

Portfolio

[e.]

echeverrimontes

Architect  
Paula Echeverri Montes

# About

echeverrimontes



**Paula Echeverri Montes** develops a professional practice with comprehensive criteria, oriented towards success and sustainability through **the experience of high-quality holistic design**. Participates in the **planning and risk assessment process in structuring projects**, relying on teamwork based on responsibility, and stands out for applying computational thinking to design and digital manufacturing.

Some of the principles that guide her practice are profitability, creativity, sustainability, and collaboration. In her professional practice, she presents innovative computational thinking oriented towards problem solving and the development of design proposals that meet the expectations of a better life.

In this portfolio we present some of the latest projects in which she participated as leader, complementing what has already been developed in the **[case study section](#)** of the website.

Architect  
Paula Echeverri Montes

# Index

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echeverrimontes

Architect  
Paula Echeverri Montes

- 01. Automation Discriminated Calculation  
Quantities: Family Walls (m<sup>2</sup> + ml) /  
Family Types - Revit

---

- 02. Automatización BIM - Area Plans  
Area Charts / Model Integration +  
Links - Revit

---

- 03. Real Estate Development - Land Value  
Capture

---

- 04. Proyecto GUN - Land Value Capture

---

- 05. Centro International Bogotá Renewal -  
Land Value Capture / Preservation and  
Intervention Plan

---

- 06. Environmental and Social Impact  
Assessment (ESIA) in the Bogotá Metro

---

- 07. Urbanization project in Santa Bárbara  
(Cali)

- 08. Architectural design of the  
Collaborative Space

---

- 09. Architectural Design of Co-living  
Building Bogotá

---

- 10. Calle 79 - Land Value Capture

---

- 11. Architectural Competition: Ministries  
Bogotá

---

- 12. Architectonic Design Competition -  
Memory Center Bogotá

---

- 13. Interior Design - Apartments Bogotá

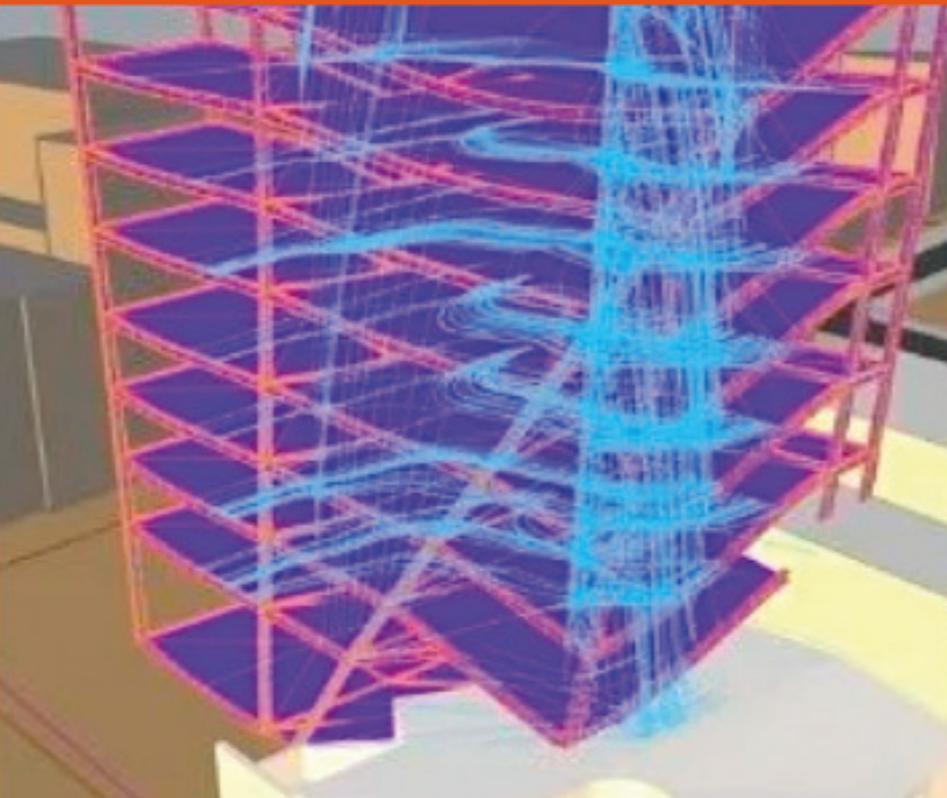
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- 14. Contemporary Intervention  
+ Preservation Rodriguez Building

# 01.

**TAGS:** Computational Geometry | C# |  
Generative Algorithms

## **GUN PROJECT** LAND VALUE CAPTURE



# 01.

**TAGS:** Computational Geometry | C# |  
Generative Algorithms

## GUN PROJECT

### LAND VALUE CAPTURE

**Year:** 2017

**Client:** GUN Club Bogotá

**Project duration:** 2 years

**Team:** 3 people, General Management + Design  
Technology

**Capital:** USD 8.333.000

**Used tools:**

**Software:** Rhino + Revit (BIM)

**Visual Programming:** Grasshopper + Dynamo

**Programming Language:** C#

Microsoft Office Excel

## ABOUT THE PROJECT

During the Project Structuring and Pre-Feasibility stage, parametric modeling is required in two respects:

01. The capacity of the lot according to the specific applicable legal frame, in this case the POT (Territorial Planning Plan) 190 of 2000 (Bogotá), to evaluate the parameters of Buildability and Uses.
02. The business model with the scheme of uses, costs and return on investment.

## ADDITIONAL DATA

Since it is a complex declared Asset of District Cultural Interest, it is necessary to develop a project to define the conditions of intervention and conservation of the complex, which must be adopted by the District Institute of Cultural Heritage.

The generative algorithm developed allows evaluating the different project scenarios (volumetric and implementation scheme, in addition to the business model) and approaching the definition of the best scenario through the convenience function or Fitness Function that best resolves the determinants.

The parameters of the algorithms have to do with the main evaluation indicators of the real estate project: volumetry, buildability, communal (equipment), technical, indicators (architectural efficiency), costs + charges (urban planning), business model and use scheme.

[See more information about the project](#)

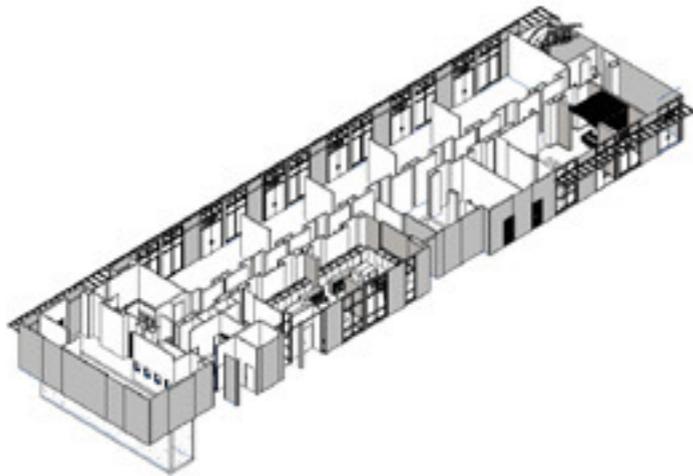
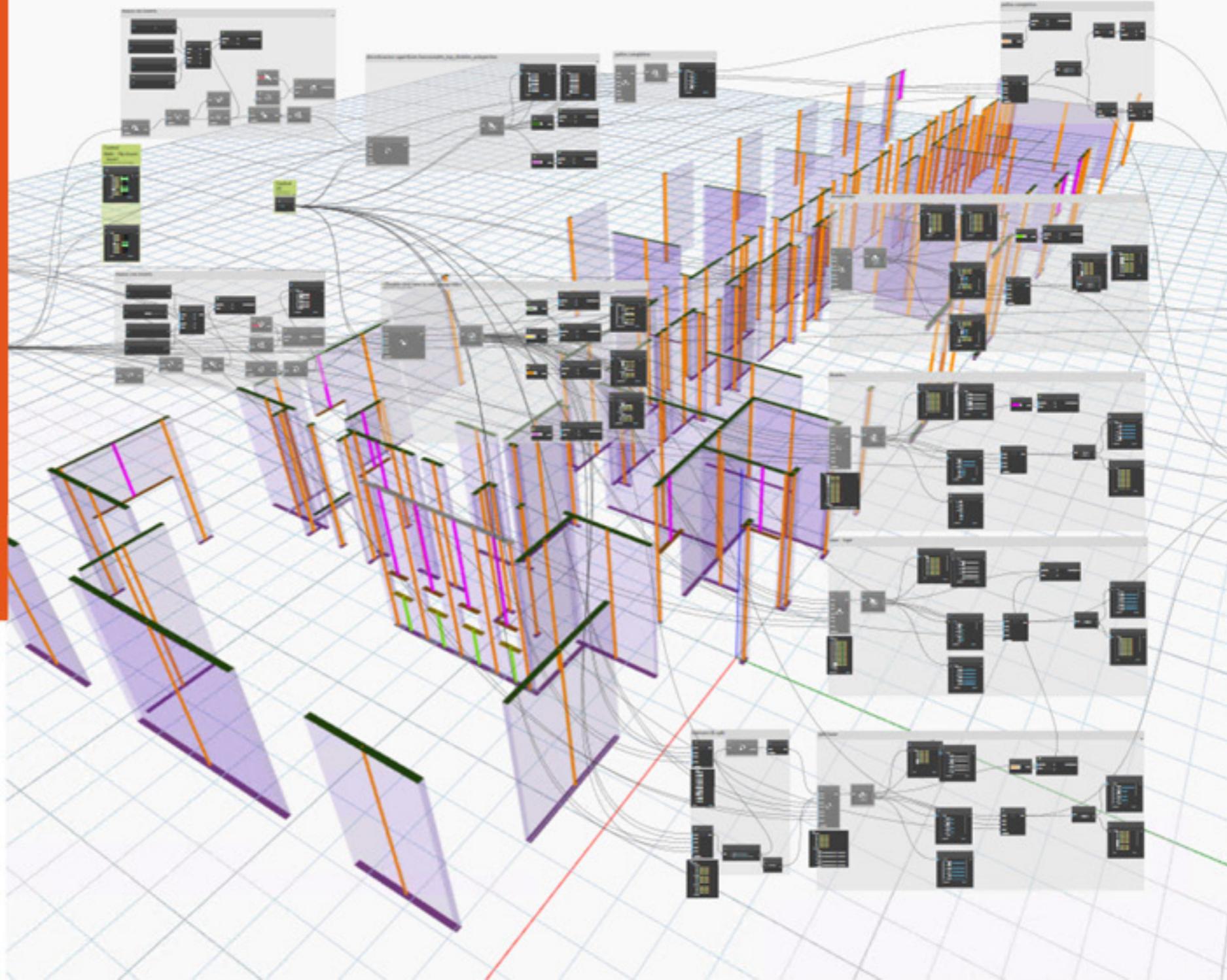


# 02.

**TAGS:** Building Information Modeling |  
Automatization & Optimization

## Automatización BIM

AREA PLANS AREA CHARTS,  
MODEL INTEGRATION +  
LINKS - REVIT



# 02.

**TAGS:** Building Information Modeling |  
Automatization & Optimization

## Automatización BIM

AREA PLANS AREA CHARTS.  
MODEL INTEGRATION +  
LINKS - REVIT

**Year:** 2024

**Client:** Perry Associate Architects

**Project duration:** 3 months (prototype)

**Team:** 3 people, design technology + interns.

**Success indicator:** 85% reduction in wall quantity quantification times

**Capital:** USD 50,000 (investment in development)

**Used tools:**

**Software BIM:** Revit

**Visual Programming:** Dynamo

**Programming language:** Python

### ABOUT THE PROJECT

During the project development stage, it is required to produce area plans and area charts that allow detailed monitoring of both the built areas and the private areas detailed by use. It is important that these tables are updated as the project evolves with advances and modifications to the plant layouts.

When working based on a federated model, and the integration methodology both in the site model and in the towers themselves with the different types of apartments, it is necessary to manage the links in the host model in Revit, to be able to manage the information in the integrated general floors and thus be able to produce tables of general project areas.

This process requires the programmatic integration of information into the Revit model as required by the project team and the structuring team. With the management of information through the import of data from the links, and the generation of area plans, area boundary lines, and the area labels, data management permits export to excel spreadsheets.

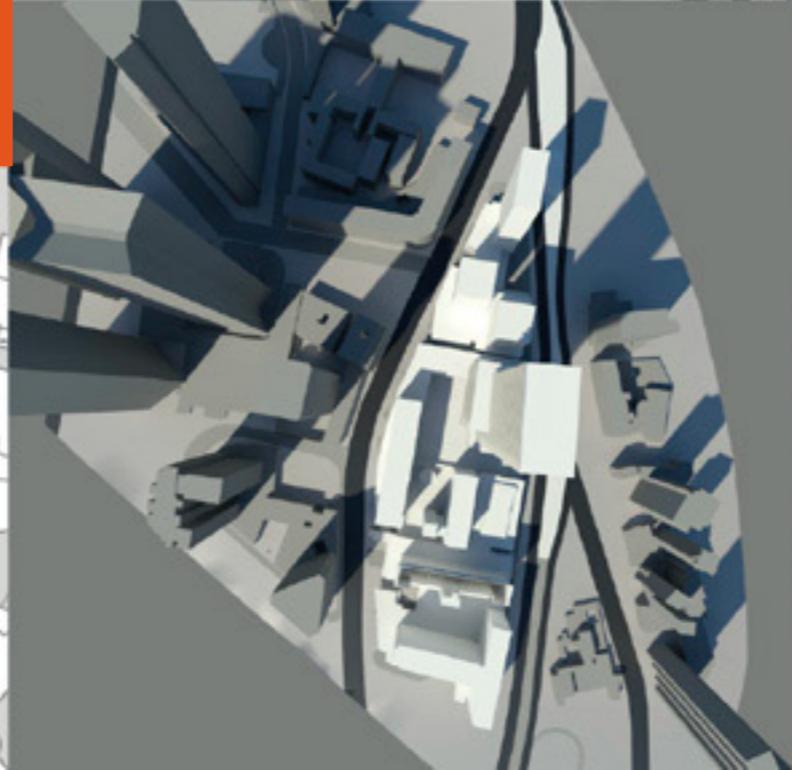
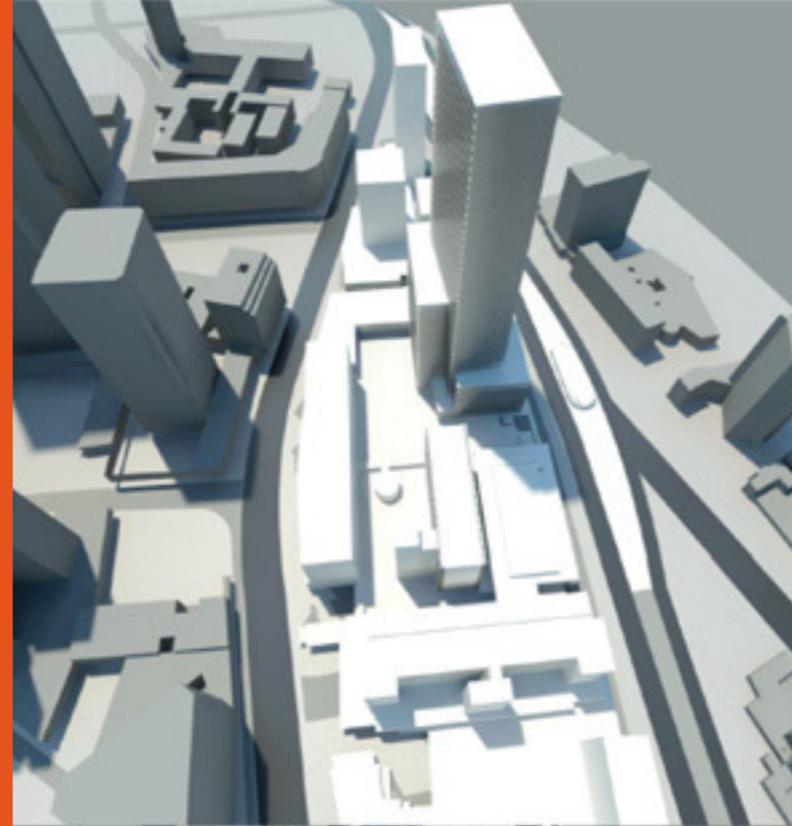
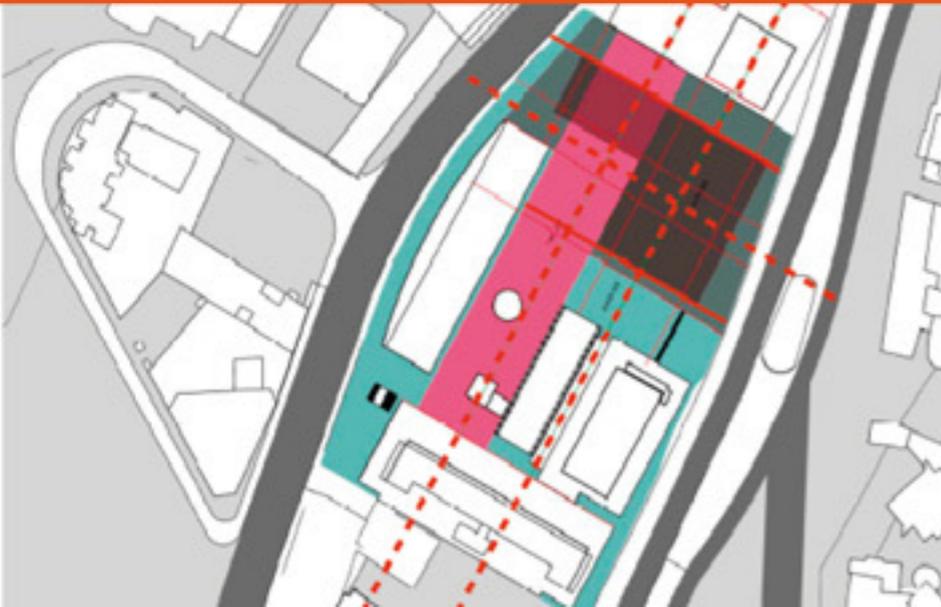


# 03.

TAGS: Value Capture

## Centro International Bogotá Renewal

LAND VALUE CAPTURE /  
PRESERVATION AND  
INTERVENTION PLAN



# 03.

**TAGS:** Value Capture

## Centro International Bogotá Renewal

**Year:** 2017

**Client:** Cremil - Armed Forces Retirement Fund - Colombia Armed Forces.

**Project duration:** 2 years.

**Team: 15 people:**

echeverrimontes - Leader.

National Development Finance - Financial Professionals.

IDOM - Engineering Consultants.

Deloitte - Market Analysis.

PGP - Legal Professionals.

**Capital:** USD 266.670.000

**Used tools:**

**Software:** Rhino

**Visual Programming:** Grasshopper

**Programming Language:** C#

Microsoft Office Excel

### ABOUT THE PROJECT

During the Project Structuring and Pre-Feasibility stage, it is required to parametrically model the same in two respects:

01. The capacity of the lot according to the specific applicable legal frame, in this case the POT (Territorial Planning Plan) 190 of 2000 (Bogotá), to evaluate the parameters of Buildability and Uses.
02. The business model with the scheme of uses, costs and return on investment.

### ADDITIONAL DATA

Additionally, since it is a complex declared a Site of National and District Cultural Interest, it is necessary to develop a PEMP Preservation Plan (Special Management and Protection Plan) to define the conditions of intervention and conservation of the complex, which must be adopted by the Ministry of Culture.

The generative algorithm developed allows evaluating the different project scenarios (volumetric and implementation scheme, in addition to the business model) and approaching the definition of the best scenario through the convenience function or Fitness Function that best resolves the determinants.

The parameters of the algorithm have to do with the main evaluation indicators of the real estate project: volumetry, buildability, communal (equipment), technical, indicators (architectural efficiency), costs + charges (urban planning), business model and use scheme.

[See more information about the project](#)

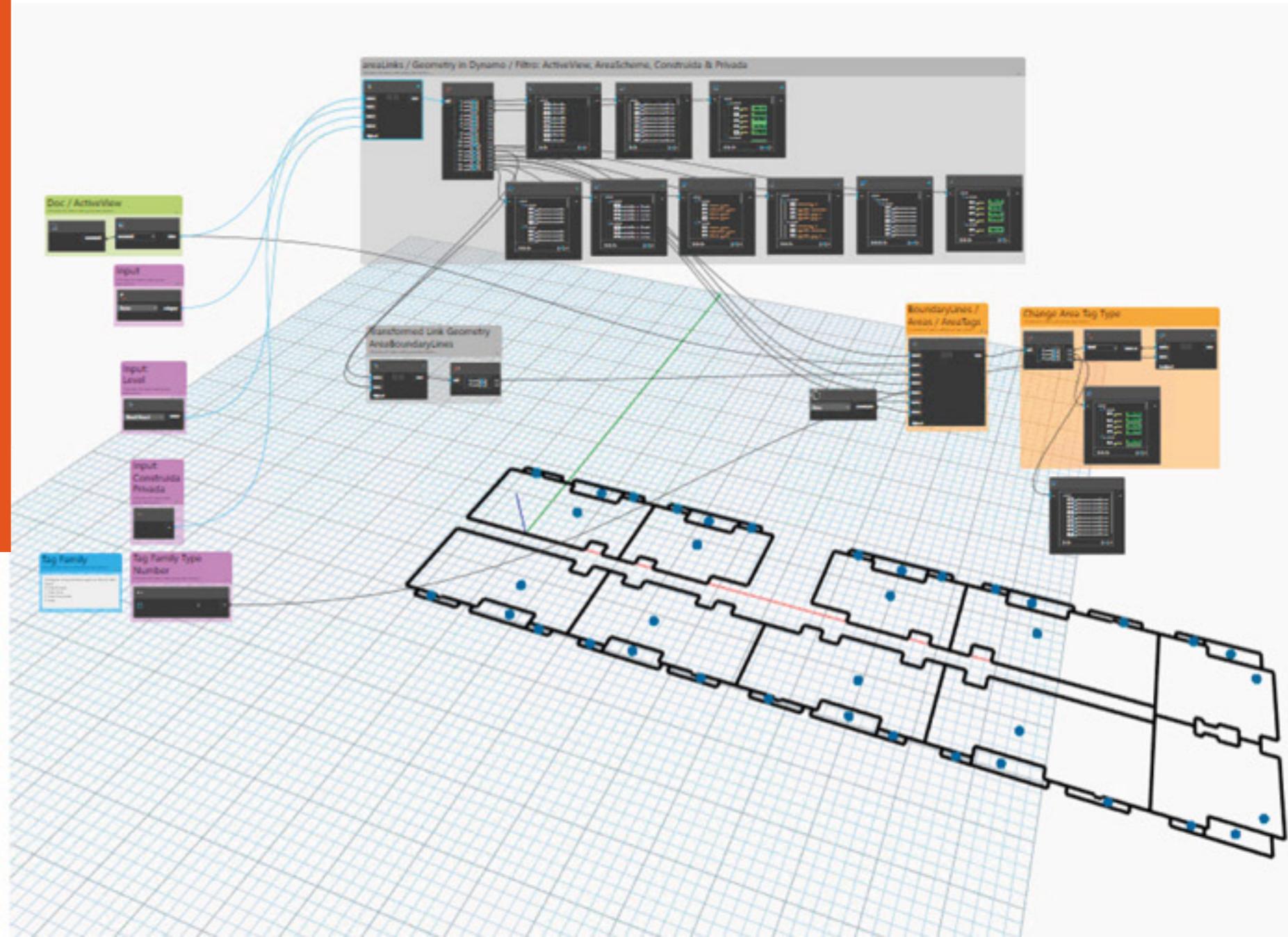
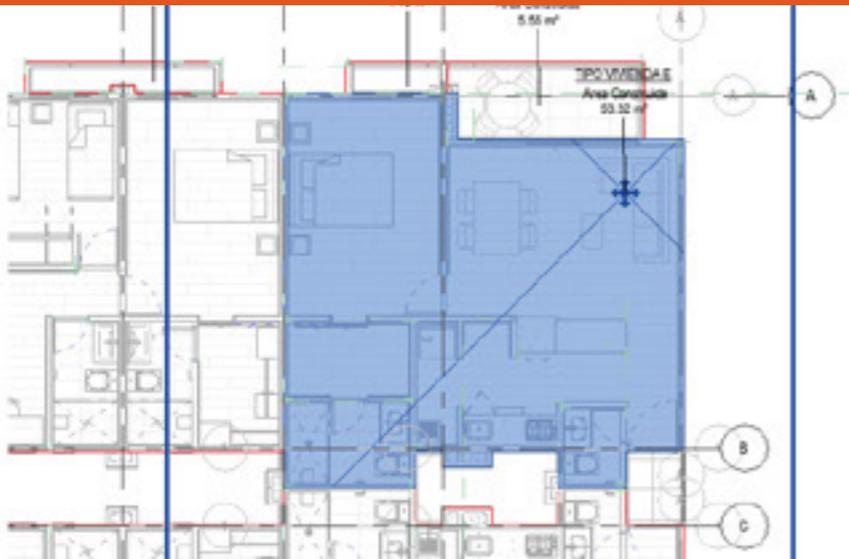


# 04.

**TAGS:** Building Information Modeling |  
Automatization & Optimization

## Automation Discriminated Calculation

QUANTITIES: FAMILY  
WALLS (M2 + ML) /  
FAMILY TYPES - REVIT



# 04.

**TAGS:** Building Information Modeling |  
Automatization & Optimization

## Automation Discriminated Calculation

QUANTITIES: FAMILY  
WALLS (M<sup>2</sup> + ML) /  
FAMILY TYPES - REVIT

**Year:** 2024

**Client:** Perry Associate Architects

**Project duration:** 3 months (prototype)

**Team:** 3 people, design technology + interns.

**Success indicator:** 85% reduction in wall quantity quantification times

**Capital:** USD 50,000 (investment in development)

**Used tools:**

**Software BIM:** Revit

**Visual Programming:** Dynamo

**Programming language:** Python

### ABOUT THE PROJECT

During the budgeting stage, the need to quantify the elements that make up a model requires the management of data contained in the Revit database. Various coding methodologies (international standards) of Families, Family Types and Instances are used to filter and organize the information, extract it from the model through Schedules (Revit), Bills of Quantities in Excel or integration with budgeting software.

One of the most difficult elements to analyze and quantify is Family: Walls, since the budgets must discriminate the measurement in square meters and linear meters according to the quantification scheme of material, waste, labor or subcontracts.

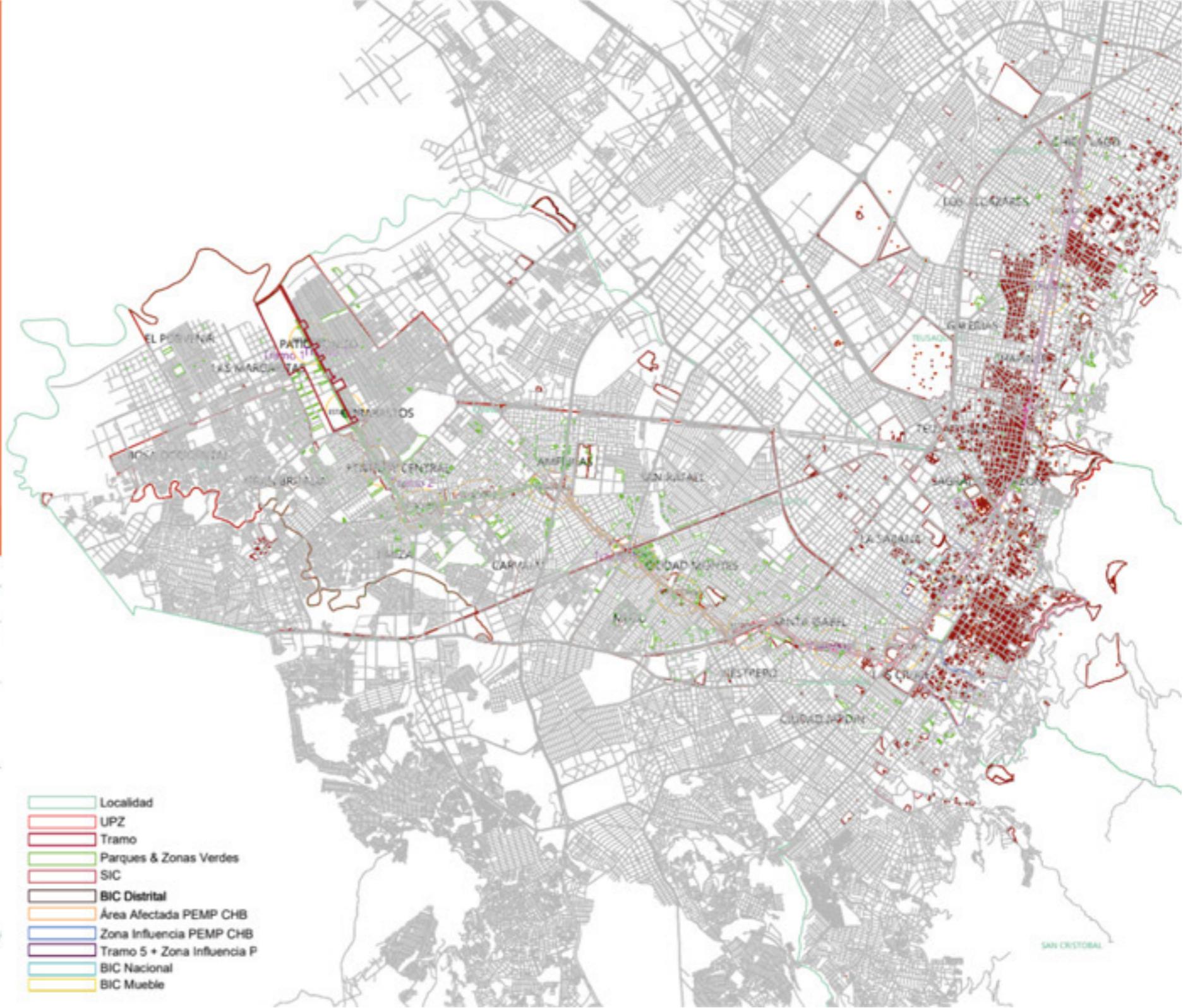
This exercise is facilitated programmatically through the algorithm developed to automate the process, analyze the geometry of each wall according to selection by Family, Family Type and Instance, and the calculation of long-overhead quantities in each case, discriminating linear walls (ml), parapets (ml), lintels (ml), and complete panels (m<sup>2</sup>), according to their dimensions.



# 05.

TAGS: GIS - Open Data

## Environmental and Social Impact Assessment (ESIA) in the Bogotá Metro



# 05.

**TAGS:** GIS - Open Data

## Environmental and Social Impact Assessment (ESIA) in the Bogotá Metro

**Year:** 2024

**Client:** Salgado Melendez

**Project duration:** 8 months

**Team:** 1 person, Design Technology, Architectural Heritage Component Specialist

**Capital:** USD 3.236.317.506

**Used tools:**

**Software:** Rhino

**Visual Programming:** Grasshopper - **Plugin:** GHopperGIS (self-developed)

**Programming Language:** C#

Microsoft Office Excel

### ABOUT THE PROJECT

Studies and designs phase review. Metro Bogotá 1st line, approximately 24 kilometers, entirely elevated: Portal Américas Station and Calle 72 Station, sixteen (16) stations. Two zones have been defined for the analysis: 1. Area of Indirect Influence (IIA), with a general look at the BICs, in total 10 localities and 25 UPZs; 2. Area of Direct Influence (AID), which includes the blocks afferent to the route of the PLMB and three hundred meters in the station area.

[See more information about the project](#)



# 06.

TAGS: BIM

## Urbanization project in Santa Bárbara (Cali)



# 06.

TAGS: BIM

## Urbanization project in Santa Bárbara (Cali)

**Year:** 2018

**Client:** Santa Bárbara Urbanization - Santiago Restrepo

**Project duration:** 6 months

**Team:** 3 professional architects

**Capital:** USD 50,000 - Project Structuring

**Used tools:** Rhino, Grasshopper, Revit, Microsoft Office - Project

### ABOUT THE PROJECT

The proposal developed for the Santa Bárbara urbanization, in the Cristales area in Cali (Colombia), is a joint offer between the UR Arquitectos office, led by architect Javier Uribe in Cali, and by architect Paula Echeverri Montes.

In this project we developed a housing proposal of 5 buildings of 5 floors each, with three sophisticated apartments: type one is approximately 137.70 m<sup>2</sup>, type 2 is 119.50 m<sup>2</sup> and type three has measurements of 147.85 m<sup>2</sup>, this being one of the largest.

The structure highlights our holistic conception of design: through computational design and the use of BIM (Building Information Modeling), our clients can view, from any angle they wish, the design plane made from a frontal or zenithal axis.

The aesthetics and design were thought about the comfort of our clients, with the aim of creating appropriately modern and avant-garde spaces. Our interest as architects is to generate a serene and calm architecture, where the housing qualities are much superior in terms of the interior comfort of the apartments and allow a better quality of life.

[See more information about the project](#)

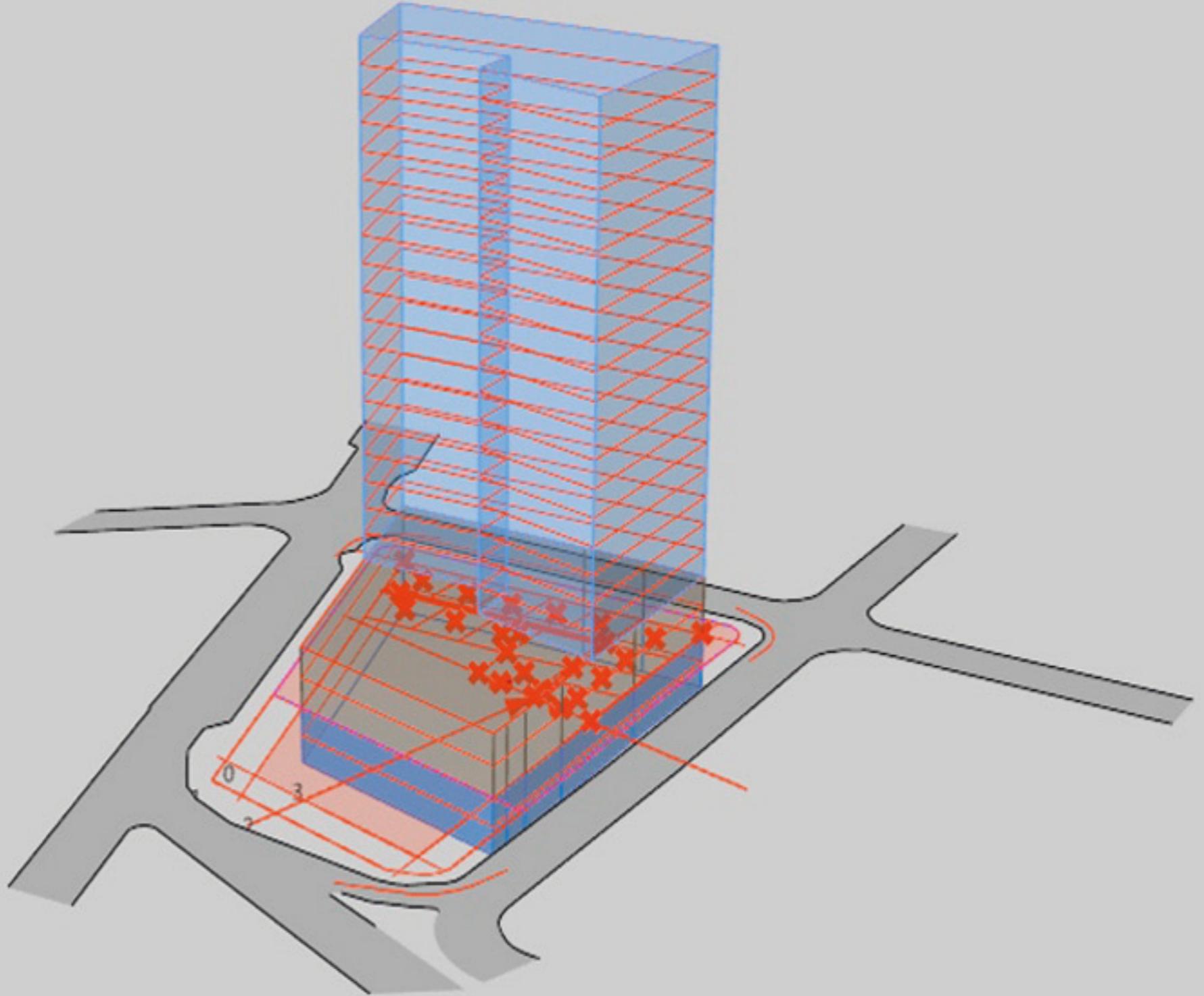
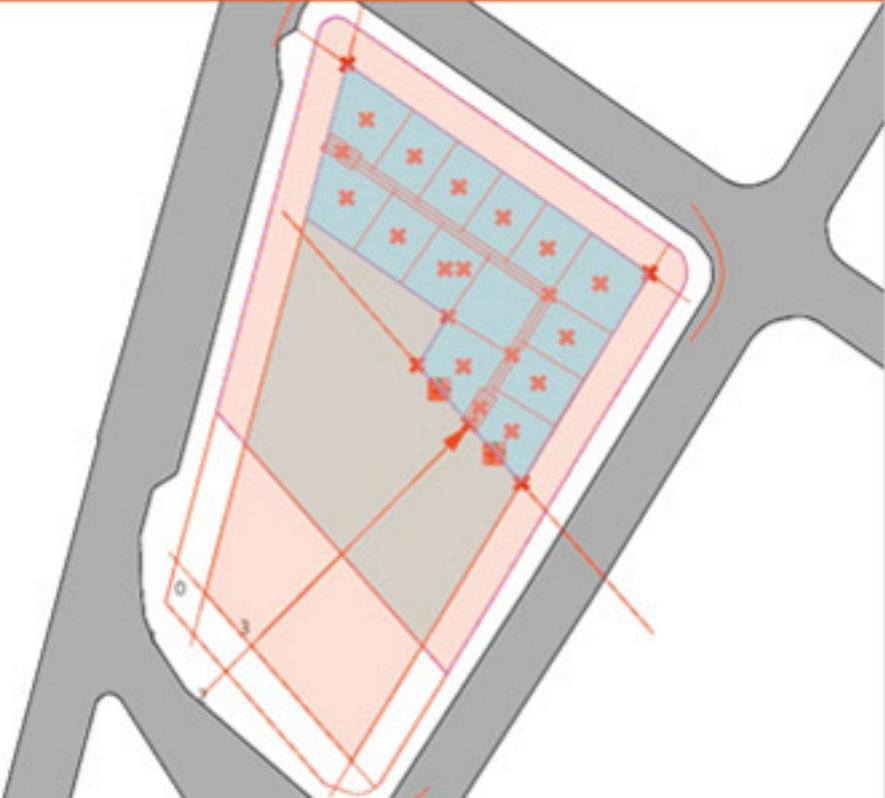


# 07.

TAGS: Computational Geometry | C# |  
Generative Algorithms

## Real Estate Development

LAND VALUE CAPTURE



# 07.

**TAGS:** Building Information Modeling |  
Automatization & Optimization

## Real Estate Development

LAND VALUE CAPTURE

**Year:** 2024

**Client:** Perry Associate Architects

**Project duration:** 6 months

**Team:** 4 people, General Management +  
Design Technology, Financial Team

**Capital:** \$6,500

**Used tools:**

**Software:** Rhino

**Visual Programming:** Grasshopper

**Programming Language:** C#

Microsoft Office Excel

### ABOUT THE PROJECT

During the Project Structuring and Pre-Feasibility stage, parametric modeling is required in two respects:

---

**01.** The capacity of the lot according to the specific applicable legal frame, in this case the POT (Territorial Planning Plan) 555 of 2021 (Bogotá), to evaluate the parameters of Buildability and Uses.

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**02.** The business model, with the scheme of uses, costs and return on investment.

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The generative algorithm developed allows evaluating the different project scenarios (volumetric and implementation scheme, in addition to the business model) and approaching the definition of the best scenario through the convenience function or Fitness Function that best resolves the determinants.

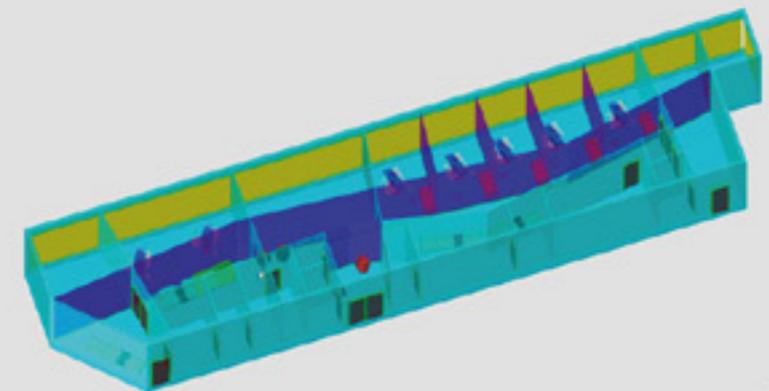
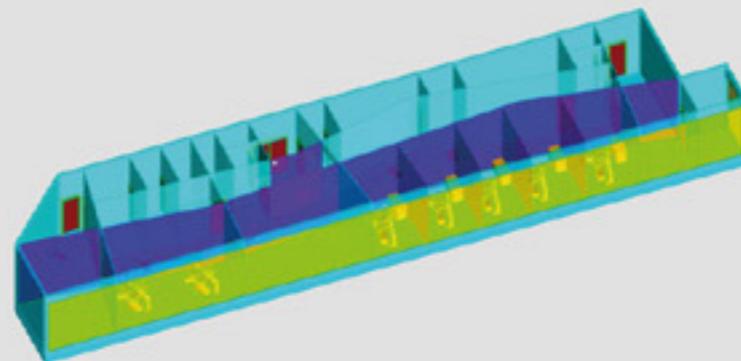
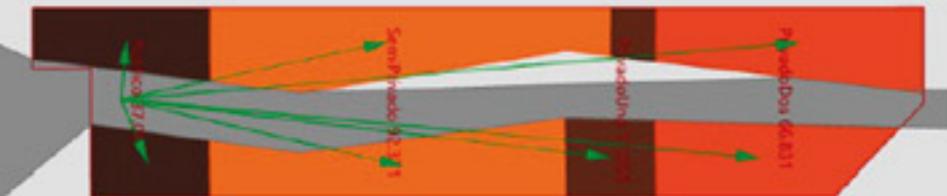
The parameters of the algorithms have to do with the main evaluation indicators of the real estate project: volumetry, buildability, communal (equipment), technical, indicators (architectural efficiency), costs + charges (urban planning), business model and use scheme.



# 08.

TAGS: Architectural design

## Architectural design of the Collaborative Space in Health



# 08.

**TAGS:** Architectural design

## Architectural design of the Collaborative Space in Health

**Year:** 2019 - 2020

**Client:** Structurers - Promoters / Own Development Project

**Project duration:** 2 years

**Team:** Business Model: Eulalia Arboleda / Financial: Miguel Montes / Lead

**Specialist:** Roberto Arboleda / Market Research: Retail & Intelligence SAS - Arturo Vergara Ortiz / Architecture: Paula Echeverri Montes

**Capital:** USD 60,000 - Project Structuring

**Used tools:** Rhino, Grasshopper, Microsoft Office: Excel + Project

### ABOUT THE PROJECT

This project consisted of the design of a collaborative space appropriate for the professional practice of health specialists, who were interested in efficiently taking advantage of their availability of space and time.

In the design, the individual work areas of the professionals are complemented by shared use areas, and "collective" areas in which professionals can interact with their colleagues and their own and shared patients through interconsultation.

The objective of creating a collaborative space was to generate a community of professionals interested in taking advantage of the synergies generated by the interaction of different specialties in the treatment of their patients, and the consolidation of a clientele that is strengthened by the offer generated through the project.

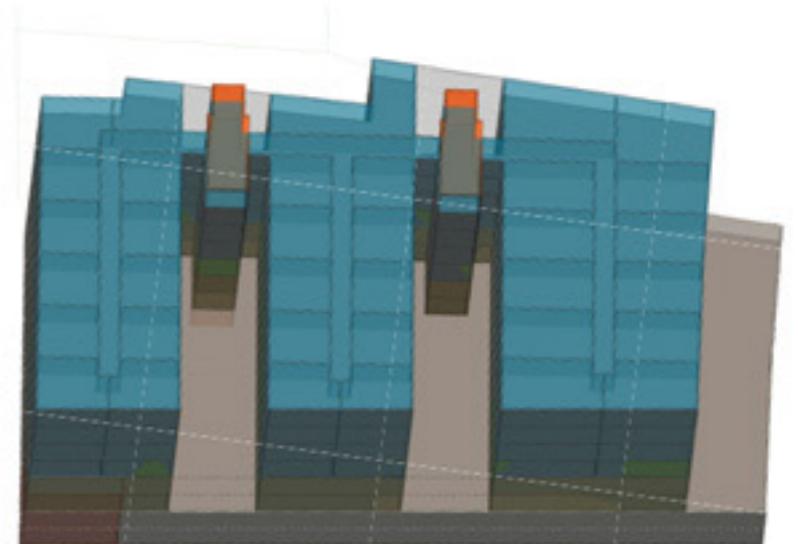
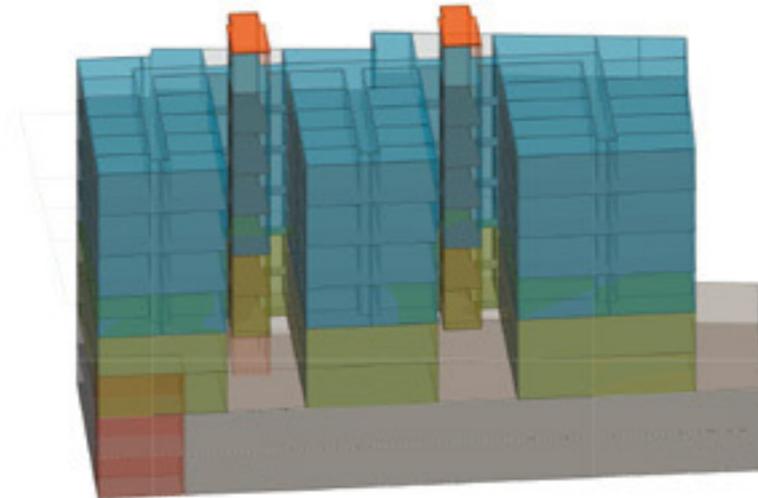
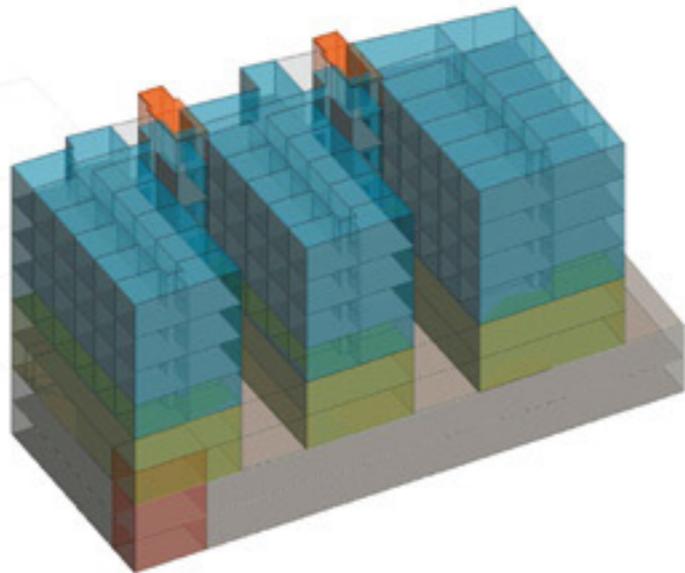
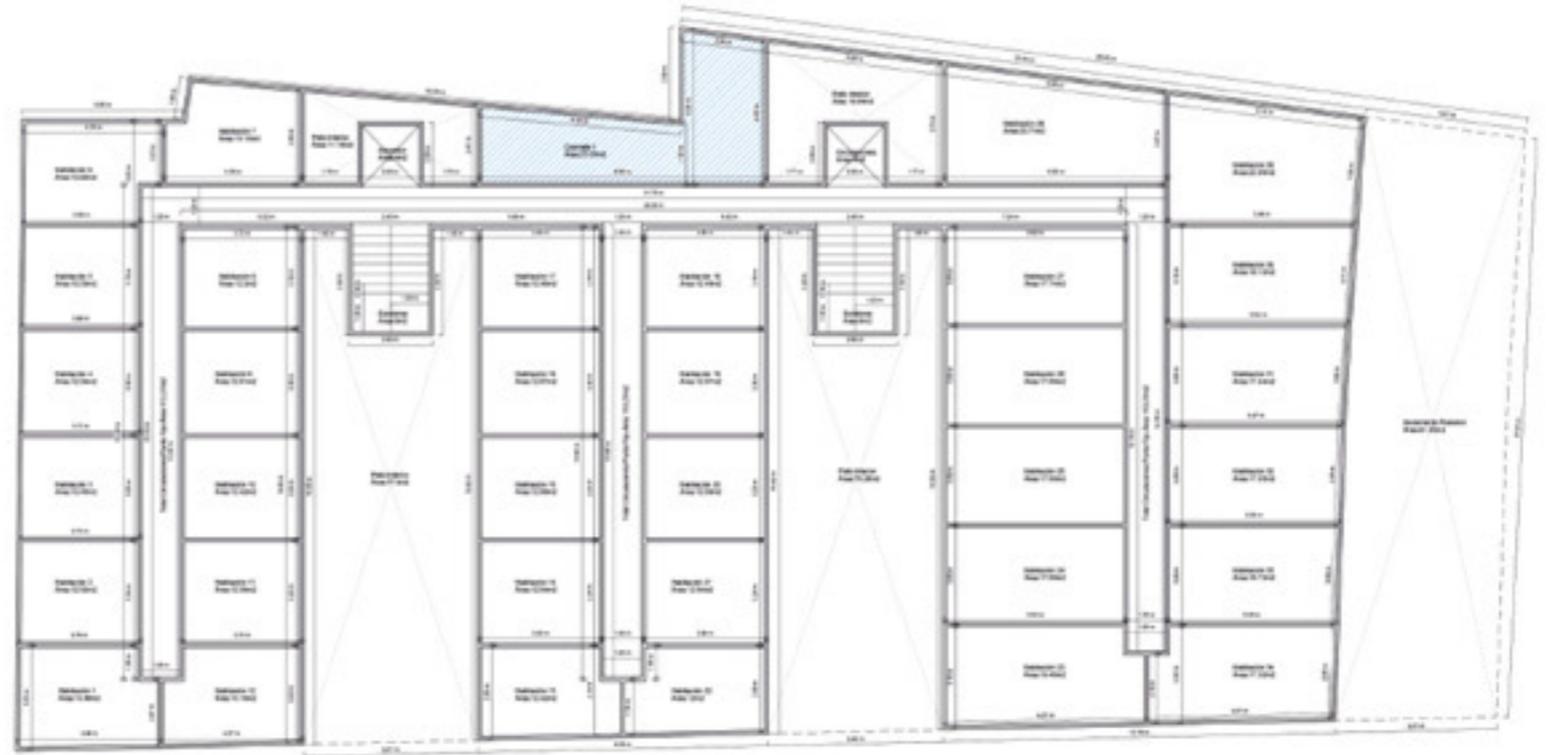
[See more information about the project](#)



# 09.

**TAGS:** Architectural design,  
Business development

## Architectural Design of Co-living Building Bogotá



# 09.

**TAGS:** Architectural design,  
Business development

## Architectural Design of Co-living Building Bogotá

**Year:** 2016-2017

**Client:** Developers - Promoters / Own Development Project

**Project duration:** 2 years

**Team: Business Model:** Promoter Team / Financial: Miguel Montes /

**Lead Specialist:** Mauricio Cajiao / Architecture: Paula Echeverri Montes

**Capital:** USD 30,000 - Project Structuring

**Used tools:**

Revit

Microsoft Office Excel + Project



### ABOUT THE PROJECT

This project involved designing a collaborative space suitable for the professional practice of healthcare specialists who were interested in efficiently utilizing their available space and time.

In the design, the professionals' individual work areas are complemented by shared-use areas and "collective" spaces where professionals can interact with their colleagues and both their own patients and shared patients through interconsultation.

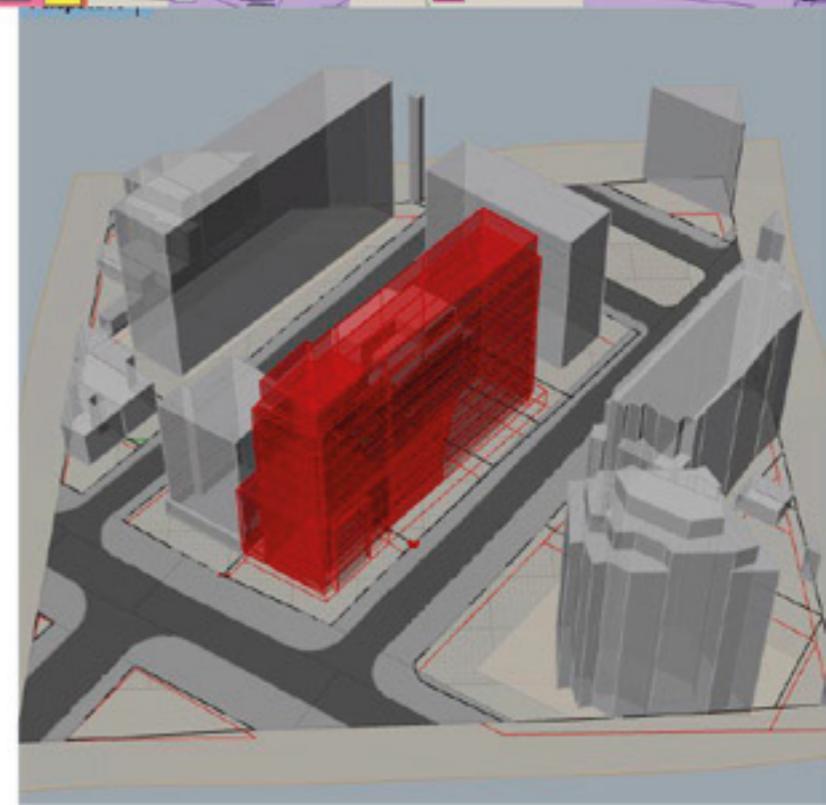
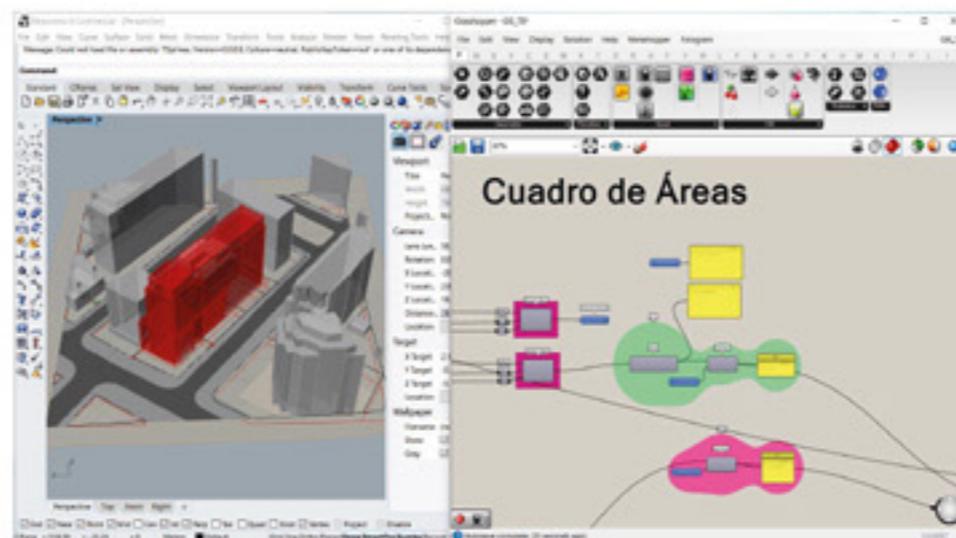
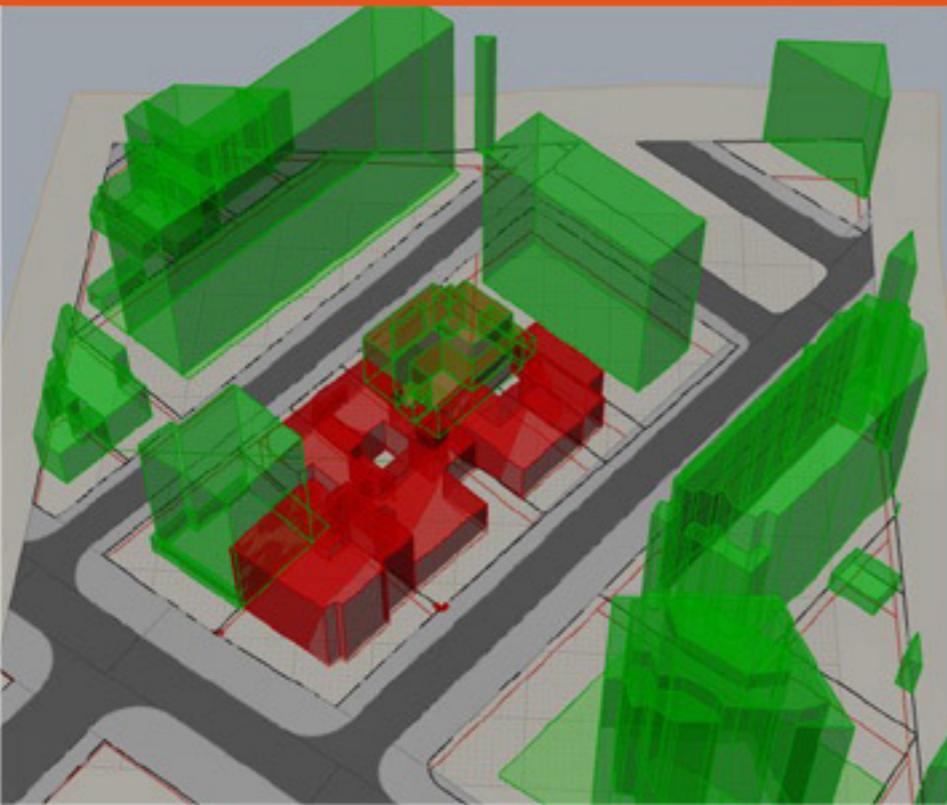
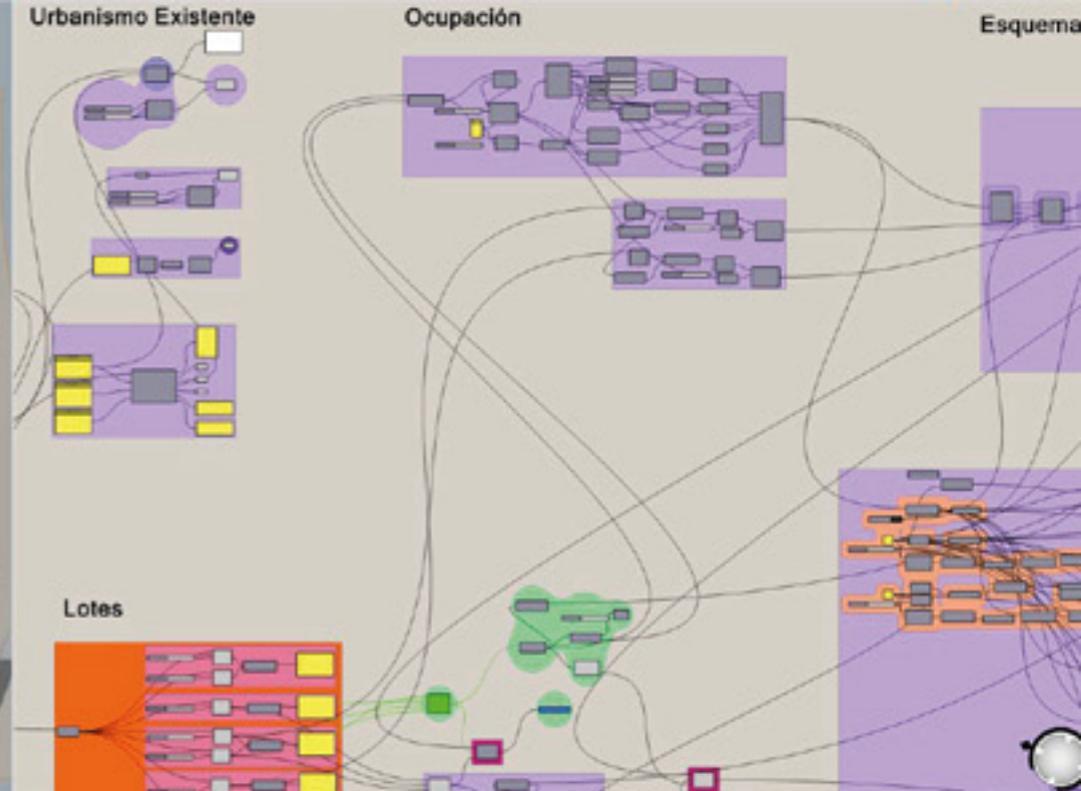
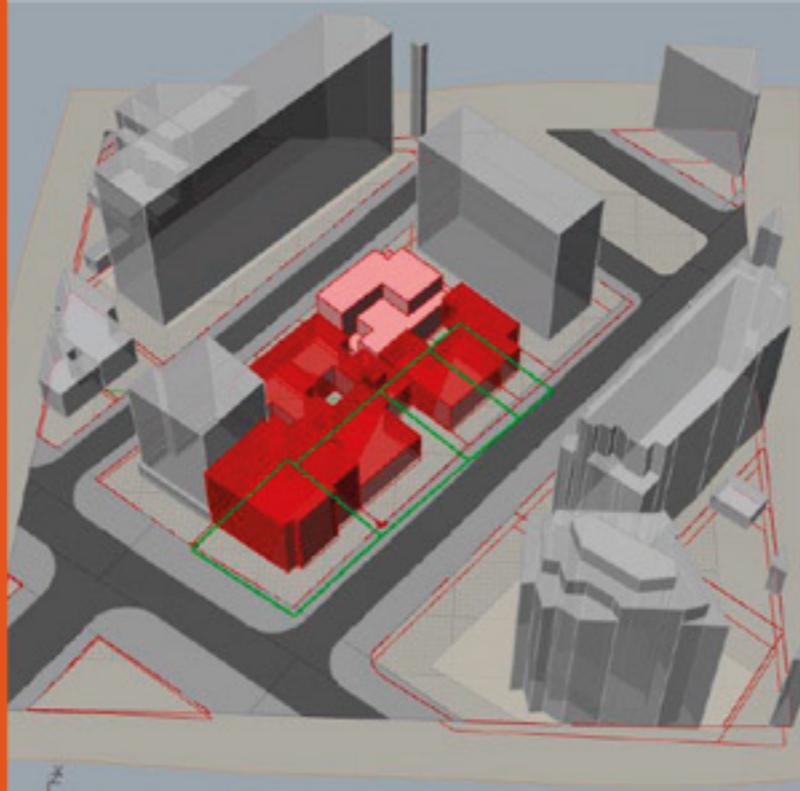
The goal of creating a collaborative space was to foster a community of professionals interested in leveraging the synergies generated by the interaction of different specialties in treating their patients, and in consolidating a client base that is strengthened by the offerings created through the project.

# 10.

**TAGS:** Architectural design,  
Business development

## CALLE 79

LAND VALUE CAPTURE



# 10.

**TAGS:** Architectural design,  
Business development

## CALLE 79

### LAND VALUE CAPTURE

**Year:** 2015

**Client:** Structurers - Promoters / Own  
Development Project

**Project duration:** 1 years

**Team:** Paula Echeverri Montes + General  
Management

**Capital:** USD 20.000

**Used tools:**

Rhino + Grasshopper

Programming Language: C#

Microsoft Excel

## ABOUT THE PROJECT

During the Project Structuring and Pre-Feasibility stage, parametric modeling is required in two respects:

---

**01.** The capacity of the lot according to the specific applicable legal frame, in this case the POT (Territorial Planning Plan) 190 of 2000 (Bogotá), to evaluate the parameters of Buildability and Uses.

---

**02.** The business model with the scheme of uses, costs and return on investment.

---

## ADDITIONAL DATA

Since within the lots there is one declared Asset of District Cultural Interest, it is necessary to develop a project to define the conditions of intervention and conservation of the complex, which must be adopted by the District Institute of Cultural Heritage.

The algorithm developed allows evaluating the different project scenarios (volumetric and implementation scheme, in addition to the business model) and approaching the definition of the best scenario through the convenience function that best resolves the determinants.

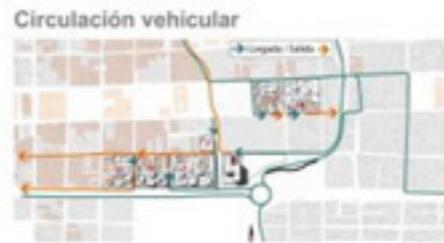
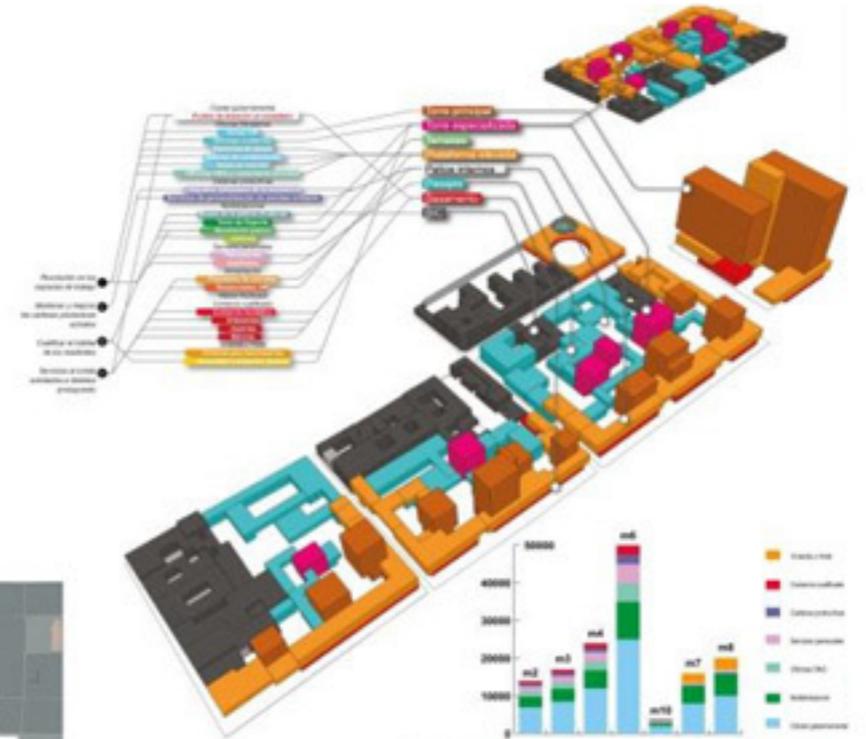
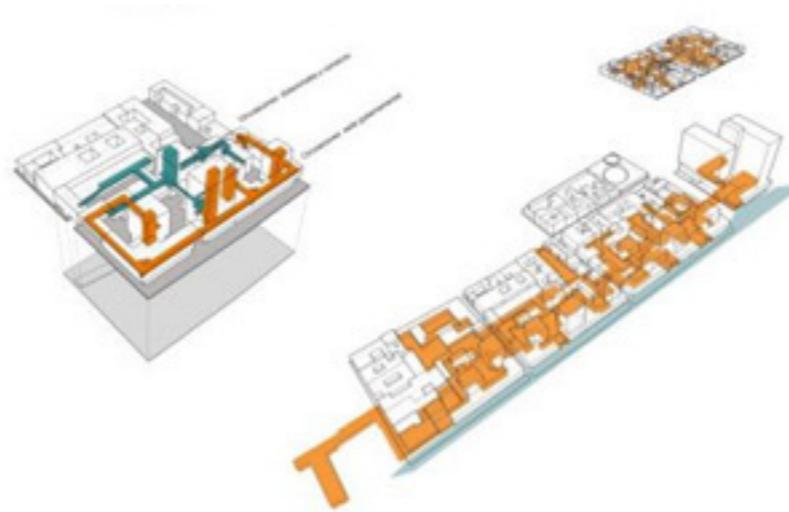
The parameters of the algorithms have to do with the main evaluation indicators of the real estate project: volumetry, buildability, communal (equipment), technical, indicators (architectural efficiency), costs + charges (urban planning), business model and use scheme.



# 11.

TAGS: Architectural design

## Architectural Competition MINISTRIES BOGOTÁ



Área	Superficie (m <sup>2</sup> )	Uso	Estado
Residencia	10000	Residencial	Completado
Oficina	15000	Oficinas	Completado
Comercio	20000	Comercio	Completado
Recreación	25000	Recreación	Completado
Almacenamiento	30000	Almacenamiento	Completado
Estacionamiento	35000	Estacionamiento	Completado
Áreas verdes	40000	Áreas verdes	Completado
Áreas de servicio	45000	Áreas de servicio	Completado
Áreas de circulación	50000	Áreas de circulación	Completado

# 11.

**TAGS:** Architectural design

## Architectural Competition

MINISTRIES BOGOTÁ

**Year:** 2013

**Client:** Ministry of Culture

**Project duration:** 1 month

**Team:** Javier Cárdenas + Paula Echeverri Montes

**Used tools:**

AutoCad

Revit

VRay

### ABOUT THE PROJECT

This project consisted of the intervention of 5 squares in the center of the city, the preservation of the urban texture while developing the complex for the Ministries within the Historic Center. The idea was to generate a varied volumetric complex both in plan as in section, with a multiplicity of textures and heights, that accounted to the existing context.

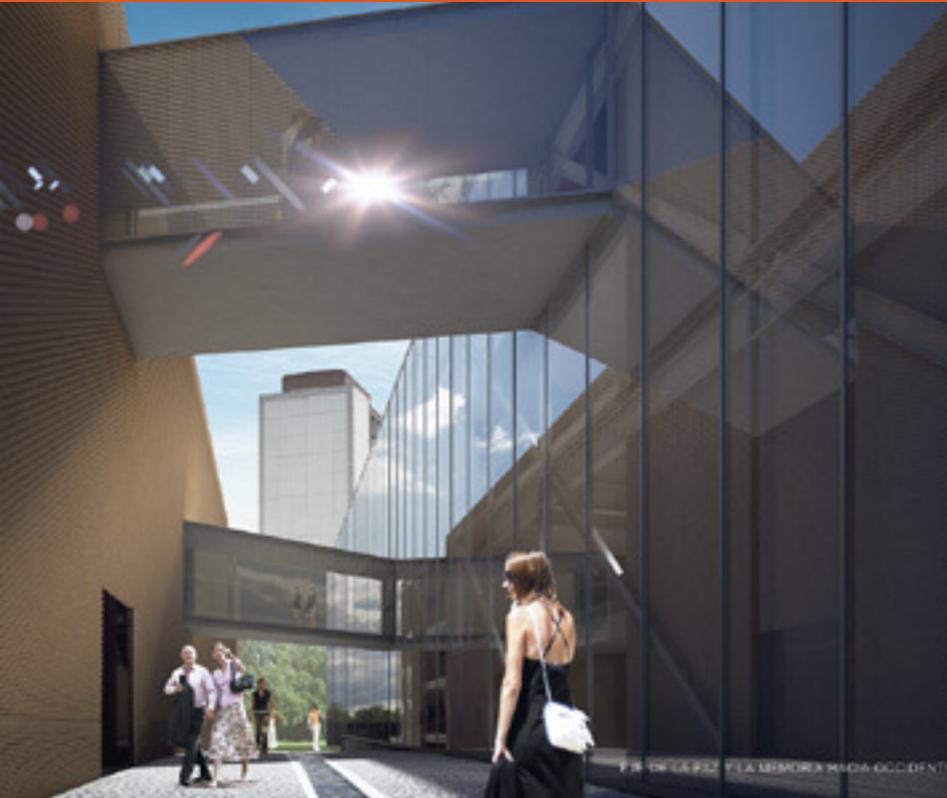


# 12.

TAGS: Architectural design

## Architectonic Design Competition

MEMORY CENTER BOGOTÁ



Logo of the Centro Nacional de Memoria Histórica, the logo of the Ministry of Culture, the logo of the government coalition 'Todos por un Nuevo País', and the logo of the Departmental Planning Department (DPS).

CONCURSO PÚBLICO DE ANTEPROYECTO ARQUITECTÓNICO PARA EL DISEÑO DEL MUSEO NACIONAL DE MEMORIA HISTÓRICA

# 12.

**TAGS:** Architectural design

## Architectonic Design Competition

MEMORY CENTER BOGOTÁ

**Year:** 2014

**Client:** Ministry of Culture

**Project duration:** 1 month

**Team:** Paula echeverri Montes / Javier Cárdenas

**Capital:** USD 30,000 - Project Structuring

**Used tools:**

Revit

VRay

3d Max

Microsoft Office: Excel + Project

### ABOUT THE PROJECT

The project consisted of the design for a monumental building in the memory of those victims of the armed conflict in Colombia. The building was to be situated in one of the main avenues of the modern city of Bogotá, in the intersection of two main avenues.

The architectonic proposal aimed at the memory of those lost and the space for reflection of those that still are.



# 13.

TAGS: Architectural design

## Interior Design

APARTMENTS BOGOTÁ



# 13.

TAGS: Architectural design

## Interior Design

APARTMENTS BOGOTÁ

**Year:** 2014

**Client:** Ministry of Culture

**Project duration:** 1 month

**Team:** Paula echeverri Montes + Javier Cárdenas

**Capital:** USD 400.000

**Used tools:**

Revit

VRay

3d Max

Microsoft Office: Excel + Project

### ABOUT THE PROJECT

The interior design of two apartments in a residential building in Bogotá, which presented a unique opportunity to blend modern aesthetics with the cultural and environmental nuances of the Colombian capital. Bogotá, known for its rich history and diverse architecture, provides a vibrant backdrop that can influence the interior spaces within these apartments.

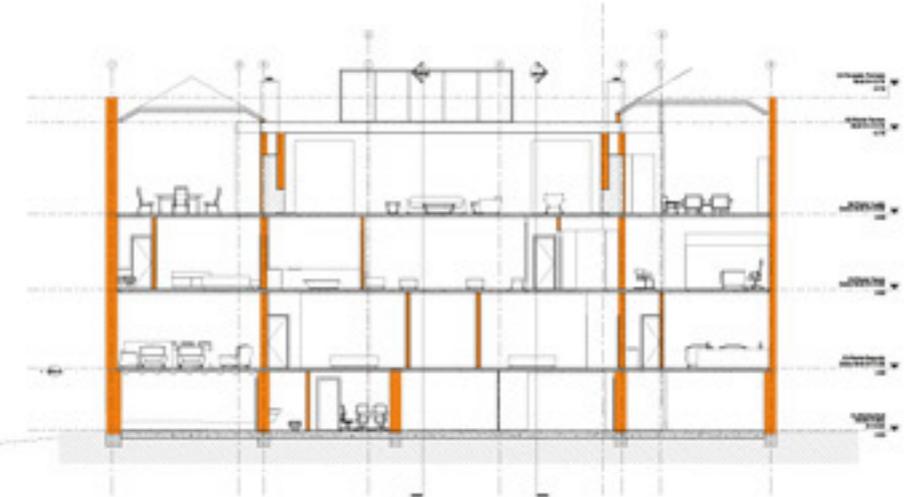
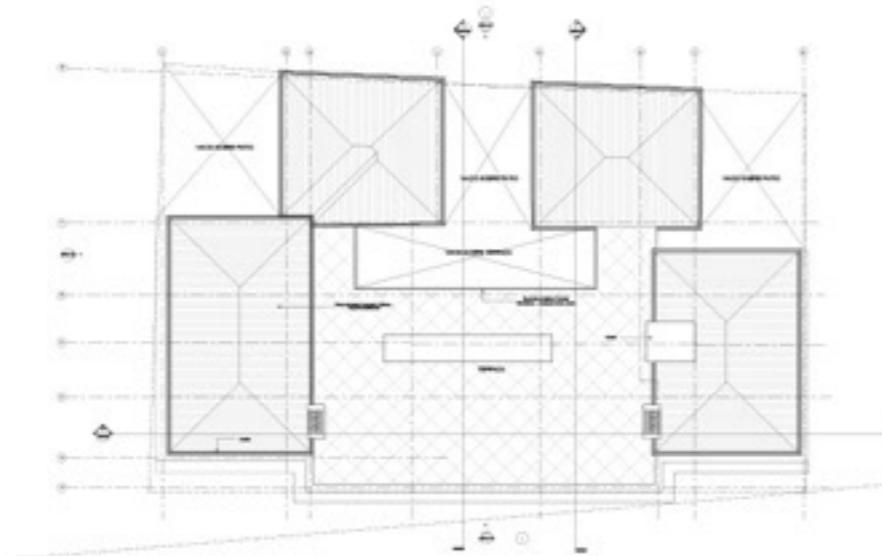
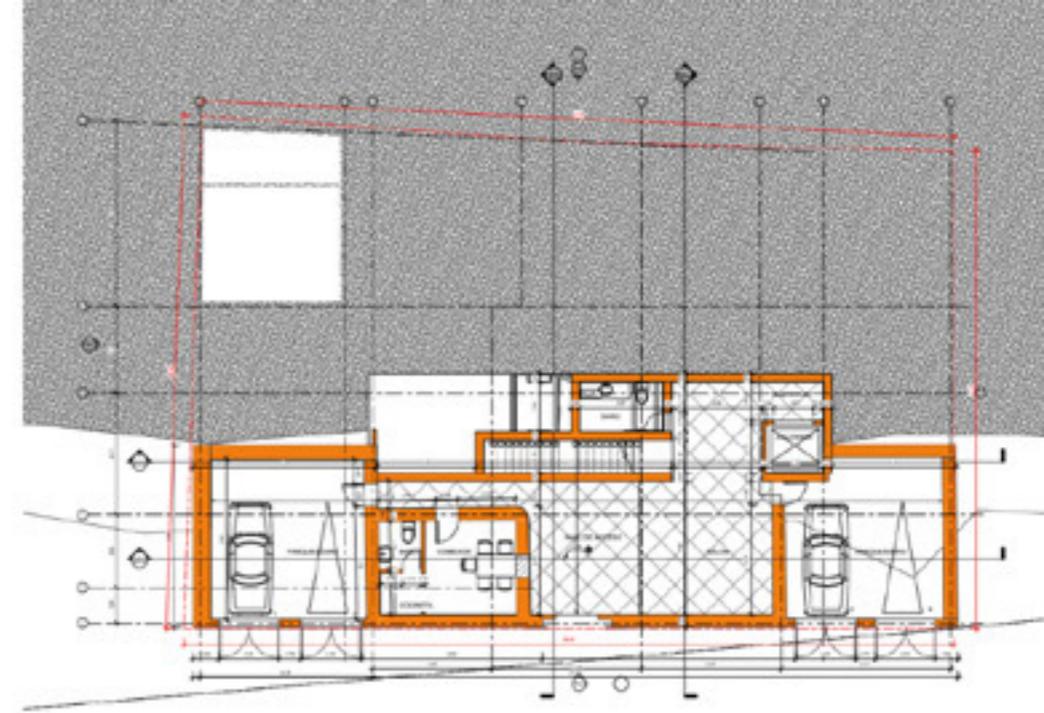
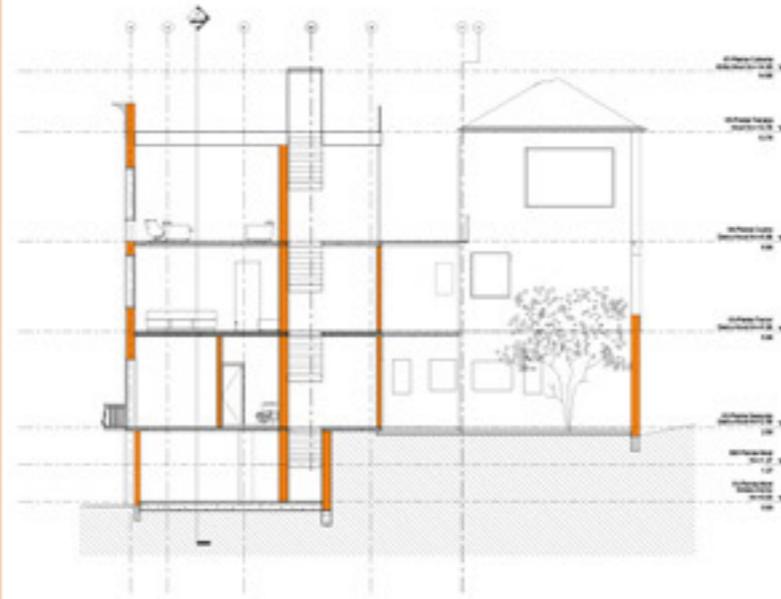


# 14.

TAGS: Architectural design

## Contemporary Intervention

+ PRESERVATION  
RODRIGUEZ BUILDING  
BOGOTÁ



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TAGS: Architectural design

## Contemporary Intervention

+ PRESERVATION  
RODRIGUEZ BUILDING  
BOGOTÁ

**Year:** 2016

**Client:** Claudia Hakim & Nayib Neme

**Project duration:** 12 months

**Team:** Paula echeverri Montes + Camilo Esguerra

**Capital:** USD 100.000

**Used tools:**

Revit

Microsoft Office: Excel + Project

### ABOUT THE PROJECT

The work we did for the Rodríguez Building in Bogotá involved a delicate balance between modern design innovation and the preservation of historical architectural elements. This intervention sought to enhance the building's functionality and aesthetic appeal while respecting and retaining its original character. Thus, the project required a careful approach to integrate contemporary architectural solutions that meet current needs, without compromising the cultural and historical integrity of the structure. By blending modern interventions with traditional preservation techniques, the Rodríguez Building was revitalized to serve as a functional and vibrant space that honors its historical significance while embracing the future.



## MORE INFORMATION

To learn more about these and other projects, be sure to visit the case studies published on our website.

[SEE CASE STUDIES](#)

Echeverrimontes is an architectural design firm with more than 25 years of experience, great recognition and excellent reputation in the market. We specialize in solving complex scenarios, in which the design requires transversal thinking and a capacity for creative and efficient execution. If you think we can help you, get in touch through the channels we share below.

### Paula Echeverri Montes

Historic Preservation Architect,  
restoration and patrimonial intervention.

Advanced Master in Computational Design,  
Digital Manufacturing and Construction Technologies

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