

## INTRODUCTION

This project is a joint venture between Godoylab (Emiliano Godoy), Amcat, CJcom, Grupo Zuma and the General Directorate of Urban Services in Mexico City. The program, called "Cruce Seguro" (Safe Crossway), has the main objective of renewing, replacing and organizing infrastructure in 459 dangerous intersections in Mexico City. Up to 25% of all roadway accidents in Mexico D.F. happen in these intersections.

The project's main priorities are as follows:

1. Increase pedestrian and vehicular safety
2. Give both pedestrians and vehicles certainty in the correct use of walkways and infrastructure
3. Recuperate public and green spaces
4. Prevent vehicular congestion
5. Design and provide infrastructure that creates a dignified pedestrian experience in the city
6. Create incentives for the use of public and other alternative forms of transport
7. Improve services for both public and alternative transport users



## PILOT PROJECT

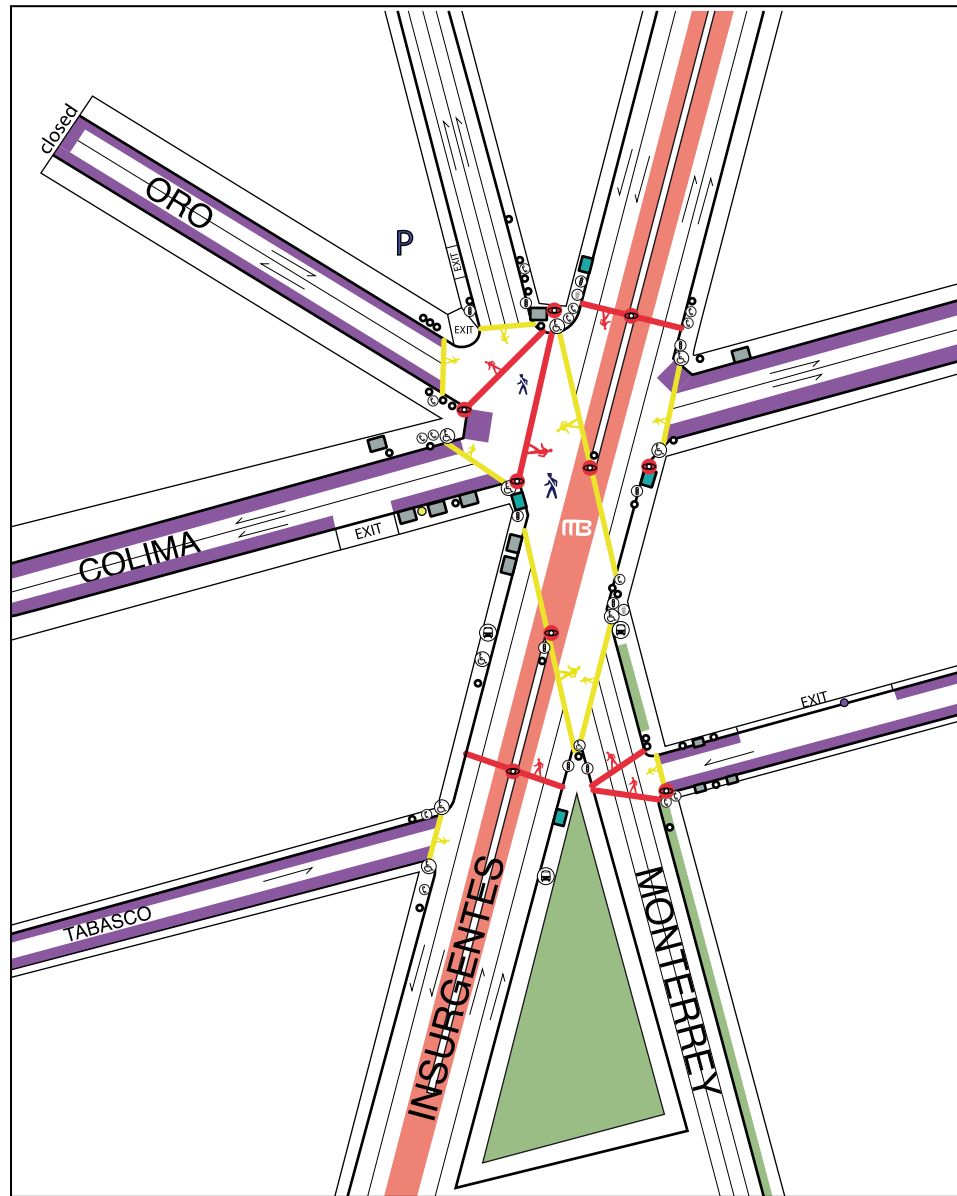
The imagery and graphics that are contained within this folder portray the distinct aspects of the pilot project in Mexico City, in the intersection of two highly concentrated vehicular arteries; Monterrey and Insurgentes. The project began in November 2008.

cruce seguro

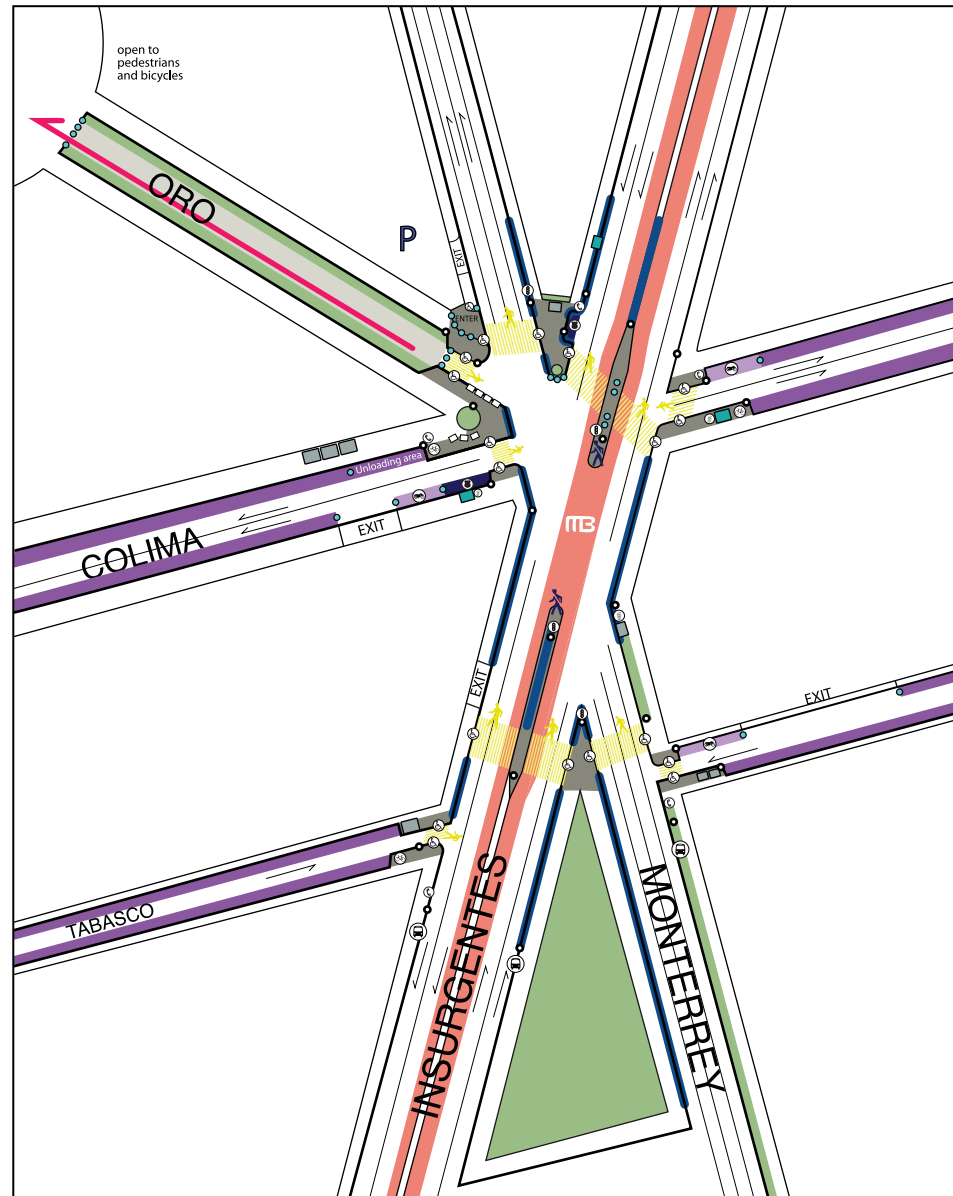
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PILOT PROJECT

Infrastrutture:  
Existing Conditions



Infrastrutture:  
PROPOSAL



KEY

-  Constructed transit officer safe area
- ENTRY / EXIT**  Defined vehicle entry and exit
- P**  Renovated and expanded public parking
-  New or cleaned, condensed and refurbished signs / post
-  Relocated bus stop
-  Refurbished and relocated trash can
-  Accessible ramp
-  Refurbished and unified traffic light / post
-  Relocated pre existing informal vending stand
-  Relocated news stand
-  Unified and relocated phone booth
-  Existing and proposed greenery
-  Modified public transport lanes (Metrobus)
-  Contained street parking
-  Pedestrian safety fencing
-  Constructed and/or refurbished safe sidewalk extensions with curved or square corners indicating street direction
-  Safe crosswalk, respective signage and crossing lights
-  Bollard
-  Seating
-  Official Parking or quick taxi pickup
-  Designated and adapted motorcycle parking
-  Bicycle racks
-  Converted to pedestrian street, grocers market with formal spaces for commercial stands
-  Bike lane connecting to existing routes
-  Dangerous formal crosswalk
-  Dangerous informal crosswalk
-  Dangerous blind spots



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## PRECEDENTS

Only 16 % of all human daily trips in Mexico City are made in private vehicles, mostly automobiles.

On the other hand only 5% of all vehicles correspond to public transport, including all types of buses and taxicabs, with the remaining 95% being private vehicles.

In terms of urban functionality, to transport one person by automobile utilizes 50 times more space than to do so using public transport.

Therefore it's estimated that an overwhelming majority of the city's streets are used by only 16% of the population, coincidentally from the high-income sector.

The majority of the street infrastructure, at every level, is designed to accommodate the necessities of the major portion of the vehicle stock, that is to say private vehicles, even though this sector moves only a reduced portion of users.

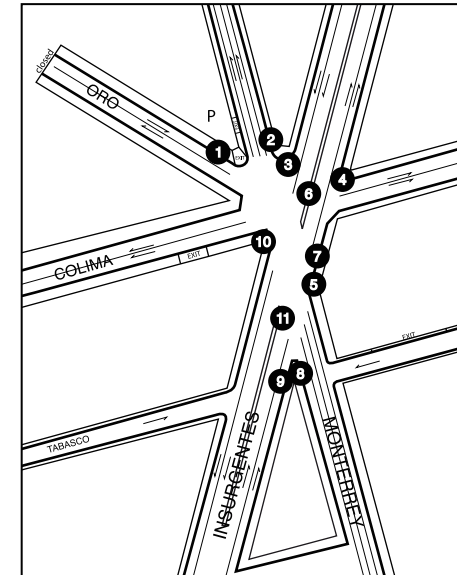
Current street infrastructure poses as an incentive for private vehicular use while at the same time inhibits the adoption of public and or alternative (pedestrian, bicycle, etc...) forms of transportation. This generates a high level of insecurity for users at all levels. Vehicular accidents account for the first place in cause of death in Mexico City.

Unlike industrialized cities, Public Transport in Mexico City tends to be substituted by private transport once users have access to a private vehicle. In 1995, 168 million passengers were transported via public electric transportation, after the year 2000 the number dropped to 79.

The incredible rate in which the vehicle stock has grown, mainly private vehicles, has led to the saturation of city roadways, decreasing the average transport speed to 17 km/hr.

This tendency has serious repercussions in city productivity. The increase in commuting times is so great that between 1972 and 1994, the man hours consumed by metropolitan transport has grown almost 12%.

## Intersection before intervention



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Environmental impact is also very serious with 76% of pollutants (emissions) in the metro area coming from vehicular stock. This adds to an already serious air quality problem: over 320 days a year surpass the official health norm, while the major cause for hospital visits in the city is respiratory illness.

Taking into consideration the cost of maintaining the street infrastructure in a city the size of Mexico DF, the environmental costs, the services required for private vehicle stock, the public health expenditure and the overall loss of productivity, the government is effectively subsidizing private vehicles in a much larger proportion than public transportation. If on top of that we add gasoline price subsidies, the situation becomes that more pressing.

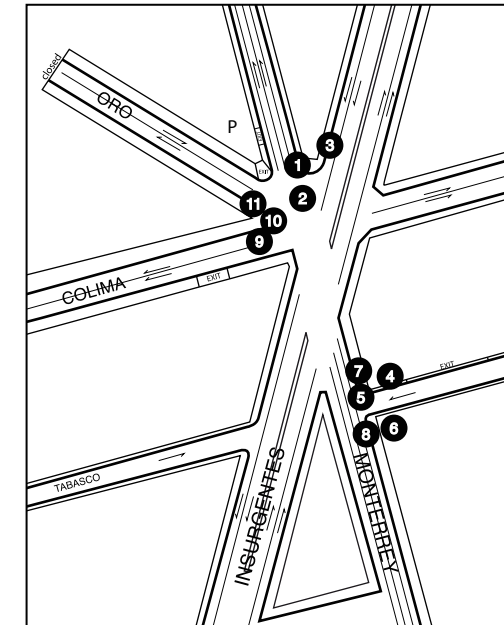
It is necessary to reverse the situation and accomplish a marked reduction of commuting times and distances, place incentives for public and alternative modes of transport, reduce the private vehicle stock and to dignify the public transportation and roadway experience.

We consider the reordering of street ways and their infrastructure an indispensable part of this strategy, in an attempt to create incentives for the use of safe attractive public infrastructure and other alternative modes of transport.

General objectives:

1. To recuperate the city as a civic space that is experienced on a personal level by means of public spaces and the direct interaction with other citizens and institutions
2. To give the general population certainty in the appropriate uses of city infrastructure
3. To guaranty and generate the sense of security in public spaces, in relation to both physical threats from vehicles and the perceived threat of crime
4. Clean the city of vestiges of abandoned and unorganized growth from past decades
5. To generate strategies and programs for the recuperation and recognition of the city by its citizens
6. To foment the use of transport methods that embody a smaller social and environmental impact
7. To establish civic spaces that may function as a spark of change
8. It is important to state that in this proposal a clean, comprehensible and organized city means a safe, respectful and integrated one

Intersection during construction period



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## APPLIED STRATEGIES

Some of the strategies that were applied at this specific site include:

1. Curb Extensions - Extended sidewalk at corners. Impedes cars from parking in crosswalk, protects pedestrians while crossing, reduces length of crosswalk, avoids motorist and cyclist blind spots.

2. Official Parking - Strictly meant for police vehicles. Allows officials to park close to where they work, decreases vehicular congestion.

3. Pedestrian sidewalk signage - signage inserted into sidewalk. Reduces visual clutter and allows for a clear distinction between pedestrian and vehicular signage.

4. Signage clearing - cleaning, re use or retiring of current signage. Allows for a clearer and up to date signage system.

5. Urban rest area - includes: benches and greenery. Creates attractive urban setting, allows for social spaces, assists the elderly and acts as a deterrent for the establishment of informal commerce that congests sidewalks.

6. Safety mechanisms - includes: fencing, bollards and constructed planters. Keep pedestrians safe from oncoming traffic, deter pedestrians from crossing street through dangerous intersections, impede vehicles from illegally parking on sidewalks and act as barriers.

7. Pedestrian walkway - creating pedestrian streets. Using closed street as an opportunity to create social and commercial local opportunities. Include spaces for stands, stores, green spaces, bike-lanes. Local neighbors are offered incentives to park their cars at nearest parking lot.

8. Out of date infrastructure overhaul - clearing stands, telephone poles, unused signage poles, exposed wiring, informal electrical connections, damaged trashcans and unused bus stops. All objects are retired, repaired or replaced with functional installations.

9. Lane definition - includes: defining, labeling and separating vehicle, public transport and bicycle lanes.

10. Local intervention - design infrastructure that may include local signage, furniture, etc, which allow the community to create their own system within pre defined city requirements.

## Site problems



- 1 Illegal double parking
- 2 Damaged and illegible signage
- 3 Vehicles parked on crosswalk

- 4 Outdated or damaged infrastructure

- 5 Pedestrian and vehicular blind spots
- 6 Dangerous informal crosswalks
- 7 Visual pollution
- 8 Misplaced infrastructure in pedestrian crosswalk

- 9 Transit officials in danger
- 10 Traffic Island minimal
- 11 Non-existent ramps or infrastructure for people with disabilities

- 12 Long and dangerous formal crosswalks

## Site proposal components



- 1 Special parking spaces for police cars and taxi cabs.

- 2 Special parking spaces for motorcycles and bikes. No double parking.

- 3 Safer and broader crosswalk and pedestrian cross signals. Signage on floor to avoid confusion.

- 4 Urban rest areas, planters and benches.

- 5 Clear and concise signage. Clean up older signs and take out unnecessary signage.

- 6 Accessible ramps in crosswalks.

- 7 Supply closed street with pedestrian walkways and space for informal commerce.

- 8 Introduce bollards, planters and fencing that keep pedestrians safe from intersection and keep them from crossing inadvertently.

- 9 Specify and clearly delineate bike lanes and public transport lanes.

- 10 Clear out some of the parking spaces by creating multistory parking nearby.

- 11 Unify and safely locate street infrastructure (ie telephone stands, vending areas, sign posts, postal, etc...)

- 12 Create safe "oasis" for pedestrians in middle of two major streets (triangle).

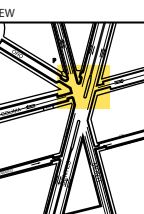
- 13 Take away advertising that may confuse drivers. Introduce greenery ie. green walls (anti graffiti surface).

- 14 Extend curb in order to allow pedestrians safer crossing

- 15 Supply safer / wider crosswalk in Insurgentes by moving lanes over or building a pedestrian bridge.

- 16 Build a safe area for transit cops in intersection.

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APPLIED STRATEGIES

11. Advertising reduction - place incentives to allow community to clean up visual pollution by replacing large signage that confuses motorists with greenery.

12. Parking division - label and delineate parking spaces specific to short term vehicle parking, motor-cycle areas, bike racks, emergency vehicles, loading and unloading areas. This will assist in reducing traffic congestion during peak traffic hours and will create incentives for small-scale motor and non motor vehicles.

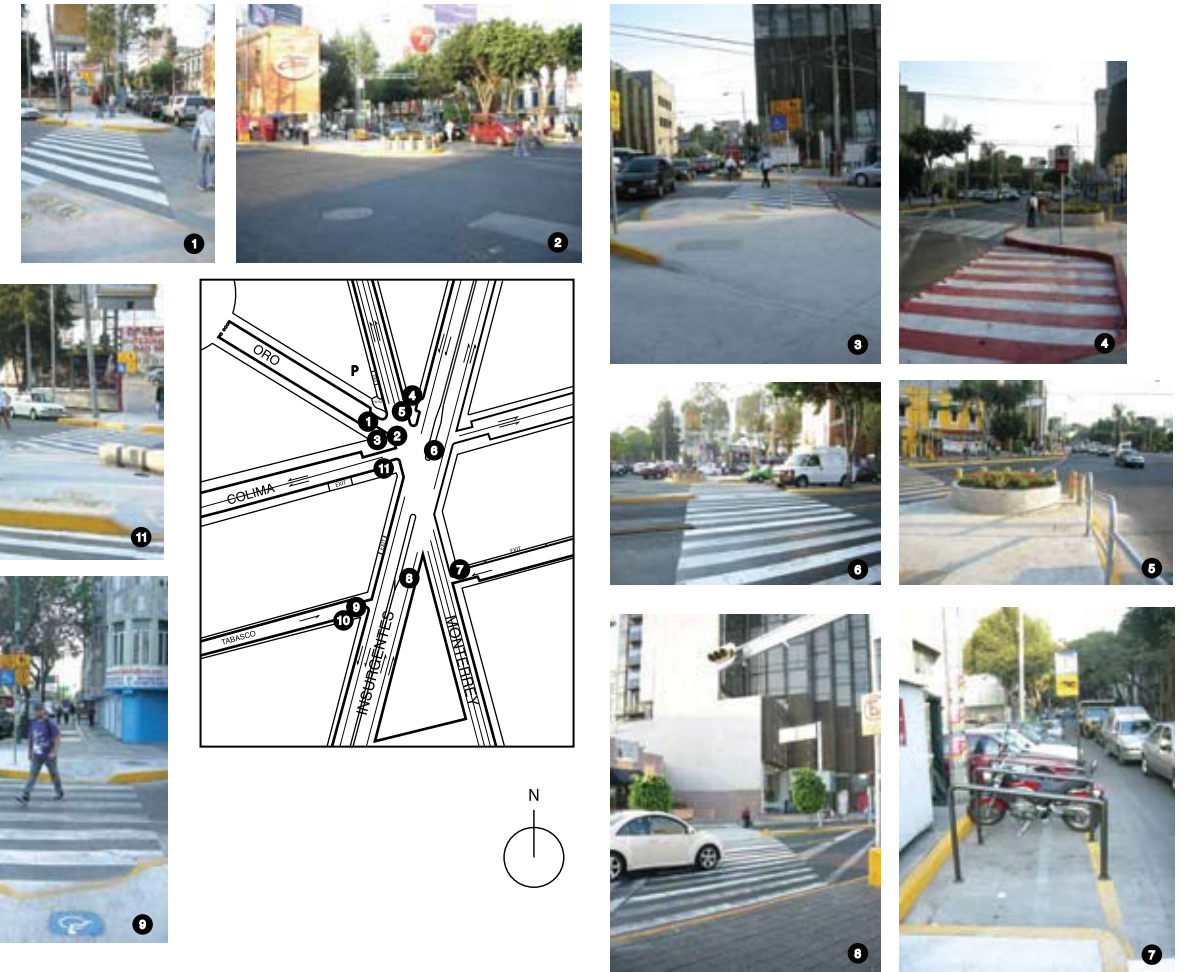
13. Inclusive sidewalks - All curb extensions are designed with handicapped ramp systems, tactile sidewalks and corresponding signage.

14. Functional sidewalks - The curb extensions include rounded or 90 degree corners, serving to illustrate one or two way streets and the direction the flow of traffic is moving. Where turns onto alternate streets are permitted the extension is curved in order for cars to turn comfortably and safely, on the other hand when turning is not permitted, the curb extension ends at a right angle, complicating wrong way turns. This assists drivers in determining the direction of traffic flow without the use of signage, acts as a deterrent for illegal turns and helps the pedestrian determine which way he/she must look before crossing the street.

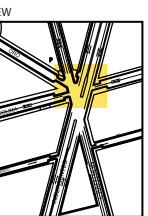
Current site advances



- 1 590 sq. mt. of new curb and pedestrian areas constructed 240 sq. mt. pending  
Total of 830 sq. mt. of pedestrian areas
- 2 Old crosswalks replaced (linear distance was 242m) with shorter crosswalks (distance of 108 m)
- 3 19 accessible ramps completed
- 4 182 sq. mt. of greenery planted  
345 sq. mt. pending  
TOTAL of 527 sq. mt. of new greenery
- 5 Old signage refurbished or 40 new signs installed.
- 6 Built parking with respective signage include:  
2 Official vehicle spaces  
3 Bicycle rack areas  
3 independent motorcycle areas



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