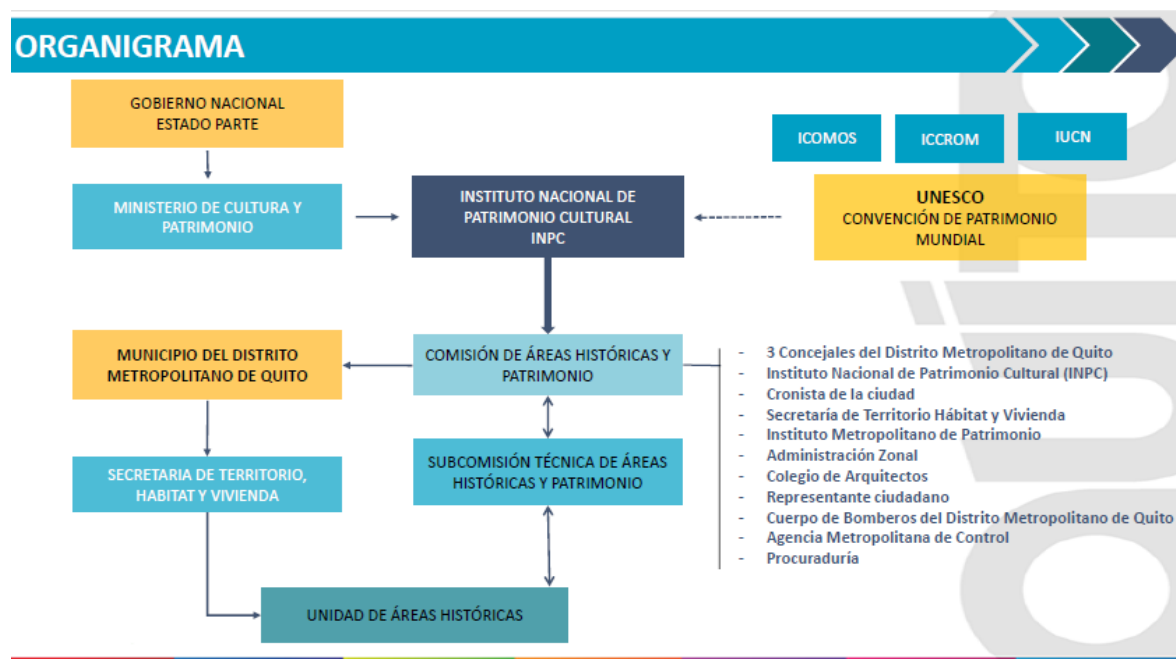
institutional organizational charts, direct links with urban and territorial planning and housing, in addition to the traditional ones that relate them to history, culture and art.

There are other ordinances designed for specific management of heritage, including the concept of cultural Landscape, such as that for the protection of the Quebradas de Quito, whose impact on the historical and social development of the World Heritage property is undeniable.

The management tools in force, even that they do not address the diversity of cultural heritage issues, require the systematization of a Management Plan for its application in daily practice.

d. Institutional framework

The IMPQ, that holds the judicial delegacy for the management of the property, works within the following frame of institutional relationships [Graph 1]:



Graph 1. The IMPQ in the municipal organization chart for the management of the property

Based on the approaches proposed by the National Plan for Good Living 2009 | 2013, COOTAD and the Metropolitan Development Plan 2012-2022, IMPQ has worked on the elaboration of the **Special Plan for the Urban Historical Complex of Quito**, under development.

According to current legislation, the INPC should be recognized as the focal point of the World Heritage property in relation to UNESCO, which delegated its management to the IMPQ, whose status in the organizational structure of the Municipality of the Metropolitan District of Quito incorporates it as a special unit within The Secretariat of Territory, Habitat and Housing. Its direct relationship –but without a vote-, with the Historical Areas Commission and its Technical Subcommittee is what allows it to institutionalize its plans, programs and projects.

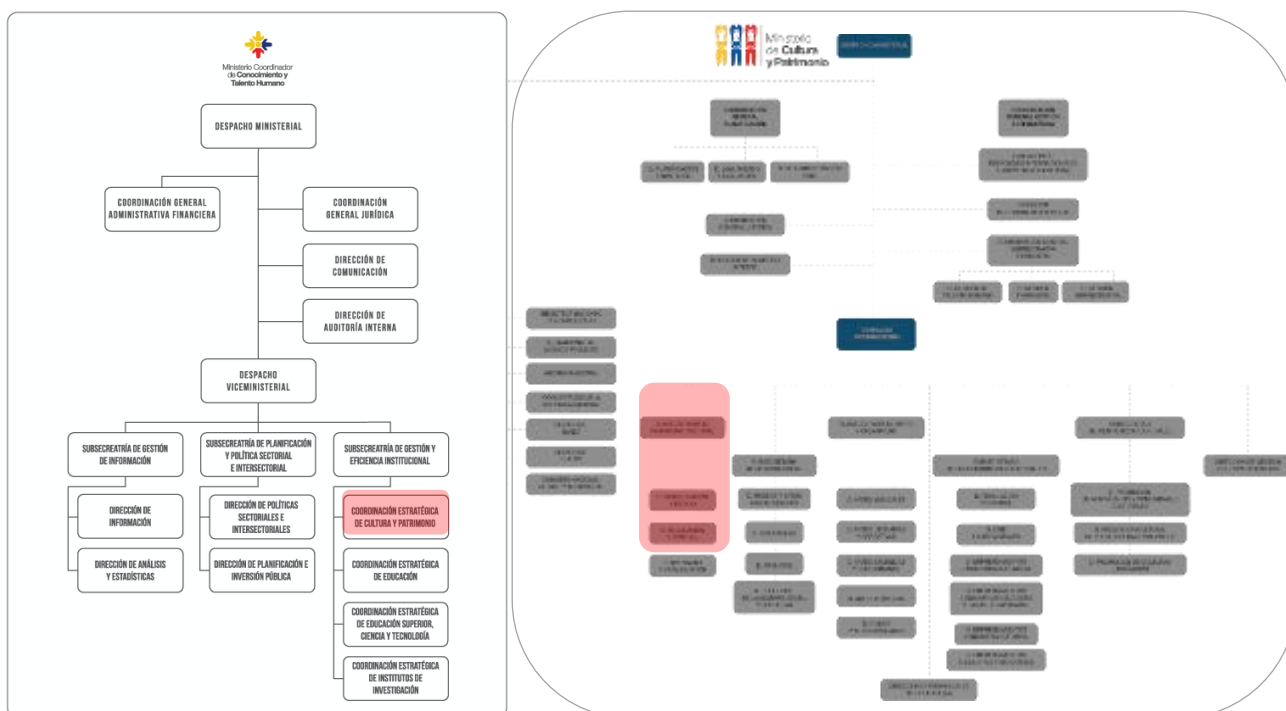
Therefore, technical, administrative and project aspects are made viable by the Secretariat and Zonal Administration of the Historical Center, and is subject to the decision of the Commission of Historical Areas of the Metropolitan Council, both for the approval of intervention projects and for the elaboration and sanction of new legal instruments.

Decision-making is shared by at least three agencies at different administrative levels and hierarchies: INPC + IMPQ + Commission of Historical Areas of the Metropolitan Council.

The INPC also participates in the Commission on Historical Areas –without a vote-, and fulfills additional functions in accordance with current legislation on cultural heritage. The delegation of the management of the Historical Center to the IMPQ also responds to the provisions by law regarding the declared historical centers. According to the current Organic Structure of the Executive Function of the Republic of Ecuador⁵, the area of Cultural Heritage is included between the Coordinating Ministry of Knowledge and Human Talent and its

⁵ Online: [http://www.presidencia.gob.ec/wp-content/uploads/2016/11/organigrama_funcion-ejecutiva_134_07-11-2016.pdf]

Strategic Coordination of Culture and Heritage⁶, and the Ministry of Culture and Heritage and its Under Secretariat of Cultural Heritage⁷. [Graph 2]. In these institutional relationships the IMPQ actions are framed, according to the previous graph.



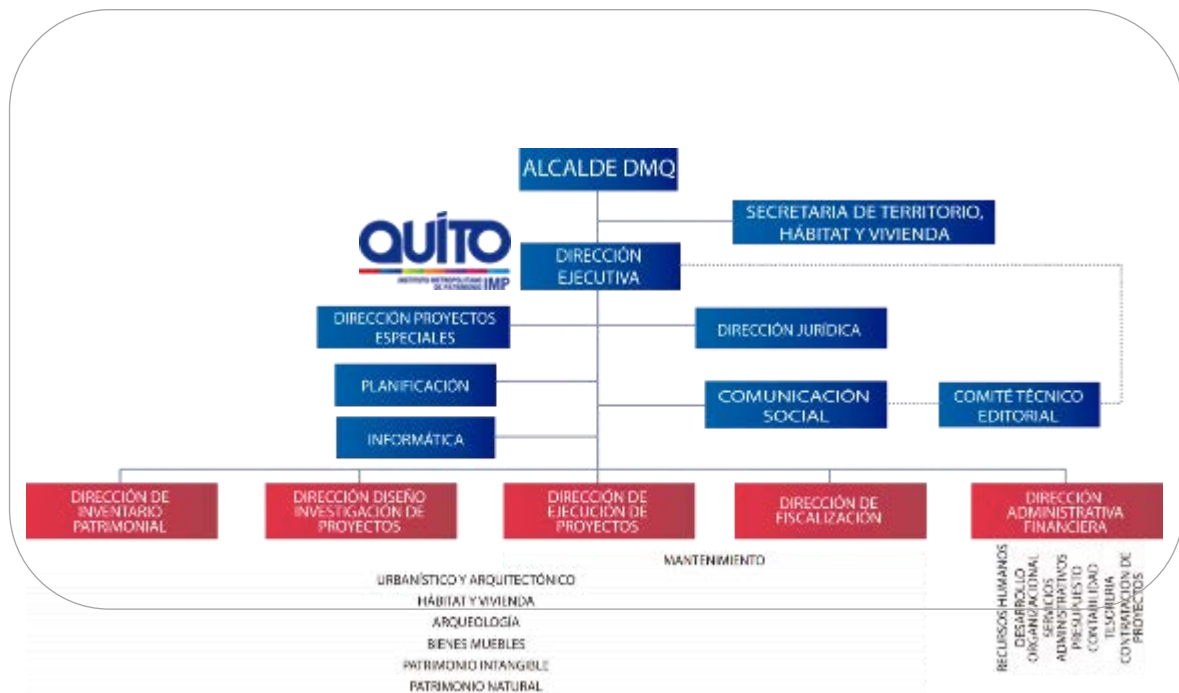
Graph 2. Organization charts of the Ministry of Knowledge and Human Talent and of Culture and Patrimony (INPC)

As for the Municipal Authority, the Metropolitan Institute of Heritage of the Metropolitan District of Quito, was created by Administrative Resolution No. A0040 of December 28, 2010. Its competencies and attributions are the registration, inventory, maintenance, intervention and management of the archaeological, urban and architectural heritage of Quito; as well as the management and conservation of the intangible heritage [Graph 3].

According to its Mission, the IMPQ is the executing arm of the public policy in the conservation of the Heritage of Quito as it is in charge of taking care of and watching over the historical memory of the capital of the Ecuadorians. Among its powers are to register, protect and promote Cultural Heritage and in particular the Historical Areas of the DMQ; to this end, it seeks to coordinate with the community and the holders of heritage assets.

⁶ Online: [http://www.conocimiento.gob.ec/organigrama-de-ministerio-coordinador-de-conocimiento-y-talento-humano/]. The Ministry of Knowledge and Human Talent has as Mission: To coordinate and evaluate the formulation, execution, control and monitoring of public policies, programs and projects, through the support and strengthening of the institutional management of entities in the Knowledge Sector And Human Talent to consolidate the Fair and Solidarity Knowledge Society.

⁷ Online: [http://www.culturaypatrimonio.gob.ec/organigrama-del-ministerio-de-cultura-del-ecuador/]. The Ministry of Culture and Heritage has as Mission: to exercise the rectorship of the National System of Culture to strengthen the National identity and Inter-cultural proces; protect and promote the diversity of cultural expressions; to encourage free artistic creation and the production, broadcasting, distribution and enjoyment of cultural goods and services; and safeguarding of social memory and cultural heritage, guaranteeing the full exercise of cultural rights based on the decolonization of knowledge and power; and a new relationship between the human being and nature, contributing to the materialization of Good Living



Graph 3. Organizational Chart of the IMPQ

It is noteworthy that at present in IMPQ owns own headquarters, result of the rehabilitation of two houses in the CHQ.

3. EVALUATION ON THE STATE OF CONSERVATION OF THE PROPERTY

3.1. Metro of Quito

At the MDQ and especially in its Historical Center three fundamental problems exist regarding **mobility**:

- High vehicular congestion
- Excessive time loss on travel
- Pollution increase

These problems of mobility are due to the model of structuring and occupation of the territory. Given the geographic support and urban evolution of the city from the colonial layout that was located at the center of a narrow valley, the traffic converges towards the CHQ or hyper center, to which the longitudinal and horizontal dispersion of the urban spot must be added.

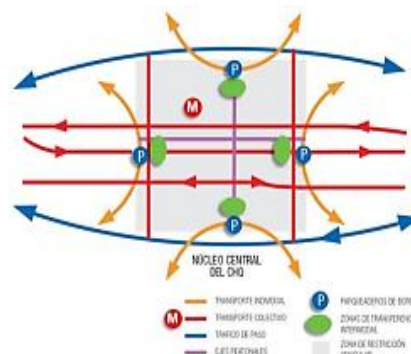
The "**Metro de Quito**" project is supported at a national level by Executive Decree Nº. 750/12, which establishes the priority classification for it, within the framework of the objectives and goals of the National Plan for Good Living 2009-2013. By means of Ordinance No. 0237/12, the Metropolitan Council of Quito, resolved the creation of METRO DE QUITO METROPOLITAN PUBLIC COMPANY.

The Metro participates in the **Integrated Transportation System of Quito**, which is presented as a **conceptual model** [Graph 4] which, in the first instance, responds to the following mobility objectives in the Historic Center of Quito:

- Preserve the heritage, residential and tourist character of the Historic Center of Quito, strategic resource of the city and the country, reducing the general density of motorized traffic and accentuating facilities for pedestrians and alternative ways of mobility.

The model responds to the following **Mobility Principles**:

- To move people not vehicles
- To guarantee rights on the city, with equitable and inclusive access to its services
- To reduce the environmental and energy impact generated by motor vehicles
- To create a new citizen culture in the act of living and in road safety



Graph 4 Conceptual model, CHCHQCHQ

The integrated system includes bus lines, trolleybuses, bike paths, eco-tracks and the Metro, which acts as its articulate axis, ensuring that 93% of users of the urban area of Quito will be less than 400 meters away from an SITM stop.

Actions and processes foreseen for the construction of the Metro of Quito

This Mission had to consider two aspects on the Metro of Quito Project:

- The progress with the works and archaeological studies carried out in Plaza San Francisco, although the World Heritage Committee did not consent to this location of the station and the passing of the subway through the historic center of the City of Quito (CHQ);
- The alternatives presented for the location of the subway's station at the CHQ, with their respective technical evaluation and environmental impact.

For the work at the MQ studies have been presented such as of mobility, service / demand (commercial viability), social impact, cartographic interpretation, topography, heritage study, geology and geotechnics, monitoring, hydrogeology, inspection of public buildings, structures and services that have been affected.

MQ is currently working on the construction of La Carolina, Jipijapa and El Labrador Stations, plus works on 24 de Mayo and Santa Clara square.

Previous reports described the process of georadar prospecting and the removal of pavement from the east sector of Plaza San Francisco, as well as the optimization of the design of the Plaza San Francisco Station.

The presentation of the results of the archaeological works in the east section of the square was realized during the development of the Mission.

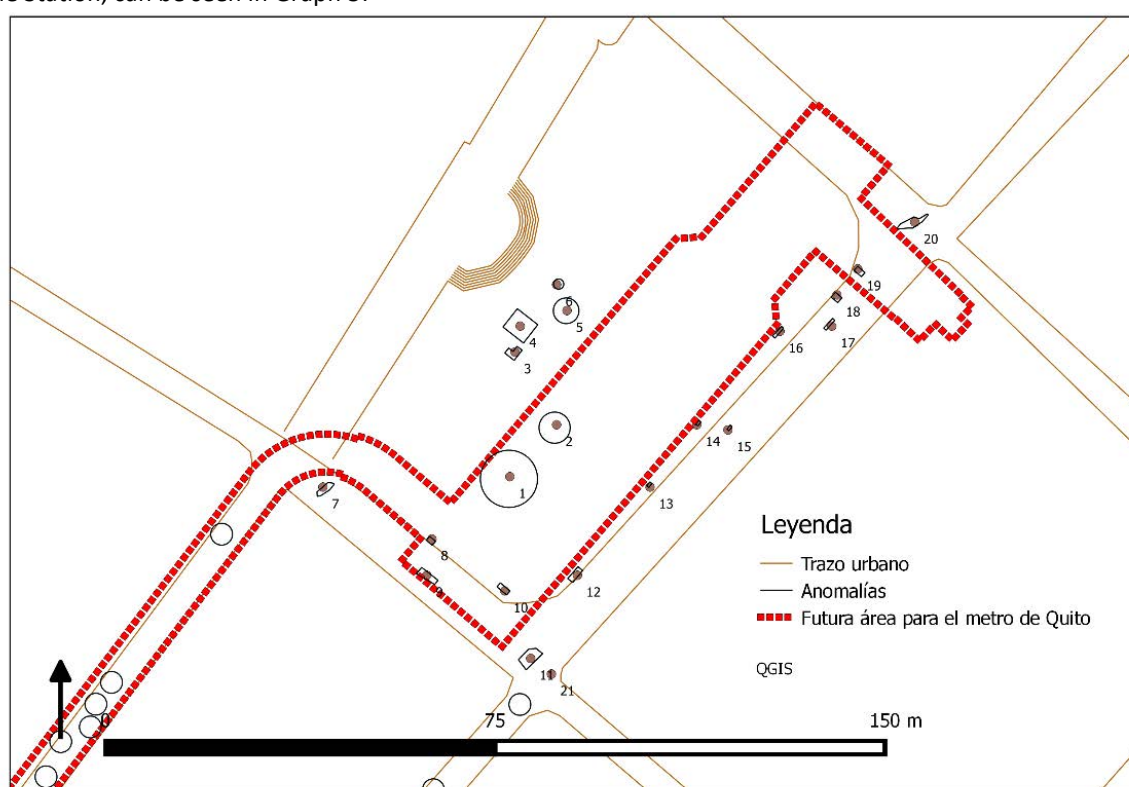
- **Final Report of the Archaeological Rescue Project of the San Francisco Metro Station. Metropolitan Public Company Metro of Quito**

During the Mission, the Final Report of the Archaeological Rescue Project of the San Francisco Metro Station, Province of Pichincha, Ecuador, was presented by Licentiate in Archeology Marco V. Vargas, commissioned by the Metropolitan Public Company Metro of Quito for the National Institute of Cultural Heritage.

Its introduction indicates that the Archaeological Rescue Project of the San Francisco Station is executed as part of a research sequence carried out by the Metropolitan Public Company Metro of Quito (EPMMQ) for the construction of the San Francisco Station.

After searching the antecedents, the INPC authorizes, by document N° 018-2016 dated April 28, 2016, to start with the works. The rescue process had as a starting point the geophysical prospecting carried out by means of electrical tomography and geo-radar to define areas of archaeological interest, a study developed in the year 2015 (Vásquez, 2015, Delgado & Vásquez 2015), by means of which a series of "anomalies" are defined, which apparently concealed possible cultural manifestations, beneath the surface of the square.

The distribution of the anomalies in the Plaza, only in the area that would be affected by the construction of the Station, can be seen in Graph 5:



Graph 5. Location of the anomalies at Plaza San Francisco (taken from Delgado & Vásquez streets, 2015)

The report indicates that during the field stage, 12 anomalies defined by the geophysical study were excavated and located in the area of direct impact of the works, plus an additional 19 units to increase the coverage margin and reduce the possibility of casual findings during the work [Image 1]. The area designated for the construction of the metro station reaches approximately 3360m², of which 466.77m² was excavated, or 13.89% of the total area of the station.

The excavation process was designed so to apply an excavation area. The units generally had a dimension of 1x1m for samples and of 2x2m. In the areas where an anomaly was located and as the presence of a cultural event was defined, it was expanded consecutively until the finding was exposed; when no evidence was found, they were not expanded. The entire registration process was supported with over flights of a Drone.

For the laboratory stage, the recovered cultural material was processed and analyzed, in the local laboratory for the case of ceramics, lithic and faunal bones; and in the case of other samples such as coal, they were sent to the Beta Analytic laboratories of Florida, USA; paleobotany material and traces found on the walls of Anomaly 1 were sent to the ABOT laboratories of Medellín, Colombia⁸.

⁸ The report includes the process and results of the analysis of ceramics, glass, faunal bones, paleo botanicals, metallic artifacts, radiocarbon and fingerprints, whose photographic documentation is attached in the Annexes the report concludes



Image1. Field work. Archaeological Rescue, 2016

Among the **antecedents of similar archaeological works** that have been carried out in the CHQ, the report quotes the one of Jacinto Jijón and Caamaño, between the streets Chimborazo, Alianza and Bolívar (near by the Plaza San Francisco) in 1951; and those located in San Juan de Dios Hospital, Santo Domingo Square, Casa Pontón, square of the Monastery of the Santa Clara Church and the Monastery of Carmen de San José.

It itemizes details of those made by Holguer Jara in the Compañía de Jesús (1991), and Paulina Terán in Atrio and Plaza San Francisco (1995). The latter allowed defining the construction stages of the Franciscan complex from 1535-7, starting with the natural topography of the terrain: a platform with a maximum depression angle of 10.34 ° east-west. The formation of the north slope would begin in the southern cradle of the main cloister. The excavation of Terán, in particular, designed a series of trench axes (transepts), that relate the search wells, that this research does not get to link, among other circumstance because it is limited to work in the area of the square that will be affected – hypothetically-, by the construction of the MQ station.

The report being analysed indicates *"although the archaeological evidence is still not conclusive, the ethno historical data are relative when mentioning that this place could have been part of some Inca Kancha. Similarly, the varied written documentation tells about the existence of a market or Tianguéz in full operation since the pre-Inca stage, and remained as such, although under the capitalist market system, until the beginning of the twentieth century"*.

Even though there are representations more or less accurate of colonial Quito and photographic images of the square as from the second half of the 19th century, which contribute to the historical urban interpretation of the city, the hypotheses of reconstruction of the pre-Inca and Inca territory not only are scarce, but heterogeneous and dissimilar, referring more to their comparison with Cuzco, which are truthful of the property. [Annex VIII].

Market or palace, with simple houses of cangahua (volcanic soil) or with walls of Inca manufacturing, these differences of criterion exposed during the Mission obstructs the interpretation of the historical thickness of the territory, and it prevents the management of interventions in the property, and much more even its cultural interpretation, not only for academics, but for the local community itself. It is necessary, 38 years after the declaration, to systematize the research carried out so that the future management plan is endowed with a solid historical urban framework.

In the **archaeological prospecting** indicated by the report Anomaly 1 is highlighted [Image 2], a structure excavated in the cangahua (volcanic soil), and comprising three environments defined as chambers, each one of them with particular architectural characteristics⁹.

⁹ **Chamber 1** has a circular shape and a dimension of 4.23m, with a staircase carved in the cangahua. At the base of the floor, the steps turn southeast towards a continuous set of three arches dug in the cangahua. In their walls traces of the carving instrument may be seen. **Chamber 2**, east of Chamber 1, has a semi-circular shape, approximately 5.24m from east to west, and 6.62m from north to south, with a total height of 2.97m. Like chamber 1, it was carved in the cangahua and filled with rubbish, and there is no link between chambers 1 and 2.

Chamber 3 presents a shape similar to an eight (8), orientated from east to west, structured in two divisions built to unevenness. The constructive typology of this structure would seem to correspond to different temporalities, i.e. it is older than the two previous chambers.

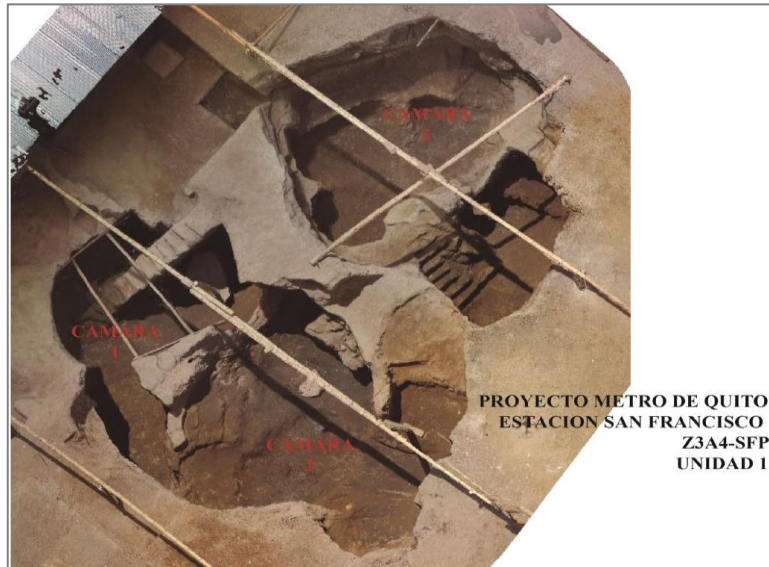


Image 1. Anomaly 1

The prints on the walls of the chambers, which would have been produced during the construction process, were analyzed in order to document eight different categories of prints, but it was not possible to define the type of instrument used to excavate the cangahua.

The dating by C14 for the evidence analyzed in Anomaly 1, indicates the report, confirms that the event corresponds to the colonial period, between centuries XVII and probably XVIII - until XIX -, chronology that clearly correlates with the defined ceramic typology after the analysis.

The absence of a pre-Hispanic occupation -although recovering ceramic fragments with Aboriginal characteristics especially in Anomaly 1-, would not be innovating, since it evidences the survival of aboriginal flourish, superimposed with Spanish or colonial elements.

Consequently, it is affirmed *"that since no evidence of a pre-Hispanic occupation has been found in this research, it is considered that if such a 'kancha' existed, it probably should have been in the space currently occupied by the church and convent of San Francisco, as excavations done in the church do report the presence of Inca elements in the church (Terán 1989, 2011). The inferences are fully correlated with the conclusions pointed out by Andrade and Jara (1995 a and b)"*¹⁰.

It is agreed with the aforementioned report that the dynamics of the square as from the Spanish occupation is intense, which entailed permanent changes and modifications, and that its major modifications are recorded from the twentieth century, when the square has multiple functions and changes in its morphology, especially its floor.

In addition to the abovementioned Anomaly 1, the most significant archaeological evidence recovered in the Plaza San Francisco corresponds to a segment of a network of waterway ducts or channels of two types, one built of bricks and the other combining brick and stone, located at different depth levels. To this are added stone floors, water conduits and drainage, and bases of the square equipment of different times.

In its final recitals, a Program for Broadcasting and Putting in Value is proposed, which includes educational modules, general broadcast, publication of research results, videos, a thematic museum plus an adequate scale reconstructive diorama of Anomaly 1, located in the spaces of the subway station [Graph 6].

¹⁰ Vargas, Marco V. Informe Final de Proyecto Rescate Arqueológico de la Estación del Metro San Francisco, Provincia de Pichincha, Ecuador, Empresa Publica Metropolitana Metro de Quito, 2016. Pág. 231.



Graph 6. View in Plant of Structure – Situation: Proposal to Put in Value. Final Project Archaeological Rescue Report

As indicated by the objectives of this of Broadcasting Program and Setting in Value, it is indispensable to reduce the levels of disinformation on the cultural wealth of the area through diffusion.

The archaeological research covers only the sector where the work will be carried out, not all the surface of the square, a situation that involves a preliminary cut of the results and the possibility of linking them to previous research. While it is sufficient, it does not cover the needs of the property as a whole.

The work encompasses all the foreseeable aspects of a research of this type, but, according to its own terms, the archaeological evidence is not conclusive to define the historical processes in the tianguéz (market)-plaza. It is evident, then, that the archaeological prospecting and rescue works were not proportionally adequate to the significance of the OUV of the World Heritage property.

In this instance it is agreed with the INPC that "to progress in the knowledge of these structures of historical value and, due to the limitations of scientific and technological methods applied to an inert material, the Cangahua Formation, should be expanded followed by work in the disciplines of MEMORY (history, archeology, geology, architecture, visual arts, etc.); incorporating interdisciplinary and interpretative knowledge defining heritage as a "social construction" linked to identity.

That is why it is more coherent to think of an in situ museum design of the so-called Anomaly 1, keeping a critical discourse, concurrent with this material and immaterial heritage

▪ Observations on the construction process. Risk management for the proposed work

The Cangahua is an interesting geological formation to study. The Cangahua formation will support the foundations of the planned development of the urban center of Quito. The excavation of the station would be an opportunity for the education of the next generation of civil engineers, architects, historians and archaeologists. There is a didactic opportunity to know the CHQ soil engineering at the suggested museum.

Fortunately, for the excavation of the Plaza San Francisco station, the Cangahua Formation can support almost vertical faces, as can be seen in the excavated archaeological site visited during the Mission (Figure 3). As the soil is relatively rigid and low in permeability, the construction of subsoil structures can handle groundwater and soil movements relatively efficiently. It should be noted that in the excavation at the CHQ, it is necessary to manage and control the risk of damage in the patrimonial structures –structures that maintain the economic center, the tourist attraction, and the cultural existence of the CHQ-. Therefore, the program of geotechnical and structural instrumentation and monitoring is critical for the result of the construction of the Plaza San Francisco station.



Image3. Archaeological excavation on the geophysical anomaly in Plaza San Francisco, 2016

The interaction between the ground and the structures around Plaza San Francisco will be modified due to the construction of the station and the access tunnel to Plaza Santa Clara. In some cases, the installation of the pedestrian tunnel and the station will result in a better seismic performance of the immediately adjacent structures. However, during construction the relaxation of the soil during the excavation will cause deformations behind the excavation walls. These movements can be managed and typical construction damage can be repaired, but a monitoring¹¹ system during execution, particularly on structures of cultural and historical importance, will be the best risk management tool.

From an engineering perspective, the factors affecting the site may be divided in three stages: before construction, during construction, and after construction:

- Before construction:

Before construction begins, it is customary to complete an inventory of previous conditions of all structures within the area to be affected by the work. Documentation of the state of conservation of each structure, including cracks, connections to public services/utilities and sensitive improvements (e.g. bricks, large glass walls or windows, or old mosaics or murals), is critical for comparing pre and post- building conditions. The facades, ceilings, and interior basements of the structures must be equipped with measurement objectives, floor level sensors (gauges), and fissure meters that are frequently monitored before, during and after construction.

Each structure must be characterized by what is understood as to whether the movement is acceptable, before construction operations must be stopped or modified. This is usually done by setting "warning" and "action" activation levels, between 50% and 90% tolerable movement.

- During construction:

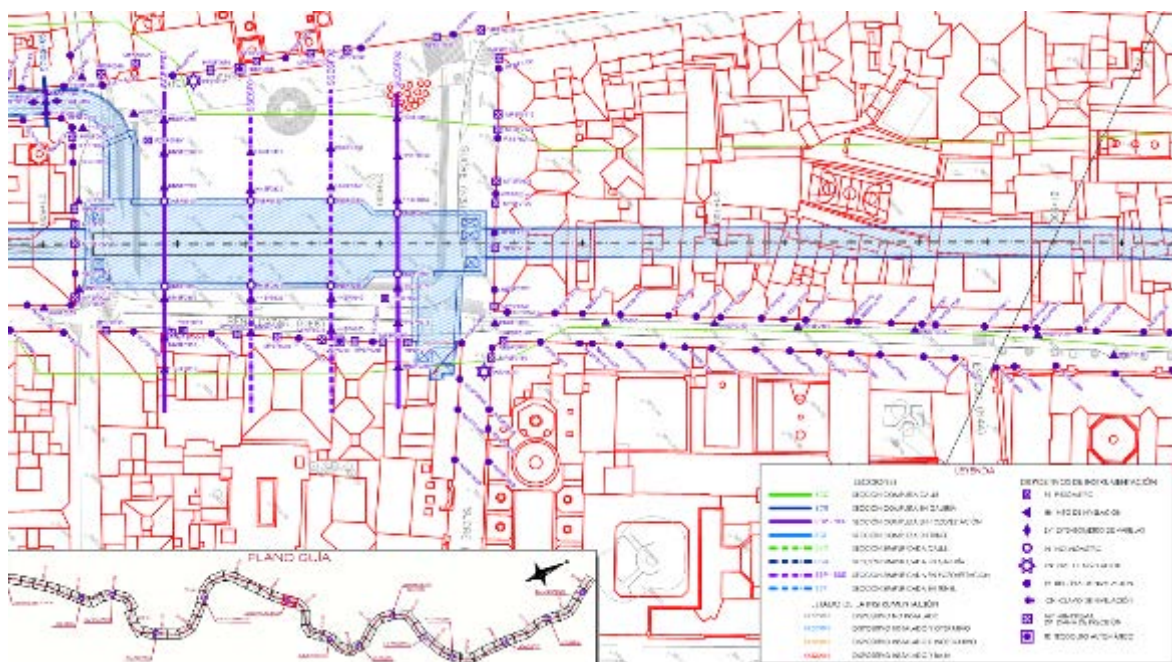
During construction, the monitoring system must periodically report de movements. Operations and measurements will be revised daily. Those movements at "warning" levels need careful observations during the work. Those movements at "action" levels may stop the work, until the operations establish a way to avoid exceeding the tolerable threshold.

¹¹ Auscultation in Spanish

- After construction:

While the structure and the soil continue moving after construction, these effects should be relatively small. The pre/post-construction surveys of the structures compared during this period. The comparison of the conditions must indicate where repairs are justified or if the works have been completed with no consequences to the structure.

During the Advisory Mission drawings were received from Metro Quito, showing the sequence for the construction of the station and the planned instrumentation¹² program [Graph 7]. Neither additional plans nor calculations were furnished on the anticipated soil deformations (i.e. models for the interaction of soil-structure, numerical models, bi dimensional or tridimensional). In general terms, the execution plan to execute the station at Plaza San Francisco is reasonably consistent with international practice, and the total automated stations will provide frequent monitoring on the displacement of the survey points.



Graph 7. Execution plane image showing piezometer, leveling milestone, strain gauges, inclinometers, leveling base, mini-prism, and theodolite, MQ

The presentations indicated that the movement limit (unspecified if it is horizontal, vertical, measured at the top of the wall, or otherwise) was 12 mm (about 0.5 inches). The revised drawings do not include displacement criteria, excavation slurry wall details or detailed monitoring plans, although the details are not critical to our review.

The plan for the excavation sequence includes completing the excavation prior to the arrival of the "break in / break out" tunnel boring machine, which will be dragged across the floor of the station box. This process reduces the potential for composite displacement during construction (first by passage of the tunnel boring machine and second during the excavation of the station).

The instrumentation plans¹³ indicate inclinometers will be installed in the station walls and outside of the station walls extending 5.0m below the wall toe. To rely on the inclinometer displacements, fixity must be achieved at the inclinometer toe.

A survey monument¹⁴ should be applied to the inclinometer at the surface to establish that the surface displacement estimated by the inclinometer is equal to the surveyed surface displacement. Prior to construction of the inclinometers in Plaza San Francisco, it should be shown that the inclinometers are achieving fixity (e.g. zero slope change for five depth intervals) at other station excavation in similar soils. If

¹² Plan of Auscultation of work in Spanish

¹³ Plan of Auscultation of work in Spanish

¹⁴ monument : marcador físico que se utiliza en la superficie para medir el desplazamiento

those station excavations do not achieve fixity at the base of the inclinometers, the depth should be adjusted for the instrumentation at Plaza San Francisco.

For example, in clays in California with E values of 5,500 t/m², depth to fixity was not achieved until greater than 30m below the bottom of the 20m deep excavation. Inclinometers were originally installed to 80m depth (60m below bottom of excavation) to provide this fixity.

Construction Methodology

The Mission had the opportunity to visit the construction site of the First MQ Station at El Labrador. The installation for the warehouse and train maintenance is of considerable scale occupying part of the former location of Quito's International Airport. It includes intermodal connections to the bus station. The team observed vanguard construction methods in the underground caves. It can be seen that with enough monitoring previous, during and after the construction, the movements induced in the Plaza San Francisco may be controlled to avoid the alteration of historical structures. It is vital to preserve the historical structures that the monitoring data be openly shared during the construction operations. [Annex IX]

- MQ station placement alternatives in the CHQ. EPMMQ

Within the development sequences of the work in the feasibility studies, the possible locations of the stations in the CHQ were analyzed, this took to consider the following possible placements [Graph 8]:

- Av. 24 de Mayo, a la altura de Venezuela y García Moreno
- Plaza San Francisco
- Santo Domingo Square
- Plaza Grande
- La Marín Station
- Teatro Sucre Square
- Gabriel García Moreno Park
- South End of La Alameda Park

Furthermore, fulfilling the instructions received by Metro de Quito, the following options have been considered for additional locations:

- Intersection between Av. 24 de Mayo e Imbabura
- Santa Clara Square
- Plaza de la Merced



Graph 8. Alternative courses for Line 1 of the MQ through the CHCHQCHQ. MQ

Technical criteria –such as "space available for the construction of the station"-, environmental –such as "affectations to the environment during construction"-, mobility and demand –such as "accessibility" or capitation radius-, patrimonial –such as archeology, real estate and urban insertion-, and economic, such as costs, situate Plaza San Francisco, Gabriel Garcia Moreno Park, La Marin Station and Plaza de Santa Clara, as the first four options.

The 2017 Heritage Impact Assessment Report for the four stations of the CHQ Stations: Plaza San Francisco, Plaza de la Independencia, Plaza del Teatro, Avenida 24 de Mayo¹⁵ develops the analysis of the patrimonial impacts in four other alternatives with the objective to evaluate the magnitude of the impact and / or benefit of a development project in the attributes of universal value by which the property was inscribed on the World Heritage List. It is agreed with the report that the ICOMOS guide gives a series of guidelines for the analysis, but does not establish a specific methodology, so following the general guidelines, a methodology used in the environmental impact assessment, Leopold Matrix modified, to the requirements of an evaluation for heritage that allows a qualitative and quantitative analysis of the impacts and serves for decision making. This methodology had already been described in the previous report to the Mission.

The quantitative valuation was made taking into consideration the various studies developed by the company Metro de Quito, the construction systems and the current state of preservation of heritage assets, analyzing the historical urban landscape to perform the characterization of possible changes to be evaluated.

The criteria used for the selection of: data sources, published works, unpublished reports, database or field surveys were to identify the information that would allow:

- Historically and culturally characterize the study property, its physical and human influences.
- To characterize the historical, social and cultural associations to determine the condition of quality, value and heritage importance of the property, framed in the retrospective statement of OUV adopted for the World Heritage property City of Quito in 2013.
- To characterize the importance of the components in the context of the urban landscape.
- To characterize the possible affectations to the elements of the urban historical landscape (aesthetics, uses, structure)

Although the attributes of the World Heritage property that contribute to its OUV are contemplated in the procedure, their identification should be more explicit in the methodology.

It is worth to highlight the research carried out to recognize the historical value of the urban shape, interpreting its structure and matrix, as well as the interest in identifying the information that allows the qualitative and quantitative description of the urban shape and the urban historical landscape as part of the attributes that must be considered.

The report sent to the World Heritage Center in October 2016, makes a change in the factors to be analyzed. From the study of Metro Quito, the following factors are taken as the most important for an evaluation in decision making:

<i>Technical</i>	<i>Mobility and Demand</i>	<i>Economic</i>	<i>Patrimonial</i>
<ul style="list-style-type: none"> – Space available for construction – Expropriations and overthrowings – Geotechnical Conditions 	<ul style="list-style-type: none"> – Accesibility – Impacto n mobility during construction – Integration with other ways of transportation 	<ul style="list-style-type: none"> – Cost of construction 	<ul style="list-style-type: none"> – Urban – Architectonic – Historic and cultural – Economic and social
Percent load 15%	15%	10%	60%

It is noted that these factors do not distinguish the Outstanding Universal Value from the other patrimony values, as requested by Decision WHC 40 COM 7B.5. It should be noted that at this time the patrimony values – which are specified below and whose description is included between p. 15 to 20 of the cited report - represent 60% of the total of the appraisal assigned.

¹⁵ IMPACT ASSESSMENT REPORT ON THE HERITAGE IN THREE STATIONS OF THE CHQ Stations: Plaza de la Independencia, Plaza del Teatro, Avenida 24 de Mayo, prepared for the Metropolitan Public Company Metro of Quito by the Consulting Team: Yadhira Álvarez, Paulina Moreno, Ana María Armijos, February 2017.

PAISAJE HISTÓRICO URBANO	VALOR		ATRIBUTO
	Urbano	Forma	
		Diseño	
		Paisaje	
	Arquitectónico	Morfología	
		Singularidad	
	Histórico - Cultural	Relevancia	
		Usos	
		Tradiciones	
		Simbolismo	
		Arqueología	
	Económico Social	Uso del Suelo	
		Calidad de Vida	
		Productividad	
		Movilidad	
		Conservación	

For the evaluation of the impact scale and the specific changes of the patrimonial values, five matrices were elaborated that were elaborated on each station, with the following procedure:

1. Valuation of Heritage Assets	Urban	Architectonic	Historic -Cultural	Social Economic																																																										
	Shape Design Landscape	Morphology Singularity	Relevance Uses Traditions Symbolism Archeology	Soil use Life quality Productivity Mobility Mobility																																																										
Matrices																																																														
2. In the first one impacts are identified																																																														
3. In the second one and in the third one qualification is carried out	Nature Intensity Extension Action		Frequency Reversibility Sinergy Accumulation	Persistence Duration Risk																																																										
	IMPORTANCE I = ±(3IN + 2A + EX + FR + RV + SI + AC + PE + RI)		MAGNITUDE M= 0.4 (IN)+ 0.3 (A)+ 0.3 (D U)	IMPACT (EFFECT) VI= I x M																																																										
	<table><tr><th>RANGO</th><th>IMPORTANCIA</th></tr><tr><td>≤12</td><td>Neutral</td></tr><tr><td>13 – 23</td><td>Ligero</td></tr><tr><td>24 – 34</td><td>Moderado</td></tr><tr><td>35 – 45</td><td>Grande</td></tr><tr><td>46 – 56</td><td>Muy Grande</td></tr></table>	RANGO	IMPORTANCIA	≤12	Neutral	13 – 23	Ligero	24 – 34	Moderado	35 – 45	Grande	46 – 56	Muy Grande	<table><tr><th>RANGO</th><th>MAGNITUD</th></tr><tr><td>≤1.00</td><td>Neutral</td></tr><tr><td>1.01 – 1.61</td><td>Ligero</td></tr><tr><td>1.62 – 2.22</td><td>Moderado</td></tr><tr><td>2.23 – 3.43</td><td>Grande</td></tr><tr><td>3.44 – 4.00</td><td>Muy Grande</td></tr></table>	RANGO	MAGNITUD	≤1.00	Neutral	1.01 – 1.61	Ligero	1.62 – 2.22	Moderado	2.23 – 3.43	Grande	3.44 – 4.00	Muy Grande																																				
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1.62 – 2.22	Moderado																																																													
2.23 – 3.43	Grande																																																													
3.44 – 4.00	Muy Grande																																																													
4. In the fourth evaluation is carried out	Neutral Impact:		With no changes																																																											
	Light Impact:		One whose return to its initial state is immediate and the gravity of the change are insignificant.																																																											
	Moderate Impact:		One whose return to its initial state needs mitigation measures and the severity of the impact is less																																																											
	High Impact:		The one whose return to its initial state needs very protective measures, corrective or mitigating measures and in spite of the measures, needs an extended period and the severity of the impact is moderate																																																											
	Too High Impact:		When it is impossible to return to the initial conditions and there is a serious impact / change is considerable.																																																											
5. In the fifth results are interpreted	Evaluation matrix and hierarchization of impacts and severity of change																																																													
	<table><tr><th>RANGO</th><th>IMPORTANCIA DEL EFECTO O IMPACTO GENERAL Para propiedades del PM Atributos que transmiten Muy Alto VUS</th><th>GRAVEDAD DEL CAMBIO/ IMPACTO EN EL VALOR DEL BIEN PATRIMONIAL</th><th>IMPORTANCIA DEL CAMBIO/ IMPACTO Para otros Bienes Patrimoniales o Atributos</th><th>INDICADOR DE COLOR</th></tr><tr><td>≤12</td><td>Neutral</td><td>Sin cambios</td><td>Neutral</td><td></td></tr><tr><td>-12.01 a -70.00</td><td>Ligero</td><td>Cambio insignificante</td><td>Insignificamente negativo</td><td></td></tr><tr><td>-70.01 a -128.00</td><td>Moderado</td><td>Cambio menor</td><td>Menormente negativo</td><td></td></tr><tr><td>-128.01 a -186.00</td><td>Alto</td><td>Cambio moderado</td><td>Moderadamente negativo</td><td></td></tr><tr><td>-186.01 a -224.00</td><td>Muy Alto</td><td>Cambio considerable</td><td>Mayormente negativo</td><td></td></tr></table>	RANGO	IMPORTANCIA DEL EFECTO O IMPACTO GENERAL Para propiedades del PM Atributos que transmiten Muy Alto VUS	GRAVEDAD DEL CAMBIO/ IMPACTO EN EL VALOR DEL BIEN PATRIMONIAL	IMPORTANCIA DEL CAMBIO/ IMPACTO Para otros Bienes Patrimoniales o Atributos	INDICADOR DE COLOR	≤12	Neutral	Sin cambios	Neutral		-12.01 a -70.00	Ligero	Cambio insignificante	Insignificamente negativo		-70.01 a -128.00	Moderado	Cambio menor	Menormente negativo		-128.01 a -186.00	Alto	Cambio moderado	Moderadamente negativo		-186.01 a -224.00	Muy Alto	Cambio considerable	Mayormente negativo		<table><tr><th>RANGO</th><th>IMPORTANCIA DEL EFECTO O IMPACTO GENERAL Para propiedades del PM Atributos que transmiten Muy Alto VUS</th><th>GRAVEDAD DEL CAMBIO/ IMPACTO EN EL VALOR DEL BIEN PATRIMONIAL</th><th>IMPORTANCIA DEL CAMBIO/ IMPACTO Para otros Bienes Patrimoniales o Atributos</th><th>INDICADOR DE COLOR</th></tr><tr><td>≤12</td><td>Neutral</td><td>Sin cambios</td><td>Neutral</td><td></td></tr><tr><td>12.01 a 70.00</td><td>Ligero</td><td>Cambio insignificante</td><td>Insignificamente positivo</td><td></td></tr><tr><td>70.01 a 128.00</td><td>Moderado</td><td>Cambio menor</td><td>Menormente positivo</td><td></td></tr><tr><td>128.01 a 186.00</td><td>Alto</td><td>Cambio moderado</td><td>Moderadamente positivo</td><td></td></tr><tr><td>186.01 a 224.00</td><td>Muy Alto</td><td>Cambio considerable</td><td>Mayormente positivo</td><td></td></tr></table>	RANGO	IMPORTANCIA DEL EFECTO O IMPACTO GENERAL Para propiedades del PM Atributos que transmiten Muy Alto VUS	GRAVEDAD DEL CAMBIO/ IMPACTO EN EL VALOR DEL BIEN PATRIMONIAL	IMPORTANCIA DEL CAMBIO/ IMPACTO Para otros Bienes Patrimoniales o Atributos	INDICADOR DE COLOR	≤12	Neutral	Sin cambios	Neutral		12.01 a 70.00	Ligero	Cambio insignificante	Insignificamente positivo		70.01 a 128.00	Moderado	Cambio menor	Menormente positivo		128.01 a 186.00	Alto	Cambio moderado	Moderadamente positivo		186.01 a 224.00	Muy Alto	Cambio considerable	Mayormente positivo	
RANGO	IMPORTANCIA DEL EFECTO O IMPACTO GENERAL Para propiedades del PM Atributos que transmiten Muy Alto VUS	GRAVEDAD DEL CAMBIO/ IMPACTO EN EL VALOR DEL BIEN PATRIMONIAL	IMPORTANCIA DEL CAMBIO/ IMPACTO Para otros Bienes Patrimoniales o Atributos	INDICADOR DE COLOR																																																										
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The proposed methodology is applied in: Av. 24 de Mayo, Plaza Grande, Plaza San Francisco and Plaza del Teatro, where in the development of each matrix the identified attributes are developed. After the individual evaluation of each station, a comparative exercise was performed that indicated the need for standardization of evaluation criteria¹⁶,

The results comparative matrix can be read vertically and horizontally. Vertically to evaluate each station individually and horizontally to compare the results of the four stations in each of the patrimonial values analyzed.

From the results obtained, the report concludes:

- With respect to **urban and architectural patrimonial values**, the following aspects are noteworthy:
 - There would be a permanent and irreversible impact with the construction of the *Estacion Plaza Grande*, with no option to mitigate or compensate them.
 - In *Plaza del Teatro* and *24 de Mayo* there would also be an irreversible impact, given the need to demolish real estate. However, in these cases there is the possibility of compensating the urban configuration, restoring these goods, some of which are currently subject to negative cataloging within the patrimonial inventory.
 - In *Plaza San Francisco*, impacts can be managed in advance, i.e. change can be prevented through the implementation of previous technical measures.

According to the Report, it is understood that in Plaza San Francisco it is feasible to proceed with the construction and return to the original state because it considers the visual aspects, built perimeter and architectural components, while in the other two locations it is necessary to alter said perimeters

In the matrices it is concluded that the changes are temporary, but that the construction of the MQ implies previous structural studies to achieve this hypothesis, and structural and protective consolidations be done prior to the construction phases.

Instead, for the other sites under analysis, the changes would be more negative because they would affect the built perimeter.

- In **historical and cultural patrimonial values**, the greatest affectations would occur in Plaza Grande and Plaza del Teatro, given the greater need for occupying the space in the construction processes and in the latter, furthermore, as a consequence of its low load capacity. However, once these construction phases are completed, the spaces could recover their natural dynamics.

It is inferred from the Report that these values include the most intangible aspects of the property, such as uses, traditions, relevance and symbolism, that can hardly return to the original state after the inclusion of a Passenger Station. Even contemplating the evaluation criteria, the changes of uses will be significant, and will remain in the time in the traditional exchange that takes place in the space-square.

Among these values the archaeological value is included, although it is agreed with the Report that the possible archaeological findings would be positive for example for the interpretation of the historical evolution of the World Heritage property and that there should be no destruction of archaeological remains, this contradicts the recommendations of the Report of the Archaeological Rescue Project, which recommends a replica of the findings at the Station, indicating the suppression of what was found during the construction of the Station. In any case, the changes undergone by archaeological excavations are irreversible in themselves. The report in the conclusions of the Valuation Matrix considers that there should be no destruction of archaeological remains, since there are specific laws and regulations that are mandatory. In the case of vestiges findings, they should be put into value, so in operation they have been valued without changes.

Once again, it is agreed with the need to strengthen a research policy, prioritizing the pre-Hispanic period, taking into account that the historical research of the city has focused on the colonial era, leaving the pre-Hispanic stage invisible.

¹⁶ Evaluation criteria:

- If the possibility of impairment exists, but it can be prevented and managed, the qualification is considered a "moderate" change with a "high" (large) impact. Thus in the matrix there is a chromatic alert that tells us that it is essential to maintain strict prevention and control measures during the process. After the constructive phase, the good can recover its initial status.
- If the impairment is permanent and irreversible, but it may be compensated, the qualification under construction it should be considerable a change with a "very high" impact and in operation it may be described as "positive". This decision is taken into consideration that the assets to be overthrown have a negative rating on the inventory of assets and after the restitution, they could contribute to the harmony of the whole.
- If the impairment is permanent and irreversible and with no option to compensate, the rating in construction and operation should be a considerable change with a "very high" impact

- In **economic and social patrimonial values**, the most significant alteration in the four stations is the possibility of gentrification and commercial re-qualification. The stations with a major tendency to these gentrification processes are San Francisco and 24 de Mayo. For reclassification processes, however, the most sensitive are Plaza Grande (or de la Independencia) and Plaza del Teatro.

These values may be most benefited by the changes, because mobility will be reorganized and pollution and vibration will affect historic buildings to a lesser extent. However, the reclassification of the urban space, in sectors of predominantly commercial and administrative use needs to compensate with the recovery of residential use, avoiding the processes of gentrification. Sustainable Tourism can be an important development policy for the CHQ, but not the only one. These changes affect to a lesser extent the option of May 24.

- Regarding **demand and mobility needs**, among the alternatives studied, Plaza de la Independencia is the most advantageous option, followed closely by San Francisco. The last two, on the other hand, move away from the most requested destinations and from efficient service to the urban centrality.
- With regard to the **technical aspects**, the option that presents the most complex resolution inconveniences, derived from its location in the ravine and the current situation of the collector and the viaduct, is 24 de Mayo.

The matrices do not include these two last factors in their analysis, neither economic cost.

The review of the matrices that include the valuation analysis and impact assessment in their attributes allows identifying to this Consulting Mission the following observations:

- In relation to **Plaza San Francisco**, the analysis of the valuation and evaluation of impacts on its urban attributes –of a very high valuation–, indicates that the severity of the change and the impact during construction will be from "minor" to "high" in the form and in the visual ones towards the urban spaces of the place, but that these would hypothetically decrease to "without changes" or "neutral" when the transportation system is in operation. Even considering the evaluation criteria that indicate that if the affectation can be prevented and managed, and that with strict prevention and control measures, the good can recover its initial state, this conclusion of the report seems questionable given the irreversible nature of some physical changes. Especially because it requires control of the process and the Site does not have an updated and comprehensive Management Plan. As for the architectural, the Valuation Matrix recognizes the risk and the impact for the structures of the monumental units, but also the absence of morphological changes in the buildings, in impacts that go from "minor" to "high" in the stage of construction, and which turn to be of less importance as from the operation stage, according to the proposed evaluation criteria. On the cultural-historical attributes, impacts are classified from "insignificant" to "moderate" -or even "positive" in the case of archaeological findings–, that do not generate changes in the relevance, uses, traditions and symbolism of the place, nor during or after the construction of the work. In this aspect there is no agreement regarding in that the archaeological works may be "neutral", because the excavation process is irreversible, even while maintaining the findings. It is likely that the proposed Evaluation Criteria make difficult the logical interpretation of results. Regarding the socio-economic, the changes and impacts analyzed are evaluated from "insignificant" to "high positive" for the quality of life, productivity of the sector, mobility and even conservation of the CHQ, it is in this attribute where the importance of the impact would be more remarked, once the transport system is put in motion, and the most significant alteration would be in the everyday use of the space and in the contemplation of the space.
- If these results are compared with those of the station's location on **Av. 24 de Mayo** –ancient Quebrada Jerusalén–, in the urban area the matrix indicates that for its attributes –of a valuation within low and high for their attributes–, changes and impacts would affect its urban shape, but that as in other indicators, these will be neutralized at the end of the work. In architectural terms, the situation remarked for the Plaza San Francisco in terms of affecting the structures and the integrality of the buildings during the work, and their control once the work is finished. The impact on the historical-cultural it also goes from "light" to "positive", although the change is important in terms of daily space uses, and there would be an improvement in symbolism and connectivity with the system in operation. The same considerations regarding the archaeological are reiterated.

However, in the economic and social area, there are potential "very high" impacts in terms of gentrification and re-qualification of space once the work is completed, and significant improvements in productivity, mobility and conservation.

- **Plaza Grande** – *with very high valuation attributes* - one of the largest squares in terms of surface area of the CHQ, the valuation and evaluation matrix indicates that in the urban the changes and impacts will be from "minor" to "very high" during and after the work, both in shape as in design and landscape. In the architectural, the changes and impacts will be of "moderate" and "high" during the work, but neutral to its end.

The historical-cultural resource records changes and impacts from low to high, before and after the work, which could even be "high positive" in the case of archaeological findings. Finally, the economic-social, with less seriousness and impact evaluated, also indicates positive assessments for the quality of life, productivity, mobility and conservation.

- As for **Plaza del Teatro**, –*with valuation attributes within low and high*–, the changes in the urban shape are considerable during the work, although in hypotheses they would improve with the system operating, and remain "moderate" on average for almost all other factors under analysis.

Applied the proposed formulas and concluded the comparison, the most favored stations are those corresponding to the layout of line 1, that is, the San Francisco Station and the Plaza del Teatro Station [Graph 9]:

MATRIZ DE RESULTADO FINAL													
Ubicación	Técnicos (Más valor, más facilidades)			Movilidad y Demanda (Más valor, mayor movilidad)			Impactos Patrimoniales (Más valor, menor Impacto)				Económicos (Más valor)	TOTAL VALORACIÓN	
	15%			15%			60%				10%		
	Espacio disponible para construcción	Expropiaciones y derrocamientos	Condiciones geotécnicas	Accesibilidad	Impacto sobre Movilidad durante la construcción	Integración con otros modos de transporte	Urbano	Arquitectónico	Histórico Culturales	Económico Social	Costo construcción	Sin Ponderar	Ponderada
Ponderación	5.00%	5.00%	5%	5%	5.00%	5.00%	20%	20%	15%	5%	10%	1.00	
Plaza de San Francisco	10.00	2.00	10.00	9.19	4.75	6	0.64	1.79	3.74	5.36	9.50	62.98	4.36
Plaza Grande	6.67	10.00	5.00	10.00	10.00	6	0.71	0.46	3.29	4.94	3.56	60.62	3.71
El Teatro	5.83	0.00	0.00	6.34	8.49	8	3.33	3.42	3.47	5.23	3.94	48.06	3.96
Intersección Avda. 24 de Mayo con Imbabura	3.33	2.50	0.00	4.45	6.67	4	4.30	1.78	2.96	5.16	0.00	35.14	2.96

Graph 9. Matrix of Final Result. IMPACT EVALUATION REPORT ON PATRIMONY IN THREE STATIONS OF THE CHQ: PLAZA DE LA INDEPENDENCIA, PLAZA DEL TEATRO, AVENIDA 24 DE MAYO. MQ, 2017. Pág. 181

In all matrices the numerical value is difficult to follow because it does not have reference quantifications or previous examples of application.

As for Magnitude in Impact Assessment -an indicator that synthesizes the intensity, duration and spatial influence that is reached through the application of a mathematical formula¹⁷–, this is reflected in the magnitude of impact qualification Matrix of which in this process is linked to the methodology suggested in the ICOMOS Guidelines on Asset Impact Assessments, 2011.

For Plaza San Francisco, the magnitude of impact during the construction process is slightly negative for the socio-economic values, slight negative and average for those historical-cultural, negative from moderate to large for architectural values and moderate negative for those urban, except in the possible partial or total destruction of some edified component of the urban unit that reaches the high impact. In the operation stage, the magnitude of impacts is positive from moderate to high, except in the reclassification of soil use, which can lead to petrification, evaluated as highly negative.

In the final conclusions and presentations, based on the comparisons of the eleven proposed location alternatives and the four evaluated ones, it is indicated that Plaza San Francisco is the one that has the best available space for the surface required in the station, although accessibility and mobility impact during construction would be better in Plaza Grande, while Plaza del Teatro may have a lower patrimonial impact. Plaza San Francisco is the one requiring the highest cost in the construction process.

According to the above, all the options present risks for the structures of the inventoried buildings and in some historical-social and economic-social indicators. **These changes and impacts would require control and mitigation measures to achieve the "no change" or "neutral" results proposed by the evaluation.**

Consequently -and in the context of the progress of works–, it is of vital importance that the **State party ensure the management instruments that allow control, reporting and evaluation of changes and impacts to agree on the continuity of the work**

¹⁷ Calculation Formula for Magnitude qualification

Final recommendation on the adequate location of the Metro Station at the CHQ

From the engineering point of view the excavation of the station and the tunnel are feasible without causing irreparable damages to the surrounding structures. But there is no agreement with the administrative procedures that have been applied in this Project by the State Party.

However, the proposals to protect the OUV require openness in management, sharing the data obtained in the monitoring, and carry out analyses prior to the progress of the execution of the work, especially since the World Heritage property does not have an updated and comprehensive Management Plan.

Neither advanced structural analysis nor programs have been submitted to share with the other institutions in the construction implementation phase and, consequently, their implementation has been requested. Nor are satisfactory results expected in the instrumentation process presented according to the management of the established inclinometers.

In this context, it is possible that the construction of the MQ means in the medium and long term the reduction of risks regarding physical aspects of the attributes such as environmental pollution and mobility, and that this favors the conservation of the OUV, as it would in any of the other locations evaluated.

As for the social and historical aspects of the Properties' attributes, also supports of the OUV, they are subject and relegated to political and administrative pressure, and in the long term will affect the OUV of the CHQ.

In view of the State party's decision to begin the execution of the work at Plaza San Francisco from Av. 24 de Mayo and Santa Clara, **ICOMOS reiterates that it reserves the verification of the impact of the work during and after construction**, in order to verify its impact on the Outstanding Universal Value of the property and its safeguarding on the World Heritage List.

In this instance a precise and specialized control will be required for the execution of the work. Before beginning the work, the following is especially recommended:

- Verify that the proposed approach to Plaza San Francisco reaches the criteria of a 12mm displacement indicated for other excavations in other places.
- Verify that inclinometers are clamped and do not show inclinations by providing significant displacement measurements during excavation of the station.
- Add vibration monitoring along the alignment of the boring machine, and around the station to collect data of environmental, construction and seismological vibrations during the construction.
- Develop an action plan in case the excavation walls deviate 6 mm and then to 10 mm, so that the execution of the construction does not exceed the tolerances of movement of the specified ground.
- Installing inclinometers near critical buildings, such as the Convento de las Claras, Cas delf Alabado, Convent of San Francisco and Compañía de Jesús, because if the movements approach the specified limits, it must be possible to identify if the movement extends from the supporting soils to sensitive structures.
- Include a seismic design criterion for the permissible movement of the excavation wall in the event of an earthquake, established as a reasonable threshold in case of an earthquake

According to the recommendations of the Impact Assessment Report – and to what this Advisory Mission proposes - in the short term it is recommended to exhaustively follow up all the monitoring processes formulated in previous and present reports, such as:

- Establishment of the control level of excavations.
- Auscultation Plan¹⁸
- Implementation of measures to protect the buildings
- Vibration control measures
- Implementation of the social management plans.
- Archaeological Monitoring Plan
- Environmental Impact Plan
- Buildings inventory and survey of current status in the area of influence of the construction of the tunnel and the San Francisco Station of 1PLMQ

In addition, among other suggestions of the Impact Assessment, it is recommended:

¹⁸ Plan de Auscultación de obra/ Auscultation plan / Auscultation d'ouvrages: Control of the movements induced by the excavation, both for the structures of the work as well as for the nearby structures, through the installation and monitoring of a series of devices, and in this way, to be able to assure their adequacy to the hypotheses and Calculation models adopted during design work

- to deepen the structural studies of the monumental complexes linked to the selected station and the civil buildings bordering to the same station;
- complete the composition of the Committee for Permanent Monitoring of the work –currently Ministry of Culture and Heritage, INPC and IMPQ-, with representatives of ICOMOS and of the academy specialized in heritage and a representative of the inhabitants of the sector, dealing specifically with the control of changes and impacts in the urban and architectural areas;
- formulate a schedule of compliance with the recommendations that the Permanent Monitoring Committee can control.
- generate a work plan related to the economy and popular culture, a criterion directly related to the historical urban landscape, which allows neutralizing the impacts in the historical-social and economic-social.
- maintain a continuous process of information on the development of the implementation project;
- to establish without delay a research policy that prioritizes studies on the pre-Hispanic period, given that the historiography tradition of Quito has focused on research on the colonial period, which is a serious detriment to the understanding of the pre-Hispanic stages.

The **Heritage Impact Assessment** Report also proposes the following **mitigation measures** to avoid, reduce or compensate impacts:

- **Auscultation.** Process that is recommended by this Mission, for which it is necessary to define with more exactitude the methodology to install extensometers, inclinometers, leads, electro-levels and control of fissures (geotechnical and structural instrumentation and monitoring)
- **Ground Treatments.** To control settlements and horizontal displacements, for which compensation injections are proposed. These studies should specifically ensure the monumental groups such as the Convent of Santa Clara and the Compañía de Jesús, among others
- **Inventory of Buildings.** This measure has already been developed in part according to previous reports and continuity should be given to the inspections and permanent updating of the data of the identified buildings (250).

3.2. Management and conservation issues

State of conservation of the World Heritage property

The management and work projects evaluated in the ICOMOS Advisory Mission in 2013 were further evaluated. In particular, the Mission reviewed the documents related to the elaboration of the Special Plan for the Historic Urban Complex of Quito. The special plan is divided into a first stage of Diagnostics, a second stage of Proposal and Development of Strategic Lines of Action, and the third stage for the Management Model. This plan forms the ordinances in force that today control the management of the Site, and guide other plans that contribute to its management.

The evaluation also covers projects elaborated, executed or in execution for the components of the Site, such as the final stage of the Joint Project of the Compañía de Jesús (herein used to refer to the members or the structure of the Church of the Society of Jesus or La Iglesia de la Compañía Jesús), verification of recommendations for projects of new public spaces, and works carried out to prevent or remedy the effects of the earthquakes of 2016.

In general, the state of conservation of the site is good, but technical and managerial advances are threatened by difficult governance, which puts the OUV safeguard at risk.

Integral Management of the Property: Property Management Plan

- **Special Plan for the Historic Urban Complex of Quito¹⁹. First Stage**

Following is the display of the stage of Analysis and Diagnosis of the **Special Plan for the Historic Urban Complex of Quito**, in development –remaining are the conclusions on the Proposal and Strategic Lines and the 2017 Management Plan-. The document begins with the general data of the property, the criteria by which it has been incorporated into the World Heritage List, but does not include OUV, authenticity and integrity.

¹⁹ The development of this item will be based on the presentation made to the Mission and the document submitted, as well as on the observations made on the High Management Plan submitted in 2014.

Considered below is the concept of historic urban landscape, by the living character of the CHQ. It also reflects on the concept of sustainable development, in particular on the notion of resilience.

The historical approach develops the pre-Inca, Inca, Hispanic and Republican stages of the property, describing its processes of occupation and urbanization, as well as the subsequent procedure for its institutional regulation through laws and ordinances.

The Special Plan is framed within the strategic principles considered in the Plans of Development and Territorial Ordering: quality of life, greater opportunities, correspondence between development and territorial ordering, perpendicularity and integrality, innovation towards the intelligent city and co-responsibility. Economy, Society and Environment, linked by Mobility, are the three strategic dimensions of development linked to the territory. The objectives of the Special Plan are [Graph 10]:

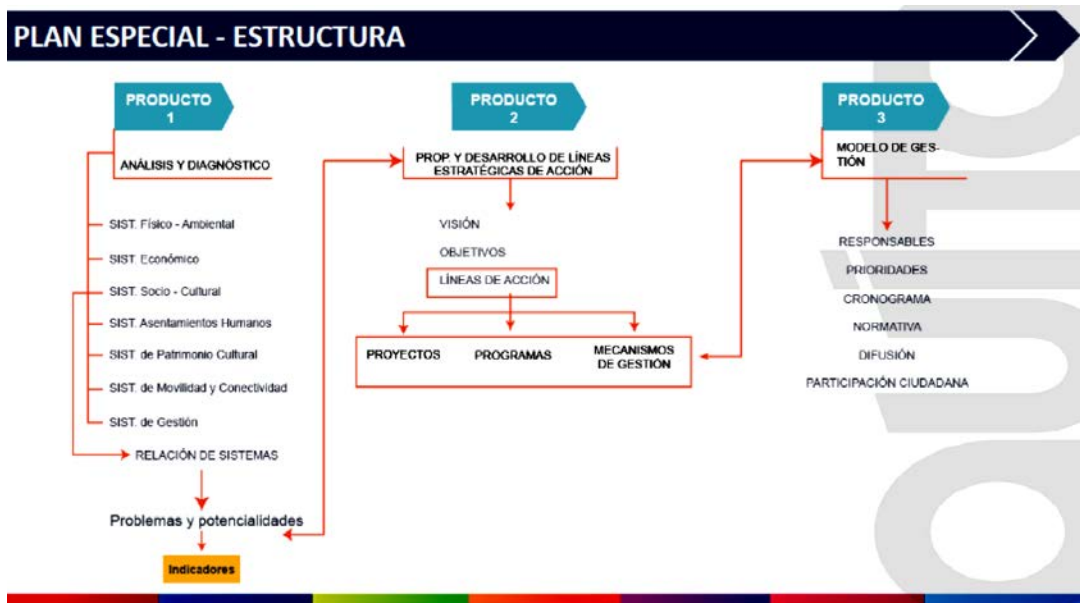


Graph 14. Objectives of the Special Plan. IMPQ

In the Methodology, the concepts of resilience and the conservation of the OUV have been taken on, which cross transversely, interacting in each phase.

Analysis and Diagnosis have been grouped into six systems, plus management: 1. Physical Environmental System, 2. Economic System, 3. Social-cultural System, 4. Human Settlement, 5. Cultural Heritage, 6. Mobilization and Connection, 7. Management.

The structure designed along the three stages to reach the elaboration of the Management Plan is as follows [Graph 11]:



Graph 11. Structure of the Special Plan. IMPQ

The methodology to be applied to develop each stage is as follows [Graph 12]:



Graph 12. Methodology of the Special Plan. IMPQ

For example, in the case of the Diagnostic phase of the PHYSICAL-ENVIRONMENTAL SYSTEM, the analysis of the variables studied indicates the serious shortcomings in terms of air quality control and acoustic comfort [Graph 13].

The impacts of climate change, uncontrolled urban development and deforestation are recognized.

These threats and vulnerabilities are some of the causes of CHQ depopulation.

For air quality, of the standard value allowed by the standard of 40mg/m³, the 53.7% of sections evaluated in the CHQ exceed the allowed value.

The incidence of volcanic activity and earthquakes should be noted more clearly in the analysis of this system



Graph 13. Diagnosis of the PHYSICAL-ENVIRONMENTAL SYSTEM

For the SOCIO CULTURAL SYSTEM, the analysis of the variables indicates the depopulation of the CHQ, at an average of minus 2.5% per year, with a low occupation in the same center and more density on the edges of the core [Graph 14].

The depopulation is attributed to the poor conditions of conservation of buildings and the transfer of educational institutions and intuitions outside the area.

This grounds the previous suggestions to favor housing as a standard of rehabilitation, an aspect on which the municipality has worked through the execution of 160 programs to date for their maintenance and rehabilitation.



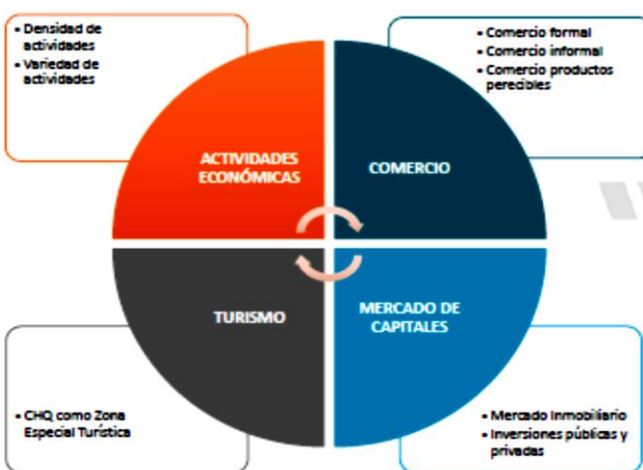
Graph 14. Diagnosis of the SOCIO CULTURAL SYSTEM, IMPQ

For the ECONOMIC SYSTEM, the analysis of the variables indicates the diversity of activities and their density in the ground floor, superimposed with the informal commerce in the public streets, which defines the axes of greater demand [Graph 15].

Diversity and high functional specialization indicate the presence of 142 activities per 100 houses in the core.

This affects the real estate market and the insertion of tourism activity.

The average cost of rehabilitation of heritage lodgings in the CHQ was around USD 750 in 2015.



Graph 15. Diagnosis of the ECONOMIC SYSTEM, IMPQ

The CULTURAL HERITAGE SYSTEM supports its analysis in the Cultural Value. According to the printed document delivered to the Mission - but does not develop the theoretical approach of reference - and does not quote the

OUV. It reviews what types of patrimony protects the legislation in force in the CHQ and in the parishes of the DMQ (natural, archaeological, architectural-urban, movable and immaterial goods), and the projects implemented for identification and inventory. No synthesis is presented in the document nor in the presentation. At this stage of Diagnosis, no considerations have been incorporated for the conservation of OUV.

Given that the monumental heritage, of greater value, is the one that is in better conditions, it becomes necessary a new approach to complete the recovery of the rest of the urban display, because it is the one that in the end allows the integral reading of the urban display and allows to establish the scales of values in the public space.

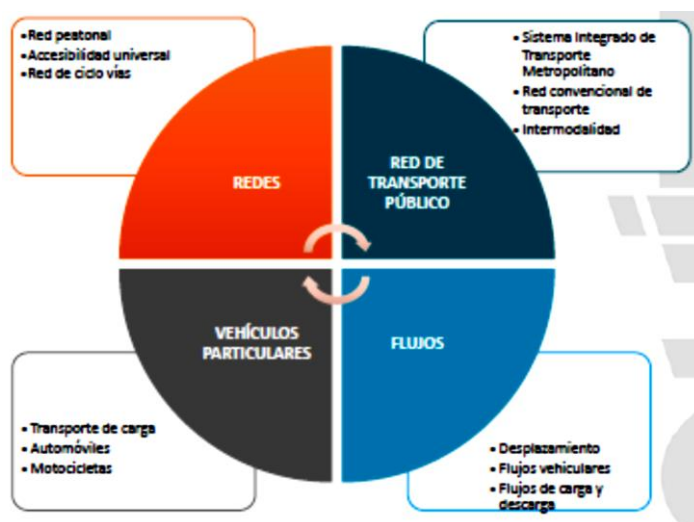
The analysis also considers the necessary integration of the intangible heritage, essential to complete the human dimension of the aforementioned physical supports. In any of its categories, the capacity of resilience demonstrated by cultural property should be highlighted in the analysis

In the MOBILIZATION SYSTEM pedestrians are the priority, but at present there is a high use of the private vehicle, which generates negative impacts on the quality of urban life [Graph 16].

In the CHQ the traffic is of 76,000 vehicles per day that move on a sixteenth-century road that was not designed for this type of transportation means. To this it should be added that about 300.000 people transit through the central area as a floating population.

The Municipality has designed and implemented variants in the modalities of transport, trying to reduce the mobility problem of CHQ, forced passage of the population crossing the city from north to south.

The MANAGEMENT SYSTEM examines the legal framework in force and the previous planning on the CHQ, in particular the Strategic Axes of the PMDOT, where cultural rights acquire relevance. The policies proposed by this Plan relate to sustainable development, resilience, OUV conservation, cultural diversity, livability, participatory management and creativity. The governance of the property may be required in this system.



Graph 16. Diagnosis of the MOBILITY SYSTEM, IMPQ

In all proposed Systems, both text and graphics should prioritize the OUV of the World Heritage property, so that the development of the diagnosis and the following stages are directed towards the objective of the Special Plan: the management of the World Heritage property and the maintenance of its OUV.

From the above the main vulnerabilities of the property arise, which generate the strategic lines of action to revert them [Graph 17]:



Graph 17. Strategic Action Lines for the Special Plan, IMPQ

The participatory model proposed by the Special Plan indicates new challenges that range from a comprehensive and diverse view of CHQ cultural assets (from pre-Inca to contemporary cultures), management responsibility among the Nation, the Municipality and the neighbor, to approach the public and the private, to plan but also to generate appropriation, to maintain the diversification of uses and to ensure the densification of housing, to provide infrastructure but to maintain the urban landscape, to favor sustainable tourism, that is to say continue keeping the CHQ alive and keep their OUV.

In the present state of progress of the First Stage of the Special Plan Analysis and Diagnosis, presented during the mission, it is always recommended to start from the OUV of the World Heritage property and from then on to enter upon the contents of each System.

It is suggested to deepen the PHYSICAL-ENVIRONMENTAL SYSTEM with the incorporation of seismic risks - although its prevention measures already have plans-, and the architectural urban conditioning that derives from them.

Part of the proposal in the MANAGEMENT SYSTEM requires a necessary updating of the current municipal legal framework that allows strengthening the political and technical governance of the property. In principle, it maintains the concurrence of national and municipal bodies as co-managers of the property analyzed in the previous Consulting Mission, and it is expected that the administrative and decision-making organization that forms part of the Special Plan will optimize the current model.

The CULTURAL HERITAGE SYSTEM, in addition to the revision of the different categories of cultural property that the CHQ possesses, requires a deeper analysis of the urban shape of the CHQ -trace, weave, display-, built from existing inventory data, allowing its use not only at a theoretical or descriptive level, but as a tool for analysis, control and management in future projects and interventions. It must be remembered that it is managed from the cultural and from the urban aspects at the same time.

Also, from this approach, the inventory is not reduced to its isolated use²⁰, building by building, unrelated to the context, but adds to an overall vision in the process of intervention. This type of analysis will demonstrate the importance of public space and housing in the urban display of the CHQ, the essential characteristics of the type and the principles of intervention for public and private, not jeopardizing the permanence of attributes. Defining the model of the urban shape that is intended to be preserved and managing reveals the knowledge and management of the attributes of the property and the preservation of the outstanding universal value, which in this advance is not incorporated. It is possible that this will also put in evidence the absence of a coherent and consensual report of the historical evolution of the urban shape of the city, which shows for the historical deepness of the territory since the earliest settlements to the present time, a situation that requires an unpredictable systematization of archaeological, urban and historical research.

The HUMAN SETTLEMENT SYSTEM gives an answer on the analysis of the occupation of the territory –which probably corresponds to the scope of the previous system-, to devote to the detailed review of the equipment and the current urban infrastructure of the CHQ.

It is emphasized the importance of the social dimension of the CHQ in the SOCIAL CULTURAL SYSTEM, in which it should support its recovery strategy, because the scale of housing in relation to monumental religious and civil buildings is what defines the urban cultural landscape of the city. This approach coincides with one of the principles of the Nairobi Recommendation for the Safeguarding of historical units and their function in contemporary life, 1976, which states: *"Each historical unit and its environment should be considered globally as a coherent whole whose equilibrium and specific character depend on the synthesis of the elements that composes it and that comprises both the human activities and the buildings, the spatial structure and the surrounding areas. Thus, all valid elements, including human activities (modest as they may be), have in relation to the whole a meaning that must be respected."*

The Diagnosis evidences the pressure that the MOBILITY AND CONNECTIVITY SYSTEM generates on the CHQ, in direct relation with the ECONOMIC SYSTEM. It should be noted in the analysis that the physical attributes of the urban shape that dates from the sixteenth to the nineteenth century -support of their outstanding universal values-, by their very condition have not evolved along with the activities and mobility of the people. In this context, the characteristics of colonial city roads should not be seen as a disadvantage, an obstacle or a threat,

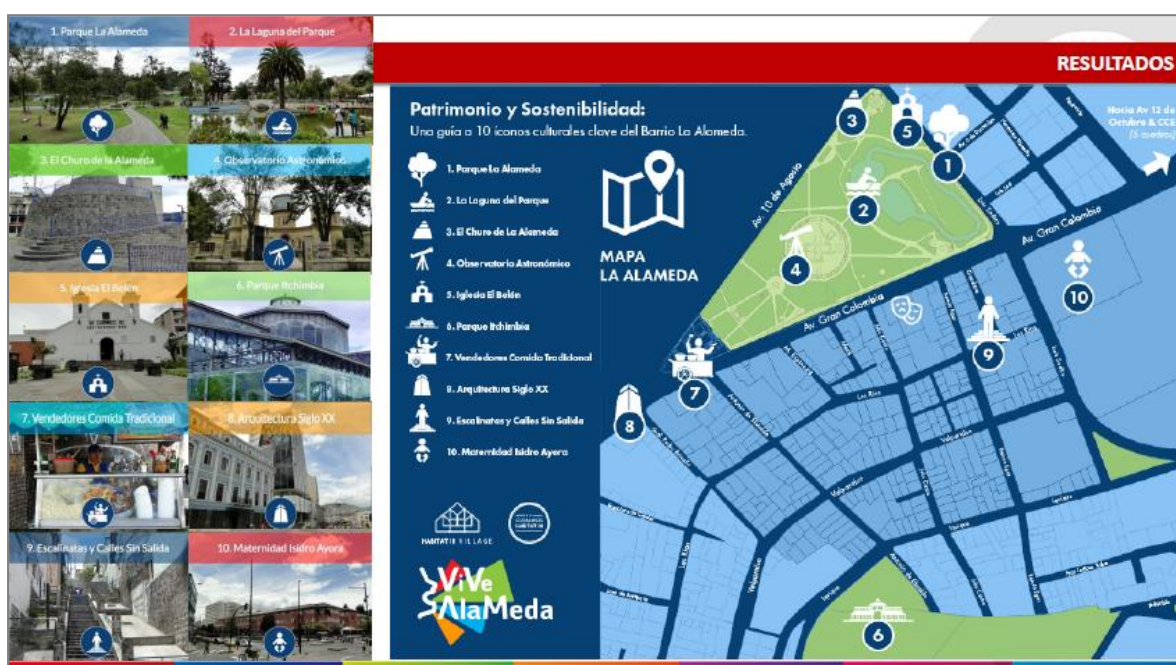
²⁰ The IMPQ developed 8611 records for the real estate heritage (Some of them still under review), 502 for intangible heritage and 345 for sound heritage. It plans to work in the furniture, in a figure close to 6000 goods

, but as the OUV attribute, but as the condition from which to generate the strategies of mobility and connectivity according to the 21st century and onwards. As cited in the Xi'an Declaration on the conservation of the environment of heritage structures, property and areas, ICOMOS 2005, *"managing the changing environment of structures, property and heritage areas of heritage value does not necessarily mean avoiding or hindering change."*

As far as possible, each System should have a synthesis closure, which allows them to be related to the proposed strategic lines, and the development of future stages.

As part of the activities of Habitat 3: United Nations Conference on Housing and Sustainable Urban Development, held in Quito in October 2016, IMPQ implemented the project *"La Alameda: Forging Heritage Tools for Urban Sustainability"*, which Implements part of the participatory methodology proposed for the Special Plan. Based on urban mapping, a collective construction was designed based on the cultural heritage of the neighborhood - which is part of the buffer zone of the CHQ -, to identify its heritage and build identity and appropriation as a tool for urban development [Graph 18].

Vive Alameda is the result of this Workshop on Citizen Participation, which broadcasts its results at <http://www.alameda.com.ec/>.



Graph 18. Signaling of the identified cultural goods, Vive Alameda, IMPQ, 2016

- **Plan for Prevention, Emergency and Investment Programs. Management of risks in the cultural heritage of DMQ. IMPQ**

One of the main threats of physical origin in the territory of the valley of Quito is the earthquakes. As noted in the first title, the property is threatened by floods and mudslides, volcanic hazards and geological faults, earthquakes and mass movements and anthropical threats. [Annex V].

The earthquake of March 5, 1987, with epicenter to the north of the volcano El Reventador, was the one that provoked the greater destruction of century XX. The Reventador is one of the most active volcanoes in the Ecuadorian volcanic arc, with at least 16 eruptions since 1541.

Currently Quito has a risk management as a Public Policy, which encompasses two institutional instances:

At a National Level:

- Risk management incorporated to the National Plan of Good Living
- Ministry Coordinator of Patrimony -INPC -Directorate of Risks
- Secretariat of Risk Management
- Emergency Operations Center - COE

- Creation of a National System as a Platform that defines competencies and institutional functions and involves actors.
- Formal education programs.
- SENPLADES: Risk Integration in planning and territorial regulating processes.
- Pollution control, sustainable management of watersheds, ecosystems, sensitive areas and protected areas.

At a Local Level:

- Secretary of Territory, Habitat and Housing - Historical Areas - Metropolitan Heritage Institute Resilience as a public policy contemplated in the Metropolitan Development Plan 2013, Rockefeller Foundation selects Quito Network of 100 Resilient Cities Risk management policies – Historical Center – Management Plan
- Secretariat of Security and Governance - Metropolitan Public Security Enterprise
- Metropolitan COE
- Atlas of Natural Hazards DMQ
- System 911 and early warning.
- Emergencies in heritage - IMP (Threats by earthquakes, fires, anthropical lack of maintenance)

In general terms, resilience can be understood as the adaptability of an environmental system to the changes and vulnerabilities to which it is exposed. It could also be understood as the ability of a system to respond flexibly to changes in the situation it is in and to oppose factors without transforming into a different structure, that is to say, keeping the characteristics that identify it.

This capacity to resist and rebuild against destruction, to recover, to overcome adversity by developing new resources, also indicates that resilience implies not only recovery, but also overcoming, adapting, based on collective action by the affected community and of their cultural identity.

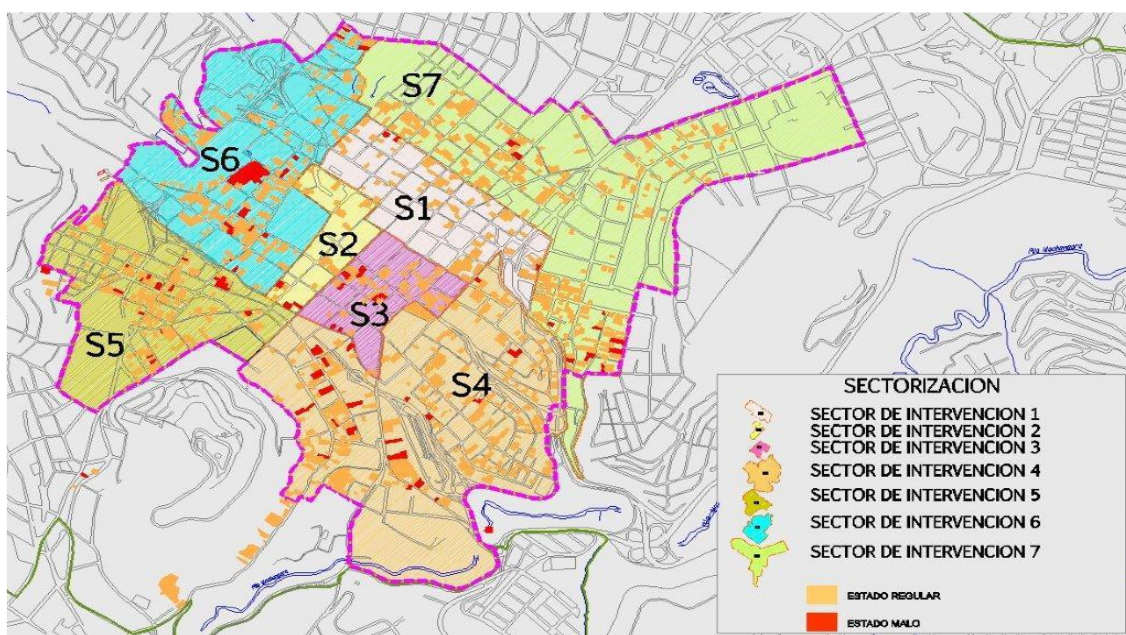
If there is something capable of adapting, of overcoming traumatic situations, of learning from mistakes, of emerging strengthened and being transformed by them, they are cultural goods. It can be demonstrated through the use of materials, techniques and workmanship, both material and immaterial that already exists, that do not need to start again, and which also bring creativity to the system.

It is therefore pertinent that Policy 2 for the CHQ PMDOT's focus from the concept of resilience. This particular policy aims to *"strengthen the HQC's ability to absorb disturbances without significantly altering its characteristics of structure, functionality, and conservation of universal values; being able to return to its original state once the disturbance is finished"*.

The strategic lines of this policy are:

- Know the exposure to risk and anthropical threats that affect the diversity of CHQ (reduction of diversity: loss of population, loss of elements, world heritage values), considered as threats to the system that affects the conditions and levels of resilience.
- Generate risk management that includes:
 - The impacts of disasters in relation to the physical and constructive vulnerability of the goods and services provided by the cultural heritage and those of the population related to poverty, marginalization, gender and vulnerable groups;
 - Determine the acceptable levels of functioning of the structures that make up the cultural heritage;
 - Develop prevention actions that are intimately linked to the elimination of restrictions that prevent the reduction of vulnerability to large sectors of the population or to incorporate risk management and prevention into the development policies applied to the CHQ and cultural heritage conservation.

Actions undertaken to address risks a range from threat and vulnerability assessment to collaborative international activities with Italy and Chile to assess risk management as well as the design of emergency responses, including operational and strategic procedures such as responses by sectors to the threat at the CHQ [Graph 19]:



Graph 19. Sectorization for threats at the CHQCHQ

The response to the emergency includes the evaluation of post-earthquake damage, technical assistance for interventions in real estate, urgent work on heritage property and corrective interventions for structural reinforcement.

The IMPQ has also made progress in the Religious Heritage Security Project in CHQ, using electronic security systems, considering all technical and technological parameters currently available (37 buildings). It has also invested in prevention actions, evaluation of anthropological threats, and broadcast of conservation and prevention measures²¹.

In summary, the process for safeguarding against risks implies:

1. Registration | ID
2. Diagnosis | Research | Inventory
3. Safeguard plan | Preparation, implementation and evaluation

Among the management measures that accompany the inventories already elaborated, the preparation of:

- Risk sheet for movable property
- Post-earthquake assessment sheet [Graph 20]

²¹ Technical Manual for the Prevention on Built up Heritage. On line: [<http://www.patrimonio.quito.gob.ec/index.php/centro-documental/fondo-editorial?id=419>]

[illegible]

Graph 20. Post earthquake evaluation card, IMPO

In the case of the earthquake of April 16, 2016, the actions, projects and interventions executed are:

- Structural study developed due to earthquake, for the Nun's Churches, Church of San Agustín and the east wing of the Monastery of the Agustinas of San Juan.
Amount USD \$ 34,603.90
- Maintenance, consolidation and structural reinforcement of the Monumental Religious Architecture.
Amount of USD \$ 700,139.87
- Within the benefits program for the Recovery of Covers "Fifth Facade" and Recovery of the Urban Image
Amount USD \$ 714,661.60
- Works in planning: Church of the Good Shepherd, Chapel of the Miracles, Chapel of the Third Franciscan Order of Tumbaco

The measures taken, previously and afterwards the seismic events, agree with OUV of the World Heritage property.

Prevent and reduce risks from inventories and protocols of intervention, management and maintenance becomes cost-effective and reduces losses, in this case, tangible and intangible. *"The means used to prevent or repair damage caused by a disaster must be tailored to the specific character of the goods to be preserved,"* stated the Washington Letter²² in 1987. Today, La Valeta Principles insist that *"safeguard plans offer the opportunity to strengthen the capacity to prevent risk and to promote environmental management and the principles of sustainable development"*²³.

Ongoing and Planned Projects

- **Compañía de Jesús Project**

Construction of the complex of the Compañía de Jesús began in 1605 and was finished in 1765. The complex underwent several reconstructions after the earthquakes that affected Quito, in particular those of 1698,

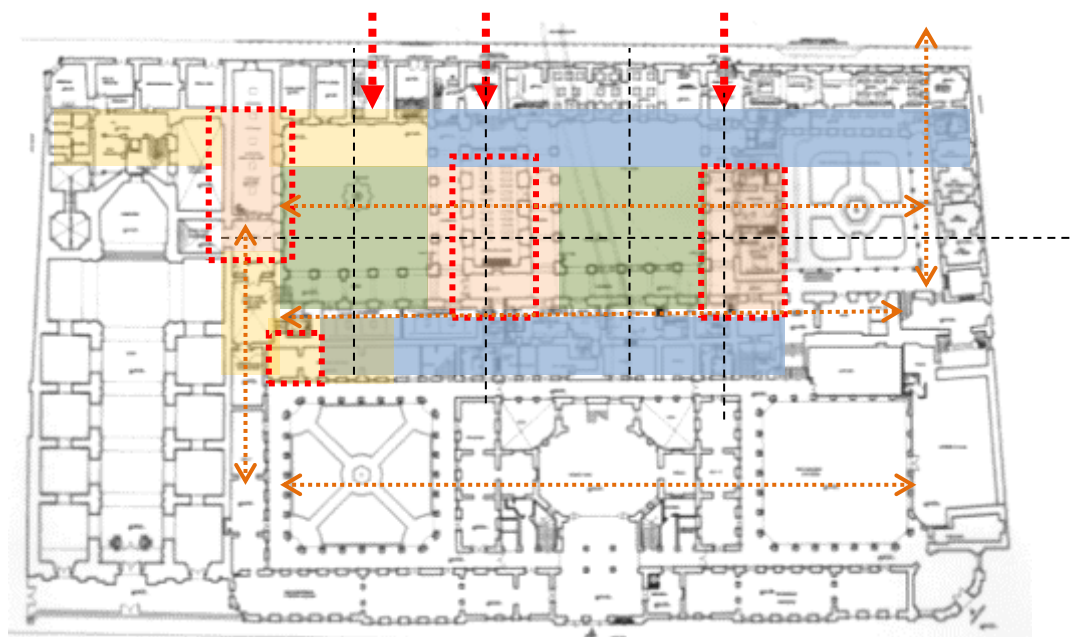
²² International Letter for the Conservation of Cities and Historical Urban Areas. Letter of Washington, ICOMOS, 1987.

²³ La Valeta Principles for the safeguard and management populations and historical urban areas. ICOMOS, 2011.

1859, 1868 and 1987. The reconstruction was operated by FONSAL (Fondo de Salvamento del Patrimonio Histórico), between 1989 and 2001.

The present Mission was briefed on the update of the project already presented in 2013, which conforms to the Integral Plan for the Compañía de Jesús, Cloistered Hotel + Cultural Center, plus the Intervention Plan in the goods and chattels of the Jesuit Residences. It has also been completed with the presentation of the Environmental Impact Studies requested by the previous Mission, from which the corresponding Environmental Management Plan is derived.

At present, the historical unit is structured through courtyards, two of which form part of the proposal. The gangway parallel to the street contains specific activities, such as offices, classrooms and rooms, mostly unused. The transversal ones are occupied by large spaces of religious and social use such as the Chapel of San José, the Chapel of the Miracle in the ground floor and multipurpose hall in the top floor, and the Auditorium in ground floor and respectively in each of the three wings [Graph 21].



Graph 21. Analysis of significant spaces

In the project, as previously indicated, the Residence of the Fathers is reorganized on the corner of Sucre and Benalcázar. It has two entrances, one at the corner itself and the other on Benalcázar Street. The Jesuit- Cultural Center-Museum will be developed on the south and west wings of the South Courtyard, including the Bell Tower. Opening the mentioned rooms to the public for social and religious events, the rest of the wings bordering the North Patio are to be used as a hotel, of which entrance is the old portal of the University [Annex X]. In this way spaces are communicated vertically and horizontally by existing circulations, maintaining the functionality of the original unit [Graph 22].

In the project some of the hotel's internal functional uses and relationships have been adjusted, its public and private social spaces, the museum, the Residence of the Order and its social functions, as well as the offices of the Foundation. In particular, the vertical circulations were revised, defining its design according to functions, incorporating a core of elevators and external fire escape in the patio's South-northwest angle, by indication of the Fire Department of the Metropolitan District of Quito. Another elevator of smaller dimensions and exempt as to its structural support will be located in the courtyard of the Residence.

Institutional agreements have made it possible to recover the visual relationship between the side-yard units of the Church, that correspond to the Museum of the Compañía and to the Metropolitan Cultural Center, which facilitate the perception of the longitudinal visuals that characterized the order's ensembles and which have been maintained from the original building until today. In this way, in spite of the change of uses and of the different legal domains, the unit will benefit in the interpretation of its spatial and functional architectural typology. [Annex X].



Graph 22. Cloister and visuals scheme on "Plan of the lower part of the building of the main college that with the name of Maximum had the Jesuits", Quito, 1783? 1830?

From the technical documentation and the visit to the work - including mock-up and presentation - it can be concluded that the project in this final stage is an adequate response to the cultural, historical, artistic and architectural values of the Compañía de Jesús Complex. Its execution does not jeopardize the OUV of the World Heritage property and positive impacts are expected in the process of integral recovery of the building.

In relation to the specific aspects of the project the following is observed:

- A complete graphic file of the project is received;
- Maintenance work has been carried out on the unit and the impact of the earthquakes of 2016 have been smaller;
- The requirements of the company MQ have been fulfilled, depending on the works to be carried out in the unit;
- The locations of stairs and elevators have been checked in the building to verify their functional and structural relevance. Technical details of the elevators have been requested so that their installation does not compromise the structure of the building, especially the elevator to be installed in the Residence. Additional technical details have been implemented for the final design of and materials of the core stairwell and elevator of the North Patio, (additions requested by the Quito firefighters to comply with fire codes);

It is recommended:

- To take into account the global standards for the seismic-resistant structural calculation in the new work, (including ASCE 31 and ASCE 41 or Eurocode 8 Part 3), and those in force in Ecuador, as well as on-site control of possible landslides.
- This Mission recommends the archaeological control in both Patios during the work, in order to - besides complying with the current legislation - contribute to the interpretation of the Compañía de Jesús Complex and the World Heritage property;
- It also suggests the subsequent elaboration of a Maintenance Manual - with drawings according to the work - ensuring the continuity and quality of future interventions.

▪ New public spaces and projects

The following is a list of projects already executed or in draft located with the World Heritage property City of Quito or its buffer zone, of which development in images conforms [Annex X]. This mission visited the working places that are cited.



V.1. Square Block of Convento de San Agustín

Building Pasaje Comercial San Agustín
(Old Civil Register), 1964
Demolished

Work: Plaza Huerto de San Agustín
2016



V.2. Square Block of Monasterio de la Inmaculada Concepción

Health Direction of Pichincha Province, 1950-7
Enrique y Lionel Ledesma.
(demolished)

Work: Plaza de las Conceptas, 2014



The Revitalization Program of the Historical Center²⁴ -NATIONAL GOVERNMENT, was reviewed in the previous 2013 Advisory Mission. It privileged the creation of public spaces in the CHQ from the design of an Axis of three or four squares, whose spaces were obtained demolishing buildings that corresponded to the line of the Modern Movement, considered with no cultural value.

No technical files were submitted for these projects, nor previous analysis or clear diagnosis of the evaluation of the impact on the outstanding universal value of the property as a whole (not of the buildings in particular), ensuring the preservation of the attributes and their completeness.

The resulting interventions in the two squares built -the one of San Agustín and the one of Las Conceptas-, The considerations already expressed both on the value of the works of the Modern Movement²⁵ and the need to maintain the contributions of each era to the present urban shape, according to the Charter of Venice. In the Huerto San Agustín square, what is called putting in value²⁶ appeals to the use of elements which do not respond to any kind of cultural interpretation of the property, i.e. the convent's own orchard²⁷.

The Plaza de las Conceptas deploys a less diverse amount of "design" resources. However, both squares have illuminations that at night compete - and win - to the historical buildings that in theory they complement. Replacing fill by empty means a significant alteration in the urban shape. The alteration on the display and the disposition that generate these new spaces is evident. The continuity of the block limit is lost and replaced with equipments and treatments of soles with no scale or relation with the historical space in which they are inserted.

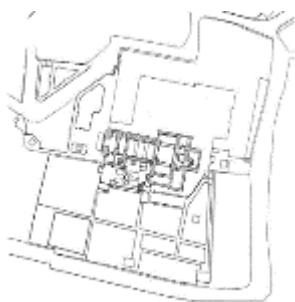
The execution of this type of works, characteristic of ephemeral and scenographical post modernity, once again shows the need for a Management Plan for the property, apart from putting the OUV of the World Heritage property at risk.

²⁴ En Línea: [<http://www.youtube.com/watch?v=O5uib7iktpk>]

²⁵ Documento de Madrid. "Criterios de Conservación del Patrimonio Arquitectónico del Siglo XX". Comité Científico del Patrimonio del Siglo XX de ICOMOS Internacional. 2011

²⁶ En Línea: [<http://www.plataformaarquitectura.cl/cl/798793/plaza-huerto-san-agustin-jaramillo-van-sluis-arquitectura-plus-urbanismo/581c98bfe58ece366d00000b-plaza-huerto-san-agustin-jaramillo-van-sluis-arquitectura-plus-urbanismo-planta-2>]

²⁷ Design of the floor at 45º - re-interpreting the graphics of lines at 45 degrees that represent the orchards in the historical drawings of the city of the eighteenth century-, didactic elements such as mural of plaques with historical drawings, children's games that allude to the urban chronicle about "the lizard that opened Mejía street" in the 19th century, the "humanized" sculpture of San Agustín, etc. only bronze applications in the floor mark the building line of the former Civil Registry that occupied it between the years 1964 and 2015



V.3. Guápulo 1644-88, 1716

Work: Integral Plan for Guápulo,
IMPQ- EPMMP, 2015



The Integral Plan of Guápulo addresses road, public infrastructure and mobility interventions for this neighborhood in order to recover the quality of urban spaces and the quality of life of its inhabitants, reducing the vehicle load of the sector that can reach 21 000 cars on the Orellana road.

The closing of the Germánico Salgado Street has the objective of preserving the heritage buildings, as well as the works of road improvement, sidewalks, curbs and signposts in Compte and Rafael León Larrea Streets, imposing a maximum speed of 30 km / h.

Other works include urban furniture in the Mirador de Guápulo park, in the BiciQuito station ramp for people with disabilities and a Scenic Walk, some of them partially executed.

The Project provides adequate antecedents for the management of urban sectors of a high cultural value.



V.4. Colegio Fiscal Nacional Simón Bolívar, Antiguo Beaterio Siglo XVIII y XIX Olmedo y Benalcázar Restaurado en 2003, FONSAL

Obra: Edificio ONU, s/d



Initially assigned for its rehabilitation in social spaces (2013), the former headquarters of the Colegio Simón Bolívar - which gathers several buildings - is signposted as the next headquarters of the UN building in Quito. Online: [<https://www.youtube.com/watch?v=9-mFoYRFB-U>].

No information on this project

■ Actions carried out by IMPQ concerning the affectations caused by the earthquakes occurred since April 2016²⁸

During 2016 the country and the Metropolitan District of Quito (DMQ) suffered several tectonic earthquakes of different magnitudes, which affected the structures of the real estate part of the patrimonial inventory in the CHQ as in the urban and rural parishes which form part of the DMQ.

Two of these earthquakes affected more to the local buildings, due to their magnitude or proximity to the property and they generated a direct incidence to the architectonic structures:

- April 16, magnitude 7.8 degrees on the Richter scale, with its epicenter in Pedernales and Cojimíes, Province of Manabí.
- September 4, magnitude 4.6 degrees on the Richter scale, with its epicenter in Puembo, north-east of Quito (Pichincha), 31.6 km from Quito

Interventions

As a consequence of the earthquake of April, the Church of San Agustín, the Church and Convent of the Agustinas de San Juan, the Convent and Church of Tejar, the BUen Pastor and the Chapel Señor de los Milagros (CHQ), as well as the church of La Magdalena (south of the city), and the churches of the parishes of Nono, Conocoto, Cotocollao, and Guapulo suffered affectations, for which the IMPQ began the following interventions:

²⁸ El desarrollo de este ítem se basará en la inspección en obra e informe de las mismas, elevado por el Arq. Franklin Cárdenas, Director de Ejecución de Proyectos Patrimoniales del IMPQ.

- **Work: Structural stabilization emerging from the Convent and the Church of the Agustinas de la Encarnación de San Juan**
 - Scope: Intervention in the eastern cradles (first and second level) and part of the south cradle (second level).
 - Works Executed: shoring, dewatering and baking of walls, repair of plasters, injections with hydraulic grout.
 - Amount of the intervention: USD \$ 17.525,99 plus VAT.

- **Emerging structural stabilization in religious properties in the rural parishes of Collacoto, Nono and Guápulo**
 - Scope: Church of Collacoto, Nono and Guápulo.
 - Implemented works: Liberation of adobe walls, shoring, wooden keys, uncoated and cooked, injections with mortar, consolidation of masonry, plaster finishes and provisional cover in the Church of Nono.
 - Amount of the intervention: USD \$ 43.873,15 plus VAT.

- **Emerging structural stabilization in the Church and Convent of San Agustín**
 - Scope: Northwest wall of the Sacristy, East Wall of the Third Room of the Museum, Tower.
 - Executed Works: Reinforcement of the Northwest walls, East wall and of the second body of the tower, repair of fissures. The aforementioned works have been entirely completed and have allowed structural stabilization by stripping and cooking, injections with mortar consolidation of masonry,
 - Amount of intervention: USD \$ 21,630.92 plus VAT.

Due to the September 4 earthquake, the churches of the parishes of the northeastern sector were affected in the towns of Cumbaya, Tumbaco, Puembo, Yaruqui, El Quinche and Checa, where consolidation work is carried out on the masonry by injection of mortars and grouts, baked, repair of plastering, ceiling and painting in general.

In the medium term, work has been planned to allow the structural consolidation of the following buildings affected:

- Consultation of the emerging structural study of real estate cultural property affected by the earthquake of April 16, 2016 is underway, including in this process the parish church of Nono, the church of the Convent of San Agustín and the east crust of the Monastery of the Agustinas de la Encarnación de San Juan.
 - Amount of intervention USD \$ 34,603.90.

- Maintenance, consolidation and structural reinforcement of the Monumental Religious Architecture.
 - Amount of intervention USD \$ 700,139.87.

- Integral waterproofing of the roof of the church of the Good Shepherd structural consolidation and waterproofing of the cover of the chapel of the Señor de los Milagros
 - Amount of intervention US \$ 192,981.65

- Works for the consolidation and structural stabilization of the church and the convent of Tejar and of the chapel Providencia de la Colina
 - Amount of intervention USD \$ 29,696.35

- Project called "Heritage Risk Management" by using the tool of the subsidy program of Recovery of Covers "Quinta Fachada" and Recovery of the Urban Image of the patrimonial buildings is in the process of execution of works in 23 buildings
 - Amount of intervention USD \$ 739,935.97, of which two respond to technical assistance for earthquake damage.

Other works scheduled to be executed and with the reference terms approved and in process in the page of public purchases to start with the contracts are:

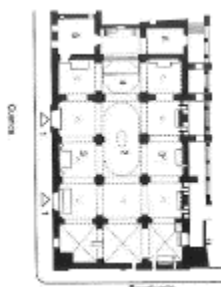
- Structural stabilization of the boundary of the Interactive Museum of Science and Con Quito with Maldonado Avenue and recovery of the Chapel of the Tercera Orden Franciscana of Tumbado, previously emergency works were executed due to the fire of December 2015.
- Structural reinforcement studies for:
The Church of the parish of Nono,
The Church of the Convent of San Agustín and Agustinas de la Encarnación de San Juan,
proposal for the east crust of the Monastery
- Investment amount USD \$ 34,603.90.

In short, all works show a quick response to the threat, and are correct in their proposal and execution - materials and procedures of restoration- and in accordance with the OUV of the World Heritage property when the buildings are located in the buffer zone, but also in the others located in the DMQ, according to their cultural, social and architectural values.

As per the reports, damages to the DMQ building have been reduced by the preventive consolidation works that the IMPQ has executed in the last damage. The intervention criteria are correct, working according to the response of the original materials and their respective construction systems.

According to the experience gathered by the IMPQ in this field, it would be beneficial to translate it into intervention rules that allow strengthening the conservation of the property facing frequent seismic events in the area.

Some of the works already executed or in progress [Annex XII]:



VI.1. Church and Convent of Santa Clara

Cuenca y Rocafuerte

Midcentury XVII

Restored between 1990-2000, FONSAL

Affected by earthquakes of 2016: convent and church



Over the centuries the building has received reinforcements to face earthquakes, as evidenced by the buttresses of the west side of the church. In 2016 the earthquakes affected part of the perimeter wall of the orchard, the novitiate, sectors near the first courtyard and the tower.

In various sectors, according to the pathologies of cracks and fissures presented, wooden braces and turnbuckles were placed in horizontal diagonal, sewn and removed from the wall, and injections with volcanic rock lime, cement, and accelerators to reach the consolidation of the wall, built in adobe, or brick, or wall fences with a wooden structure.

In some interiors the cleaning and consolidation of paintings were carried out, as well as the consolidation of the wall by means of the mentioned injection process. Work in progress.



VI.2. Chapel Los Milagros

Rocafuerte y Fernández Madrid N1-113

1680

Restored between 1989-90 M-2000, FONSAL

Affected by earthquakes of 2016: chapel



In the chapel the seismic movement affected the sector of the high choir, with the detachment of the plaster over the wall of the ceiling. Also affected are the paintings of the ceiling of the nave, on which the consolidation prior to the intervention has been applied.

In the lateral tower were remarked previous fissures.

Work in progress



**VI.3. Convent Buen Pastor,
Antigua Recoleta de la Peña de Francia**

La Recoleta

1600, 1770 church, modifications 1871-1912

Restored between 1993-2000, FONSAL

Affected by earthquakes of 2016: convent and church



The seismic movements affected the ornamentation of the entablature of the facade, and highlighted previous fissures of the rest of the set, mainly in the church.

Work partially implemented.



VI.4. Church and Convent Mercedario de El Tejar

El Retiro N5-153, La Merced

1750

Affected by earthquakes of 2016: convent and church



Seismic movements affected part of the cloisters and the two wings of the convent on the first floor destined for the museum. It also affected the towers of the church. The movements were smaller in areas where the cover is less rigid.

Works to be executed.



VI.5. Iglesia de Nono

Parroquia Nono, Noroccidente DMQ

Siglo XVI en adelante

Affected by earthquakes of 2016 church



The chapel has a structure that corresponds to the original building in the nave and lateral dependencies, while the current facade is a wall built later parallel to the existing one.

Due to seismic movements, this wall separated from the rest of the building, and in particular the north side wall presents important horizontal cracks, evidences of lateral tensions during the event.

Lateral and frontal, external and internal shoring, double cover, and consolidation of the internal paints have been executed

4. IDENTIFICATION OF THE FACTORS AFFECTING THE WORLD HERITAGE PROPERTY

Revision of the actual state of conservation of the World Heritage property

The factors that affect the state of conservation of the property are the following:

- Lack of a management plan
- Non-authorized interventions that affect the authenticity of the property and negatively impact in the OUV.
- Governance, due to the management model shared between the Nation and the Municipality
- Arbitrary modifications of ruling ordinances
- Theoretical support on the urban historic process
- Seismic vulnerability
- Depopulation / historical houses not in use and with no maintenance
- Lack of broadcast about the intervention management processes

As the attributes defined in the retrospective statement of Outstanding Universal Value for the City of Quito principally refer to the relation among urban shape, architecture and landscape, their permanence and authenticity, all management or intervention should ensure their conservation.

It is clear that the major weakness of the property is the lack of a Management Plan and of an updating of the urban norms, so the management responsibility is clearly defined.

This mission also highlights the factors considered strength and opportunities that benefit the property:

- Human capital: specialized technicians
- Cultural value of the material and immaterial goods
- Persistency of traditional construction knowledge
- Elaboration of acting plans, but not entailed
- Capacity to elaborate, execute and manage projects
- Coordinated answers to emergencies
- Opening to new approaches: diversity, sustainability, risks, resilience, participative management
- Research and practice: FONSAL, INPC, IMPQ

As mentioned by the previous Advisory Mission in 2013, it is to be expected that the social value of the cultural heritage that the new Culture Law places in the foreground will allow the linkage and balance of the conservation of the tangible and intangible heritage of the property, which in any case is indispensable to decrease in the community levels of disinformation about the cultural richness of the property and the DMQ through the broadcast of the intervention processes, so that it is understood why and what is protected and conserved.

5. EVALUATION OF THE STATE OF CONSERVATION, CONCLUSIONS AND RECOMMENDATIONS

Based on the above, the following is observed and recommended:

Metro of Quito

Quito's Metro, as part of the Integrated Transportation System of Quito, at its passing through the Historic Center of Quito, identifies two passenger stations, Plaza San Francisco and Teatro, as a reserve. According to previous ICOMOS recommendations, a number of alternatives, none of them feasible, have been presented for the location of the stations at the CHQ.

Without any agreement on the definitive location of the station, work has begun on that planned for Plaza San Francisco, from the interchange of May 24 and works in the Plaza de Santa Clara.

The presentations made during this Advisory Mission have also concentrated on justifying the location of the San Francisco Station, being this area the one that provides best urban services, and reaches the highest demand for MQ users.

As stated several times, the Metro of Quito project is a feasible solution to the mobility conflict at the CHQ, but it is not so the location of the main station in Plaza San Francisco, due to the anthropological, archaeological and patrimonial vulnerability that the sector for its role as an emblematic landmark of the property inscribed on the World Heritage List. The option of this location has never been recommended by ICOMOS. Continuing with this type of procedures definitely puts the OUV of the World Heritage property at risk.

The report on **the Archaeological Rescue Project of the San Francisco Station**, commissioned by the Metro Metropolitan Public Company of Quito (EPMMQ) that runs the work, does not provide conclusive data. The management of the property has risked the universal cultural value of the CHQ by starting the works without adequately responding to the previously mentioned recommendations.

- This Mission had to consider two aspects of the Metro of Quito Project:
 - On the one hand the progress with the works and archaeological studies carried out in Plaza San Francisco, although the World Heritage Committee did not consent to this location of the station and the passing of the subway through the historic center of the City of Quito (CHQ); ICOMOS and this Mission also do not agree with this location;
 - On the other hand, the technical and impact assessment of 11 alternatives²⁹ (which were narrowed to four possible alternatives) shows this location to be the most viable for the location of the Metro of Quito station in the CHQ;
- As the State Party and its competent authorities decide on the progress of the work, this Mission recognizes the two situations cited and:
 - a. Understands that the location of the Metro Station in Plaza San Francisco is not advisable in the current circumstances, since it puts the World Heritage property's Outstanding Universal Value at risk, and in particular threatens the integrity and the interpretation of the property;
 - b. Evaluates the progress of the work and the projects presented for the work, especially in relation to soil movements and seismic events.
- It is possible that the construction of the Quito metro, in the medium and long term, would lead to a reduction of risks regarding physical aspects of attributes such as environmental pollution and mobility, and that this favors the conservation of the OUV, as it would in any of the other locations evaluated. However, the social and historical aspects of the World Heritage property's attributes which contribute to its OUV are affected by and overlooked due to political and administrative pressure, which in the long term, will affect the OUV of the CHQ.
- It is recommended to immediately implement communication and broadcasting mechanisms to reduce disinformation levels on activities in the area of the square, regardless of the final location of the subway station;
- It is recommended that Anomaly 1 *in situ* be preserved and put into value, accompanied by its respective interpretation property;

The **Heritage Impact Assessment** presented on three stations of the CHQ compares 4 possible locations considered as preferred: Plaza San Francisco, Plaza de la Independencia, Plaza del Teatro, and Avenida 24 de Mayo. It reiterates the methodology applied to Estación San Francisco in previous reports and emphasizes on the variables destined to the architectural urban cultural heritage, more social and economic aspects, developing the variables as from the attributes of the property. The variables of mobility and cost are not evaluated in the matrices

The evaluation of the magnitude of the impacts in Plaza San Francisco is negative - between light and large - during the construction, it is special in the possible partial or total destruction of some constructed component of the urban set; and becomes positive in the operating phase of the system, although it evidences as negative in the reclassification of soil use, which can lead to gentrification.

The conclusions of the Impact Assessment Matrix - which consider the ICOMOS Guidelines on Heritage Impact Assessments for Cultural World Heritage Properties (2011) - indicate that the negative impact on the property and its OUV can be prevented and managed, and with strict prevention and control measures the good can recover its initial status, but this conclusion seems to be questionable, given the irreversible nature of some physical changes. Especially because it requires control of the process and the property does not have an updated and comprehensive Management Plan.

The comparison between the results of the evaluation matrices indicates that Plaza San Francisco is the one that has the best space available for the required surface in the station, although the accessibility and the impact on the mobility during the construction of the work would be better in Plaza Grande, While Plaza del Teatro can register a lower patrimonial impact. Plaza San Francisco is the one with the highest cost in the

²⁹ Av. 24 de Mayo, a la altura de Venezuela y García Moreno, Plaza de San Francisco, Plaza de Santo Domingo, Plaza Grande, Estación de La Marín, Plaza del Teatro Sucre, Parque Gabriel García Moreno, Extremo Sur del parque de La Alameda, Intersección entre Av. 24 de Mayo e Imbabura, Plaza de Santa Clara, Plaza de la Merced

construction required. That is to say, as from the results of the Impact Assessment on the Patrimony requested by the Metro de Quito Company, the desirable location for the State Party is Plaza San Francisco. According to the above, in all the options there is risk for the structures of the inventoried buildings and in some historical-social and economic-social indicators, thus they suppose to be threatens to the attributes that support the OUV, to its integrity and authenticity. These changes and impacts would require control and mitigation measures to achieve the "no change" or "neutral" results proposed by the evaluation. In consequence for the **construction process**: the State Party is urged to present in a short term management and administration control tools, inform and evaluate the changes and impacts identified in the 2017 Heritage Impact Assessment Report to agree on the continuity of the work.

- It is recommended to implement the recommendations of the 2017 Heritage Impact Assessment (HIA) report, in order to ensure verification of its assertions regarding the evaluation of the construction of the MQ and its coming into operation; a process that would show the State Party's interest to demonstrate the governance of the World Heritage property;
- It is suggested that the State Party generate the necessary plans and projects to mitigate the many urban and architectural impacts, as well as the historical-social and economic-social impacts indicated in the aforementioned HIA Report.

In view of the decision of the State party to start with the execution of the work at Plaza San Francisco from Av. 24 de Mayo and Santa Clara, with which there is no agreement, **ICOMOS reiterates that it reserves the verification of the impact of the work during and after construction**, in order to verify its impact on the outstanding universal values of the property and its permanence in the World Heritage List.

- It is necessary to establish a Committee integrated by Metro de Quito, ICOMOS and Quito's Instituto Metropolitano de Patrimonio (IMPQ) with the responsibility of daily reviewing operations and measures of instrumentation system. This Committee should have the ability to interpret and adjust during the work if the behavior of the excavation is not as expected, documenting its actions on a weekly basis.
- It is recommended to implement a system of geotechnical instrumentation and movement control, at the station to be built immediately before Plaza San Francisco, to measure and compare structural movements. The results of this study should be shared with the World Heritage Centre before starting the construction of the Plaza San Francisco station.
- It is suggested to take into account the recommendations made regarding control of soil displacement criteria, the addition of monitoring along the alignment of the tunneling machine and in the significant buildings of the area, as well as the action plan for seismic or construction eventualities.
- It is requested to ensure an adequate depth for the installation of inclinometers, to avoid rotation and movement of their bases (i.e. to provide relevant measurements, the inclinometers must be installed deep enough to achieve base fixity). It would be desirable to verify the installation and measurement process of the inclinometers (and other monitoring systems) in the station nearest to Plaza San Francisco – before construction in the Plaza begins – and submit said data to the World Heritage Centre for the consideration of ICOMOS.

Management and conservation issues

Special Plan for the Historical Urban Complex of Quito. First Stage

The first stage of the Special Plan for the property presented has achieved to partially systematize the background for its diagnosis. Although it provides approaches, methodology and some strategic lines, it still does not define the urban shape model to manage in order to preserve its outstanding universal value. The diagnosis should go deeper in the analysis of the trace, the display and the layout, and in the typologies that constitute them (Criterion ii), a study that provides the historical urban patterns of occupation of the property and provide tools to evaluate the impacts on the OUV.

- Progress has been achieved in the development of the Special Plan in its First Stage, its theoretical approach and methodology. It is urgent to complete its writing by strengthening the attributes and values of the property -particularly of those that support the outstanding universal value -, and the administration and legislation instruments;

The new Culture Law plus the Resolution for the transfer of competence to preserve cultural heritage to the autonomous governments, 2015, accentuate the responsibility of heritage management in the municipalities. In this context, DMQ through legislation and management must support this position by providing the

institution responsible for hierarchy and proportional authority to an national cultural heritage that is also a mankind heritage.

- As it has been chosen by an authority of mixed application between Nation and Municipality -INPC and IMPQ-, it is exhorted to define in an urgent way the administrative procedures in the property that allow to share the decisions and reports, and not confront them, to assure the governability of the property
- It is recommended to complete the process of updating the legislation and avoid modifications that may affect the quality of the management of the property, understanding that it needs both politicians and technical experts for its conservation;

In some of the projects considered by this Advisory Mission, executed and to be executed, it is evident that it is based on unlike historical antecedents and on elementary and incomplete readings of the urban shape that supports the attributes of the property. These historic discrepancies are what compel, in this case, the historical review that heads this report, as well as the consideration of seismic vulnerability of the territory.

Quito has gone through a lot of work in the conservation of its masterpieces, which must now be applied in the domestic urban net, identifying all the vulnerabilities of the property, especially the volcanic one as it was exposed in 2016.

- It is suggested to define and consolidate the historical framework of the city in terms of its urban evolution and the historical thickness of the territory, giving importance to the overlapping of cultures that this entails, encompassing its tangible and intangible heritage. Both INPC and IMPQ have a background in the research of the subject that is essential to systematize together;
- It is proposed that the system of inventory of cultural property of the IMPQ be applied in the deepening of the analysis of the urban shape of the CHQ –draft, plot, grate-, allowing its use not only at a theoretical or descriptive level, but as an analysis, control and management tool in future projects and interventions. It should be remembered that it is managed from the cultural and from the urban at the same time;
- It reiterates the importance of housing typology within the Special Plan, both in its analysis and in its strategic management, since it focuses on concepts of co-responsibility in heritage conservation, sustainability and resilience.
- As far as possible, the property's retrospective statement of OUV should be incorporated at the beginning of the First Stage, and each System should have a summary closure, which can be linked to the proposed strategic lines, and the development of future stages;
- It is suggested to highlight in the diagnosis the seismic vulnerability of the property and its conditions, incorporating specific design requirements for historic buildings according to their construction and materials systems, in connection with the provisions of the Ecuadorian Code of Construction for new construction according to the seismic zones, incorporating the current risk management that the Municipality already has;
- Integrate into the Ecuadorian Code of Construction the global standards, including ASCE 31 and ASCE 41 or Euro code 8 Part 3.

Compañía de Jesús Complex

The complex and cloister of the Church of the Compañía de Jesús- one of the main architectural and artistic attributes of the property -keeps the original layout of cloisters that attend the evangelizing, educational and social activities by the priests. The authenticity of the unit is one of its most relevant attributes. The proposal of the project –already analyzed in the previous report-, defines in this instance the development of vertical circulations and the responses to the requirements of the Fire Department of the Metropolitan District of Quito.

It may be concluded that the project in this final stage is an adequate response to the cultural, historical, artistic and architectural values of the Compañía of Jesús Complex. Its execution does not put at risk the OUV of the Site and positive impacts are expected in the process of integral recovery of the building.

In the development of the final presentation of the project and during the execution of the work the following is required:

- To provide the technical details of the elevators to verify that their installation does not compromise the structure of the building (especially the elevator in the Residence), as well as the final design of details and materials of the core stairwell and elevator of the North Patio, as requested by the Quito firefighters to comply with fire codes;

- It is recommended to include archaeological control in both Patios during the work so as to, in addition to complying with current legislation, contribute to the interpretation of the Compañía de Jesús Complex and the World Heritage property;
- The subsequent preparation of a Maintenance Manual - with the drawings in accordance to the work - to ensure continuity and quality of future interventions.
- To consider the global standards for the structural seismic-resistance calculation of the new work, (including ASCE 31 and ASCE 41 or Eurocode 8 Part 3), and those in force in Ecuador, as well as control of possible movements of the work.

New public spaces and projects

The execution of works reported in the previous Advisory Mission is of concern to ICOMOS, as they show evidence of significant governance issues for the World Heritage property.

Being the urban shape one of its most significant attributes, documented through historical documents that demonstrate the generation and persistence of the compass, multiple functionality and readability of the Historic Center of Quito, it is surprising the continuity of works that lack serious urban historical analysis.

- There are dissonances between the authorities of the institutions that have shared management of the property, as well as regarding the criteria of intervention;
- It is strongly recommended to not allow interventions which have not previously been approved by the World Heritage Committee, and in particular until the Special Management Plan is elaborated
- It is recalled that interventions such as those executed for the creation of the squares alter the authenticity and integrity of the property, are usually ephemeral and scenographical and difficult to maintain, as well as demeaning the management thereof;

On the other hand, there are plans and projects that have observed correct intervention criteria, solving in some cases wisely the provision of new services and infrastructure with the conservation of architectural and urban heritage.

- It is recommended, if necessary, to continue with the implementation of Partial Integrated Plans, which may be incorporated into the final Special Management Plan;
- Recalling the recommendations of the 2013 ICOMOS advisory mission, it is recommended that the State Party continue consulting with the World Heritage Centre and Advisory Bodies on project proposals, in accordance with paragraph 172 of the *Operational Guidelines for the Implementation of the World Heritage Convention*, reporting on projects before they are implemented. Heritage Impact Assessments should also be carried out for all projects that relate to the World Heritage property and which may affect the property's OUV.

Affectations caused by the earthquakes of 2016

Earthquakes of the year 2016 warned about the seismic vulnerability of the property, which was analyzed in theory and in practice during this Mission. The management of seismic events before and after they occurred evidences correct intervention criteria, working according to the response of the original materials and their respective constructive systems, i.e. depending on the resilience of cultural assets.

- The mission recognizes the work developed by the IMPQ towards the prevention and management of risks, which has allowed them to face the 2016 earthquakes;
- The projects and budgets implemented, during the same year of the seismic events, for the buildings affected are praised;
- It is suggested to benefit from the experience gathered by the IMPQ in this field so as to establish intervention rules that would allow the strengthening of the conservation of the property against the frequent seismic events in the area, adding to this the recommendations of the Reference Manual on *Managing Disaster Risks for World Heritage*, (UNESCO / ICCROM / ICOMOS / IUCN, 2010).

At this instance, this ICOMOS Advisory Mission believes it is appropriate to recall some concepts included in the *Operational Guidelines for the Implementation of the World Heritage Convention*, according to which the City of Quito was inscribed on the World Heritage List. The protection and management of World Heritage properties are based on their Outstanding Universal Value³⁰, and while fully respecting the sovereignty of

³⁰ 49. Valor universal excepcional significa una importancia cultural y/o natural tan extraordinaria que trasciende las fronteras nacionales y cobra importancia para las generaciones presentes y venideras de toda la humanidad. Por lo tanto, la protección permanente de este patrimonio es de capital importancia para el conjunto de la comunidad internacional. Directrices Prácticas para la aplicación de la Convención del Patrimonio Mundial

States, the *Operational Guidelines* recommend that scientific and technical studies be carried out to determine appropriate measures to counteract the hazards that may threaten the heritage.

World Heritage property Management Plans should refer to the prevention of such risks, because the adverse effects of development and / or negligence may affect the integrity of the property. And among the dangers that threaten the property serious adulteration of cultural meaning are considered, as well as the – potential – dangers caused by urban plans or lack of conservation policies.

Fifty-four years ago, the Recommendation concerning the Preservation of Cultural Property Endangered by Public or Private works recognized that the execution of these works could jeopardize properties and noted that *"the well-being of the population depends, among other things, on the fact that its life develops within a medium favorable and stimulating and that the preservation of cultural property of the past periods of its history contributes directly to it "*, and consequently, *"it is urgent to harmonize the conservation of the cultural heritage with the transformations demanded by social and economic development, it is necessary to make every effort to ensure that both requirements are met within a broad and constructive understanding and with reference to appropriate planning "*.

The Historical Center of the City of Quito deserves that the State Party consider the exceptionality of the property: the *"best preserved and least altered historical center of Latin America"*. It is an essential space of construction of the multiple and diverse identities that have inhabited and inhabit the territory. Space whose balance and coherent character must avoid incorporating inappropriate uses and abusive transformations

Institutional management -not isolated projects-, is the one that must *"define the forms and actions necessary to assess, measure, avoid or remedy degradation, loss of meaning, or reduction to triviality, and propose improvements for the conservation, management and interpretation activities"*, according to the Xi'an Declaration on the conservation of the environment of structures, property and heritage areas, ICOMOS, 2005. And it must establish indicators to manage the changes. Management must *"assume the challenge of preserving this fragile, transcendental and non-renewable resource for the benefit of present and future generations"*, as established by the Paris Declaration on heritage as a driver of development (Adopted at Paris, UNESCO headquarters, on Thursday 1st December 2011).

Likewise, *"recognizing and respecting cultural heritage as a practice -not as a discourse-, at the same time innovative and traditional, implies an investment of the local community in its management and its governance, because the recognition of the multifunctional nature of cultural landscapes favors its resilience and its flexibility"*, according to the Florence Declaration on Heritage and Landscape as Human Values (ICOMOS, 2014). Resilience and flexibility are necessary to face the challenge of managing a property that represents a living city, in permanent evolution between the past and the present, which is not only another tourist destination that depends on its cultural heritage, but an essential reference space in the identity of the multiple communities that comprise it, a tangible and intangible link between generations, where patrimonial and landscape values represent the expression of the millenary cultural diversity of the territory.

6. ANNEXES

Annex I. Program and composition of mission team

Annex II. WHC Decision 40 COM 7B.5

Annex III. Terms of Reference of the Mission

Annex IV. ICOMOS Technical Review May 2016

Annex V. Geographical location and its seismic condition

Annex VI. The historical occupation of the territory

Annex VII. Analysis of the current Legal Framework

Annex VIII. Antecedents on the archaeological and historical interpretation of Plaza San Francisco

Annex IX. Metro of Quito

Annex X. Compañía de Jesús project

Annex XI. New Public Spaces and projects

Annex XII. Interventions on buildings affected by the earthquakes of 2016

Annex XIII Special Plan Schedule

6. ANNEXES

Annex I. Program and composition of mission team

ICOMOS mission representatives:

- Mrs Maria Rebeca Medina (Argentina)
- Mr Martin Walker (USA)

DATES:		December 7 to 14		4 effective days
DATE	TIME	ACTIVITY	RESPONSIBLE/S	PLACE
7 .XII.2016	DIA 1			
	8:30 - 9:30	Welcome and coordination of activities, methodologies, scope, determination of objectives, explanation of logistics to be implemented.	Arch. María Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; Architect Angélica Arias, Director of the IMPQ (Heritage Metropolitan Institute of Quito); Eng. María Fernanda Acosta, Institutional adviser.	Office of the Executive Direction of the IMPQ
	09:30 -10:00	Transfer to INPC		
	10:00 -10:30	Meeting with the Executive Director of the INPC	Arch. María Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; Mgs. Lucía Chiriboga, Executive Director of the INPC (National Institute of Cultural Heritage); Arch. Angélica Arias, Director of the IMPQ (Heritage Metropolitan Institute of Quito); Mgs. Tania García, Technical Coordinator of the INPC (National Institute of Cultural Heritage).	Office of the INPC Director
		Transfer to IMP		
	11:30 -13:00	Presentation of progress of the Special Plan of the Historical Center of Quito, legal framework and current status, by the Executive Director of the IMP	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; * Ach. Angélica Arias, Director of the IMPQ; Technical Team IMPQ: Arch. Diana Araujo, Technical Adviser; Team of the Specil Plan of the MDMQ: Arch. María Mercedes Cárdenas, Arch. Paulina Feijóo, Arch. María Belén Pérez; Arch. Santiago Orbea; * Arch. Viviana Figueroa, President of the Technical Sub-Commission of the Historical Areas and Heritage of the Municipality of the Metropolitan District of Quito Techncal Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Dr. Joaquín Moscoso, Assitant Secretary of Patrimony of the Ministry of Culture and Patrimony.	Capacitation Room 4th Floor IMPQ
	13:00 -14:30	Recess		Historical Center
	15:00 -17:00	Presentation of action axis in relation to the management of the Historical Center towards the Resilience in Cultural Heritage: * Arch. Diana Araujo, IMP Technical Adviser: Participative Heritage Recognition - Vive Alameda project case. * Arch. Tamara López, IMP Director for Special Projects: Risk Management in the Cultural Heritage of: Plans for Prevention, Emergency and Investment Programs; * Dr. Indira Salazar Martínez, Projects Coordinator, Cultural Area of the Office in Quito and Representation to Bolivia, Colombia, Ecuador and Venezuela: Risk Management in the city of Quito	* Arch. Rebeca Medina (Argentina) Eng. Martin Walker (USA), ICOMOS Consultants; * Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo, Technical Adviser; Special Plan Team of the MDMQ: Arch. María Mercedes Cárdenas, Arch. Paulina Feijóo, Arch. María Belén Pérez; Arch. Santiago Orbea; * Arch. Viviana Figueroa, President of the Technical Sub-comision of Historical Areas and Patrimony of the Municipality of the Metropolitan District of Quito. Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Dr. Joaquín Moscoso, Assitant Secretary of Patrimony of the Ministry of Culture and Patrimony.	Capacitation Room 4th Floor IMPQ

	17:00 -17:30	Joint working group Conclusions and recommendations	<ul style="list-style-type: none"> * Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; * Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo, Technical Adviser; Special Plan Team of the MDMQ: Arch. María Mercedes Cárdenas, Arch. Paulina Feijóo, Arch. María Belén Pérez; Arch. Santiago Orbea; * Arch. Viviana Figueroa, President of the Technical Sub-comision of Historical Areas and Patrimony of the Municipality of the Metropolitan District of Quito. Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Dr. Joaquín Moscoso, Assitant Secretary of Patrimony of the Ministry of Culture and Patrimony . * Arch. Jacobo Herdoiza, Secretary pf Territory, Habitat and Lodging. 	Capacitation Room 4th Floor IMPQ
DAY 2				
8 .XII.2016	9:20 - 10:20	Presentation of the historical context of the San Francisco Square by the del City Chronicler, Arch. Alfonso Ortiz.	<ul style="list-style-type: none"> * Arq. Rebeca Medina (Argentina) and Ing. Martin Walker (USA), ICOMOS consultants; * Arch. Alfonso Ortiz, City Chronicler; * Economist Mauricio Anderson, Manager EPMMQ (Metropolitan Public Enterprise Metro of Quito); Technical Team EPMMQ delegate: Eng. Adriana Vallejo, Manager of Social and Environmental Responsibility and Mr. Raúl Talavera, Expert of the Managership of the Metro of Quito Project; * Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo; Arch. Viviana Figueroa, President of the Technical Sub-comision of Historical Areas and Patrimony; * Arch. Jacobo Herdoiza, Secretary pf Territory, Habitat and Lodging. 	Capacitation Room 4th Floor IMPQ
	10:20 -11:30	<ul style="list-style-type: none"> * Presentation of the context of the Quito Metro Work and its importance for the integral development of the city, within the framework of the Integrated Transportation System of the DMQ and its contribution to the CH, by the Manager of the company Metro de Quito * Constructive Method in the CH and measures of mitigation of impacts to patrimonial buildings. Review of processes such as soil improvement, auscultation, inspection of nearby dwellings, by Mr. Raúl Talavera, expert of the Management of the Metro Project of 	<ul style="list-style-type: none"> * Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; * Arch. Alfonso Ortiz, City Chronicler; * Economist Mauricio Anderson, Manager EPMMQ (Metropolitan Public Enterprise Metro of Quito); Technical Team EPMMQ delegate: Eng. Adriana Vallejo, Manager of Social and Environmental Responsibility and Mr. Raúl Talavera, Expert of the Managership of the Metro of Quito Project; * Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo; Arch. Viviana Figueroa, President of the Technical Sub-comision of Historical Areas and Patrimony; * Arch. Jacobo Herdoiza, Secretary pf Territory, Habitat and Lodging. 	Capacitation Room 4th Floor IMPQ
	11:30 -13:00	Presentation of the Methodology applied to the Patrimonial Impact analysis on the alternatives for the construction of the Metro stations in the HC of Quito, by the EPMMQ (Arch. Yadhira Álvarez)	<ul style="list-style-type: none"> * Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; * Arch. Alfonso Ortiz, City Chronicler; * Economist Mauricio Anderson, Manager EPMMQ (Metropolitan Public Enterprise Metro of Quito); Technical Team EPMMQ delegate: Eng. Adriana Vallejo, Manager of Social and Environmental Responsibility and Mr. Raúl Talavera, Expert of the Managership of the Metro of Quito Project; * Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; * Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo; Arch. Viviana Figueroa, President of the Technical Sub-commission of Historical Areas and Patrimony; 	Capacitation Room 4th Floor IMPQ

			* Arch. Jacobo Herdoiza, Secretary of Territory, Habitat and Lodging.	
	13:00 -14:00	Tour of the central core and buffer area of the Property inscribed on the World Heritage List (with emphasis on the location areas of the alternative stations)	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants * Arch. Angélica Arias, IMPQ Director	Historical Center
	13:00 -15:00	Recess		
	15:00 -17:00	Official Visit to the Ministry of Culture and Heritage	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants * Minister of Culture and Heritage; Undersecretary of Heritage of the Ministry of Culture and Heritage; Arch. Angélica Arias, Director of the IMPQ (Heritage Metropolitan Institute of Quito)	Office of the Undersecretary of Culture
DAY 3				
9.XII.2016	08:30 -10:00	* Archaeological context of the Metropolitan District of Quito, by the archaeologist Silvia Figueroa of the IMPQ; * Archaeological rescue work carried out in San Francisco, by the archaeologist Marco Vargas of the EPMMQ	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; * EPMMQ Technical Team: Eng. Adriana Vallejo, Manager of Social and Environmental Responsibility; * Arch. Angélica Arias, IMPQ Director; IMPQ technical and archaeological team; Arch. Diana Araujo, Arch. Ana Lucía Andino, Director of Investigation and Design de Projects (e) and Arch. Silvia Figueroa, IMP; * Technical Team INPC delegate: Archaeologist Fernando Mejía and Archaeologist Rocío Murillo; Arch. María Fernanda Carrión * Arch. Viviana Figueroa, President of the Technical Sub-commission of Historical and Heritage Areas	Capacitation Room 4th Floor IMPQ
	10:00 -11:00	Visit to the San Francisco Square – Archaeological excavations	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), COMOS Consultants; * EPMMQ Technical Team: Archaeologist Marco Vargas; * Arch. Angélica Arias, IMPQ Director; IMPQ technical and archaeological team; * INPC delegate technical team: Archaeologist Fernando Mejía and Archaeologist Rocío Murillo; Arch. María Fernanda Carrión * Licensee Jacinto Collaguazo, IMP Announcer	San Francisco Square
	11:00 -12:20	Continuation of the tour in the central core and buffer area of the Property inscribed on the World Heritage List (with emphasis on the location areas of alternative stations - May 24): Visit to consolidation works in the context of earthquakes happened in Quito as from April and in August of 2016: Convent of Santa Clara; Visit to the Church of San Francisco and Chapel of Cantuña	* Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), COMOS Consultants; * EPMMQ Technical Team: Archaeologist Marco Vargas; * Arch. Angélica Arias, IMPQ Director; IMPQ technical and archaeological team; Arch. Vinicio Salgado, Eng. Marco Jara; Arch. Fabio Carranco, IMP Technicians; Arch. María Fernanda Carrión; INPC Technical Team.	Historical Center
	12:30 -13:30	Presentation of the project and visit to the Company of Jesus, under the responsibility of the Director of the Church Foundation of the Company; visit to consolidation works in the framework of the earthquakes that took place in Quito from April to August 2016: Dome of the Company	Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; Arch. Angélica Arias, IMPQ Director; Arch. Diego Santander, Director Church Foundation of the Company; Technical Team INPC delegate: Arch. Juan Carlos Baca and Arch. Félix Torres; Arch. Vinicio Salgado, IMP.	Church Foundation of the Company
	13:30 -15:00	Recess		
	16:30 -17:30	Technical visit to El Labrador	Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; Arch. Diana	El Labrador Station/ avenues Amazonas and Galo Plaza - La

			Araujo, IMP Technical Adviser; Eng. Andrés Arizala, EPMMQ.	Concepción Neighborhood
	20:00 -22:00	Closing event and visit to Villa Celia, a privately owned historic house, located in the emblematic neighborhood of La Mariscal	Dr. Mauricio Rodas E.; Mayor of the Metropolitan District of Quito; Arch. Angélica Arias, IMPQ Director; Mgr. Tania García, INPC Technical Coordinator; Dr. Cristian Espinosa, Metropolitan Director of International Relations; Arch. Alfonso Ortiz, City Chronicler; Economist Mauricio Anderson, EPMMQ Manager; Arch. Rebeca Medida and Eng. Martin Walker, ICOMOS Consultants	Villa Celia - La Mariscal
DAY 4				
10.XII.2016	08:00 -09:30	Working table, conclusions and recommendations	Arch. Rebeca Medina (Argentina) and Eng. Martin Walker (USA), ICOMOS Consultants; Arch. Angélica Arias, IMPQ Director; IMPQ Technical Team: Arch. Diana Araujo; MDMQ Special Plan Team: Arch. Santiago Orbea; Technical Team INPC delegate: Arch. María Fernanda Carrión; Arch. Ruth Aguirre; Arch. Viviana Figueroa, President of the Technical Sub-commission of Historical and Heritage Areas; Eng. Adriana Vallejo, Manager of Social and Environmental Responsibility	IMPQ Offices
	11:00	Meeting with the President of the Architects Association of Ecuador, CAE		CAE - Office
	15:00	Meeting with ICOMOS President- Ecuador		San Marcos House
OUT OF INITIAL AGENDA				
DAY 5				
12.XII.2016	09:00 -12:30	Continuation of the visit to the Company of Jesus. Final Modifications to the Project	Arch. Rebeca Medina (Argentina), ICOMOS Consultant; Arch. Diego Santander, Director of the Church Foundation of the Company; Technical Team	Company of Jesus Complex
DAY 6				
13.XII.2016	10:00 -11:30	Meeting with the INPC Executive Director	Arch. María Rebeca Medina (Argentina) ICOMOS Consultant; Mgs. Lucía Chiriboga, Executive Director of the INPC (National Institute of Cultural Heritage)	INPC Direction Office
DAY 7				
14.XII.2016	08:00 -14:30	Continued visit to consolidation works in the framework of the earthquakes that occurred in Quito from April to August 2016: Chapel Los Milagros - Rocafuerte and Fernández, Madrid; Church Buen Pastor - Sector of the Recoleta; Church of the Tejar - Barrio El Tejar; Church of Nono - Parish of the Metropolitan District of Quito, located to the NW of the City; Church and Convent of Guapulo - Francisco Compte Street, Guápulo Sector	Arch. Rebeca Medina (Argentina), ICOMOS Consultant; Arch. Franklin Cárdenas, Director for the Execution of Heritage IMP Projects	Historical Center of Quito, Guápulo and Parrish of Nono

Annex II. WHC Decision 40 COM 7B.5

2016 Committee Decision : 40 COM 7B.5

City of Quito (Ecuador) (C 2)

The World Heritage Committee,

1. Having examined Document WHC/16/40.COM/7B.Add,
2. Recalling Decision **38 COM 7B.43**, adopted at its 38th session (Doha, 2014),
3. Commends the State Party for its commitment to implement the recommendations of the World Heritage Committee, the 2013 ICOMOS Advisory mission and the recent technical reviews;
4. Welcomes the adoption of the Metropolitan Plan for Development and Territorial Management 2015-2025 (PMDOT) that explicitly incorporates cultural heritage as one of its key elements, and its alignment with the Management Plan and encourages the State Party to finalize the updating process of the Management Plan as soon as possible, and to submit it to the World Heritage Centre, for review by the Advisory Bodies;
5. Noting that subway project now includes only one station within the historical centre, precisely at the emblematic San Francisco Square, and that the Heritage Impact Assessment (HIA) did not evaluate the potential impact of alternative locations, requests the State Party, before a final decision is taken on the Metro station location, to apply the HIA methodology to all potential alternative locations, to allow a thorough examination of the proposed options, and to submit the outcomes of this evaluation to the World Heritage Centre for review by ICOMOS;
6. Welcomes the initiative of the State Party to invite a second ICOMOS Advisory mission to advise further, with a view to supporting the conservation and management of the property and facilitating the successful implementation of the subway project in a manner that will not adversely impact upon the OUV of the property;
7. Recommends that the Terms of Reference of this Advisory mission include the review of the follow-up given by the State Party to earlier recommendations of the Committee and ICOMOS, the assessment of the new management and planning mechanisms, the subway project including alternative station locations and other matters raised by ICOMOS in the technical review of the HIA, as well as projects such as the Compañía de Jesús project among others, also taking into consideration the 2011 UNESCO Recommendation on Historic Urban Landscapes (HUL);
8. Also requests the State Party to submit to the World Heritage Centre, by **1 February 2017**, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 41st session in 2017.

Annex III. Terms of Reference of the Mission

**WHC/ ICOMOS/ / ICCROM Advisory mission to
City of Quito
(Ecuador) (C2)**

Experts required: (2)

- One ICOMOS expert specialized in Heritage Management and Conservation
- One ICOMOS expert specialized in urban underground transportation systems

Dates proposed:

- xx-xx November 2016

Within the framework of the implementation of **Decision 40 COM 7B.5** adopted by the World Heritage Committee at its 40th session (Istanbul, 2016) for the City of Quito and taking account of previous decisions of the Committee and recommendations made by ICOMOS International, the mission shall address the following:

Metro of Quito

1. Discuss with the national authorities the appropriate actions which are required in order to ensure the adequate protection of the property and its OUV, in the context of the developments foreseen for the construction of the **Quito subway**;
2. Discuss with the local and national institutions possible **alternative locations for the Quito subway station proposed at San Francisco Square**, each of which should be subject to Heritage Impact Assessment (HIA), (prepared in accordance with the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage properties* January 2011), to allow a thorough examination of the proposed options in order to determine which would not adversely impact on the property's OUV, before a recommendation on the preferred location for the subway station is taken;
3. Provide guidance to assist the State Party in addressing issues raised by the ICOMOS technical review transmitted in June 2016 on the **Heritage Impact Assessment (HIA) on the subway station at San Francisco Square** submitted by the State Party, including particularly reconsideration of the assessed 'magnitude' of potential heritage impacts.

Management and conservation issues:

1. Evaluate the **current state of conservation** of the property including all the actions taken by the State Party in response to the recommendations made by the 2013 ICOMOS Advisory Mission;
2. Assess the overall management and protection arrangements for the property, including the **new management and planning mechanisms**, having particular regard to the process and timing for updating of the Management Plan for the property;
3. Consider the **on-going and planned projects for the property**, including the Compañía de Jesús project, to ascertain whether the project proposals might have adverse impacts on the attributes that convey the Outstanding Universal Value (OUV) of the property or on its conditions of authenticity and integrity, and to advise on the preparation of necessary HIAs.

The mission will prepare a concise report no later than 2 months after the end of the mission.

Annex IV. ICOMOS Technical Review (May 2016)

ICOMOS Technical Review

Property	City of Quito
State Party	Ecuador
Property ID	2
Date inscription	1978
Criteria	(ii)(iv)
Project	Heritage Impact Assessment San Francisco Metro Station



Justification of the Outstanding Universal Value of the World Heritage property

The historic centre of Quito is characterized by the unity and harmony that has been maintained in its urban, architectonic and landscaping structure. The construction of the city was based on the original checkerboard pattern established during the Colonial period; in which the grid had to be adapted given the limitations of the terrain, ravines and hills. The intricate topography led to the development of alternative solutions to solve the unevenness of the landscape; excavations were carried out to create terraces, retaining walls and landfills in order to have plots of land suitable for the construction of buildings. This makes Quito an exceptional city.

The central area of the city has evolved without great change; its evolution began in the 16th century when the city was established, and plots of land were distributed and blocks, streets and squares were designed, and it continued until the early 20th century, when the expansion of the city began outside the limits of the historic centre. In fact, according to the first map of Quito dated to 1734, drawn by Dionisio Alcedo y Herrera, one can confirm that the original layout of the city has been maintained to date, with only a few exceptions.

The city embodies cultural and historical values that result from the occupation process and the participation of populations from various origins. This multi-ethnic presence has allowed for the configuration of a city where traditions, rituals and celebrations, part of the intangible heritage of the population, still persist. The tangible heritage conserved in religious buildings, museums, libraries, etc. is of exceptional artistic and historical value.

The historic centre of Quito is one of the largest and best-preserved historic centers of Latin America; as a place of human settlement, it is subject to changes that are regulated by decrees and current laws.



Overview of submitted documentation

- **HERITAGE IMPACT ASSESSMENT. THE SAN FRANCISCO METRO STATION. QUITO - ECUADOR (2016)**

The 2016 Heritage Impact Assessment (HIA) on the San Francisco Metro Station was commissioned and submitted by the State Party in response to Decision 38 COM 78.43 adopted at the 38th session of the World Heritage Committee (Doha, 2014) and following the recommendations of the report on the 2013

ICOMOS Advisory Mission to the property as well as the January 2015 ICOMOS technical review of the initial HIA submitted in 2014¹, which recommended the State party to:

- Review the HIA based on the recommendations established in the *Guidance on Heritage Impact Assessments for Cultural World Heritage properties* (ICOMOS, January 2011), that retains the OUV and attributes of the property as the principal reference;
- Emphasize the urban form and urban landscape as part of the attributes to be assessed;
- Submit the preliminary designs for the stations, demonstrating the implications on the urban form and uses (stations, access, public spaces);
- Define the feasibility of alternative locations for the stations, or whether it is only possible to evaluate the ones previously presented and for which HIAs have already been presented.

The State Party has attempted to implement these recommendations by means of a further Heritage Impact Assessment report, complementary to the 2014 HIA, and prepared in consideration to the ICOMOS *Guidance on Heritage Impact Assessments for Cultural World Heritage properties* (January 2011), in which urban form and landscape were emphasized as the assessed attributes.

The HIA report achieves an important development regarding the studies and analysis of the urban form of the historic centre of Quito, however, ICOMOS notes that no historic urban patterns have been established.

The HIA report recognizes that the San Francisco Square is “*seated in the most representative urban setting of the city, for years the water supplied central source; it has worked as popular market as an area of military and political rallies, and as a meeting place and social recreation. After staying in the twenties of the last century and for a long period with Frenchified design, with flower beds and gardens, it reconverts in the large open space that facilitates its varied uses.*”

The conclusions from the 2011 Feasibility Study for the *Primera Línea del Metro de Quito* (PLMQ) and the San Francisco Square are reiterated, and compared with an Optimized Proposal for the San Francisco Station. The 2016 HIA report indicates that the project for the Station of the Theatre Square would not

REPORT METRO DE QUITO IN THE HISTORIC CENTER																		
WEIGHTED ANALYSIS OF THE STATIONS ALTERNATIVES																		
	STATIONS PROPOSALS	PHYSICAL CONDITIONING					PARTIAL SUMMATION (OVER 25)	SERVICE CONDITIONING				PARTIAL SUMMATION (OVER 25)	SOCIO-ENVIRONMENTAL AND HERITAGE VALUES				PARTIAL SUMMATION (OVER 25)	SUMMATION (OVER 45)
		Geometric and kinematic	Public space not built	Geo-engineering	Infrastructure, public works, and existing roads	Constructive design		Controlling population density	Demand for passenger, integration to the STM	Station passenger access facilities	Distance to edge parking places		Socio-environmental	Proximity to monuments	Affections to the urban space	Affections to heritage buildings		
ENFANCES	SAN FRANCISCO - STX. CLARA PLAZA	5	5	5	4	5	24	5	4	5	4	18	5	1	3	4	13	55
	PLAZA DEL TEATRO	4	3	4	3	4	18	5	5	4	5	19	5	2	4	4	15	52
CITY CENTER	AVENIDA 34 DE MAYO	0	1	1	1	1	4	3	4	3	4	14	5	4	4	3	16	34
	CENTRO COMERCIAL LA MARCANNA	0	0	5	1	1	7	5	3	3	4	15	3	3	4	0	10	32
	PROYE COLORED LA PROVIDENCIA BUDOS	5	0	1	1	2	9	5	4	3	4	16	3	1	3	0	7	32
COMMENTS		CAN BE MODIFIED OR MITIGATED BY TECHNOLOGY						DETERMINANTE, CAN NOT BE CHANGED				NONMODIFIABLE (SUPERIOR LOSS IS IRREVERSIBLE)						
Weights																		
Excellent condition / no risk		5																
Very good condition / low risk - negligible		4																
Good condition / medium risk - easily overcome		3																
Regular condition / risk / safety uncomfortable		2																
Poor condition / higher risk - hard to last		1																
No strings / unsurpassable risk		0																
Physical conditions can be overcome by technology																		
CONDITIONS OF SERVICE acquire a decisive character to the extent that they are conditions that can not easily change																		
The assets are crucial, since they can not be modified in case of loss, this is permanent and irreversible																		

¹ Heritage Impact Report of the San Francisco and Plaza Del Teatro Metro Stations Located in Quito's Historical Centre (May 2014)

be implemented, leaving San Francisco as the only station located in the historic centre of Quito. Notwithstanding previous recommendations, no other location alternatives were evaluated.



The 2016 HIA report states that the San Francisco Station “*may not be the busiest stations (40,000 movements per day estimated in 2020), however, it provides access to HCQ, from both the North and South through a reliable, regular and decongested transport thanks to an underground system. This non sharing platform feature is different from other traffic roads; this will ease traffic congestion in the HCQ, reorganizing mobility and surface traffic, improving the level of noise and air pollution.*”

Construction systems to be used are reiterated [Modified Sequential Method (MSE) and "Earth Pressure Balance" (EPB) tunneling methods], concluding that in the presented Optimised Proposal several simultaneous excavation areas are being planned, with digging wells located at:

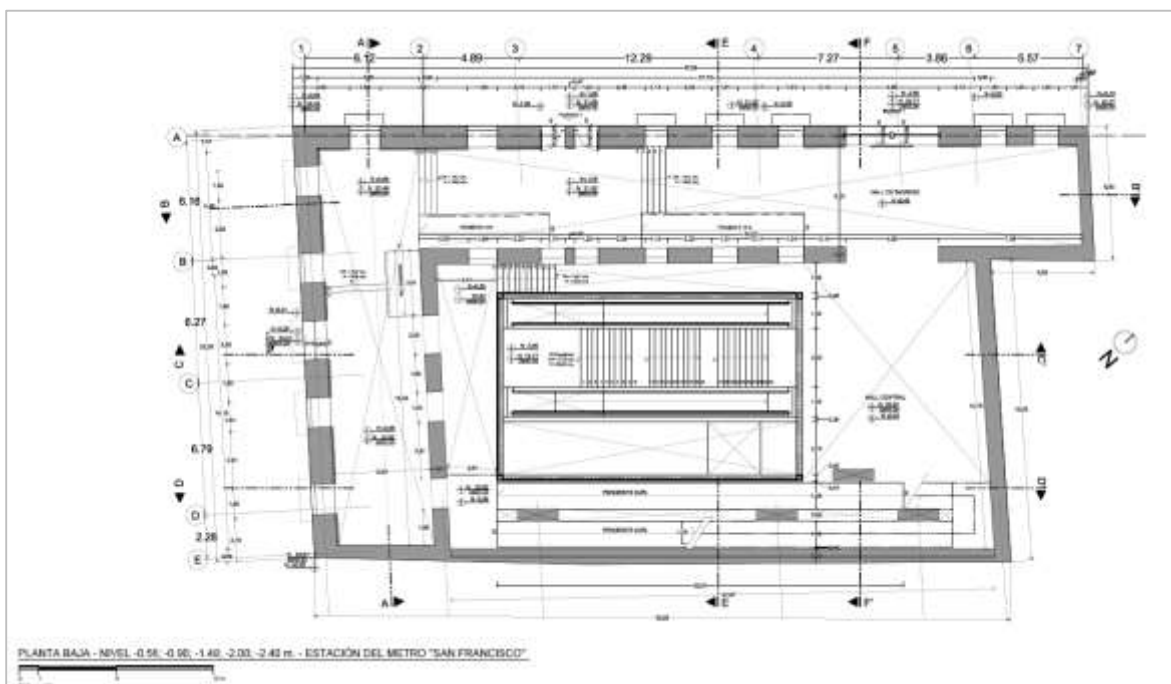
- Ventilation and EPB extraction well in San Diego
- 24 de Mayo exchanger
- Ventilation and EPB extraction well in Theater Square
- Auxiliary well next to Santa Clara Square, from which to undertake the connecting tunnel between 24 de Mayo and San Francisco.



It is stated that the proposed changes would “*obviate extract EPBs wells in San Diego and Plaza del Teatro. Thus, although these wells would be built for another purpose (ventilation, pumping, emergency exit), deadline does not depend on the tunnels and surface alteration would be much simpler in terms of effort and time. In fact, since the EPB would no longer be drilled out of these wells, a new location would be analyzed, looking for a less sensitive location (especially in the Plaza del Teatro)*”.

Scheduled to begin operation in 2019, the San Francisco Station will “*host 23.079 passengers a day, according to micro simulation models. These figures represent, on average, a movement of 1,226 people per hour in San Francisco station that approximately is slightly above the current street movement that Benalcázar Street manages in that stretch. While there is a small increase, it is worth mentioning that a high percentage of the 1,226 people don't have as final destination the San Francisco Square, but it is an important point in their journey. Therefore, these people will be distributed, either before or after their metro journey, by many side streets, until they reach their final destination.*”

- The optimized San Francisco Station consists of:
 - A box station of about 72,000 m³, located in the east of the square, with 3 levels, inside of which are located all the stairs and elevators that connect over the different levels plus technical spaces, executed as the other stations, under shelter of screens by the ‘up & down’ construction method.
 - An integrated pedestrian access integrated within the building at the crossing of Sucre and Benalcázar streets, so as to avoid any impact or insertion into the square.
 - An exchanger located at Av. 24 de Mayo, which benefits from the avenue’s vehicular underpass to locate an additional bus stop, linking by underground means to the lobby of the San Francisco Station, by moving walkways”.
 - An emergency exit of this exchanger in Santa Clara Square.



In the proposed dimensions, the station occupies the entire length of the San Francisco Square. The dimensions appear to meet the required safety standards, both in the construction work process and in its future operation. Architectural drawings of the station have been incorporated, but no design is provided for the emergency exit of Santa Clara Square (Drawing No. 10.7.1.4), or vents in San Francisco Square (Drawings No. 10.7.1.2 and 10.7.1.3), in relation to the space of the square and the surrounding buildings.

The urban form and landscape have been considered in the impact analysis matrix as part of the attributes to be evaluated, and a specific impact matrix is developed, which links the Environmental Impact Assessment, the Modified Leopold Matrix, with the ICOMOS Guidance on HIAs (2011).

To evaluate the impact and specific changes, four matrices are presented: in the first one, impacts are identified, the second and third provided qualification, and in the last evaluations are given. The following elements of the urban landscape are separated in order to verify modifications or benefits:

Value		Attribute
Historical urban landscape	Urban	Shape
		Design
		Landscape
	Architectonic	Morphology
		Singularity
		Relevance
	Historical and cultural	Uses
		Traditions
		Symbolism
		Archaeology
	Social economic	Land Use
		Quality of life
		Productivity
		Mobility
		Conservation

▪ **NON INVASIVE SURVEY IN SAN FRANCISCO SQUARE AND A SECTION OF CUENCA STREET, ZONE OF CONSTRUCTION OF QUITO'S METRO (February 2016)**

This report indicates the need to complete the research during excavation so as to confirm the stages of occupation of the site.

▪ **FORMULATION OF GENERAL GUIDELINES FOR THE DEVELOPMENT OF AN ANTIGENTRIFICATION PUBLIC POLICY IN RELATION TO QUITO'S METRO PHASE 2 (July 2015)**

This report analyses and proposes remedial guidelines to prevent gentrification around metro stations, using indicators such as Good Location, Vulnerability of the Neighborhoods, Symbolic Social Capital and Gentrifiability.

- **SYSTEM FOR PUBLIC SPACE AND MOBILITY IN THE CITY OF QUITO. REVITALIZATION OF QUITO'S HISTORICAL CENTER**

The report contains:

- Memory 1. Diagnosis
- Memory 2. Strategic proposals
- Memory 3. Implant
- Memory 4. Feature cards
- Memory 5. Design of sections



The analysis concludes with the assessment of historic centre of Quito in terms of urban sustainability, concluding that conditions are currently insufficient. Consequently it proposes the necessary actions to achieve an adequate qualification.

The proposal is to reorganize the road hierarchy with a model based on *superblocks* applied in the historic centre of Quito, which results in a set of urban cells from which the proposals of urban "transformation" are organized -referring to the management. A series of tables indicate the characteristics of 16 "superblocks" units that, in some cases, are equivalent to the grouping of two or more "superblocks". For the urban shape of the historic centre of Quito, the "superblocks" units have a variable surface, between 10 and 20 ha.

For each one of the units, seven technical specifications were designed to develop different aspects within the thematic frames of public space and mobility:

- General data / Strategic elements of the proposal
- Personal vehicle / Parking
- Urban Distribution
- Public Transportation / Bicycle networks
- Street typologies
- Accessibility
- Priority for action

ICOMOS Comments and Recommendations

2016 Heritage Impact Assessment

ICOMOS wishes to underscore several inconsistencies in the documentation provided. Firstly, it cannot be understood how an evaluation of (no change/neutral) for the excavation of the San Francisco Square in relation to its impact on the urban form was given, because the impact is in fact high. Even though upon completion of the works these changes might not be physically evident, the heritage area of San Francisco would be considerably disturbed and would not recover its original state, given the magnitude of the works to be implemented.

Structural alterations in monumental buildings such as Santa Clara and the Compañía de Jesús – as well as other components – also cannot be considered without impact, because their original structural condition will be changed irreversibly and permanently, even with the safety margins proposed.

The significance of the change of use and archaeological components should neither be rated as neutral nor moderate since it will depend on strict management during and after the operation phase.

ICOMOS agrees that during the construction work process the impact on the area is negative and will directly affect a central and emblematic area of the property. These impacts are the direct result of the proposed project and they will not be reversible. Considering this aspect, the intensity of the impacts should have been given a higher value in relation to the urban aspects.

The assessment of impacts indicates a negative tendency, particularly in the excavation and execution of screens, indicated as moderate to high for the monumental and civil buildings. However, the report does not include a discussion or interpretation of the results obtained (p. 156), although proposals for mitigation are included.

The study presents other underground facilities for comparison - located in various historical cities or next to historical buildings - but does not propose alternative locations to the San Francisco Square to be compared with in the historic centre of Quito, as has been repeatedly requested.

ICOMOS recognizes the mobility conflict in the historic centre of Quito, and understands that the Quito Metro Project can be a feasible solution. There is no question that of the proposed construction methods for the metro in the historic centre of Quito, in any of its three modes, the Cut and Cover construction system is the one that mostly influences the variation of the authenticity of the site. In the context of international texts that ICOMOS prepares to safeguard the built cultural heritage, it should be noted that once works are implemented, although *"the changes that occur in the design to be considered are minor and temporary"* - although the assessment of the impacts are indicated as moderate to high, during the constructions process", the site cannot return to its original state, as it has been modified, along with its authenticity and integrity.

Recalling Decision 38 COM 78.43 adopted at the 38th session of the World Heritage Committee (Doha, 2014), the recommendations from the 2013 ICOMOS Advisory Mission, and subsequent technical reviews, ICOMOS considers the following:

- ICOMOS recognizes the development achieved by the State Party in the analyses, diagnoses and proposals submitted, which are an improvement on the previous ones.
- Reiterates its recommendation to revise the location of the proposed station at San Francisco Square and explore alternative locations that would not negatively impact the Outstanding Universal Value of the property and would demonstrate the will to prioritize the significance of the property over technical considerations. This recommendation is substantiated by the emblematic and iconic landmark role of the San Francisco square for the inscribed property.

- Apply similar methodologies for the Heritage Impact Assessment (HIA) of other alternatives, such as the Theater Square Station, no longer included in the established layout. The results from these assessments should be submitted to the World Heritage Centre for review by ICOMOS. This information is needed to reliably compare alternatives and so that ICOMOS would not be put in a position where recommendations can only be made on the one option that has been considered as the most favorable from the start of the process by the State Party.
- Reflect on the results of the Heritage Impact Assessment, and on the scope of the construction work at the core of the property itself in the consideration of alternative locations.
- In relation to the HIA, broaden the concept of "magnitude" and how it is used in the corresponding matrix. The application of the polynomial formula does not coincide in all cases with the obtained results, and places greater emphasis on the individual assessment of the "importance" of the impact. As currently presented, the results fall outside the proposed ranges, and it would therefore be the case that the work would not be viable.
- Present the survey plans of the squares and the technical proposals and specifications for surface finishes;
- As at this stage it is not possible to compare alternatives given the information provided, ICOMOS reserves the right to verify the impact on the items valued negatively in the impact assessment in relation to the existing and operating transport. It also reserves its assessment at this stage in relation to finishes given that the information provided in the descriptions are insufficient in this regard. Similarly, value and impact weighing on aspects relating to subsurface deposits are also reserved pending the results from the archaeological excavations. The sum of these impacts will be to be assessed in relation to the Outstanding Universal Value of the property as soon as information requested is provided.

System for Public Space and Mobility in the City of Quito, Revitalization of Quito's Historical Centre

ICOMOS notes that for some variables of analysis used - such as compactness, habitability of public space, green visual perception, and green spaces – in terms of the historic importance of the urban settlement itself, one should always expect negative values, as it would be contradictory to expect green visuals in a Spanish American colonial city.

In the same token, in terms of its original design conditions, it is possible that variables such as street proportion, thermal comfort and diversity, give acceptable percentages because they are typical of this type of urban process.

Given the above, there will be variables that, considering the values and significance of the urban form of Quito, cannot be feasibly improved without considerably altering the Outstanding Universal Value of the property, including its conditions of authenticity and integrity.

Therefore, any intervention proposed must be tailored to the preservation of the urban shape of historic centre of Quito, based on the attributes that embody the OUV of the property.

It should be recalled that proposals need to be subjected to Heritage Impact Assessments. The results from these assessments should be submitted at the earliest stages possible to provide timely recommendations pertaining to conceptual and design revisions, if applicable, and if potential negative impacts to the property are identified.

Annex V. Geographical location and its seismic condition

"Ecuador is located in one of the zones of highest tectonic complexity in the world, at the meeting point of the plates of Nazca and South America. It is part of the so-called 'Pacific Fire Belt', with a long series of mostly active volcanoes that causes permanent seismic and volcanic activity and determine high vulnerability. Ecuador is also located within the belt of low pressure that surrounds the globe, in the area of inter-tropical convergence, an area subject to hydro-meteorological threats such as floods, droughts, frost or effects of the El Niño phenomenon".¹

The territory where the City of Quito is located is bounded by the Casitagua volcano in the north, the fault of Quito in the east, the eastern slopes of the Pichincha in the west and the Atacazo Volcano in the south. [Gráfico V.1]

In particular, some foothills detached from the Andes have formed a cloistered landscape, divided in its central part by the hill of El Panecillo, and to the east by the hills of Puengasí, Guangüiltagua and Itchimbia.

To the west, the mountain chain belonging to the Pichincha volcano encloses the city with its three different elevations, Guagua Pichincha, Rucu Pichincha and Cóndor Güachana. In the slopes of Pichincha (20° to 30°), and those of the back of the tectonic step (10°), to the east of the city, the ravines have cuts of ten to twenty meters. In the last century, the most important ravines of the Quito plain were two to three meters deep, although not all were marked topographically, but erased by their own sediments. They continue to constitute a dense network of drainage of the slopes that dominate the city, since eighty-five ravines have been registered in the drawing up of a map of the old natural drainage network, such as El Machángara, Jerusalem, Rumipamba, Ortega, Santa Inés and Atucucho. The limits of the present urban perimeter are recognized by gullies, of which only three drain in the river Machángara.



Graph V.1. Geographical location of Quito

— The seismic condition

According to the above, the records of the zones of greater seismic activity indicate an average movement of 6 centimeters per year of the Nazca plate that is pushed towards the South American plate, process known as sub-duction that is one of the sources of generation of Earthquakes in the coastal zone of the country. In addition to the earthquakes originated by sub-duction, there are those of volcanic origin and geological faults, which have been responsible for most major earthquakes in the inter-Andean region.

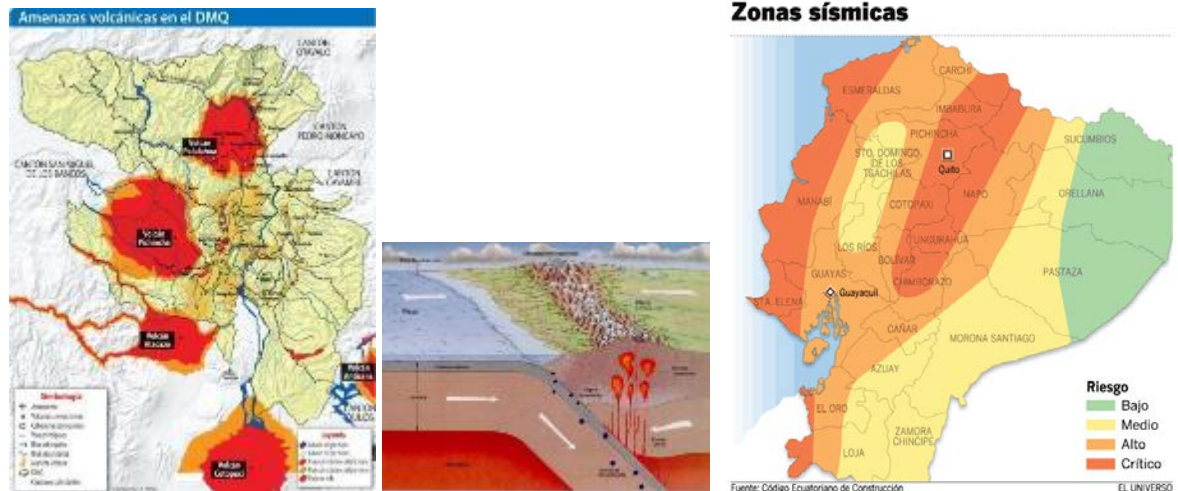
The Cotopaxi volcano, for example, is located on the Eastern Cordillera, 45 km southeast of Quito. Cotopaxi is considered one of the most dangerous volcanoes in the world due to the frequency of its eruptions, its eruptive style, its relief, its glacier coverage and the number of populations potentially exposed to its threats. From the beginning of the Spanish conquest, the Cotopaxi has presented five great eruptive periods: 1532-1534, 1742-1744, 1766-1768, 1853-1854 and 1877-1808. The danger of Cotopaxi lies in the fact that its eruptions can lead to the formation of enormous lahars (flows of mud and debris) that would transit through neighboring drainage to densely populated areas.

Others like El Reventador, located approx. 90 km east of Quito, is currently one of the three erupting volcanoes of Ecuador, as well as the Guagua Pichincha located 12 km west of the city, whose fumaroles are usually very remarkable.² [Graphic 2]

In this framework, the ECUADORIAN CODE OF CONSTRUCTION. GENERAL DESIGN REQUIREMENTS: 2001, establishes minimum requirements to be applied for the calculation and design of a structure, in order to withstand events of seismic origin. These requirements are mainly based on the dynamic behavior of building structures. Quito is included in an area IV, of critical risk. It is important to mention that the buildings that define the urban trace of QHC do not respond to these directives, obviously by their historical dating, but especially by the materials and constructive systems used between centuries XVII and XIX. [Graphic V.2]

¹ Ecuador: A country with a high vulnerability. Food and Agriculture Organization (FAO), 2008.

² Instituto Geofísico (Geophysical Institute). On Line: [<http://www.igepn.edu.ec/guagua-pichincha>]



Graph V. 2. Volcanic threatens on the territory of Quito's Metropolitan District and seismic zonings in the Ecuadorian Construction Code

In summary, the Property is threatened by:

Hydro-meteorological dynamics: Flooding and landslides that can affect:

- 5000 properties,
- Cultural services infrastructure: 13 museums, 32 files, 4 libraries, 5 showrooms, 30 churches.

Volcanic hazards and geological failures, which can generate ashes, lahars and pyroplasts

- 5 active volcanoes
- 1999. Guagua Pichincha Eruption
- 2002. Ash rain, Reventador
- 2016. Reactivation of Cotopaxi, yellow alert

Earthquakes and mass movements

- 1987. Earthquake 7° Richter Scale, CHQ
- 2016. Earthquake 7° Richter Scale, Costa
- 2016. Earthquake 4,5° Richter Scale, Cumbaya

Anthropical

- Lack of maintenance
- Inadequate interventions
- Perishable facilities
- Abandonment / aging of materials
- Insufficient education and ignorance of the valor patrimonial heat / OUV

Annex VI. The historical occupation of the territory

– The pre-Hispanic occupation of the territory

The complex conditions of the territory offered, however, natural defenses for a human settlement, as well as good conditions of production, which were exploited by the early man, approximately from 50000? -13000-2000 BC, and which subsequently allowed the development of different cultures that, for the purposes of its archaeological study are organized according to the following timeline:



The territory of the present Metropolitan District of Quito has been divided into six blocks for the study of these cultures that have been systematized in the ARCHEOLOGICAL ATLAS OF THE METROPOLITAN DISTRICT OF QUITO, comprising 3 volumes and 7 maps, directed by Dr. Holguer Jara for the Metropolitan City Hall of Quito and the Fund to Save the Cultural Heritage in 2010. The study gives a number of 1330 properties with archaeological evidence of paleontology, quito and Inca cultures, among others. [Graph VI.1.]

The bibliography consulted indicate that the Quito, Quitwa or Kitu Property has been inhabited for thousands of years -possibly from the Formative period on the slopes of Pichincha-, but that nevertheless there has never been a continuous population, so it is difficult to give continuity to the historical panorama of the city.

The Quitus people, organized in independent lordships, occupied the region according to the production and the possibilities of exchanges, favored by the commercial roads. That is to say that Quito was recognized as "an important place of exchange: a large market according to some, a" virtual space "according to others, leaving no material traces, creating symbolic relationships on the Property, networks of relationships flowing and rooted in each person"³.

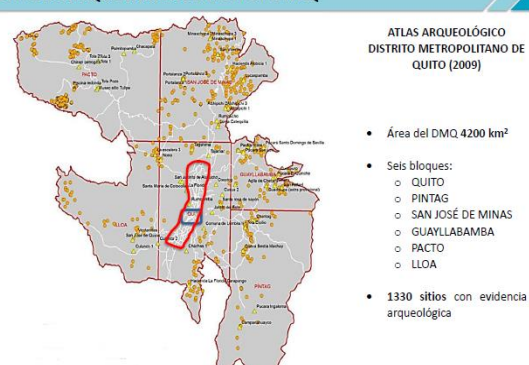
Towards the period of integration, by affinities or the result of strong contests, there are several groups that meet, in theory, under the direction of the *caras* or *quitus*, who impose their own social and political regime, a process of unification that probably expanded before the danger of the invasion of the Inca Empire. This model of "dispersed" settlement was a "way of being together" of these Aboriginal communities, which led to the idea of the existence of a "Kingdom of Quito", probably imaginary.

In any case, it is understood that the region of Quito at this time was a political, religious, commercial and economic center of such an importance that it was able to attract the Incas on a plan of conquest. These reasons, plus the special conditions of the sun trajectory, sacred to the Incas, pushed a Pachacutec during the imperial expansion phase to occupy the region despite local resistance. They grouped to resist under the guidance of mythical warriors, until finally they were defeated and subjugated, and Quito became a strategic military, religious and commercial center under the government of Huayna Capac.

Although this Inca was probably the most prominent and powerful of the rulers and privileged the development of Quito, the time of Inca occupation was brief (possibly a little more than 30 years, over 80 years of occupation of the rest of the present Ecuadorian territory), interrupted at the Arrival of the Spaniards in 1534.

The initial pre-Inca settlement had to be organized around a large market or *tianguez*, with the existence of scattered houses built with blocks of *cangahua* and thatched roofs, and *tolas* - artificial earthen monuments

SITIOS ARQUEOLÓGICOS en el DMQ



Graph VI.1. Archaeological places in the Metropolitan District of Quito(DMQ). Division in blocks

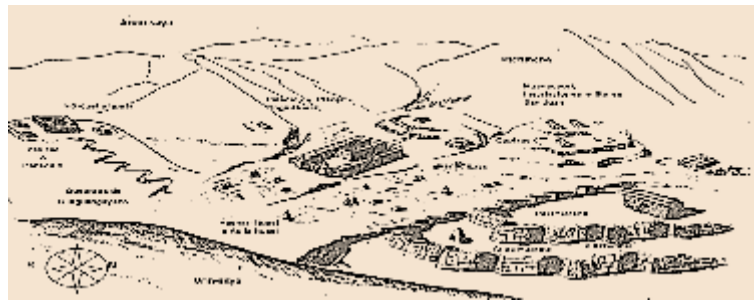
³ On line: [<http://www.patrimonio.quito.gob.ec/index.php/centro-documental/fondo-editorial/30-libros/385-atlas-arqueologico-tomo-ii>]

⁴ Del Pino Martínez, Inés. Thesis: "La Casa Popular de Quito Una obra de "bricolage" cultural". ("The Popular House of Quito. A work of cultural 'bricolage'") Master's Degree in Culture Studies Communication Mention, Simón Bolívar Andean University Headquarters Ecuador, 2005

for ceremonial, astronomical, habitation and funeral purposes – all surrounded by the agricultural space. [Graphs VI.2 and 3]



Graph VI.2a. Inca Quito. Hypothesis of the reconstruction of the city with inca influence.



Graph VI.2b. Inca Quito. Mock up. CAE

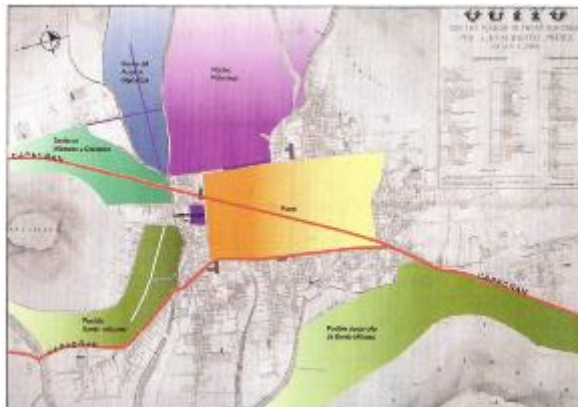


Gráfico VI.3a. Quito inca. Propuesta de ocupación del quito en la época inca. Inés del Pino



Gráfico VI.3b. Quito prehispánico. Gran plaza-centro ceremonial. Interpretación simbólica totémica. A. Peñaherrera

Following Del Pino Martínez: "With the Incas, during the first third of the sixteenth century, the marketing management changes without altering the physiognomy of the place: they seized the market in Quito, located in the present square of San Francisco and surroundings in order to exercise control on the distribution of goods and the dominions of the region. In this way a qualitative change of space takes place: from "moving space" to "fixed space", from space of agreements and negotiation to a "mediated space" by a unique power, which failed to establish itself according to Tupac Yupanqui's project as "head and shelter of my great kingdom" because it was truncated with the arrival of the Spanish conquerors, who will appropriate the place, will maintain the tianguetz as a place of mediation between the local population and the European, and will highlight the symbolic imagery that the Pre-Hispanic Quito had".

The urban shape of the Inca Quito or the millenary Quito is what remains to be defined. Many chroniclers of the time of conquest or later, almost always Spaniards - such as Juan de Velazco J.P., Pedro Sarmiento de Gamboa, Pedro Cieza de León, Juan de Betanzos, Fray Diego Córdova y Salinas, Antonio De Ulloa and Juan Jorge [Graphs VI.4 & 5]-, to the mongrel narrative of the Inca Garcilaso de la Vega and Felipe Guamán Poma de Ayala, described houses, temples, pleasure houses and palaces in the manner of Cuzco, whose interpretation must be framed in the very process of conquest, of the interests at stake of the Incas, Quitus and Spanish, and in the archaeological investigations that allow to corroborate the hypotheses that can be derived from the stories.



Graph VI.4. . Felipe Guamán Poma de Ayala. Audience of Quito. First new chronicle an good government, 1615



Graph VI.5. Antonio De Ulloa and Juan Jorge - Flora and Fauna of the Corregimiento of Quito. Historical Relationship of the Journey to South America,

On the other hand, it is possible to affirm the consolidation and reinforcement of the Andean road system by the Incas, installing tambos and pucarás, but the Inca empire was already submerged in a civil war between Atahualpa -resting in Quito, and Huascar- resisting in Cuzco-, and Despite the Inca military resistance commanded by Rumiñahui, around 1533 Pizarro captured Atahualpa, executed him and occupied his space of power.

- *The Hispanic occupation of the territory*

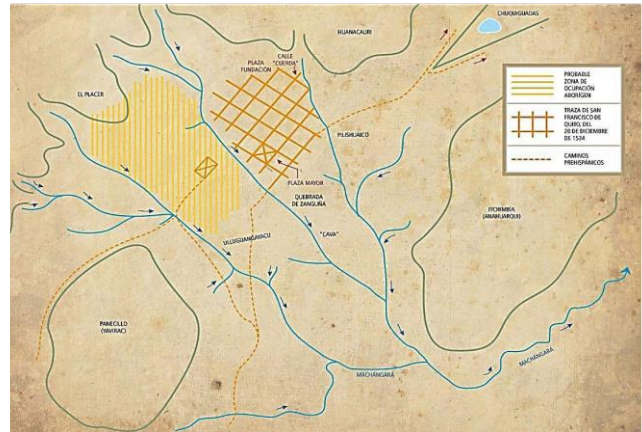
In the geographical context described and then superimposed on the quitu settlement occupied by the Incas, the city founded by Sebastián de Benalcázar in 1534, today has an elongated shape, whose width does not exceed 4 km, while, inside the inter-Andean alley, It extends in direction NS, by approximately 45 km.

The conquest of the region of Quito in the northern Andes was prompted by another rumor: the existence of Atahualpa's treasure. Was it for the destruction ordered by the Inca general Rumiñahui or by the consequences of an earthquake, the settlement was in ruins at the arrival of the Spaniards, who recognized the preexisting strategic position and gave continuity with the new urban layout. [Graph VI.6]

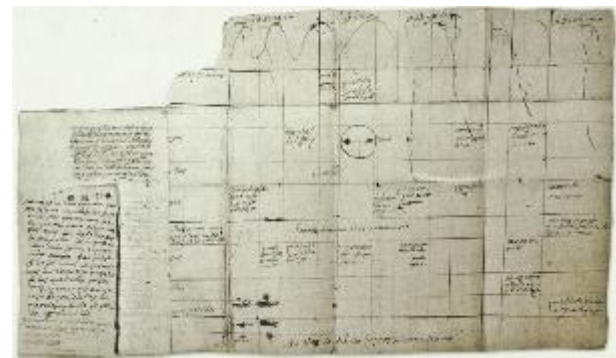
The attributes that determine the universal values for which the HCQ enters the List of the World Cultural Heritage are generated as a result of the trans-culturation of the urban model, like a checkerboard, and its overlap with the pre-Inca and Inca settlements

But while the colonial urban layout is registered through numerous drawings of centuries XVII, XVIII and XIX, there are few sources that could recompose the evolution of the settlements that make up the historical thickness of the territory of Quito. [Graphs VI.7 & 8]

In this context, it is necessary to compile existing archaeological and historical research on the occupation of Quito, to fill empty spaces of knowledge and to agree socially and academically the historical process of the city, as a baseline for its planning, conservation and management, not only at the urban level, but territorially, given the cosmology of the Andean culture.



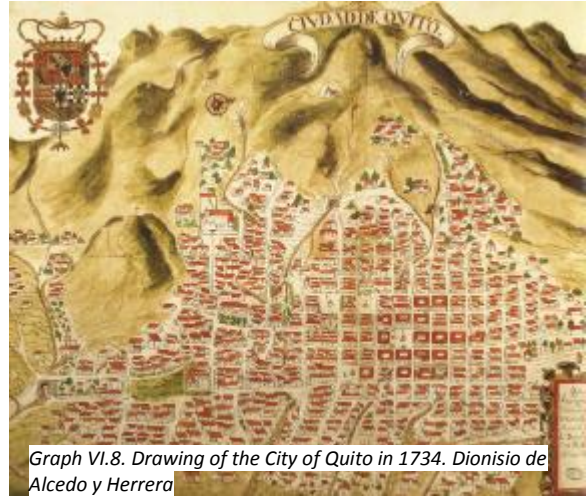
Graph VI.6. Hypotheses of the occupation of the territory by the Spaniards. Arq. Alfonso Ortiz Crespo, City Chronicler, 2016



Graph VI.7. Trace of the foundation of Quito according to the Relation of 1573, anonymous

Only the whole interpretation of the urban shape will allow managing this urban route, *"intact, entire, complete"*, recognized as the *"best preserved and least altered historical center of Latin America"*.

Despite the N-S longitudinal growth, the increase in transport services, the growth of its fleet, the depopulation of the HC and seismic events suffered, San Francisco de Quito maintains a constant development. At its center, the area of protection of the Historical Center of Quito encompasses 70.43 ha, reaching 302.82 ha by including the buffer area, which contemplates the main historical districts.



Graph VI.8. Drawing of the City of Quito in 1734. Dionisio de Alcedo y Herrera

Annex VII. Analysis of the current Legal Framework

a. International legal framework

The Republic of Ecuador ratified the 1972 World Cultural and Natural Heritage Convention in 1975, in which the Nation has requested and achieved the inclusion in the World Heritage List of five Property to date:

- **City of San Francisco de Quito [Reg. No. 2, 1978],**
- Galapagos Islands [Reg. No. 1 bis, 1978-2001],
- Sangay National Park [Reg. No. 260, 1983],
- Historical center of Santa Ana de los Cuatro Ríos of Cuenca [Reg. No. 863, 1999].
- Qhapaq Ñan, Andean road system [Reg. No. 1459, 2014].

The Convention establishes the principles and processes that allow safeguarding Property whose cultural value reach the conditions of universal and Outstanding for humanity, ensuring their permanence in time. In its implementation, the Convention and its Practical Guidelines [Provision No. 172] request the State Party to notify the World Heritage Committee of any intervention on the Property that may affect the values underlying its registration.

Ecuador has also ratified: the Convention for the Protection of Cultural Property in the event of armed conflict, 1954; the Convention against Illicit Traffic of Cultural Property, 1979; the Underwater Heritage Convention, 2001; And the Convention for the Protection and Promotion of the Diversity of Cultural Expressions, 2005.

The National Institute of Cultural Heritage, created by Supreme Decree No. 2600 in 1978, is the focal point of the Convention in Ecuador, which delegates to the Mayor of Quito the management of the Property. The attributions of the INPC will be modified by the new Law of Culture.

This State Party has also ratified, in 2008, the Convention for the Safeguarding of the Intangible Cultural Heritage of 2003, and in this context has achieved the inclusion in the Representative List of the Intangible Cultural Heritage of Humanity of three expressions:

- Oral heritage and cultural manifestations of the Zápara people, 2008, [Decision 3.COM 1]
- Traditional fabric of the Ecuadorian straw hat (toquilla), 2012, [Decision 7.COM 11.12]
- Marimba music and traditional songs and dances from the Colombian region of the South Pacific and the Ecuadorian province of Esmeraldas, 2015, [Decision 10.COM 10.b.13]

b. National legal framework. República of Ecuador

The Constitution of the Republic of Ecuador of 2008 establishes as a form of government the republican, governed in a decentralized way. Its text, the Organic Code of Territorial Ordering, Autonomy and Decentralization [hereinafter COOTAD], and the Law and Regulation of Cultural Heritage contain express provisions on the protection of Cultural Heritage. Likewise, the National Plan for Good Living includes the constitutional provisions and must be complied with by the Local Governments. The provisions of this legislation on cultural heritage are summarized below.

▪ Constitution of the Republic, 2008:

Fundamental principles, Art. 3.7. Primordial duty of the State: "To protect the country's natural and cultural heritage."

Rights of Good Living, Art. 21: "People have the right to (...) know the historical memory of their cultures and access to their cultural heritage"...

Art. 83.13. The duties and responsibilities of Ecuadorians are: *"to preserve the country's cultural and natural heritage, and to care for and maintain public property"*.

Competences, Art. 264.8. Competence exclusive for municipalities: *"Preserve, maintain and broadcast the architectural, cultural and natural heritage of the canton and build public spaces for these purposes"*.

Development Regime. Art. 276.7. The development regime (organized, sustainable and dynamic system of economic, political, socio-cultural and environmental systems, which guarantee the realization of good life, *sumak kawsay*) will have the following objectives: (...) Protect and promote cultural diversity and respect their spaces of reproduction and exchange; recover, preserve and enhance social memory and cultural heritage.

Culture. Art. 377. The national culture system aims to strengthen national identity; protect and promote the diversity of cultural expressions; to encourage free artistic creation and the production, broadcast, distribution and enjoyment of cultural goods and services; and safeguard social memory and cultural heritage. The full exercise of cultural rights is guaranteed.

Art. 380.1. It will be the responsibility of the State: To ensure, through permanent policies, the identification, protection, defense, conservation, restoration, broadcast and enhancement of tangible and intangible cultural

heritage, historical, artistic, linguistic and archaeological richness, collective memory and of the whole values and manifestations that establishes the multinational, multicultural and multiethnic identity of Ecuador.

- National Development Plan [Art. 260 of the CN]: National Plan for Good Living 2009 | 2013.

It establishes new challenges oriented towards the changes that allow the construction of a multinational and intercultural State. Among the objectives of the National Plan that apply to Cultural Heritage and Mobility the following are to be mentioned:

"Objective 3. To improve the life quality of the population", for which the policies and strategic guidelines contemplate guaranteeing the preservation and integral protection of the cultural and natural heritage and of the citizenship before the threats and risks of natural or anthropical origin, incorporating for example the integral, preventive and sustainable management of risks in the national and local planning and regulation processes.

"Objective 7. To recover and expand the public space and of common gathering", understanding that "public space, - physical, medial and symbolic - conformed with clear incentives to participation, dialogue, deliberation, respect and diverse expression , is the place where a culture of democratic, intercultural and creative coexistence can be built between free subjects who recognize and respect each other as equals (Article 23). "

"Objective 8. To affirm national identity and strengthen diverse identities and inter-cultural expressions," implementing policies to promote and support processes of preservation, valorization, strengthening, control and diffusion of collective and individual memory and of the country's cultural and natural heritage, in all of its richness and diversity.

- Organic Code to put to rights the Territory, the Autonomy and the Decentralization, COOTAD. D.E. 1577/09.

COOTAD implements the contents of the Constitution in the territory, articulating the public policies with the management and public investment, as follows:

Art. 4. Purposes of the decentralized autonomous governments. Within their respective territorial districts the objectives of the decentralized autonomous governments are:

e) "The protection and promotion of cultural diversity and respect for its generation and exchange spaces; the recovery, preservation and development of social memory and cultural heritage."...

Art. 55. Exclusive competences of the decentralized municipal autonomous government. The municipal decentralized autonomous governments shall have the following exclusive powers, without prejudice to others determined by law:

f) "Plan, regulate and control the transit and ground transportation within its cantonal district"

h) "Preserve, maintain and broadcast the architectural, cultural and natural heritage of the canton and build public spaces for these purposes;"

Art. 144. Exercise of the competence to preserve, maintain and broadcast the cultural heritage. "It is the responsibility of the autonomous municipal decentralized governments to formulate, approve, execute and evaluate plans, programs and projects aimed at preserving, maintaining and broadcasting the architectural, cultural and natural heritage of their constituency and constructing public spaces for these purposes.

For this purpose, the patrimony in reference will be considered with all its tangible and intangible expressions. Preservation will encompass the set of actions that allow its conservation, guarantee its integral support through time; and broadcasting will seek the permanent propagation in society of the values it represents".

(...) "It will be the responsibility of the central government to issue national policies, safeguard social memory and cultural and natural heritage, so it is up to them to declare and to supervise the national heritage and the tangible and intangible assets" (...) "which will be managed in a concurrent and deconcentrated manner" (...) "Assets declared as cultural and natural human heritage will be subject to international instruments "(i.e. the 1972 World Heritage Convention).

The new Organic Law of Culture would empower the decentralized Autonomous Governments to proceed to expropriation based on the protection of cultural property

- Law No. 3501/79. Cultural Heritage of Ecuador. Regulation. Revoked?

The Law on Cultural Heritage has been in force since 1978 and has been codified since 2004. The law enforcement authority is the National Institute of Cultural Heritage, which is responsible for the declaration of property, supervision and technical control of Heritage at the national level. It is complemented by other instruments, such as the Penal Code and Local Ordinances, among others.

Among its provisions, it states:

Art. 14. Municipalities and other public sector bodies may not order or authorize demolitions, restorations or repairs of immovable property belonging to the State Cultural Heritage without prior permission of the Institute, being the one responsible for the infraction the official who ordered or extended the authorization, who will be punished with the fine indicated by the Law.

Art. 15. The municipalities of those cities that have Historical Centers, urban groups or isolated buildings whose architectural characteristics are worthy of being preserved must dictate ordinances or regulations that protect them and that previously have obtained the approval by the Institute of Cultural Patrimony. If the regulatory plans approved by those municipalities violate these characteristics, the Institute will require its reform and will seek compliance with this article.

Its Regulations indicate the procedure for the inventory of cultural property, as well as sanctions for those who perform repairs, restorations or modifications of property belonging to the Cultural Heritage of the Nation without the authorization of the Institute (Art. 77 and 78).

- Executive Decree No. 816/07. State of Emergency - Cultural Heritage.

It declares the state of emergency in the sector of Cultural Heritage at a national level. Its purpose was to establish the measures and mechanisms for the control, use and actions aimed at the conservation and preservation of the patrimonial assets of the Ecuadorian State. On this occasion the inventory of 142 212 on cultural assets was developed, and was executed by the Coordinating Ministry of Heritage (2007-8).

- Modus Vivendi and the Additional Agreement concluded between the Republic of Ecuador and the Holy See, 1937.

Regarding the cultural heritage property of Catholic Church agrees:

"Art. VIII. In each diocese the Ordinary shall form a Commission for the preservation of churches and ecclesiastical premises that are declared by the State monuments of art and for the care of antiquities, pictures, documents and books belonging to the Church that possess artistic or historical value. Such objects may not be alienated or exported from the country. That Commission, together with a Government representative, shall proceed to form a detailed inventory of said objects. "

In its Additional Agreement it adds: "Art. III. If the Government, for reasons of public necessity, wishes to occupy a monastery, it will provide the respective religious community with an adequate place, preferably outside the city center, by prior agreement with the Apostolic Nuncio. The place should have the necessary comforts for the object to which it is intended [attending to the number of nuns] and to the contemplative life they carry. "

- Law No. 37/99. Environmental management

This Law contains, among other conditions of identification, prevention, mitigation and management of environmental impact, provisions relating to cultural heritage. As a complement to the Cultural Heritage Law, no infrastructure work of the country can be executed unless it has the studies and the liberation of areas in relation to the archaeological heritage, by the National Institute of Cultural Heritage, for the implantation of new Structures, as follows:

Chapter II. Of the Environmental Impact Assessment and Environmental Control, Article 23. "The environmental impact assessment shall comprise: (...)

c) The impact of the project, work or activity will have on the elements that make up the historical, scenic and cultural heritage ".

- Resolution 4. Transfers competence to preserve heritage to autonomous governments. Official Register No. 514/03 June 2015

It provides for the transfer of the competence to preserve, maintain and broadcast the architectural and cultural heritage to the decentralized autonomous governments. It establishes a framework of competencies of the nation and the municipalities in terms of policies, planning, regulation, control and management of cultural goods.

- Organic Law of Culture. Official Register No. 913 / December 30, 2016

The text of this law project recognizes diverse cultural assets and expressions through the concept of social memory, considering the dynamic nature of culture and its permanent re-signification and revaluation by social actors. It takes social memory as the center element, and in relation to it generates the regime of protection of cultural heritage that must be adapted to the diversity of goods and material and immaterial expressions that constitute it.

The proposal establishes three levels of protection: a basic one of general protection, and two specific ones that apply to the goods that have passed cataloging and registration.

Among its highlights the new law:

- gives special importance to the social value in the identification of the goods, ranging from the old and monumental to the contemporary heritage;
- recognizes and enumerates cultural rights, giving priority to ancestral knowledge and social memory, including diversity, inclusion and new technologies;
- promotes education in the arts, in culture and in heritage;
- recognizes cultural work as a profession with specialties with a particular framework of training and practice of that profession;
- generates a national management system - National Culture System -, under the Ministry of Culture and Heritage subdivided into the **Subsystems of Social Memory and Cultural Heritage** and Art and Innovation;
- recognizes the patrimony of contemporary character but does not give it preventive protection.

Regarding the administrative aspects, the law adheres to the tendency to decentralize the incumbencies of the national state, transferring the competitiveness to the municipal administrations. In particular, the control of building work is protected to the local administration, but reserves the right to stop the execution of the work and to suggest modifications in the projects.

The **National Institute of Cultural Heritage** is reserved for the development of research and the exercise of technical control of cultural heritage, for which it must attend to and coordinate the public policy issued by the governing body of Culture and Heritage. In particular, it develops the necessary research in the area as well as advice, but can only intervene through provisions of the governing body of Culture and Heritage.

This Institute declares to the Historical Center of the City of Quito "Cultural Patrimony of the State², by Declaration of December 6, 1984. In this instance the declaration covers the central nucleus, its sphere of influence, plus the urban nuclei of Guápulo and Chillogallo, including buildings and valuables sectors in the rural parishes of the Canton.

c. Local legal framework. Metropolitan District of Quito. Central Zone Administration

The Municipality of Quito has, since 1975, legal provisions that have allowed preserving its historic center and other significant urban areas. The ordinances of the years 1975, 1984 and 2008 (in force), establish provisions regarding the regulation of the components of the urban shape and its special areas, applying the recommendations of the Norms of Quito.

- Metropolitan Ordinance 0143/00. Reformulation of the OM 95. New Soil Regime, which regulates the use and protection of the public space of the CHQ, in particular its use.
- Metropolitan Ordinance 0031/08. Land Use and Occupancy Plan POUS
- Metropolitan Ordinance 0265/08. Creates the DMQ Metropolitan Integrated Risk Management System
- Administrative Resolution of Mayor's Office No. A 0040/10. Creates the "METROPOLITAN INSTITUTE OF HERITAGE"

On December 28, 2010, the Municipality of the Metropolitan District of Quito created the Metropolitan Heritage Institute [IMPQ], as a "special unit added within the organizational structure of the Municipality of the Metropolitan District of Quito, endowed with administrative and financial autonomy, attached to the Secretariat of Territory, Habitat and Housing, which must also work in coordination with the other Secretariats of the Metropolitan Municipality of Quito, legal successor of FONSAL. "It establishes as its purpose to assume the powers and attributions that correspond to the municipality of DMQ" Registration, inventory, maintenance, intervention and management of the architectural and urban archaeological heritage of Quito; as well as the management and conservation of the intangible heritage"⁴.

- Metropolitan Ordinance 0319/10. It institutionalizes the gathering of the rural parishes

⁴ Instituto Metropolitano de Patrimonio. POLÍTICAS DE GESTIÓN (Versión preliminar en revisión) Quito, abril 2013

▪ Municipal Code for the Metropolitan District of Quito. Official Register 226/1997. Last reform: 2011. This Ordinance incorporates as Title II of the Second Book to the Municipal Code for the Metropolitan District of Quito, in effect, to the provisions of Metropolitan Ordinance No. 260/2008 that regulates the urban aspects of the HCQ of the Historical Areas of the DMQ.

Previously, in its First Book for the administrative organization, it provides for the organization of the Council and its Commissions, as well as the transfer of competencies to the Parish Boards of the Metropolitan District of Quito. The code empowers the municipality to proceed to expropriations according to the norm, as well as to control the territory and its respective sanctions.

As an integral part of the Code, the Metropolitan Ordinance 017/99 provides for the organization and attributions of the Historical Areas Commission, integrated by "the following members with **voice and vote** [modified by Metropolitan Ordinance 003/14]:

- a) *Three councilors appointed by the Metropolitan Council, one of them as President;*
- b) *The Director General of Planning or his delegate,*
- c) *A delegate of the Architects Association of Ecuador, Nucleous of Pichincha or alternate, specialized in rehabilitation or restoration projects, designated by the Mayor of the list presented by said College,*
- d) *The Director of the Institute of Cultural Heritage or his delegate,*
- e) *A representative of the citizens designated by the Mayor,*
- f) *The chronicler of the City of Quito,*
- g) *The Director of the Salvage Fund or its delegate,*
- h) *The Manager of the Company of the Historical Center of Quito or its delegate,*
- i) *The Zonal Administrator of the Central Zone or his delegate. "*

By Metropolitan Ordinance 0125/04 it regulates the protection of the documentary heritage of the DMQ, while other chapters deal with the museums of the city, the Metropolitan Archive of History and the functions of the Chronicler of the City - to integrate with voice and vote the Commission of Historic Areas of the Metropolitan Council of Quito, as well as the Ornate Award "City of Quito".

By Metropolitan Ordinance 02650/12 regulates the Metropolitan System of Risks Control.

The Second Book covers the regulation of the land regime and territorial planning. It is established as complementary instruments for the planning: Plans of metropolitan scale: Plan of Use and Occupation of the Ground. Master Plans. Plans of zonal scale: Partial Plans. Plans of parish or sectarian scale: Special Plans. Special urban-architectural projects. Technical standards: Architecture and Urbanism Standards. Specific standards manuals. Regulations: Procedures regulation for the habilitation of the soil and the building.

Also included are provisions relating to land ownership, its habilitation, building, protection of the landscape, slopes and ravines and public space, being art. *"Heritage and heritage areas, archaeological Property and their natural and scenic environment located in the Metropolitan District of Quito shall be subject to research, planning, protection and management in accordance with the provisions of regulations in force."*

It has a chapter destined to the Planning and Management of the Patrimonial Areas, being its instruments of reference: the Cultural Patrimony Law and its General Regulation, the General Plan of Territorial Development and its complementary instruments, the Master Plan of Integral Rehabilitation of the Historical Areas of Quito and the Special Plan of the Historical Center of Quito. Provisions for the inventory, incentives, infractions and sanctions are also indicated.

A special title regulates outdoor advertising, identifying possible attacks on historic monuments.

- Metropolitan Ordinance No. 0260/00. Patrimonial Areas It is incorporated as Title II of Libro Segundo to the Municipal Code for the Metropolitan District of Quito, in force.

It defines the central nucleus between the limits included by the buildings that conform the urban parameters and urban environments: Chimborazo, Mires, Olmedo, Imbabura, Manabí, Flores, Pereira, Montufar, Rocafuerte, Paredes, Morales, Avenida 24 de Mayo, Until joining again with the Chimborazo, although its scope extends to the limits of the Metropolitan District of Quito.

Its Art. 1 understands the Patrimonial Areas as *"those territorial areas that contain a set of components and socio-cultural expressions of value that are part of the process of conformation and development of human settlements. Heritage areas and assets constitute an integrality as a whole, from the natural environment where most of the social goods produced are located, and basically the spaces organized or constructed by those who inhabited it historically and who have acquired such cultural significance that the Makes them representative of their time and of human creativity. "*

It establishes the process of classification, inventory and cataloging of real estate [Typological Value, Meaning, State of the building, Relation with the environment], as well as the elaboration of the Archeological Map of

the DMQ (Art. 10). It contains provisions on the rehabilitation of housing in the CH, land use in general and public space in particular, as well as administrative procedures, incentives and sanctions.

It recalls in Article 13 the rights of the State on historic monuments, objects of archaeological and paleontological interest, to control all kinds of findings in the case of mining explorations, earthworks for buildings, road constructions or other, As well as in building demolitions.

It recognizes in Art.17 as planning instruments for the conservation and development of heritage areas to: Cultural Heritage Law and its general regulations; General Plan of Territorial Development [PGDT], and its complementary instruments; Master Plan for Integral Rehabilitation of the Historical Areas of Quito, Special Plan for the Historic Center of Quito, and the ordinance under analysis.

The city of Quito enters the List of World Heritage and in 1984 it is declared Cultural Patrimony of the State. In its recital it is recalled that *"its historic center is the most coherent and the best preserved of the Hispanic American capitals"*, and in its Article 1 establishes the delimitation of the First Order Area and its buffer zone, while Art. 2 indicate the delegation of powers of control and enforcement of the National Law to the Commission of the Historic Center of the Illustrious Municipality of Quito.

In response to the 1987 earthquake, the **Fund for the Salvage of Cultural Heritage** [FONSAL] was created, through Laws No. 82/87 and 129/91. Given that FONSAL was based on pre-assignments derived from taxes that were eliminated by law, the municipality formed a new institution inscribed within the municipal structure to replace FONSAL and allocated resources to it within the municipal budget.

With the new regulatory framework, the need to amend Metropolitan Ordinance No. 260 is created and the Metropolitan Ordinance project is drawn up, replacing Ordinance No.260, a project that is under discussion in the MDMQ Historical Areas Commission.

- Metropolitan Ordinance 0057/11. Program Quito Heritage of Humanity. Scholarships
- Metropolitan Ordinance 0094/11. Section II Reformulation Chapter II not numbered Title "Of the Heritage Area and Assets" of the Second Book of the Municipal Code for the Metropolitan District of Quito, incorporated by Metropolitan Ordinance No. 260/2008.

It replaces the articles numbered 28, 29, 30, 31 and 32 of Section IV, Chapter II of said title referring to management. Creates the incentives for the owners of inventoried buildings in the DMQ through the fifth façade programs (roofing), and urban image recovery (façades).

- Metropolitan Ordinance 0170/11. DMQ Metropolitan Development Plan. PMD 2012-2022.

Its Strategic Axis 6. Millennium, Historical, Cultural and Diverse Quito recognizes that the city is a world heritage of humanity, and that its history and tradition account for its diversity and richness.

In the Diagnosis it recovers concepts and categories of the Convention for the Safeguarding of the Intangible Cultural Heritage. It describes the conservation of the built heritage of the Historical Center and the rural parishes, recognizing the deterioration of the houses and the population abandonment of the CHQ. It also recognizes the difficulties in managing this type of heritage, as well as in the construction of identity.

The objectives are to recover the identity and from it, the tangible and intangible heritage, establishing policies, programs and goals, in particular the identification of multiple milestones and / or historic centers, throughout the District, from the historical and symbolic logic . The strategic objectives set by the LDC identified by axes, in the case of the Quito Historic, Cultural and Diverse - Identities and Heritage Axis are:

- Strengthen the Identity Quiteña and recognize that in the District different cultural and cultural manifestations, related to the ancestral collection (indigenous and mestizos), official culture, subaltern cultures, urban cultures, youth cultures, etc.;
- Articulate an inclusive cultural management, through the promotion and recovery of the history of each sector and neighborhood, legends, knowledge, traditions, games, music, religious holidays, ancestral festivals, etc.;
- Build, improve, rehabilitate and sustain the cultural infrastructure of the city, to accommodate a broad and democratic cultural offer that promotes the diversity of cultures, their development, strengthening and active participation in the life of the District;
- Preserve, protect, maintain and promote the material cultural heritage (built heritage)

Programs include: Revitalization of public space and pedestrian area in the HCQ; Patrimonial Inventory; Recovery of Heritage Building, DMQ Archaeological Program.

- Metropolitan Ordinance 0171/11. Metropolitan Plan of Territorial Planning PMOT of DMQ 2012-2022.

The formulation of the Metropolitan Plan of Territorial Ordering recognizes and is based on the guiding and management principles as well as the objectives set forth by the Metropolitan Development Plan (PMD). Its instruments of action are:

- a. Areas of Protection and Ecological Corridors, PMOT1 (Annex 1);
- b. General Soil Classification, PMOT2 (Annex 2);
- c. Patrimonial Areas System, PMOT3 (Annex 3);**
- c. Area of Patrimonial Promotion, PMOT 3a (Annex 4);
- d. Integrated Public Transport System, PMOT4A (Annex 5);
- f. Main Road Network, PMOT4B (Annex 6);
- g. PMOT4B1 Main Road Network (Annex 7);
- h. Priority Works Road Network, PMOT4C (Annex 8);
- i. Urban Centralities, PMOT5 (Annex 9); Y,
- j. Rural Centrals, PMOT5A (Annex 10).

It is declared of public or social interest, all activities and operations of ordering, planning and management of the territory provided for in the PMOTT

It proposes four lines of action that should be implemented in the long term:

- Axis 1. Improvement of the internal mobility and relationship with other areas of the city that has the HCQ, as a node of urban centrality that is the CHQ, through the re-ordering of the vehicular traffic system that improves the mobility conditions of pedestrians in the HCQ, the implementation of an internal transportation system and the definition and design of cycle routes.
 - Axis 2. Improvement and conservation of public spaces and real estate in the CHQ, its urban environment and in rural areas through the rehabilitation and maintenance of public spaces, the promotion of new housing and the improvement of housing conditions. Habitability of heritage buildings, development of assistance programs and municipal compensation for the recovery and conservation of heritage buildings for housing, and assistance programs for the maintenance of facades and roofs.
 - Axis 3. Rehabilitation and development of equipment to promote residential areas as areas for active and passive recreation as well as educational and health equipment at sector and zonal level, complemented by the definition of land uses that guarantee the heterogeneity characteristic of Historical patrimonial areas.
 - Axis 4. Improvement of security and coexistence in historical areas and heritage assets through the implementation of community security and surveillance systems, regulation of the improvement and modernization of internal electric power networks, telecommunications and fire systems as well. Also through campaigns the improvement of habits and behavior of visitors and residents in the public spaces of the historical heritage areas.
- Metropolitan Ordinance 0265/12. Reformulation of Metropolitan Ordinance No. 265, in Section Two "Of the Components of the Metropolitan System of Risk Management
 - Resolution C350 / 12. To declare Natural, Historic, Cultural and Landscape Heritage to the Quebradas System of the Metropolitan District of Quito

Among the recitals, it recognizes that the recovery, protection and conservation of the Quebradas System of the Metropolitan District of Quito, which constitutes a symbol of the city's historical, natural, cultural, social and scenic identity, is of paramount importance. The declaration reaches the natural, historical, cultural and landscape dimensions of the ravines and establishes as a priority its care, integral rehabilitation and maintenance in order to prevent inherent risks and provide citizens with places of high environmental quality, recreation, leisure and culture.

- Metropolitan Ordinance 447/13. Reform on Land Use and Occupancy Plan. Metropolitan Development and Territorial Planning Plan of the DMQ.
- Metropolitan Ordinance 003/14. Substitute of the Metropolitan Ordinances No. 140, 194, 197 and 297, which regulates the formation, operation and operation of the Commissions of the Council of the Metropolitan District of Quito.

The Council directs the themes of its permanent working committees by axis, with the territorial axis that includes the Commission on Historic Areas and Heritage, together with those of Land Use, Mobility, Environment, Housing and Habitat, Property and Public Space and Territorial Ordinance. While the rest of the

Commissions are delivered by three councilors with voice and vote, given its nature and scope that of Historical Areas and Heritage is integrated in its Art. 6 by:

- a) *"Three councilors with voice and vote;*
- b) *The Secretary or person in charge of Territory, Habitat and Housing*
- c) *A delegate from the Architects Association of Ecuador, Núcleo de Pichincha;*
- d) *The Director of the National Institute of Heritage*
- e) *A representative of the citizens designated by the Mayor,*
- f) *The chronicler of the City of Quito,*
- g) *The Director of the Institute of Cultural Heritage*
- h) *The Administrator of the Central Zone, or its respective delegates, **with voice, but without vote** ".*

The duties and powers of the commissions are to resolve the proposed topics in their knowledge, study, projects, plans and programs, propose draft ordinances and carry out on-Property inspections, among others. In particular, that of Historical Areas and Heritage should *"study, elaborate and propose to the Council normative projects for the structuring of plans, programs, projects and architectural and town planning interventions developed in protected historical areas, and the approval of projects for the creation or modification of Public monuments. It will also propose to the Board normative projects whose objectives are the assessment, dissemination, protection and conservation of the District's cultural heritage. By express delegation of the IMPQ is the instance that analyzes the projects of intervention in the historical and patrimonial areas, previous report of the Technical Sub-commission for the approval of the Council".*

- Metropolitan Ordinance 0041/15. Metropolitan Plan for the Development and Territorial Planning of the DMQ. Diagnosis and Proposal. Development.

Annex VIII. Antecedents on the archaeological and historical interpretation of San Francisco Square

According to the **Final Report of the Archaeological Rescue Project of the San Francisco Metro Station** -and here there are coincidences on some bibliography and other consulted reports-, the Franciscan order chose to build its headquarters in an esplanade that *"an old tradition said that it was full of giant cedars"*, two blocks away from the square of Arms, which would become the Plaza de San Francisco, and built in an uncharted place the first chapel that was completed on January 25, 1536, marking the beginning of the Spanish occupation of the sector.

From there the Franciscans began with their missionary work, evangelizing and educating in several crafts, - among them the construction-, progressively adding lands towards the slope of the Pichincha so that the Indians yanaconas⁵ serving the Convent had their own means of support and sustenance, gradually increasing the limits of the Convent and Church. These Indians are those who worked in the quarries of stone and lime, for the construction of the religious building from 1552.

In what the chroniclers, historians and researchers differ, is about the preexisting buildings in the area that the Franciscans occupied, where it is usually indicated that there was the Palace of Huayna Capac built between 1516 and 1525, an architectural complex that extended along to the El Placer (Inca's houses of pleasure), limited by the ravine descending from El Tejar; Garcia Moreno Street to the east and south to avenue 24 de Mayo, *"where according to Brother Agustín Moreno, all this sector ... was a huge cedar forest."*

The report being analysed indicates "although the archaeological evidence is still not conclusive, the ethno historical data are relative when mentioning that this place could have been part of some Inca *Kancha*. Similarly, the varied written documentation tells about the existence of a market or *Tianguez* in full operation since the pre-Inca stage, and remained as such, although under the capitalist market system, until the beginning of the twentieth century".

Even though there are representations more or less accurate of colonial Quito and photographic images of the square as from the second half of the 19th century, which contribute to the historical urban interpretation of the city, the hypotheses of reconstruction of the pre-Inca and Inca territory not only are scarce, but heterogeneous and dissimilar, referring more to their comparison with Cuzco, which are truthful of the property [Graphs VIII.1, 2 & 3, and Image VIII.1].



Graph VIII.1. Hypothetical view of the aboriginal market sector in Quito, where later would be placed San Francisco Square. Drawing belonging to the City Museum. Quito. Before 1535



Graph VIII.2. Building up San Francisco. Drawing belonging to the City Museum. Quito. After 1535

⁵ Yanacona/ yanaconazo: pueblos indígenas que los incas primero y luego los españoles tenían de servidumbre perpetua, ya fuera en sus encomiendas o en integrados a las formaciones militares como *"indios auxiliares"*. Hacia Sudamérica, tomo más tarde la connotación de *"traidor"* o servil a los intereses extranjeros



Graph VIII.30. San Francisco Square. Juan Agustin Guerrero, 1860



Image VIII.1. San Francisco Square. Photography, beginning of the 20th century

According to Del Pino, "according to ethno historical studies, the square of San Francisco is the lag of a greater space that was the political center, denominated in Hispanic time *tiánguez*(big market), in which the lordships of different regions congregated to make contacts and exchanges. The Incas appropriated the *tiánguez* to turn it into a political space and of interregional exchanges from which they controlled the manors of the region. The physical space does not change but the regulations of material use and symbolic value (...) do. This virtual pre-Inca site is transformed with the Inca presence into a power space that ratifies its previous symbolic value. Likewise, the Spanish foundation, in spite of establishing its major square very near from there, installs one of the four main Catholic temples, ratifying again the symbolic character of the place. These sojourns and cultural overlays in Quito along time, identify it as a site with unique characteristics, (...) whose value depends not only on the physical conditions of the place but also on added values that it is imperative to take them into account to understand certain processes and dynamics of the conversion of natural territory into anthropical space".⁶

⁶ del Pino, Inés. Reflexiones sobre el Ecuador prehispánico y la ciudad inca de Quito, en Revista de la Pontificia Universidad Católica del Ecuador, No. 74, Noviembre 2004, Quito, Ecuador

Annex IX. Metro of Quito



Imagen IX.1. Slurry walls constructed at the El Labrador Station, mezzanine level.



Imagen IX.2. Quito Metro tunnel boring machine being assembled



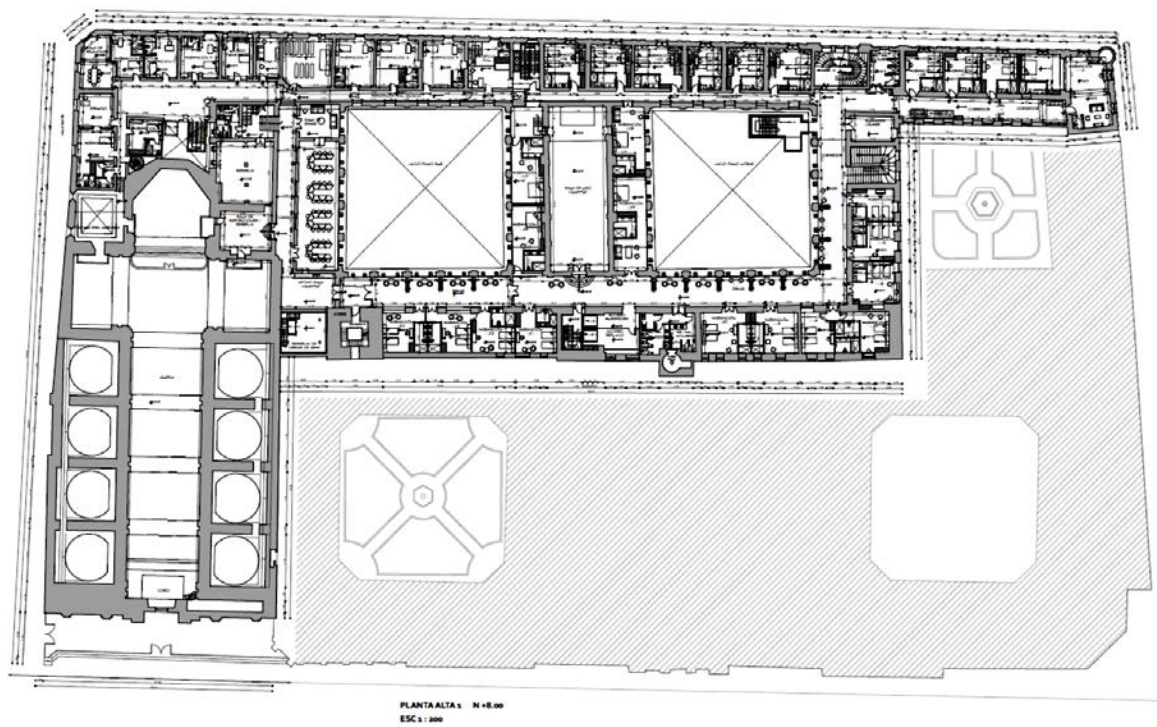
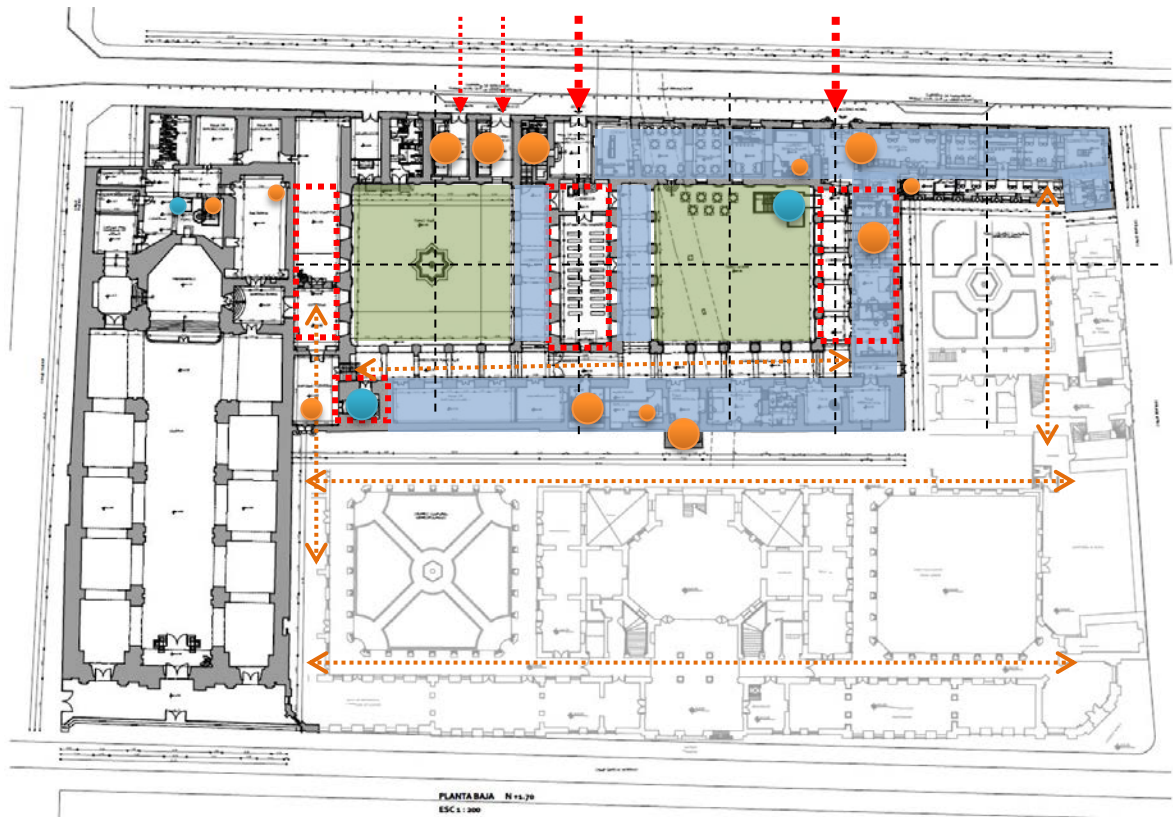
Imagen IX.3. Track level of the El Labrador Station, with TBM (tuneladora) cradle and in the distance, the TBM assembly area.



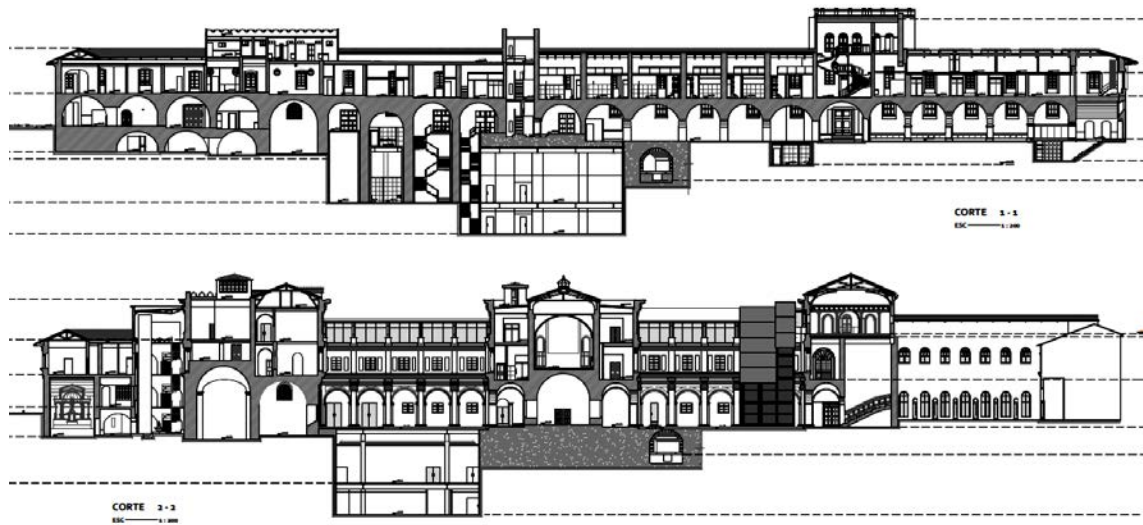
Imagen IX.4. ICOMOS team with IMPQ representative shown for scale at El Labrador Station with station box break-out wall behind.

Annex X. Company of Jesus Unit

X.1. Complex Ground Floor and Top Floor of the project



X.2. Cut through the North and South courtyards.



X. 3. Cut through the North and South courtyards with religious and social



Annex XI. New Public Spaces and projects



XI.1. Block of the Convento de San Agustín
Commercial Moll
San Agustín
(Old Civil Register), 1964
Demoished

Work: Square Huerto de San Agustín
2016, MIDUVI



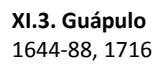


XI.2. Block of the Monasterio de la Inmaculada Concepción

Health Direction of the Province of Pichincha,
1950-7?
Enrique y Lionel Ledesma.
(demolished)

Work: Plaza de las Conceptas, 2013, MIDUVI





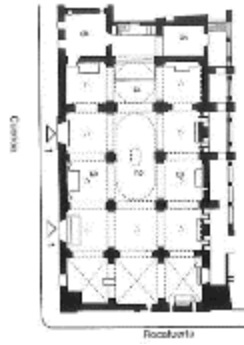


**XI.4. Colegio Fiscal Nacional Simón Bolívar,
Antiguo Beaterio**
Siglo XVIII y XIX
Olmedo and Benalcázar
Restored in 2003, FONSAL

Work: UN Building / no data



Annex XII. Interventions on buildings affected by the earthquakes of 2016



XII.1 Church and Convent of Santa Clara
Cuenca and Rocafuerte
About the middle of the 17th century
Restored between 1990-2000, FONSAL
Affected by the 2016 earthquakes: convent and church





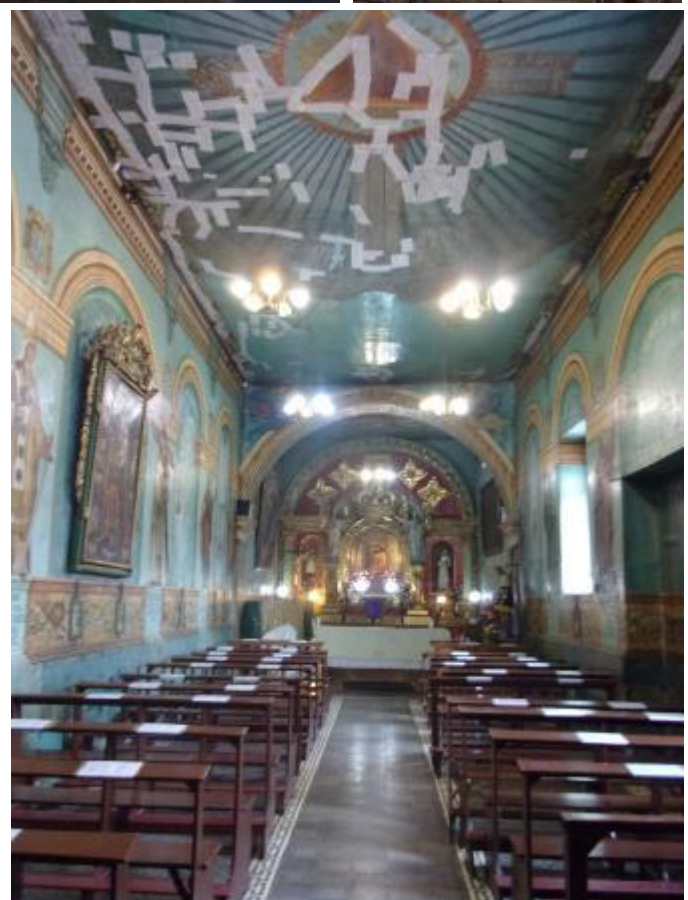
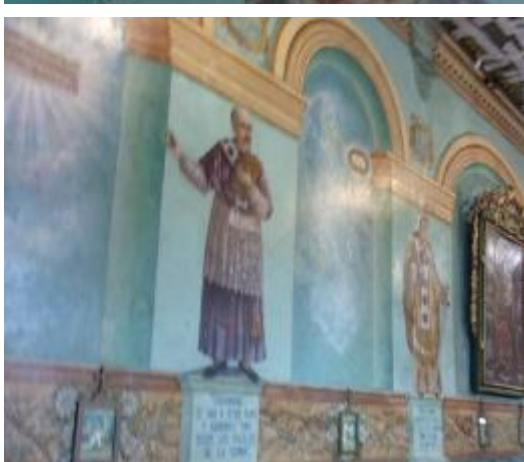
XII.2. Chapel de Los Milagros

Rocafuerte and Fernández Madrid N1-113

1680

Restored between 1989-90 M-2000, FONSAL

Affected by 2016 earthquakes: chapel





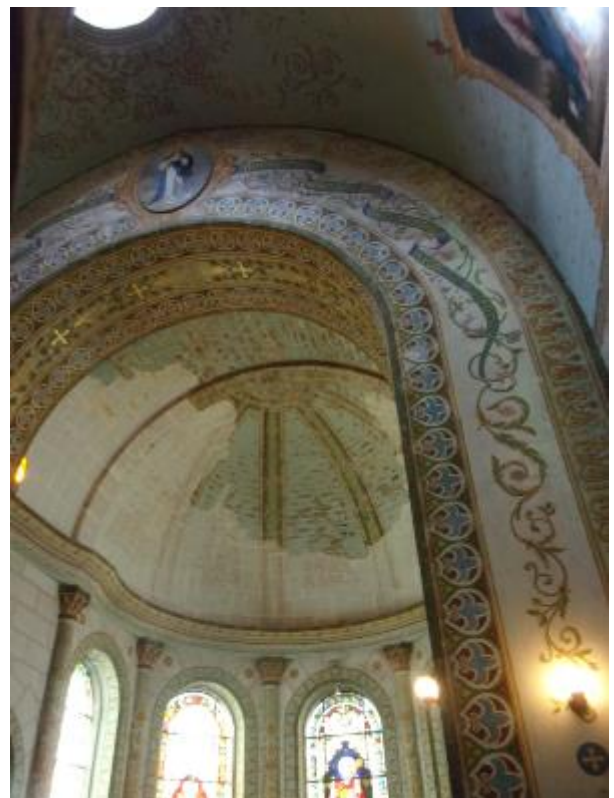
XII.3. Convent del Buen Pastor, Old Recoleta de la Peña de Francia

La Recoleta

1600, 1770 church, modifications 1871-1912

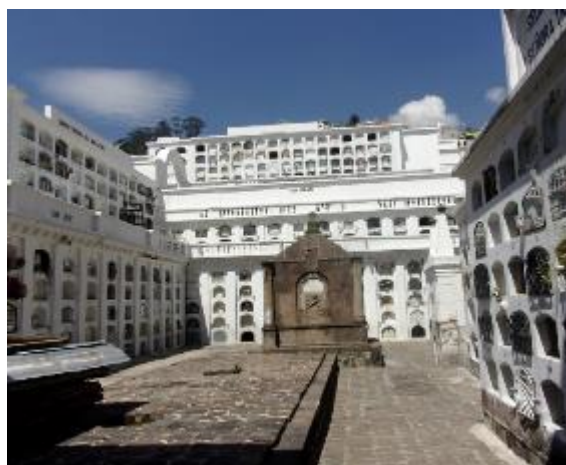
Restored between 1993-2000, FONSAL

Affected by 2016 earthquakes: convent and church



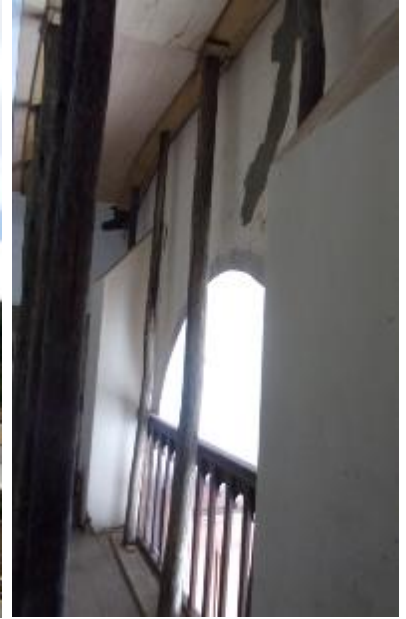


XII.4. Church and Convent Mercedario de El Tejar
 El Retiro N5-153, La Merced
 1750
 Affected by 2016 earthquakes: convent and church





VI.5. Church of Nono
Nono Parrish, NW DMQ
16th century and on
Affected by 2016 earthquakes: church



Annex XII. Special Plan Schedule

Plan de Trabajo 2017
INSTITUTO METROPOLITANO DE PATRIMONIO

[illegible]