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Title of graduation project: The Golden Rush and the EPJ International Train Station

1. “The relationship between the theme of the graduation lab and the subject chosen by the student” and “The relationship between the methodical line of approach of the graduation lab and the method chosen by the student”

This project is part of the graduation studio “Borders – Architecture of Violence”, started in September 2014 in the chair of Complex Projects. The main topic of the studio was to take an architectural position in the context of the American-Mexican border.

The final design is the result of different levels of collaboration. The studio, composed by fifteen people, worked as a group to “unpack” the region in different layers of information. The outcome of this layering and mapping process was collected in an Atlas, that constituted a common knowledge to base the individual research. In the Atlas more objective issues, provided by data analysis, were combined with social and cultural information and with the experience of the field trip.

As a common conclusion to the analysis, we recognized the deep fracture between the region, that is not only divided by two countries, but it is also locally fragmented. The whole group shared the vision of a undeveloped potential, and set as a goal the design of a new political, economical and logistical approach. The aim was to make the trans-border area work as one, providing the region with a complete set of tools to be competitive with other macro-regions in the continent.
From these premises the personal research started as part of a common plan. Each project was the result of a continuous interaction and contamination with the whole group, but it was at the same time approached individually and individually developed. Each one of the studio members developed a different aspect of the regional plan, and later delved into the specific reality of one of the border cities. In the frame of a collaborative urban strategy an individual project was later developed.

My focus was in particular on the lack of efficient infrastructure for mobility and transportation, and how they are a mirror of an ideological condition. The investigation resulted into the design for a magnetic levitation train line on the border, a new urban strategy for transportation and mobility in the cities of el Paso and Juarez, and a shared facility for train station and border crossing for the twin cities previously mentioned.
2. “The relationship between research and design” and “The relationship between the project and the wider social context”

The relation between the analysis and the final outcome of the design was continuous and specific in every different scale. Each level of intervention was provided and motivated by the result of the research.

XL- Regional Scale

As presented in the research book, the history of the border itself is quiet controversial, and so is the relationship between Mexico and United States. The actual situation is the result of many historical acts of violence, and it perfectly mirrors how contradictory governmental strategies are.

On one hand the government of the United States started in 1991 the construction of a fence, to prevent illegal immigrants and smugglers to cross the border. This initiative was accompanied by a gradual and constant worsening of perception, powered by the increase of the drug wars and the escalation of violence in the north of Mexico. Facing this issue the militarization of the border increased, and after the Secure Fence act (2006) and the Obama’s immigration reform in 2014, the border became one of the most surveilled places of the planet.

On the other hand Mexico always provided cheap labor force for their American neighbors, which tried to protect that privilege with the institution of the NAFTA trans-border fiscal corridors. The NAFTA initiative led to the construction of state of the art North south infrastructure to freely exploit Mexican labor in the Maquiladoras facilities, but prevented the realization of fast East-west connections. As a consequence the trans-border region is at the moment extremely disconnected, forcing the inhabitants to very long travelling times and unsustainable means of transport. Fast and efficient connections have proved to be fundamental in the growth of other macro-regions in the continent, and therefore they have to be regenerated to make the whole area competitive.

Basing on the information collected in the atlas and implementing the data with personal research, I designed a new trans-border train line, which adopts Mag-lev technology to increase cost efficiency and reduce travelling time. The new line was planned as part of a network, connecting main urban and commercial hubs in the region with existing and planned tracks in the rest of the continent.

Moreover the train line was also designed from an ideological point of view, in order to face the negative perception emerged in the research. Therefore the train was coated in gold and it was named “Golden Rush” to recall a shared positive history between the two counties and the possibility of a common successful future.
The twin cities of El Paso and Juarez are not only the geographical center of the border region, but they also arelogistically and ideologically very central. Both cities count more than one million inhabitants and the number is about to double in the coming 20 years. Moreover they present an extremely organic urban fabric, that suggests an intense interaction between the two sides of the border, even if there is nowadays an extremely critical situation. El Paso is in fact one of the safest cities in the US, while Juarez was the center of the drug wars and it became in 2006 the most dangerous city in Mexico. As a consequence the crossing from the American side it is extremely reduced while the infrastructural interaction between the two cities it is almost inexistent.

To face the population growth and boost shared management of facilities I designed a new plan for train traffic in the city. The proposal consisted of a new freight hub in the border crossing of Santa Teresa, shared and managed by the two countries, in order to eliminate from the cities goods traffic – that consists now the main traffic in the urban area. The land regenerated would be re-assigned to absorb the upcoming growth and to reinject a new interactive system of mobility in the city. The Golden Rush and the new train lines designed for the regional plan were in this way integrated with a new urban metro lines, reusing part of the existing freight infrastructure. Moreover the research showed the possibility of placing additional train lines in the Rio Grande ditch, taking advantage of the very low water level. As a result the injection of the new lines would have been less invasive for the surroundings. Central hub and main connection for the new mobility systems was a shared train station in the city center of the two cities.
**M – The Chamizal Zone**

As emerged from the research the Chamizal area can be considered the symbol of the new border region. These area, now on the Mexican side, was historically object of a very long political dispute that ended in 1964, when the concrete ditch for the Rio Grande was built and the border was finally set. The river was in fact used as track for the border but it have various times changed its path during the years, generating political disagreements. The Chamizal is the leftover of these changes. It is now mostly disconnected from the city of Juarez and left as a park.

For its nature of Urban Island and for its ideological value it have been chosen to be the representative area of the new border region, hosting governmental buildings, as well as community centers and new residential developments. The design have been arranged to turn the Chamizal zone, from a urban limit, into a social attractor. The EPJ international train station is part of the new masterplan and it consists of main mobility hub of the area.

**S – EPJ International Train Station**

Basing on the analysis, the location for the project was selected in one of the areas left from the freight trains, in order to reuse part of the existing infrastructure and create a social attractor for the city. The area chosen it is in proximity of both city centers, on the aster edge of the Chamizal zone. Case studies analyzed showed how train stations and border crossings tend to be isolated systems, closed to urban interaction, therefore the program previously set have been rearranged to include more social attractors.

That resulted into an open ground floor, freely accessible from both sides, with railway museum on the American side and Covered Plaza on the Mexican side, in order to blur the limits of the open station and create urban continuity. Over the ground level, the national platforms and the Golden Rush headquarter are enclosed into a squared concrete volume, generic and neutral in terms of shape and materiality, in order to show no ideological positioning on site. The building is therefore defined “Generic Monument”. The volume is continuously perforated by the same openings every-where, which are later closed with different materials basing on the functions underneath. The only variation in the concrete body of the building , is the violent cut that celebrates the border and the Golden Rush international platforms placed in the ditch.
The whole building adopts passive climate systems developed from the analysis of historical typologies such as colonial buildings and vernacular architecture.