

GROUP 4

MOBILITY, TRANSPORTATION AND ACCESSIBILITY

Ninon Esclangon, Adarsh Ravindra Joshi, Victoria Vandewalle & Jana Zein

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- a. Mobility
- b. Demography

1. SITE SELECTION

- a. Onsite spatial analysis
- b. Site division
- c. A pedestrian response
- d. Stakeholders

1. ADAPTING NORMS

5. FIELDWORK

- a. Survey methods
 - i. Anonymous online survey
 - ii. Focus group
- b. Online survey results
 - i. Demographics
 - ii. Mobility, accessibility and transportation
 - iii. Security concerns

6. SOCIO-SPATIAL ANALYSIS

- a. Part 1
- b. Part 2
- c. Part 3
- d. Part 4
- e. Part 5
- f. Conclusion

7. PROPORTIONS

- a. Security
- b. Pedestrian sidewalks
- c. Road signage
- d. Intervention
- e. Further, propositions
- f. Limitations
- g. Further recommendations

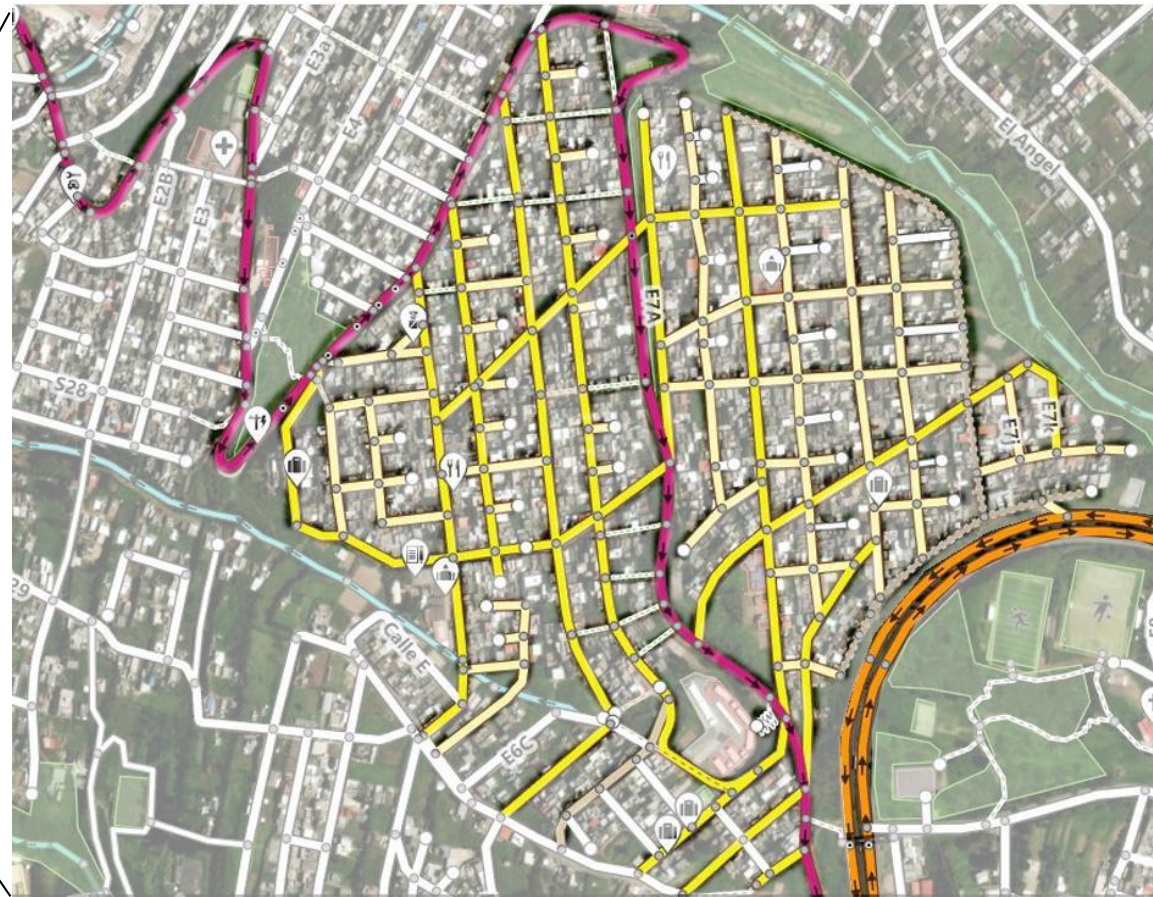
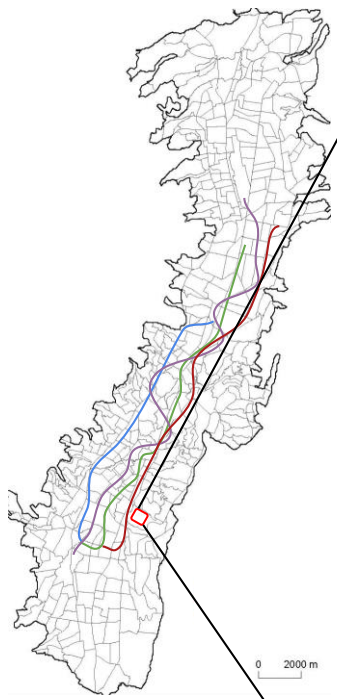
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TIMELINE

OFFSITE ANALYSIS	SPATIAL ANALYSIS	OFFSITE ANALYSIS	QUALITATIVE ANALYSIS	INFORMATION ASSESSMENT
9/03/22 - 15/03/22	16/03/22	17/03/22 - 18/03/22	16/03/22	17/03/22 - 23/03/22
Data collection and understanding of the context	14:00 pm - 17:00pm Onsite analysis and presentation of the manzanas	Data collection and assessment, preparation for the qualitative analysis	09:00 am - 15:00 pm Anonymous surveys, focus group	Data assessment and recommendation moving forward

OFFSITE

CONTEXT



LEGEND

- Highway
~12m
- Main Road
~8m
- Secondary
~6m
- Tertiary
~4m
- Pedestrian
- Stairs

OFFSITE ANALYSIS
MOBILITY

Las Luchas de los Pobres is a **8000** neighborhood organized in 3 levels.

Each neighborhood contain **Manzanas** of 4 to 5 households. Each of them hosts 200-300 inhabitants

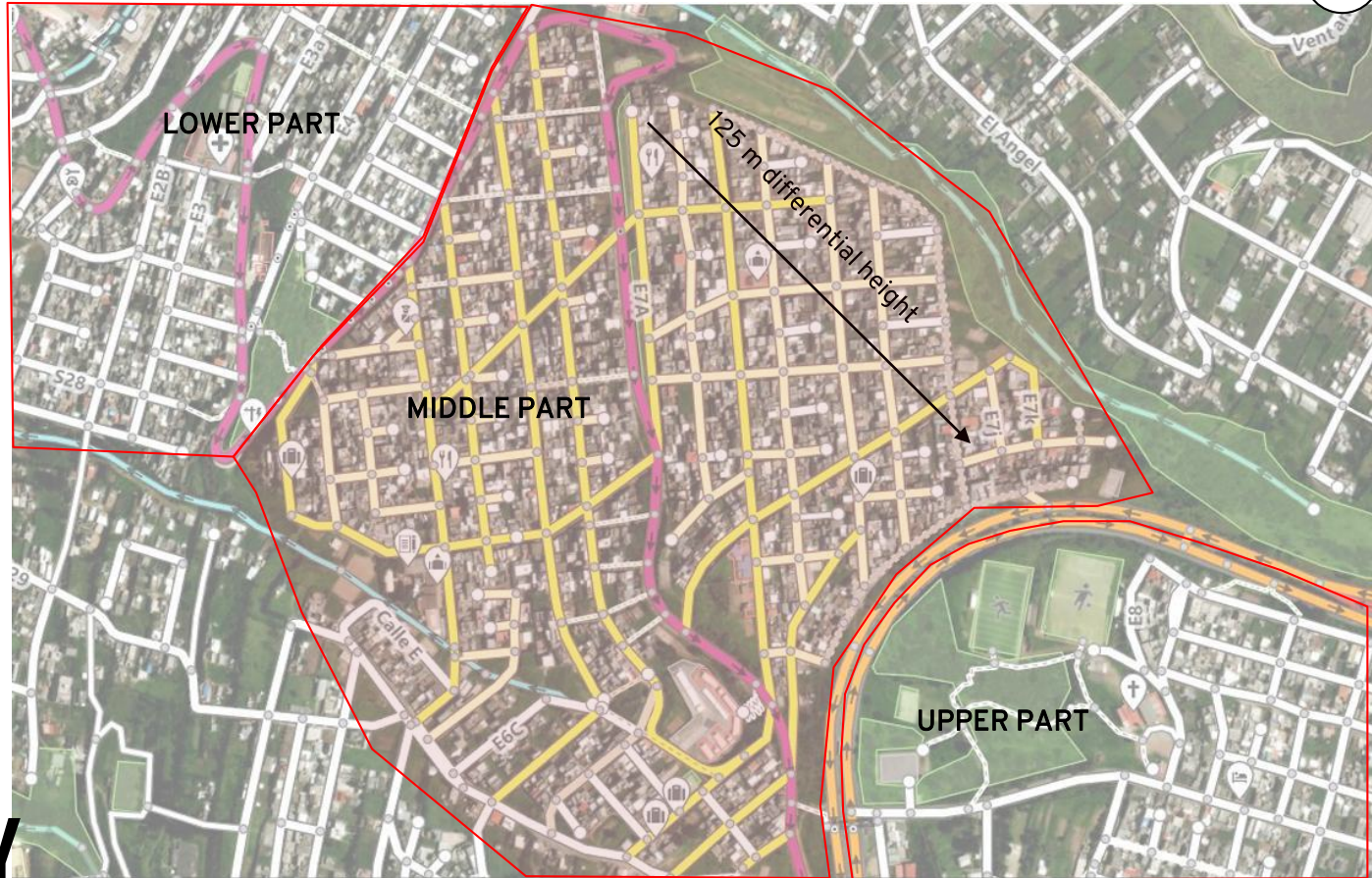
In the Lower part : 7 manzanas
In the Middle part : 20 manzanas
In the upper part : 13 manzanas

The decision are taken through **mingas** through community representatives.

Fundings can be provided by the municipality or ministry but most of the time provided by the inhabitants **themselves**.

OFFSITE ANALYSIS

DEMOGRAPHY



SITE

SELECTION



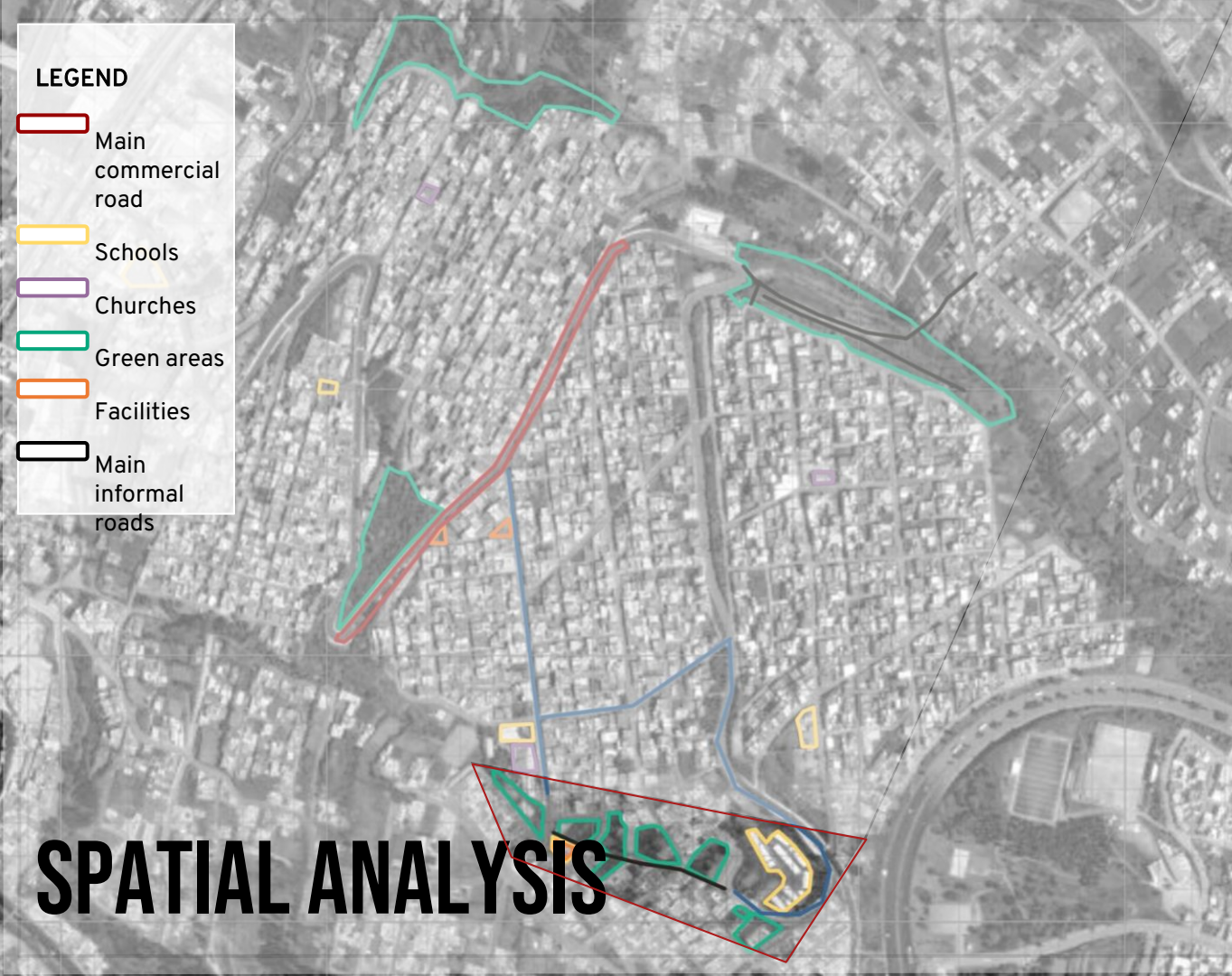
CIVIC ACCESS STRATEGY

- **Connectivity** between 3 schools, a church, a sports field, a playground, a community center, via 21 de Augusto and a secondary road
- **Versatile site** between public / private, formal / informal signification sample that could be replicated in other part of the neighborhood
- Project already enhanced through **funding**
- **Highly used path**, especially by school child and their parents
- The high level school is a **landmark** in the community because it used to be an open market.

LEGEND

- Main commercial road
- Schools
- Churches
- Green areas
- Facilities
- Main informal roads

SPATIAL ANALYSIS



PART 1

- School (ancient marketplace)
- Green space
- Sports field
- Access to the main road
- Secondary road

PART 2

- Stairs
- Green wasteland

PART 3

- Green area improvement project

PART 4

- Green land / Volley ball field

PART 5

- Community center / school
- Community flower garden
- Public space

PART 6

- Desire roads
- Secondary roads
- Children playground
- Church
- Church's school
- Green space
- Urban orchard

SITE DIVISION



Quito is not a pedestrian friendly city in general. Las Luchas De Los Pobres is not an exception.

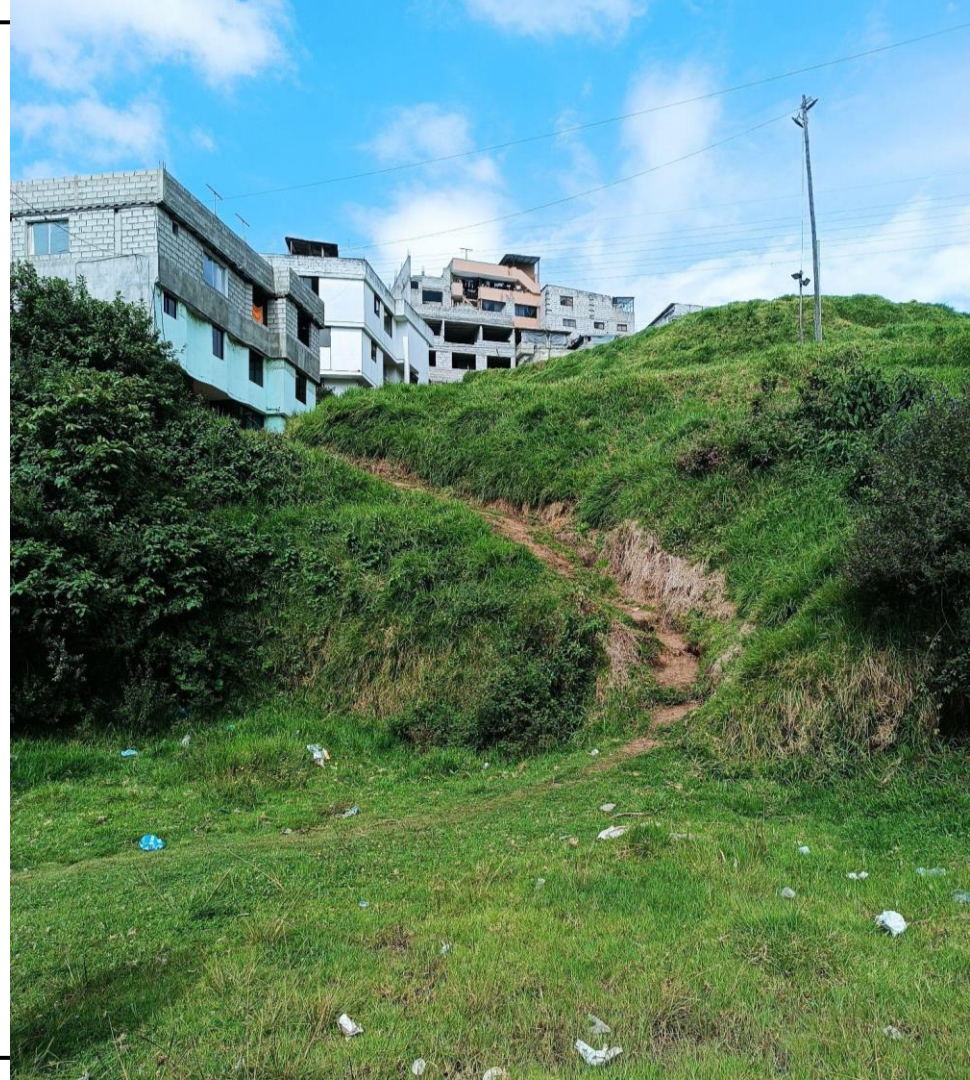
DESIRE LINES

People choose faster path to reach their daily needs. Although there are often **unsafe** and not sustainable in time.

Meanwhile, the **price of gas** is rising, making private and public transport even less accessible.

The **slope** of the site stress the need of proper infrastructure to overcome that issue.

A PEDESTRIAN RESPONSE



ACADEMICS

- FLACSO Ecuador:
Myriam Paredes y Sara Latorre
- University of Montreal:
Gonzalo Lizarralde ,
Benjamin Herazo y
Gabriela González
- UIC Barcelona Dra. Arq.
Carmen Mendoza Arroyo,
Arq. Farzana Gandhi y
Ashley Howard
- UIC 2021 -2022 student
promotion

LOCAL COMMUNITY

- AYRIWA: Vanesa Guerrero,
Maria Lopez , Paulina Alulema
- Consejo comunitario del barrio
La Lucha de los Pobres
- Neighborhood Presidents
- Manzana's Presidents

GOVERNMENT ENTITY

- Ministry of transportation
- Ministry of public security
- County
- Municipality

STAKEHOLDERS

SURVEYS

FIELDWORK

SURVEY METHODS

Anonymous online survey (19-03-2022 11:00)
During the focus group, we gave the participants phones and tablets to fill a mixed methods survey of 14 questions, 3 of which were demographic questions, 7 single choice answers and the rest open ended questions.



ANONYMOUS ONLINE SURVEY

Focus group: (19-03-2022 11:00)

We gathered around 20 persons from a variety of age groups, gender and backgrounds from La Lucha De Los Pobres and discussed the topic transportation, mobility and accessibility focusing on the safety of the roads.

During this group, we focused on active listening and showing and understanding the dynamic of the neighborhood in regards to the mentioned topics.

We also used maps and photos where the participants commented and drew on them.



FOCUS GROUPS

Interviews: (19-03-2022 11:00)

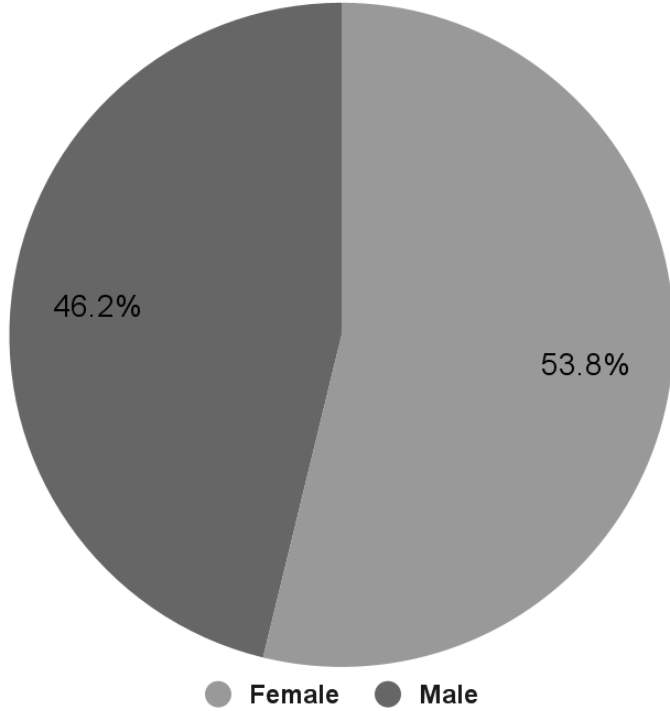
4 people were interviewed from La Lucha De Los Pobres, 3 women and 1 man, we discussed the same topic of transportation, mobility and accessibility focusing on the overall safety including the road safety.



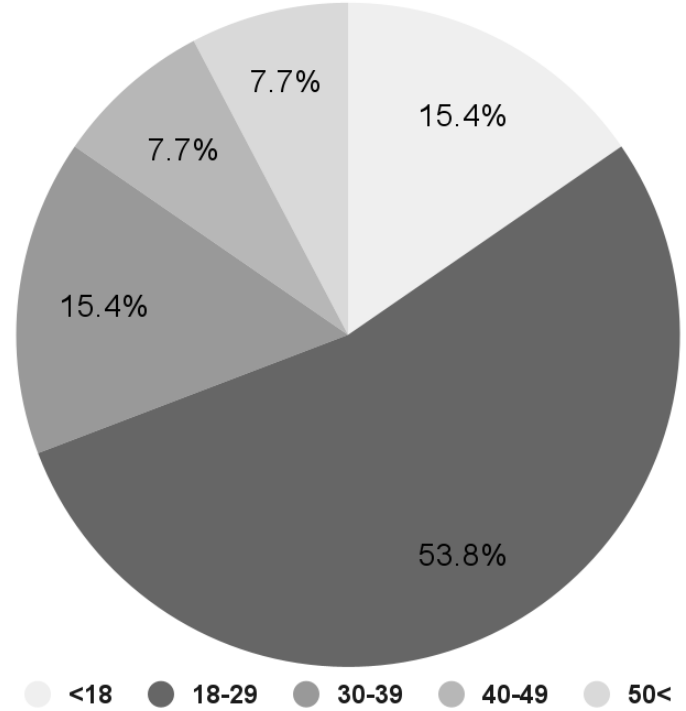
INTERVIEWS

**ONLINE MIXED
METHODS
SURVEY
RESULTS
(20 PEOPLE)**

Gender

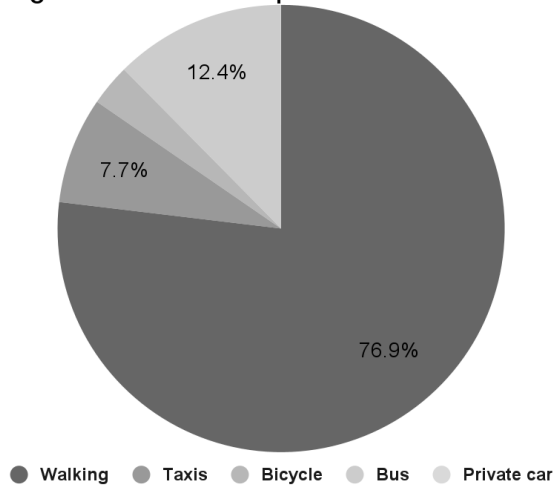


Age groups (of surveyed)

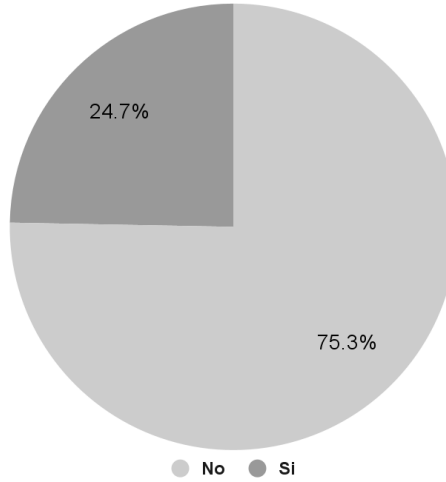


DEMOGRAPHICS

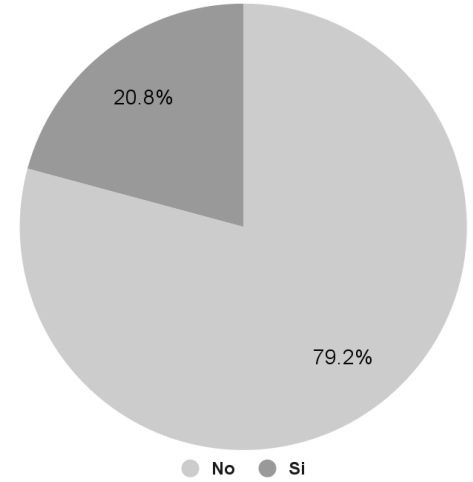
¿Como te mueves por tu manzana?



¿Crees que hay buena señalización?

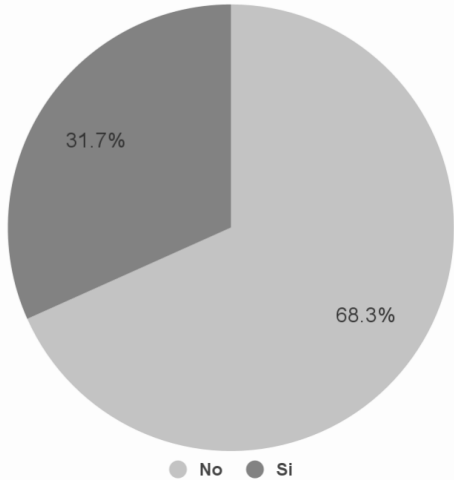


¿Usted tienen coche privado?

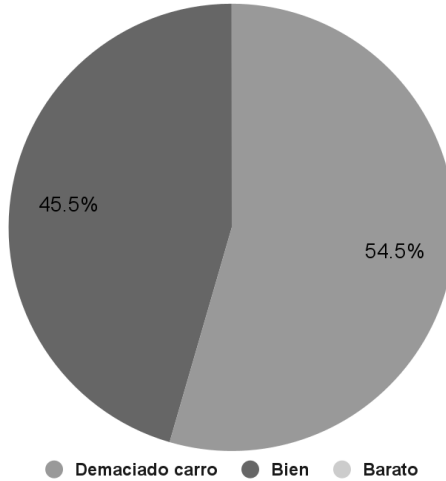


MOBILITY - ACCESSIBILITY - TRANSPORTATION

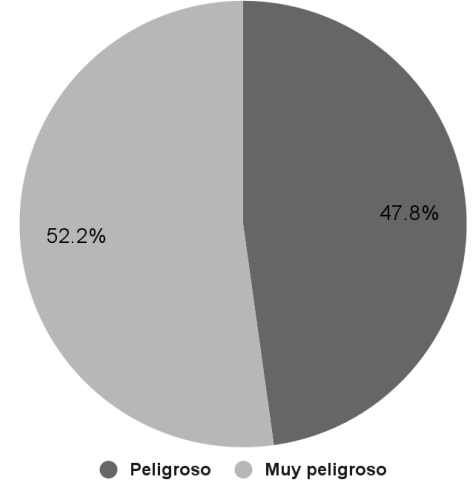
¿Hay suficiente transporte público en el barrio?



¿Qué pienses de los precios de los taxis?

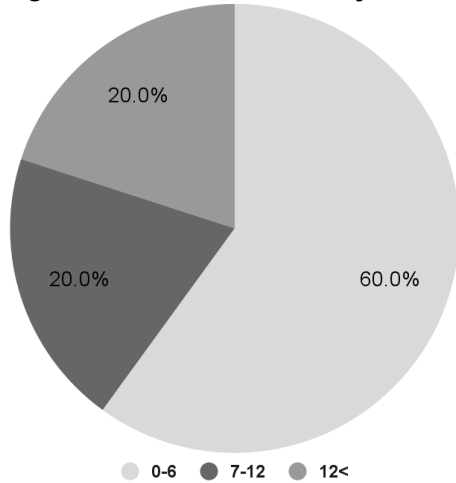


¿Qué pienses de la seguridad de los peatones?

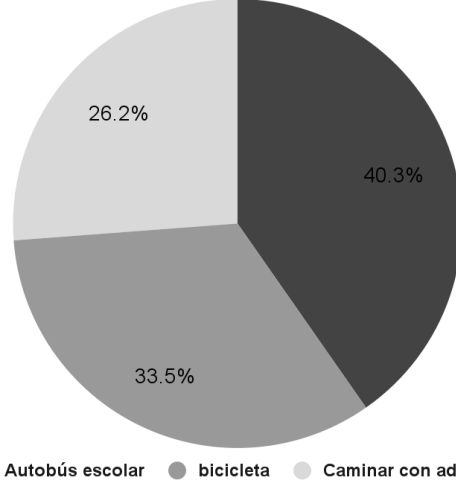


MOBILITY - ACCESSIBILITY - TRANSPORTATION

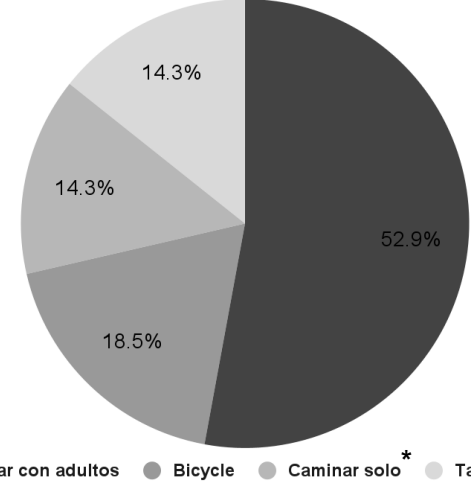
¿Que edad tienen tus hijos/as?



¿Como van al colegio tus hijos?



¿Cómo se mueven tus hijos por el barrio?



*caminar solo: are the kids who are 12 years and older

MOBILITY - ACCESSIBILITY - TRANSPORTATION

SECURITY CONCERNS OF THE COMMUNITY:

“Primera ruta por mas cerca ahorro tiempo, usamos esta ruta solo en el dia”

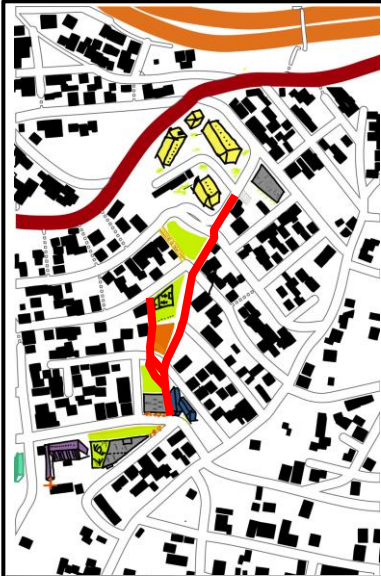
Informal routes during the DAY.
(primary pedestrian)

Pros	Cons
Faster	Dangerous
Direct	Unpaved
Efficient	Thieves

Formal routes during the NIGHT.
(Secondary pedestrian)

Pros	Cons
Streetlights	small/low sidewalks
Security	Takes more time
Transportation	
Paved	

Summary: The survey is conducted from 10 people of the community travelling from school to the (north) to the church (south).



ACCIDENT PRONE SPOTS:



SOCIO SPATIAL

ANALYSIS

**SOCIO-SPATIAL
ANALYSIS :
LINKAGE ONSITE
SPATIAL
ANALYSIS WITH
FOCUS GROUP (6
PEOPLE)**



DOS SEÑORES DE COTOPAXI

EDAD: 35 Y 24 ANOS

NOT SAFE FOR CHILDREN

ON TOP
→ KIDS PLAY FOOTBALL
VOLLEYBALL

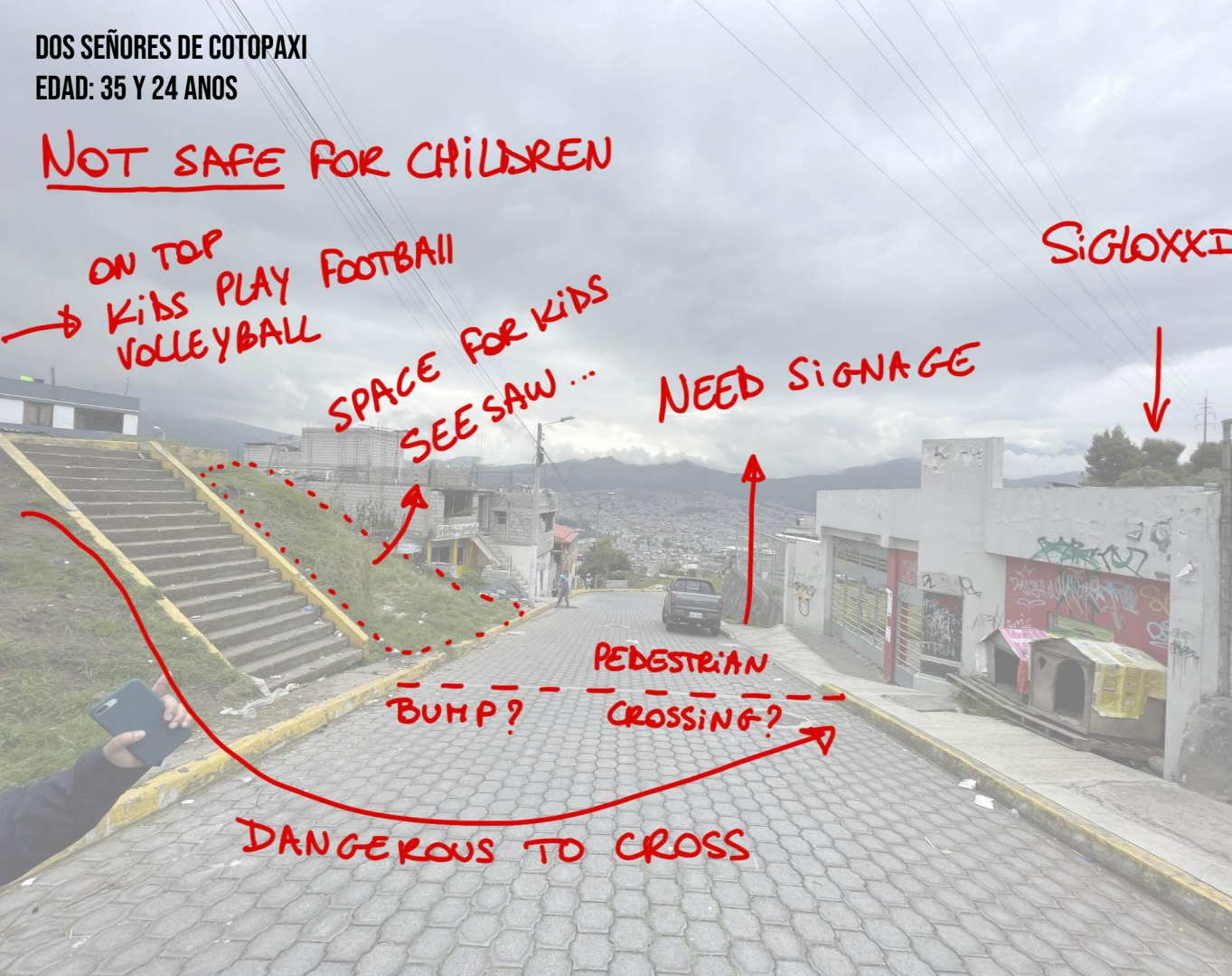
SPACE FOR KIDS
SEESAW ...

NEED SIGNAGE

SIGLOXXI

PEDGSTRIAN
BUMP? CROSSING?

DANGEROUS TO CROSS



UNA MUJER DE LA MANZANA Y UN ADOLESCENTE DE LA LUCHA DE LOS POBRES
EDAD: X 15 AÑOS

NOT SAFE



SHOULD BE 2.5 m

→ MINGA NEEDED TO
TAKE CARE OF THAT

MUNICIPALITY → STREET
NEIGHBORHOOD → PATHWAY
↳ DON'T WANT TO PAY
FOR IT





4m

Good conditions stairs



1,8m

Public space amelioration project

Informal road to go down



SITE PART 2

UNA MUJER DE LA MANZANA Y UN ADOLESCENTE DE LA LUCHA DE LOS POBRES

EDAD: X 15 AÑOS

NOT USE ANYMORE

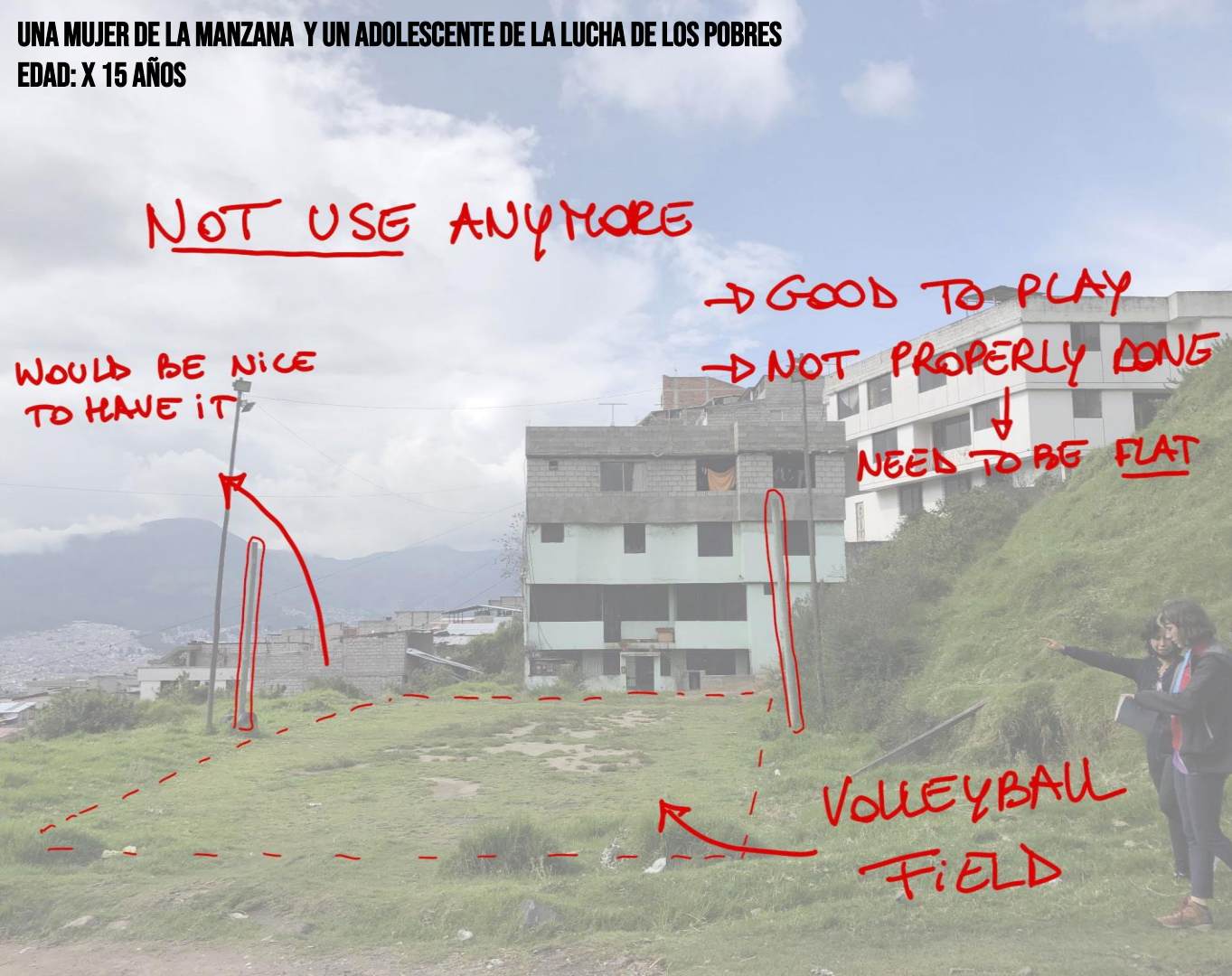
WOULD BE NICE TO HAVE IT

→ GOOD TO PLAY

→ NOT PROPERLY DONE

↓
NEED TO BE FLAT

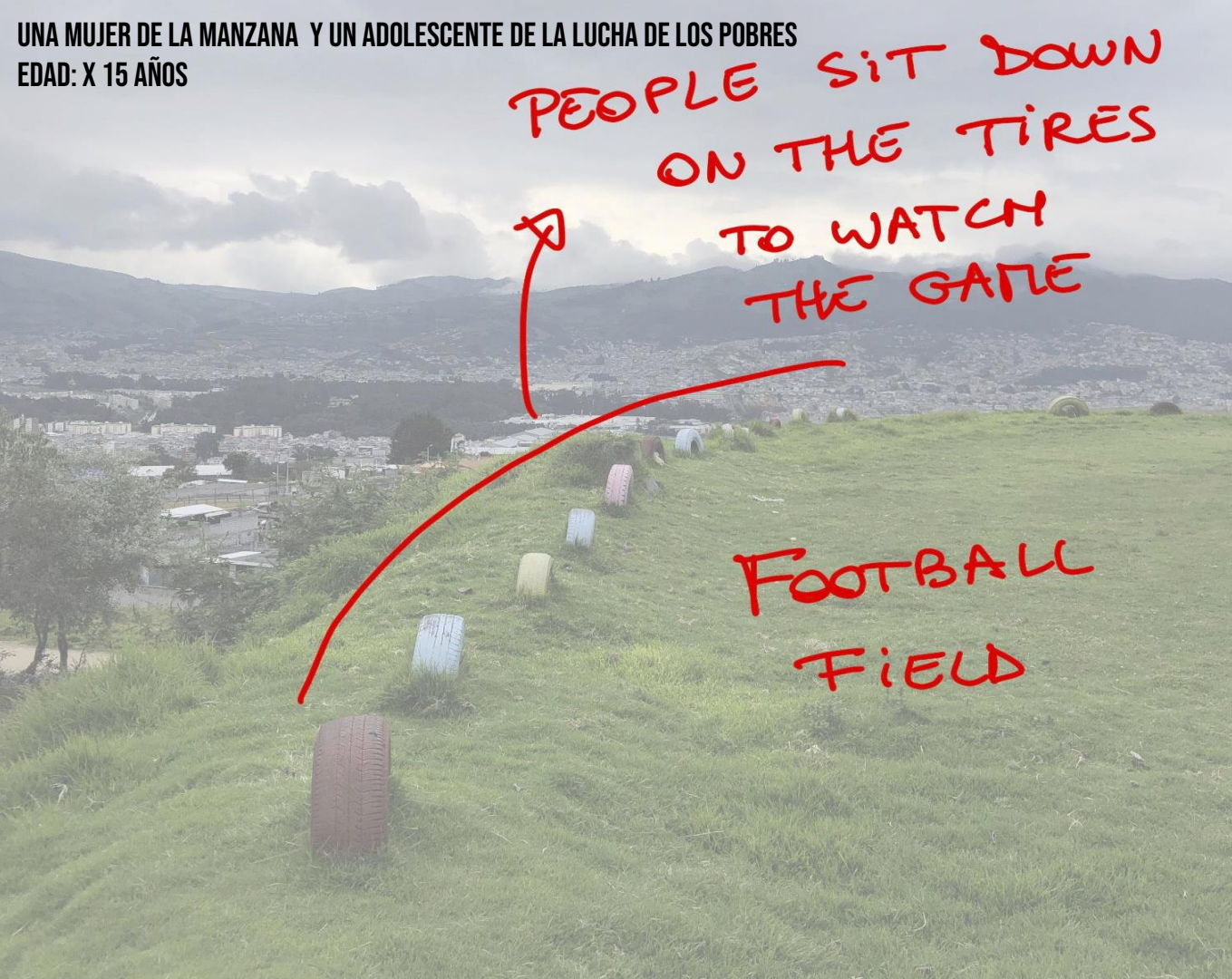
← VOLLEYBALL FIELD



UNA MUJER DE LA MANZANA Y UN ADOLESCENTE DE LA LUCHA DE LOS POBRES
EDAD: X 15 AÑOS

PEOPLE SIT DOWN
ON THE TIRES
TO WATCH
THE GAME

FOOTBALL
FIELD







SITE PART 4

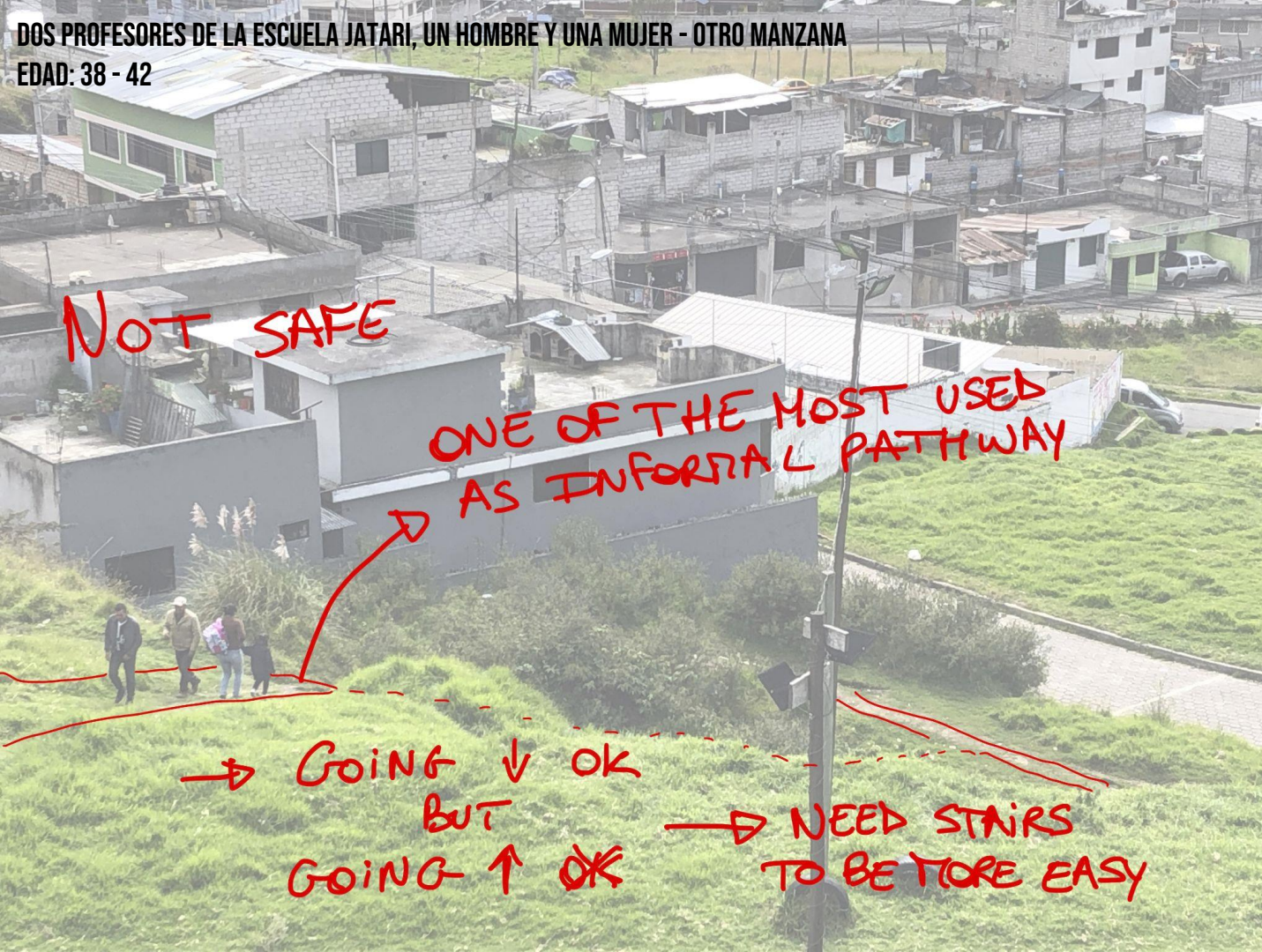


Informal roads are less and less maintained roads has no pedestrian facilities



DOS PROFESORES DE LA ESCUELA JATARI, UN HOMBRE Y UNA MUJER - OTRO MANZANA

EDAD: 38 - 42





Steep, humid
desire line
bordering the
school

SITE PART 5 PEDESTRIAN



NOT SAFE

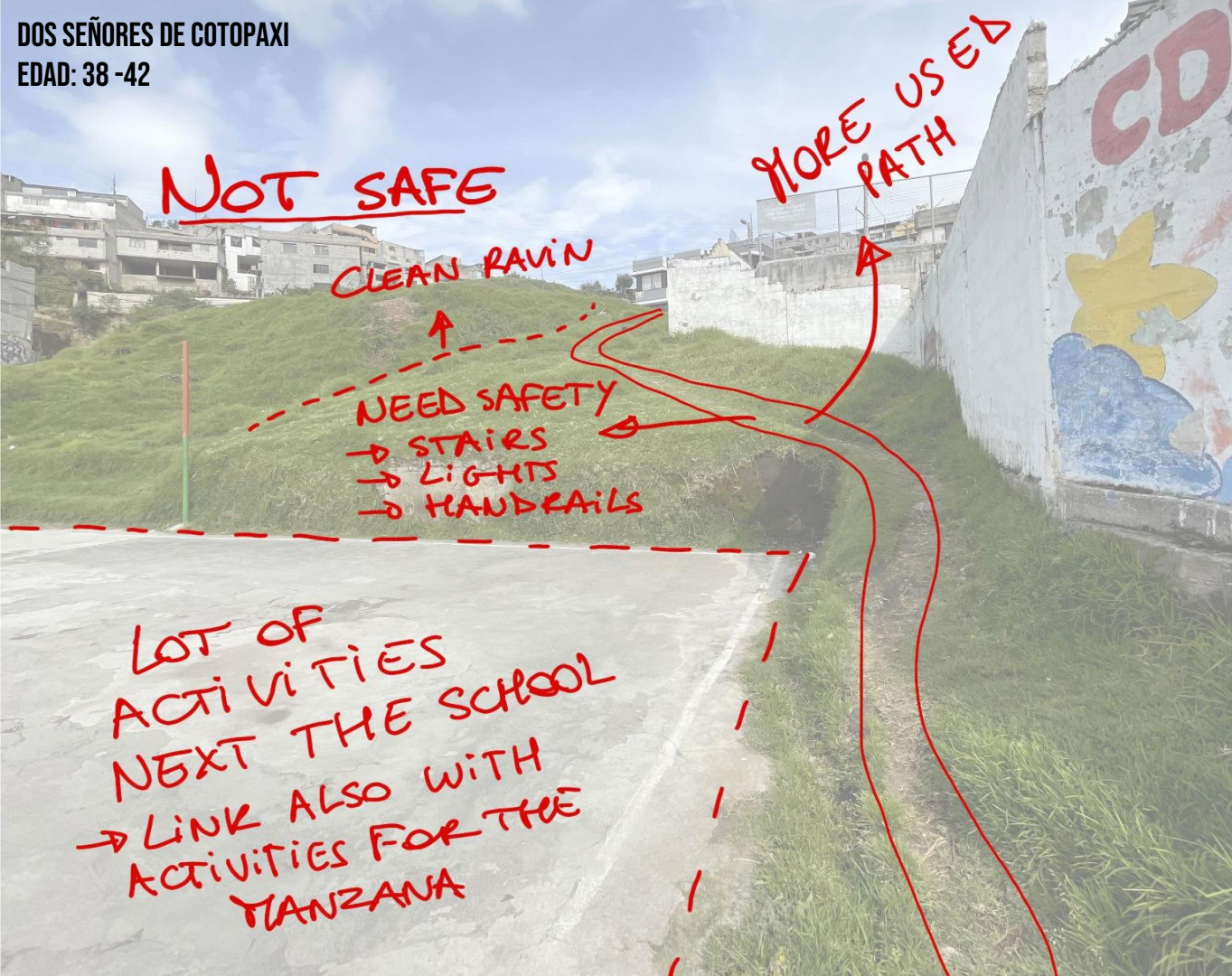
CLEAN RAVIN

MORE USED PATH

NEED SAFETY

- STAIRS
- LIGHTS
- HANDRAILS

LOT OF
ACTIVITIES
NEXT THE SCHOOL
→ LINK ALSO WITH
ACTIVITIES FOR THE
MANZANA





Sidewalk initiative by the community

Need land holding

4m

SITE PART 5 ROAD



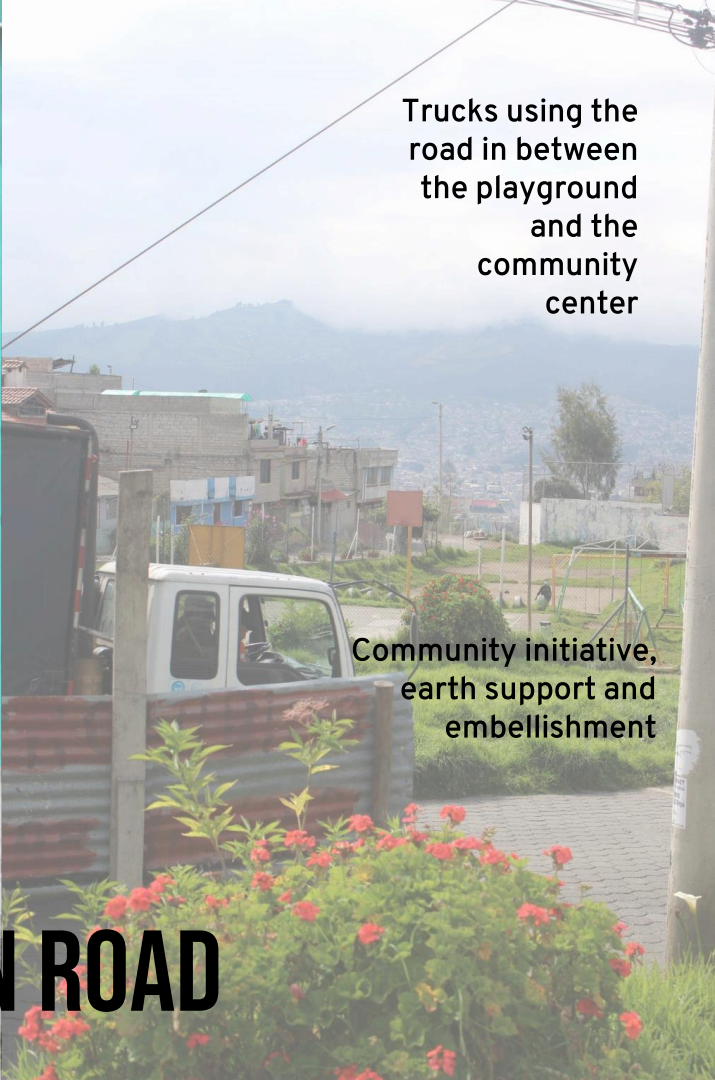




Sidewalk insufficient, lack of maintenance, effort for low mobility access

0,90m

SITE PART 5 MAIN ROAD



Trucks using the road in between the playground and the community center

Community initiative, earth support and embellishment



DOS PROFESORES DE LA ESCUELA JATARI, UN HOMBRE Y UNA MUJER - OTRO MANZANA

EDAD: 38 - 42

- GOOD FOR A URBAN ORCHARD
OR
- GARDEN WITH FLOWERS

MAIN VENUE
OF THE BLOCK
→ SATURDAY FULL

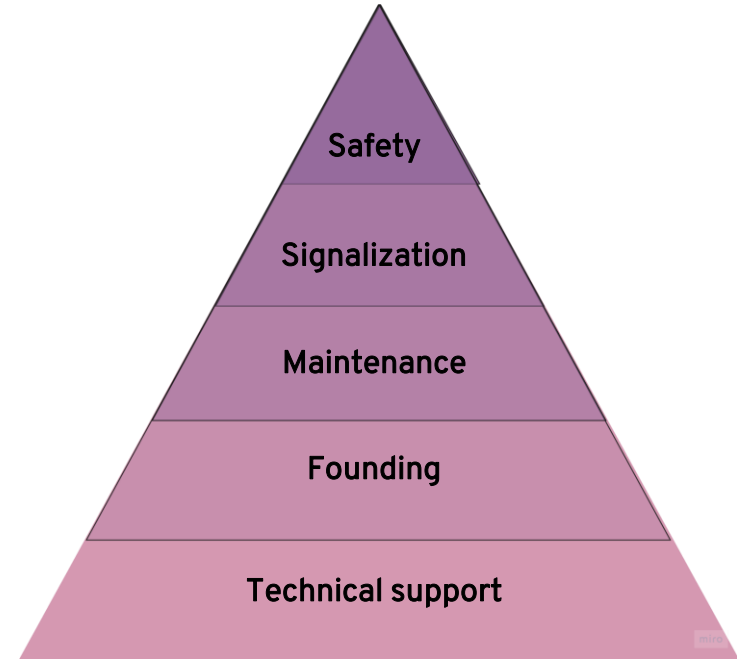


Formal routes:

1. Introduce Side walks
2. Bike lanes
3. Speed Breakers
4. Zebra crossing
5. Signage
6. Security cameras
7. Maintenance
8. Road mirrors
9. Retaining systems to avoid soil erosion

Informal routes:

1. Permeable paving
2. Improving the conditions of the pathways
3. Security cameras
4. Lights
5. Make them prominent



Needs hierarchy

SURVEY/ FIELDWORK CONCLUSIONS

PROPOSALS

Street lightnings



Security Cameras



SECURITY



Existing

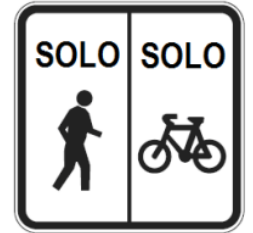


To be implemented /
ameliorated



PEDESTRIAN SIDEWALKS



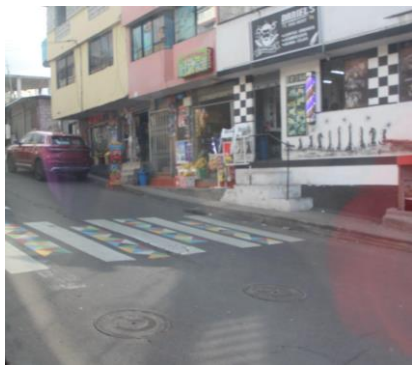


ROAD SIGNAGE

Speed Bumps.



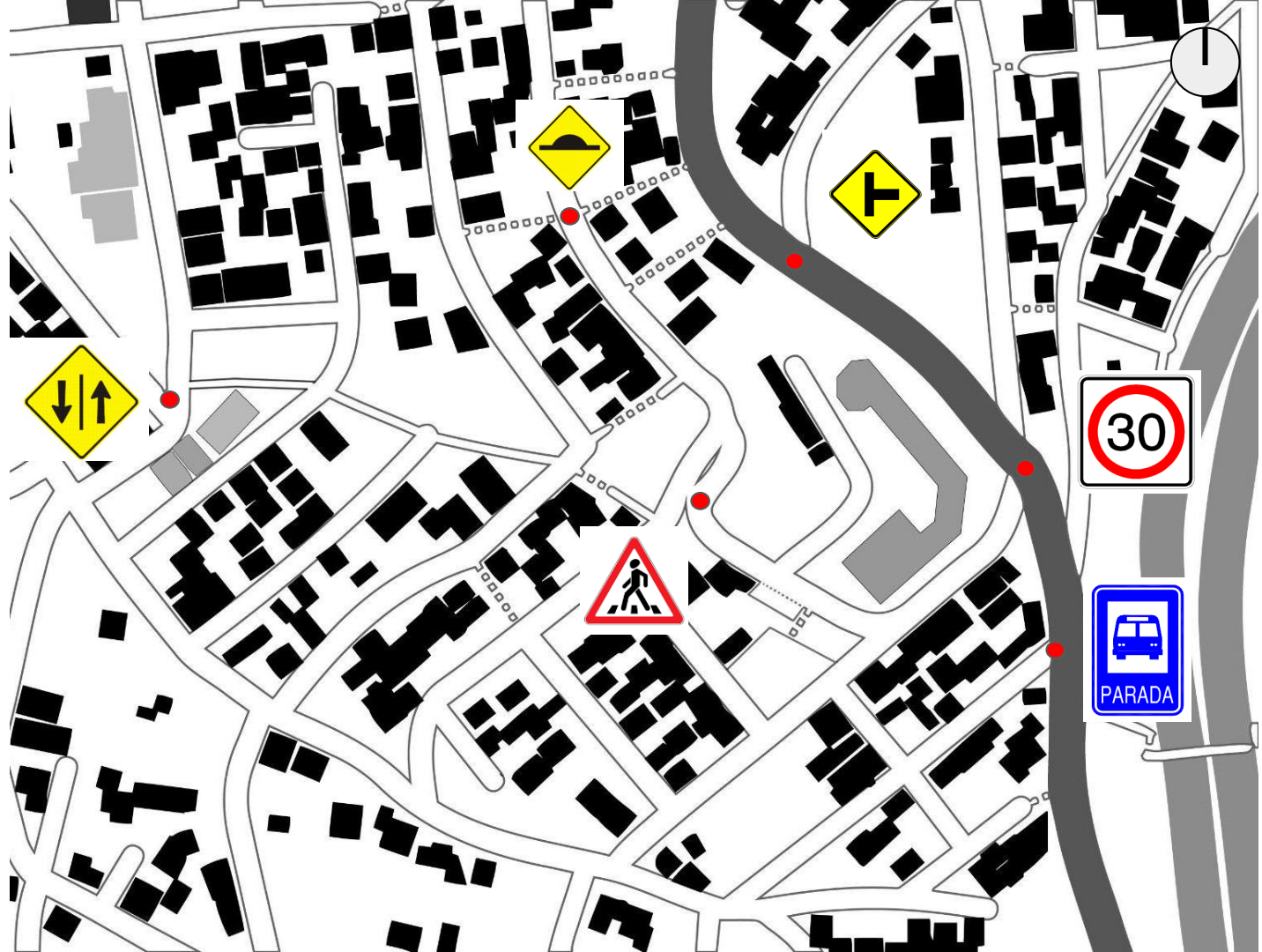
Zebra Crossing.



SIGNAGE



SIGNAGE





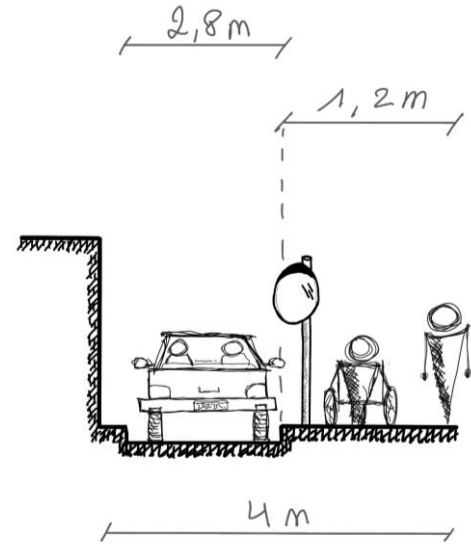
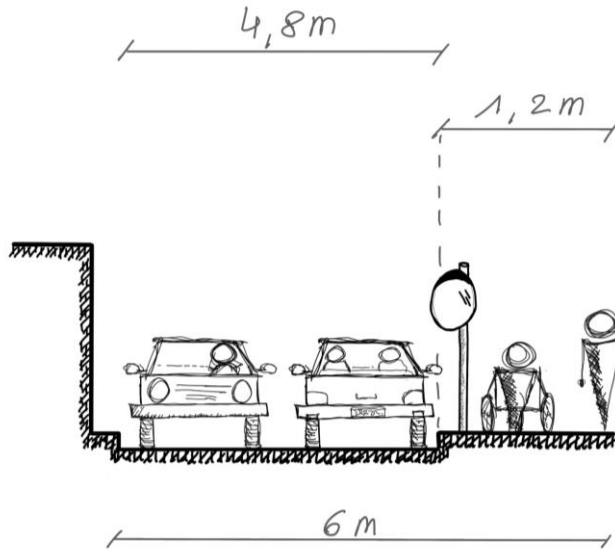
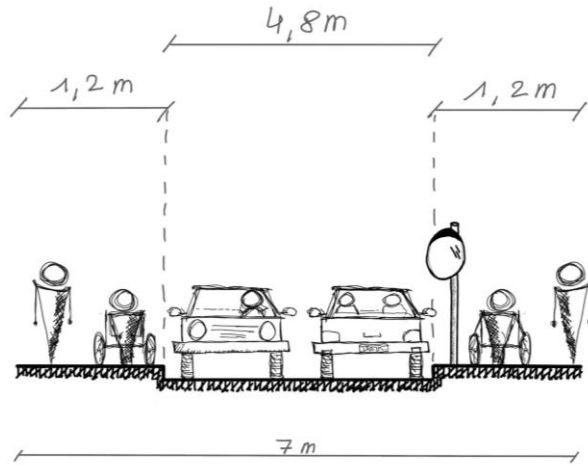
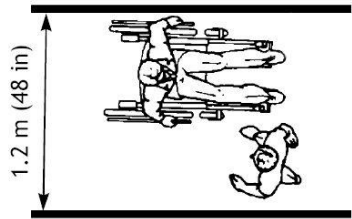
Mirrors

ROAD MIRRORS



ADAPTING

NORMS



CASE STUDY NORMS APPLICATION

INTERVENTION

FORMAL ROADS



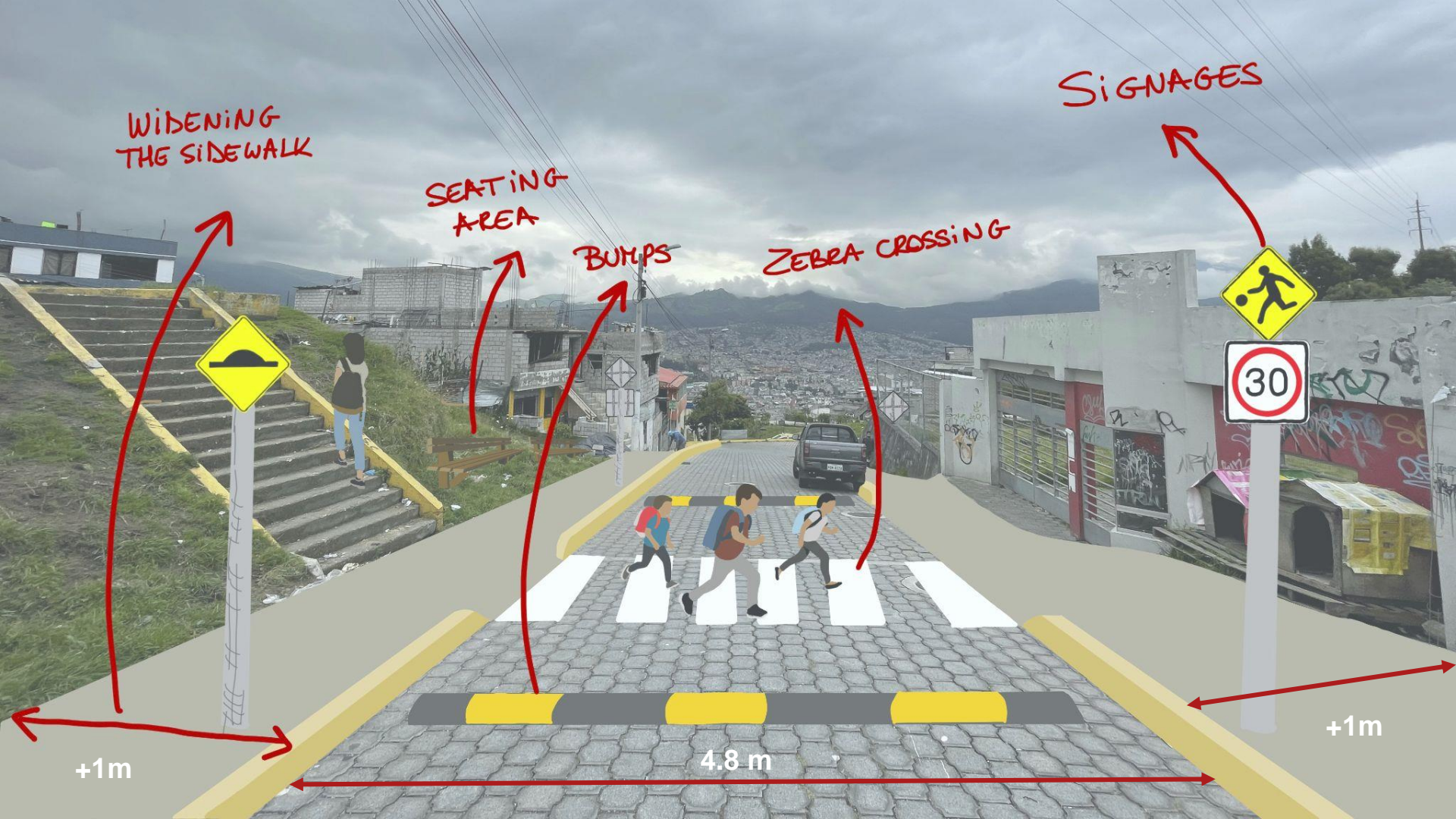
SIGNAGES

WIDENING THE SIDEWALK

SEATING AREA

BUMPS

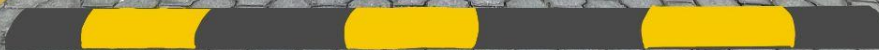
ZEBRA CROSSING



+1m

4.8 m

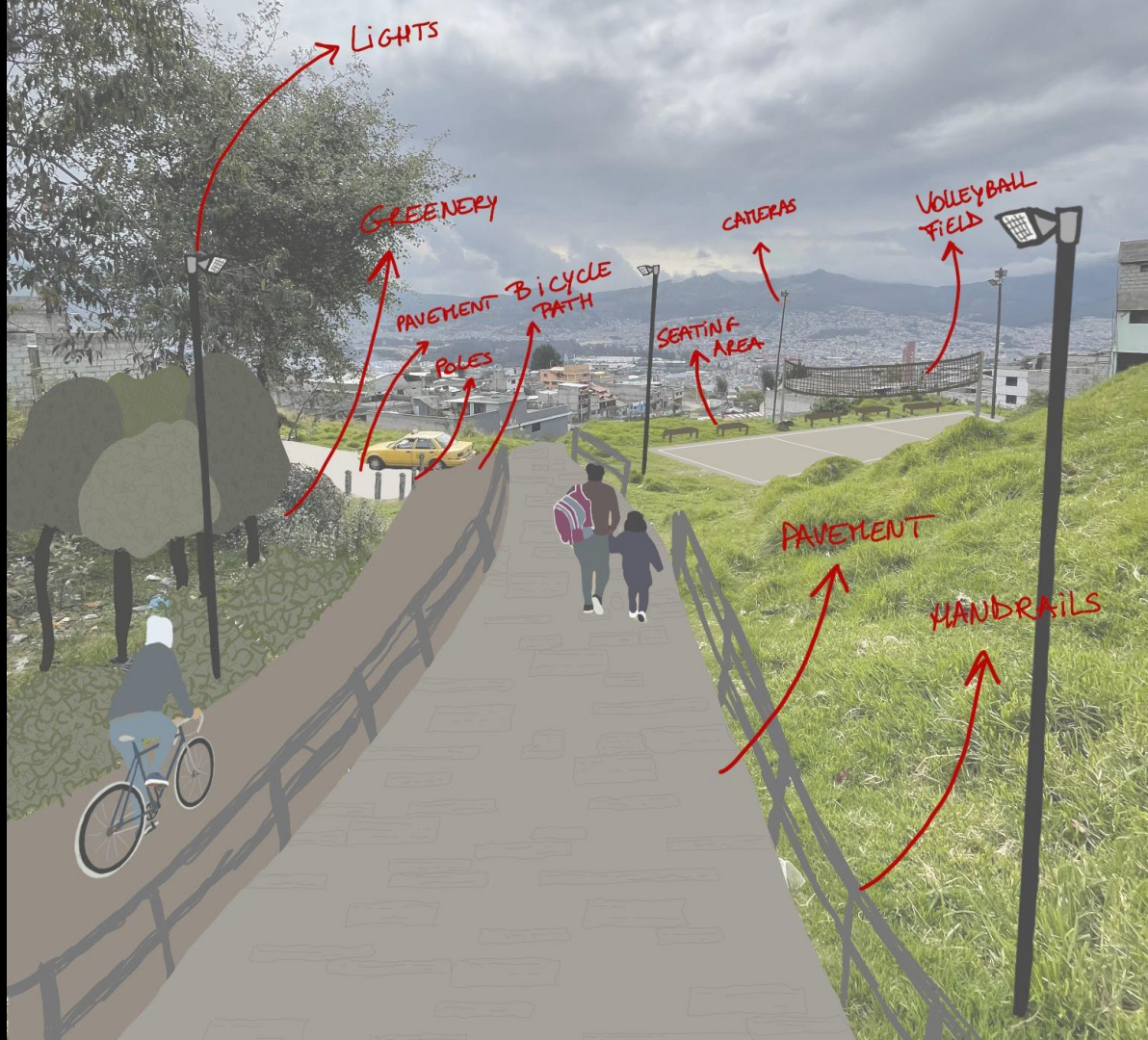
+1m



INTERVENTION

INFORMAL ROADS





LIGHTS

GREENERY

PAVEMENT BICYCLE PATH

POLES

SEATING AREA

CAMERAS

VOLLEYBALL FIELD

PAVEMENT

HANDRAILS





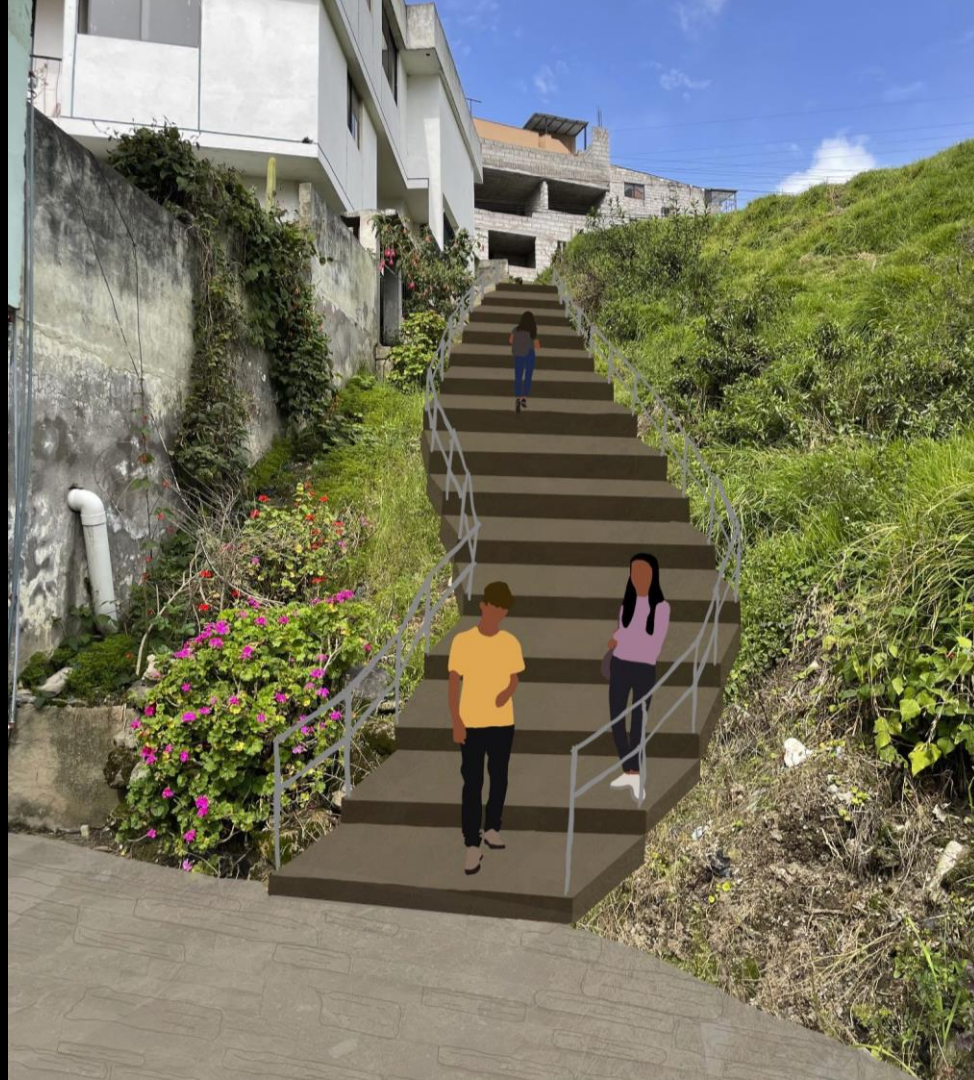


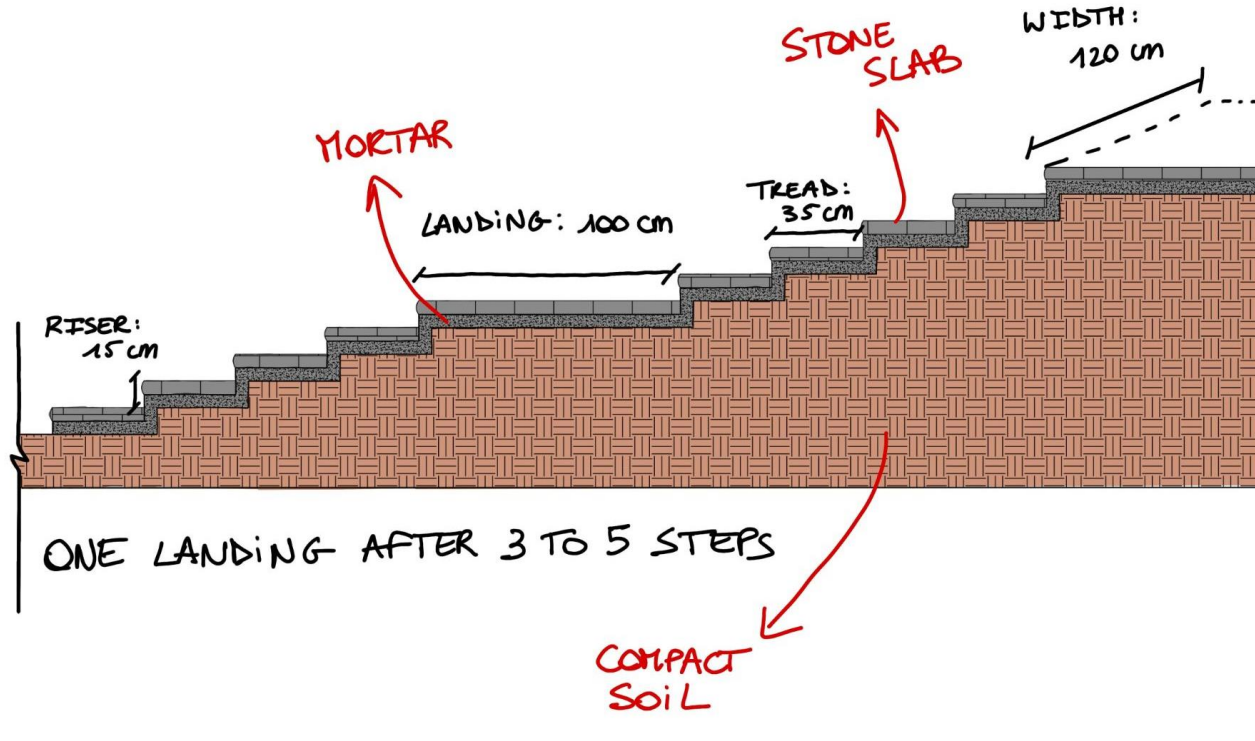
STAIR CASE

CLEAN THE
GREENERY

HANDRAILS

PAVEMENT





TECHNICAL DRAWING - STAIRS

Stone	Durability	Resistance to water	Machining
1-Slate stone	Good	Perfect	Easy and precise
2-basalt rock	Perfect	Perfect	Delicate, Great hardness
3-Limestone	Very weak	Weak	Very easy and precise
4-Granite	Perfect	Very good	Difficult
5-millstone	Very good	Good	Medium process



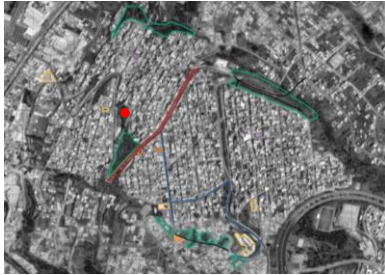
PROPOSED MATERIAL AND CHARACTERISTICS

The sample chosen could be extended down to the lower LLDLP in order to strengthen the green link. It could also be replicated in the opposite part of the neighborhood to offer more accessibility.



FURTHER PROPOSALS

The Backyard of the school could be incremented for recreational purposes as the Community is indulged in various activities such as welding, tailoring, vehicle repairing, electrical works, etc.

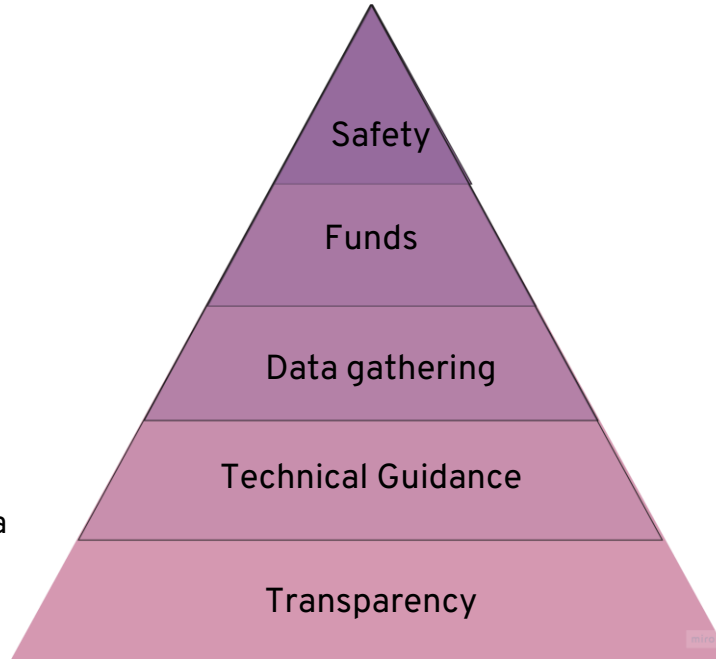


SCHOOL PROPOSAL : SECURITY CONCERNS

1. **SAFETY** towards
Gender
Youngster
Low mobility persons
Night life

2. **FUNDS**
Accessibility of government
funds
Hikes in fuel prices (private
and public transport)

3. **DATA
GATHERING**
-No official demographic data
-Sample of interviews too
narrow (0.2%) and
inconsistency of responses.
-Restricted time
-Language barrier
-No social studies background



4. **TECHNICAL
SUPPORT**
Revision of pedestrian and
vehicular network in more detail
Factors of road accidents

5. **TRANSPARENCY**
Low collaboration between the
manzanas
Confusing

LIMITATIONS

TECHNICAL SUPPORT

- In order to adapt the road hierarchy system, a deep urban study could be driven.
- Traffic engineers: Pedestrian roads could be implemented and the orientation of the roads can be changed without traffic disturbance.
- Waste management.

“Los conductores aquí no tienen la cultura de respetar a los peatones.”

Hombre 25-30 yo

“- ¿Qué harías si te rompés una pierna?

- Así (El niño pequeño se fue arrastrando su pierna atrás)”

Nino 15 yo

BIKES

- Implementation of a bike friendly mobility system.

“Por la noche todo es oscuro, no te ilumina”

Mujer 35-40 yo

SOCIAL

- Conduct more surveys and focus groups in the neighbourhood
 - Target vulnerable groups
- Driving awareness campaign
 - Health support centre/awareness in the neighbourhood

SAFETY

- Safety measures are the most pressing to be implemented. In order for any project to rise, this needs to be assessed from the beginning through survey and deep analysis of the neighbourhood.

FURTHER RECOMMENDATIONS

THANK YOU

Ninon Esclangon - Adarsh Ravindra Joshi
- Victoria Vandewalle - Jana Zein

RESOURCES

- Google Maps
- <https://www.openstreetmap.org/edit#map=16/-0.2869/-78.5296>
- <https://metrodequito.gob.ec/estaciones/>
- <https://www.ecuador-turistico.com/2016/08/terminal-terrestre-quitumbe.html>
- <https://www.ecuadorbus.com.ec/terminal-carcelen-de-quito>
- Quito-Resilience-Strategy-English.pdf
- https://www.obraspublicas.gob.ec/wp-content/uploads/downloads/2015/04/LOTAIP2015_reglamento-tecnico-ecuatoriano-rte-inen-004-1-2011.pdf
- <https://www.alamy.es/fragmento-de-luz-de-una-vieja-pared-de-bloques-de-piedra-caliza-para-su-uso-como-un-resumen-de-antecedentes-y-la-textura>
- <https://www.shutterstock.com/es/image-photo/basalt-rocks-stone-wall-background-texture-620279456>
- <https://depositphotos.com/43685953/stock-photo-slate-stone-wall-seamless-background.html>
- <https://depositphotos.com/53905987/stock-photo-stone-marble-granite-texture.html>