The Border

A Contextual Vacuum

P5 Complex Projects Border Studio

Carsten Smink

Structure

1. *Introduction*
2. *Research*
3. *Design*
4. *Reflection*


Juarez - El Paso 2,5 mil.

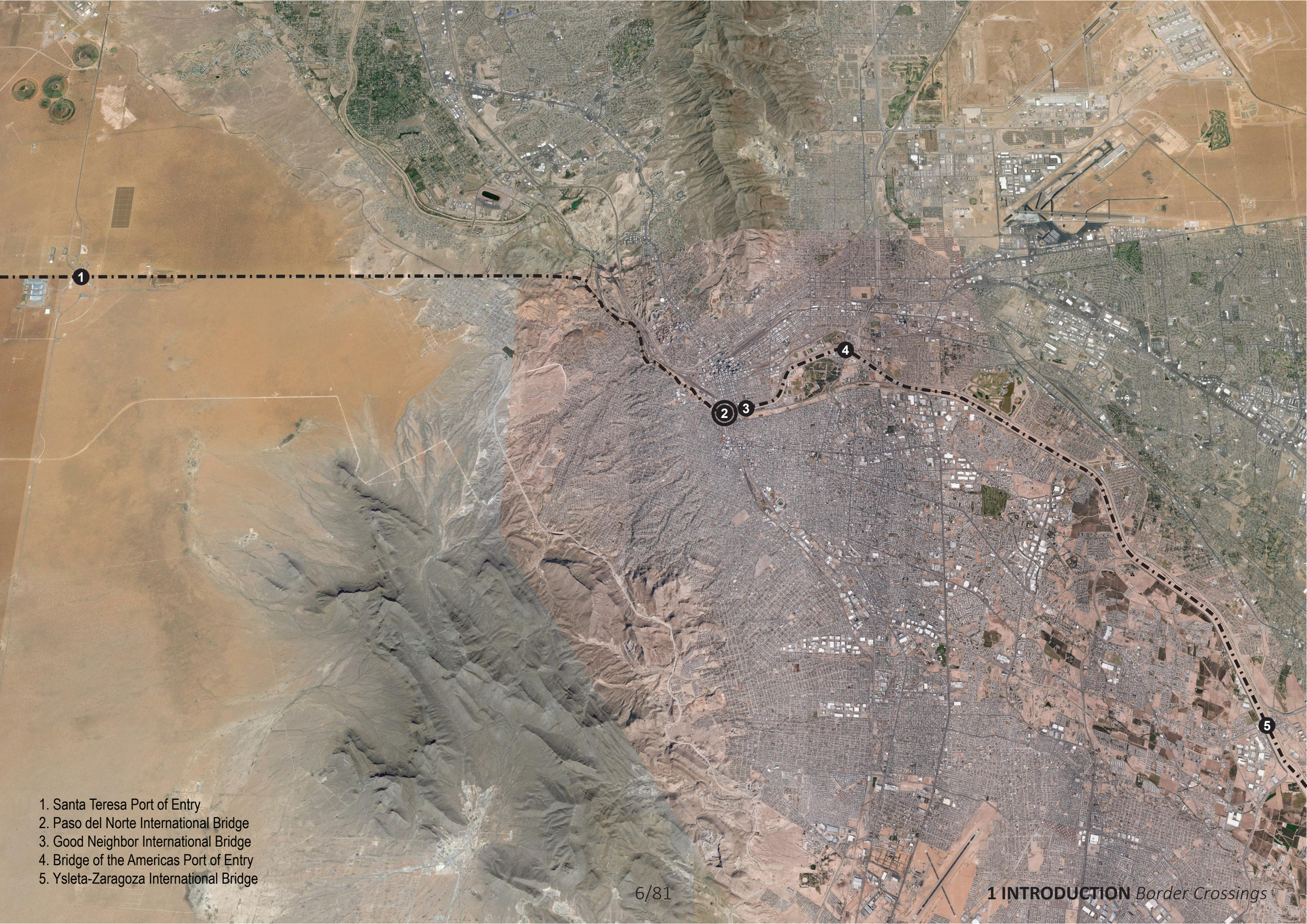

Phoenix 3,6 mil.
Tijuana 1,8 mil.
6:30 hr.
12:30 hr.
9:20 hr.
Dallas 5,1 mil.
Juarez - El Paso 2,5 mil.
12 hr.
Monterrey 4 mil.

El Paso, U.S.

679,000

1,351,000

Juarez, Mexico



1. Santa Teresa Port of Entry
2. Paso del Norte International Bridge
3. Good Neighbor International Bridge
4. Bridge of the Americas Port of Entry
5. Ysleta-Zaragoza International Bridge



Interests:

The border crossing experience

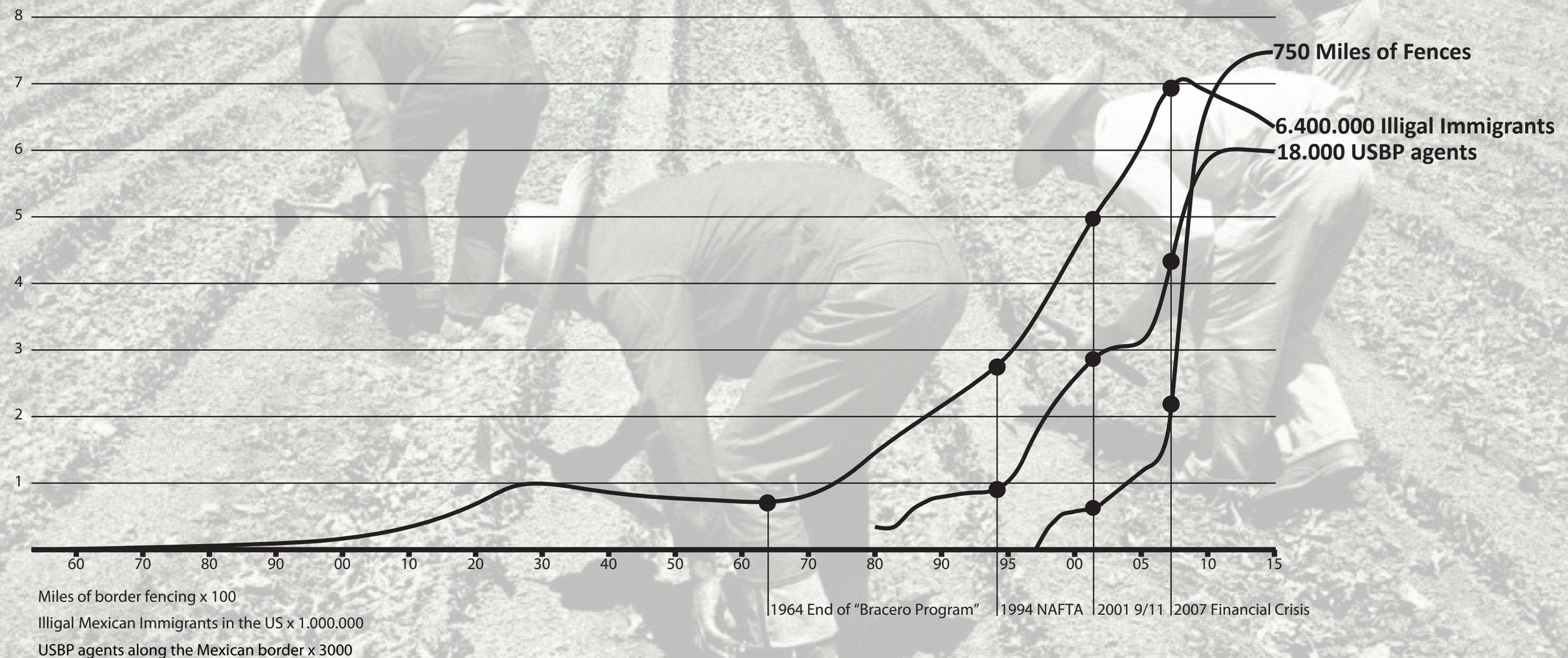
The border as seperator vs connector



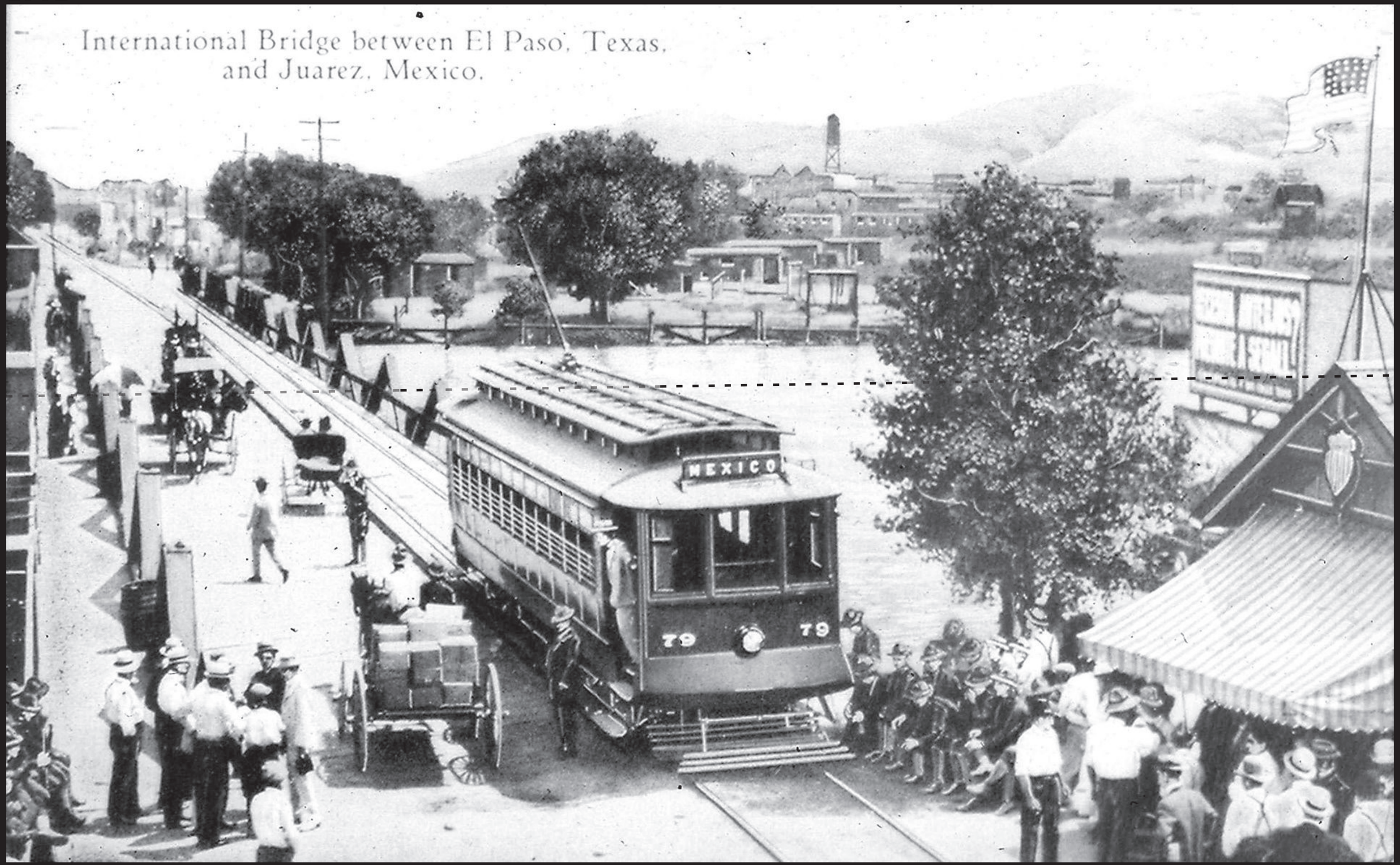
2. Research

1. *The Dynamic Border*
2. *Potentials of the Twin-City*
3. *The Border Community*

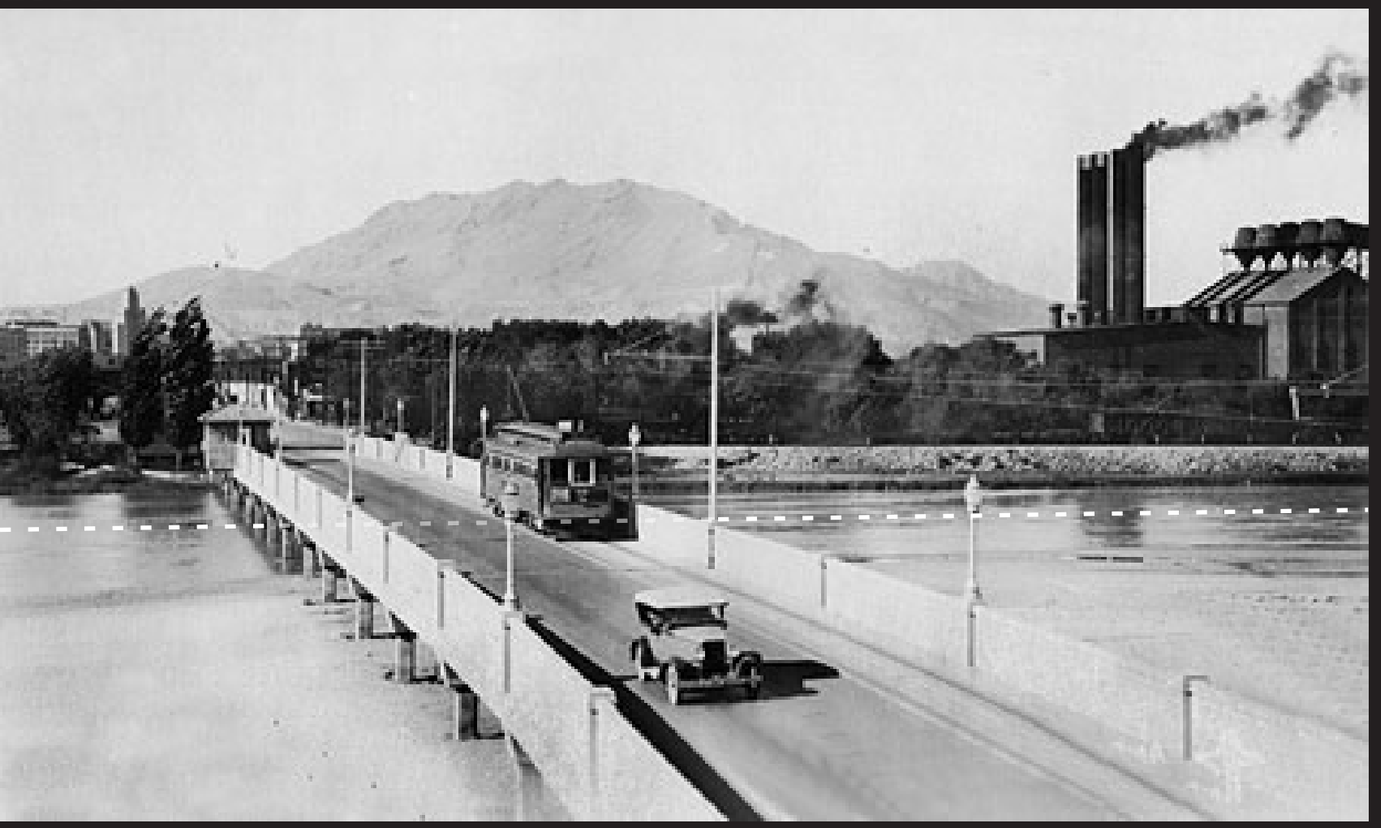
The US-Mexico border in recent history



1902


International Bridge between El Paso, Texas,
and Juarez, Mexico.
MEXICO
79
79

1930s



1940s



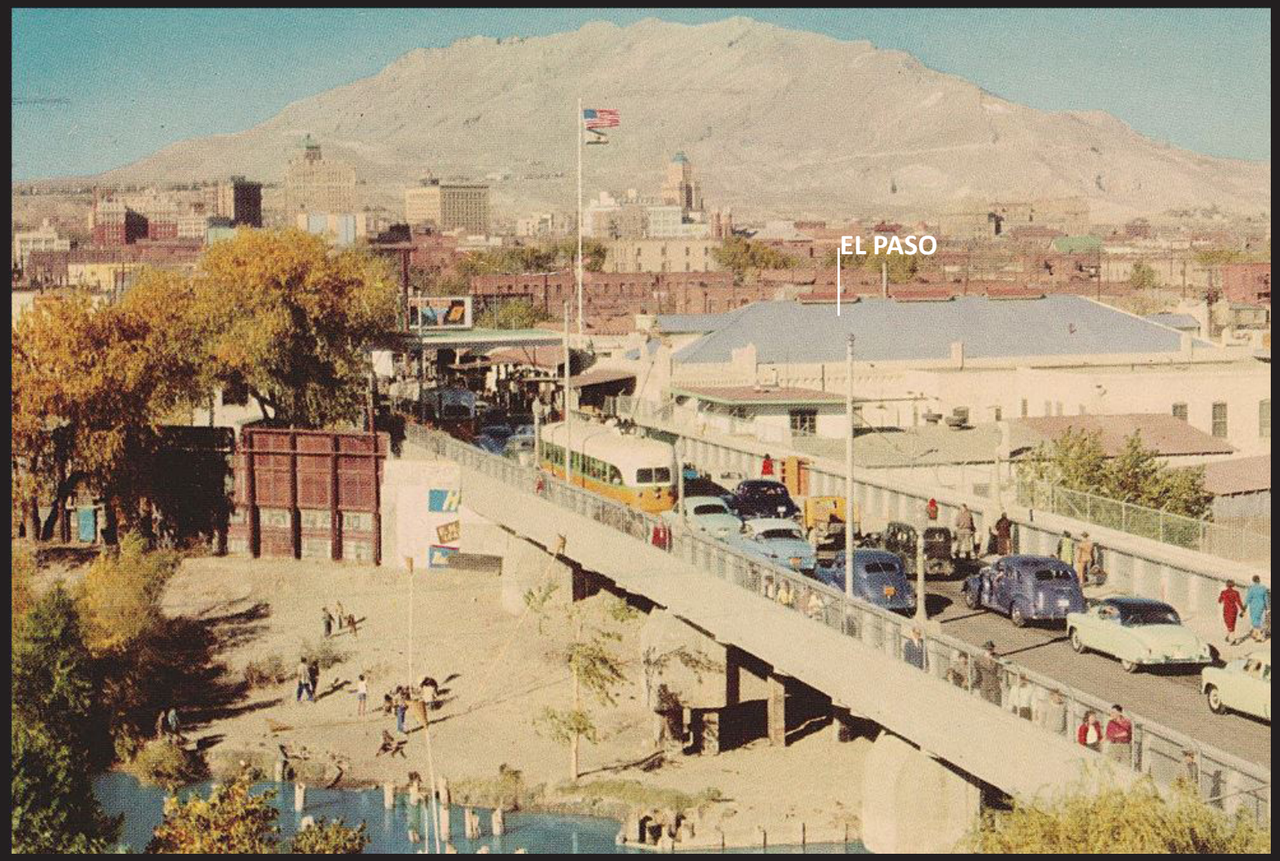
1950s


BIENVENIDOS AMIGOS
NATIONAL CHAMBER OF TO
AV. MEJIA 118 PI
TEL. 2
JUAREZ

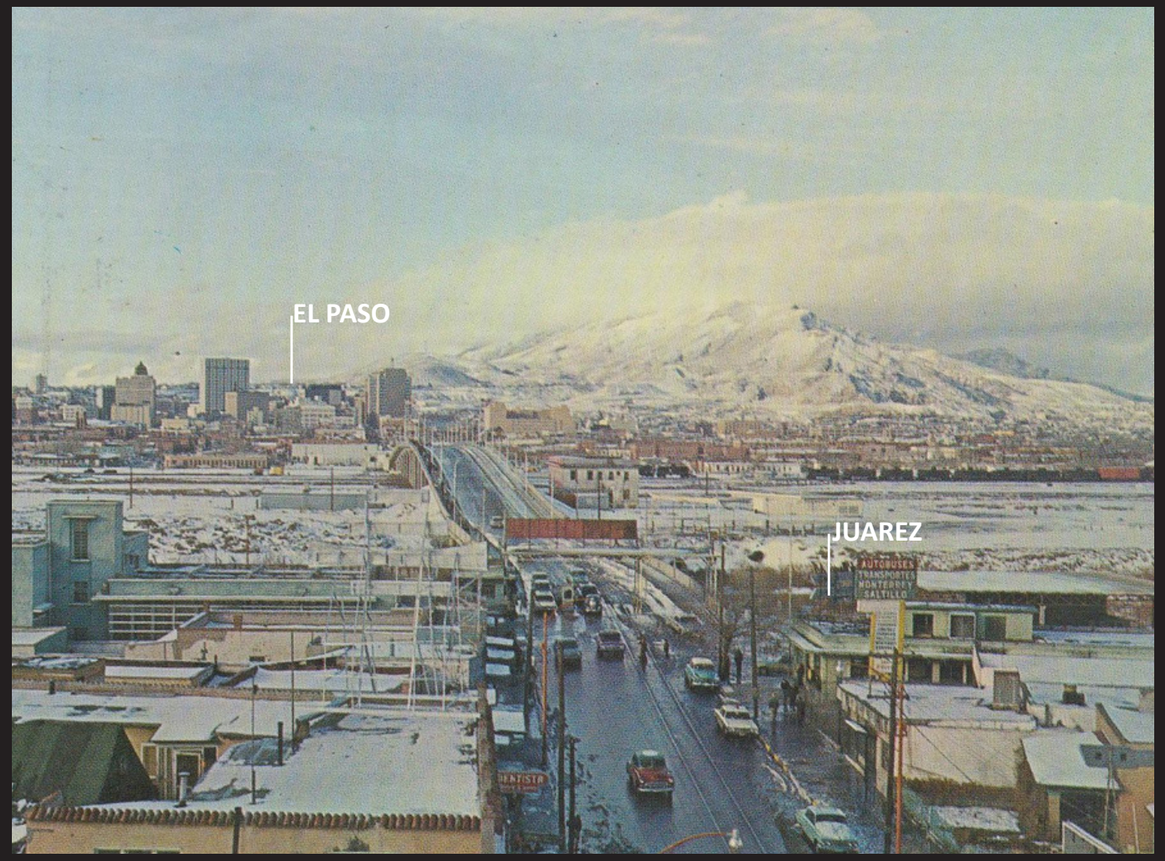
1958


TEQUILA
LICORES
JUAREZ
EL PASO
ADIOS
AMIGOS
COME BACK AGAIN
Patrocinio de Turismo de Cd. Juárez
BACARDI
ENTRAN
TAXI
RENDAIN

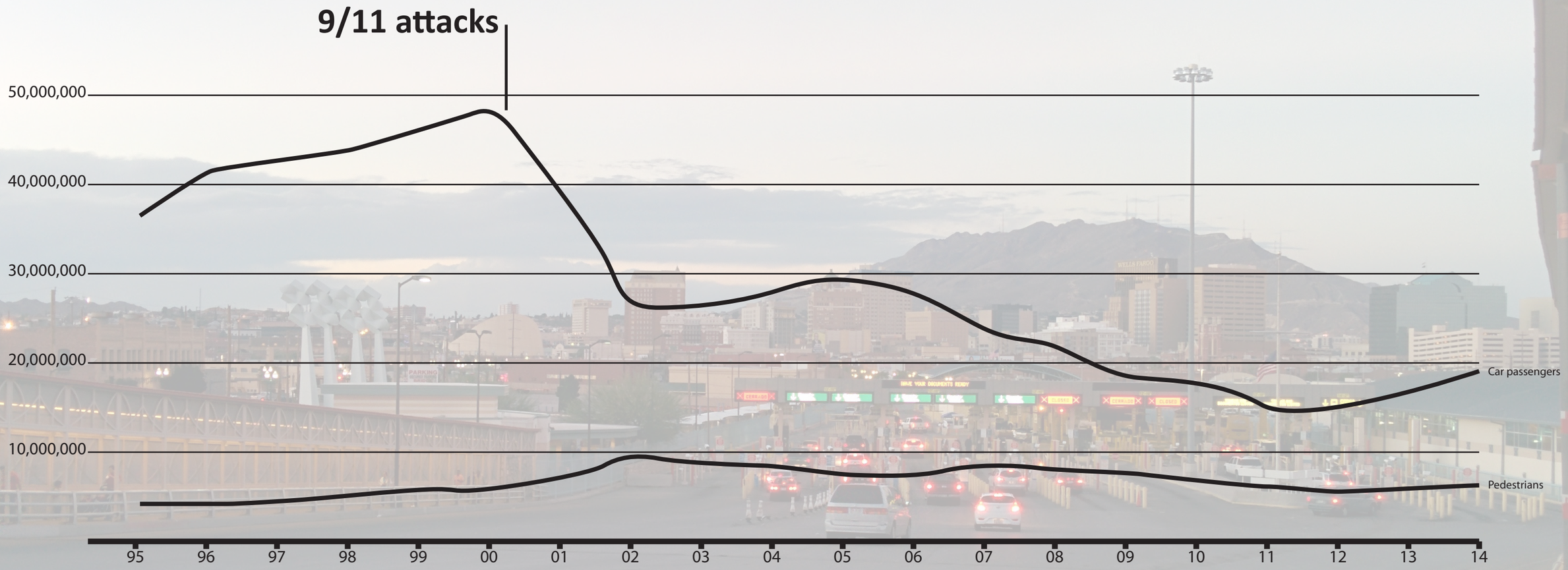
1958


EL PASO

1967+


EL PASO
JUAREZ
AUTOBUSES
TRANSPORTES
MONTERREY
SALTILLO

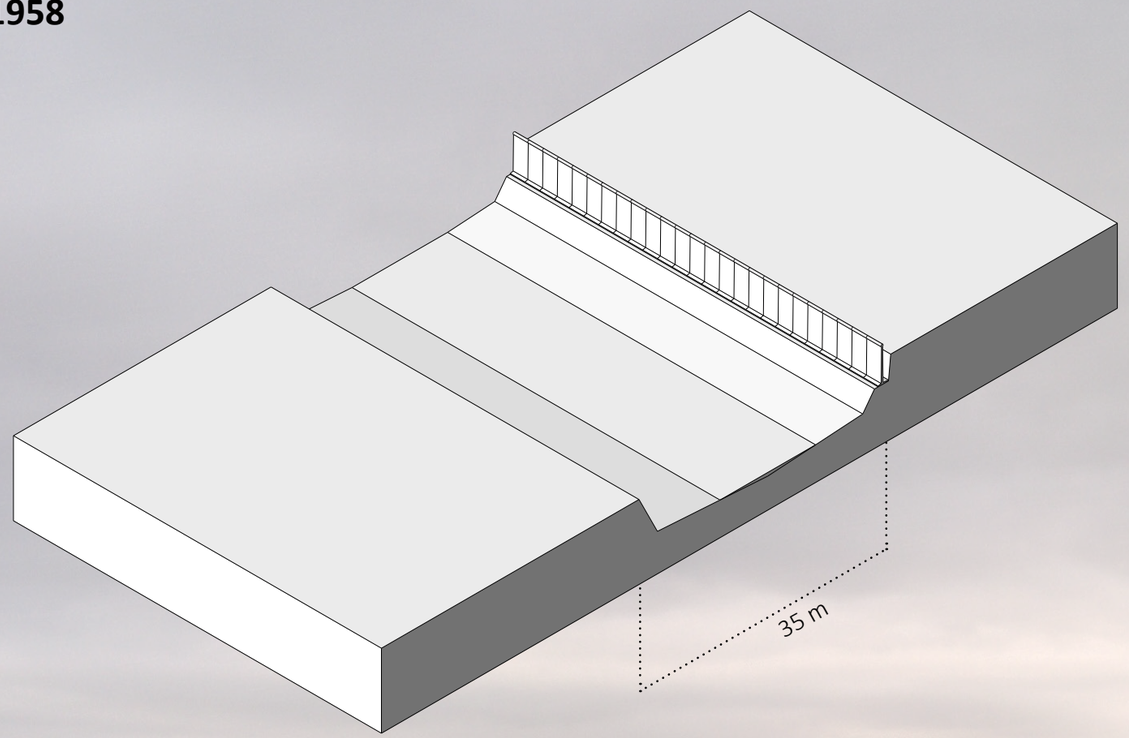
ANNUAL CROSSING EL PASO



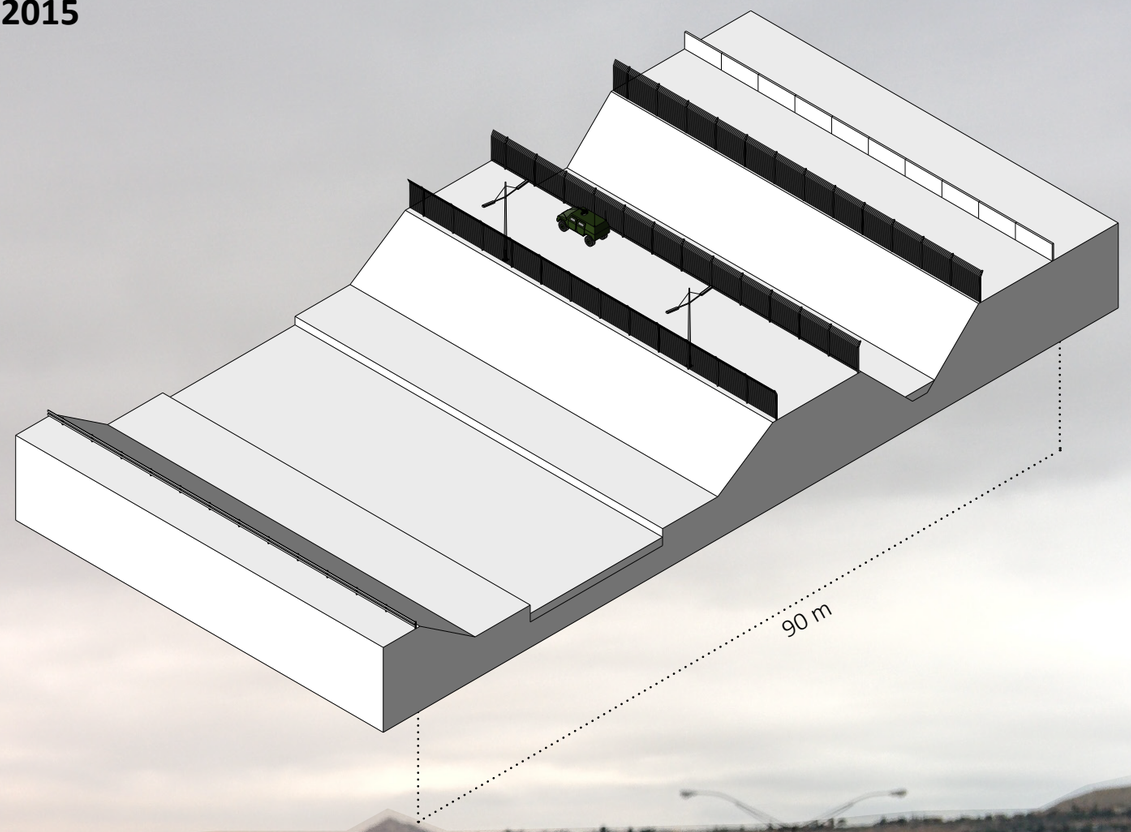
2015



1958

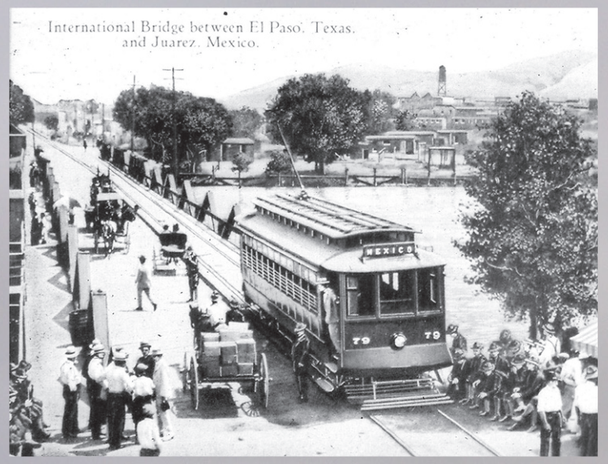


2015

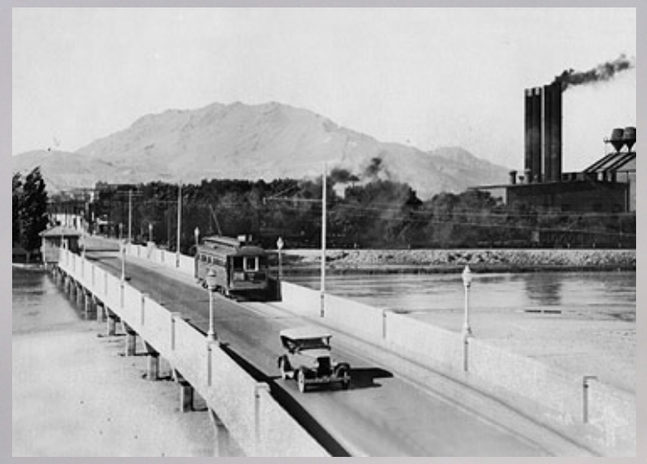



El Paso, U.S.
Juarez, Mexico

1902



1930



1958



2015



The architecture of the border is a built expression of and shaped by its binational social, political & economical context and so it is very dynamic and usually reactive. Can it play an active role?

2. Research

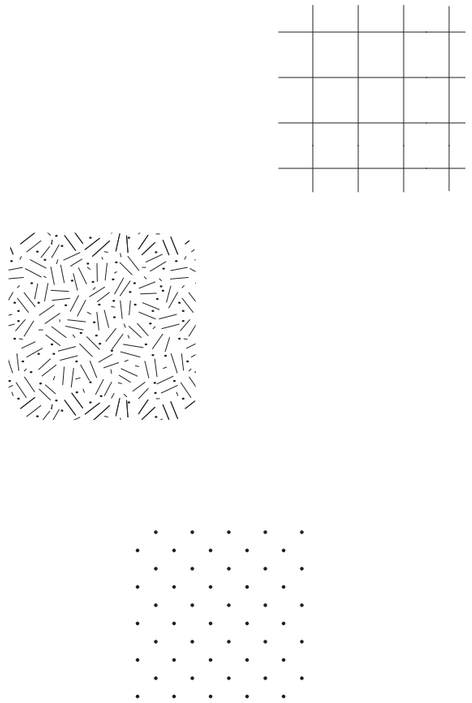
1. The Dynamic Border

2. *Potentials of the Twin-City*

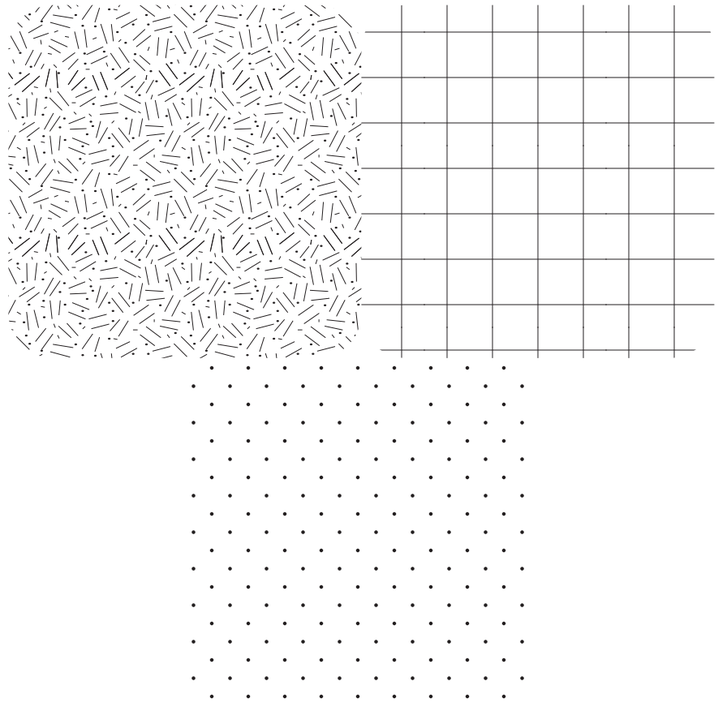
3. *The Border Community*

A national border is a place where differences, in culture, policies and language are juxtaposed, potentially creating a very diverse and rich environment.

Difference

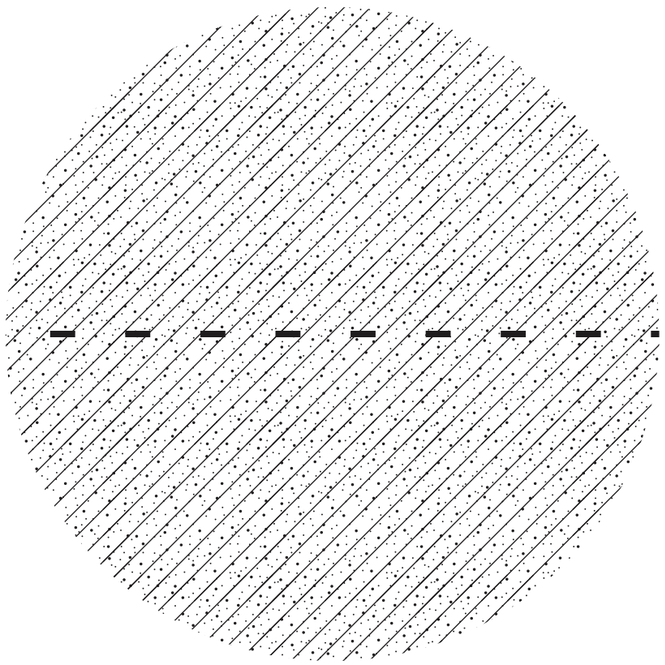


Border

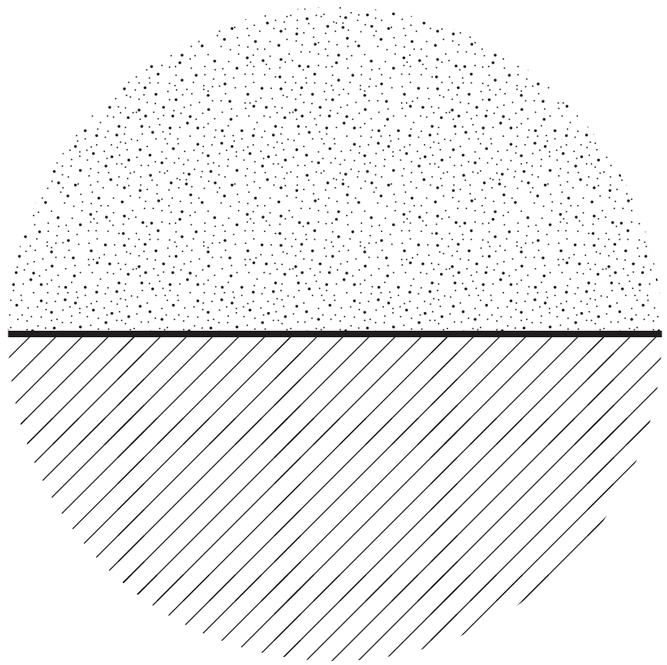


“Borders need resistence and porosity” - Sennet, 2004

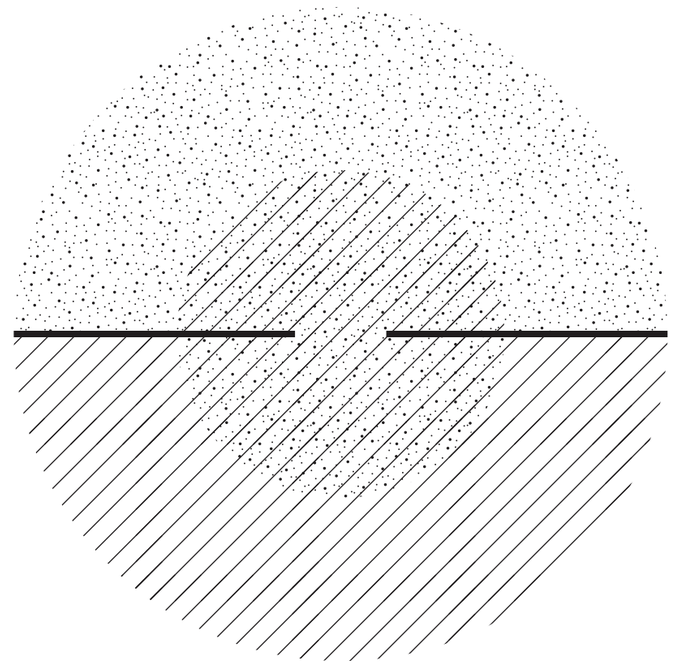
Porosity

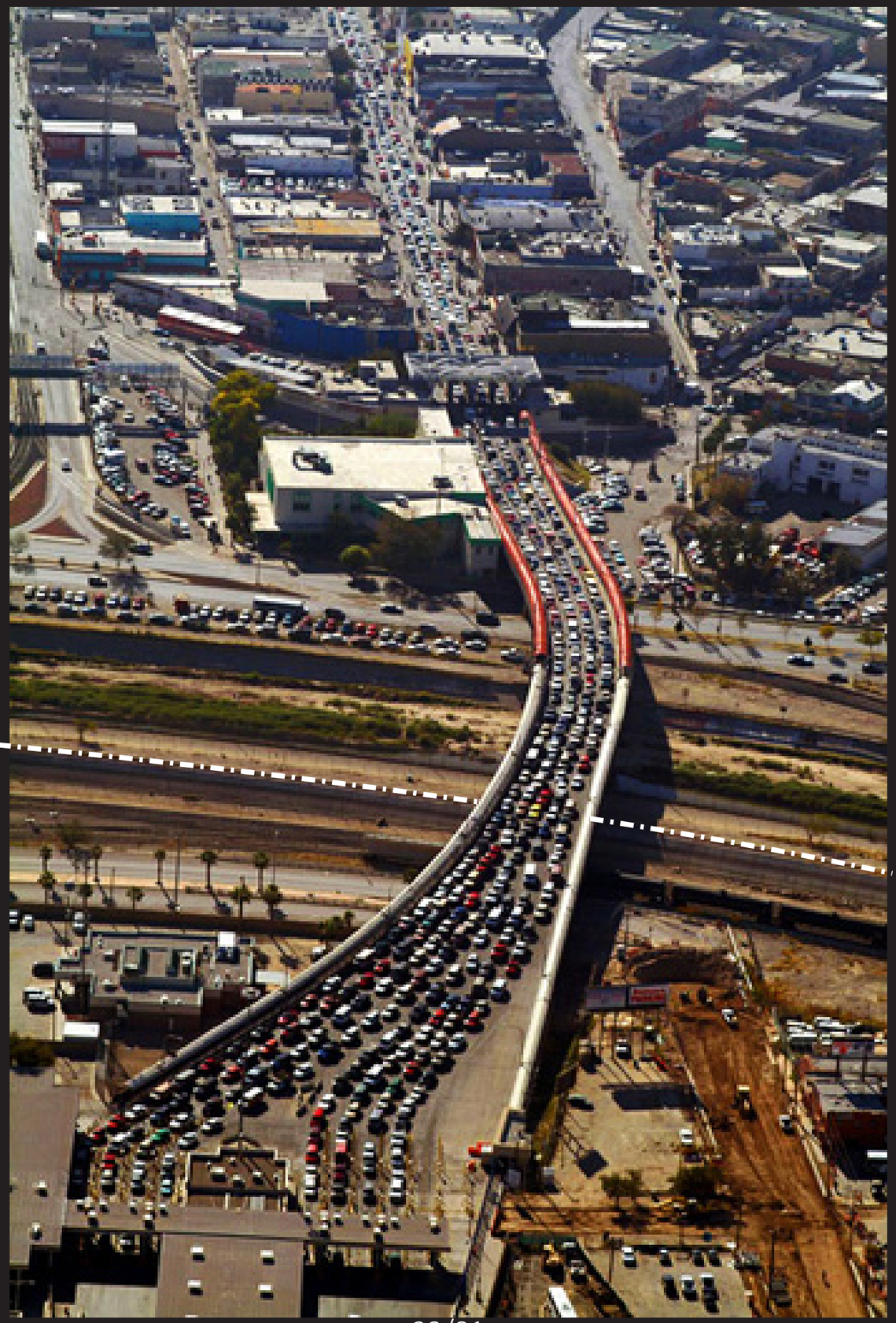


Resistence



Resistence & Porosity





Juarez, Mexico

El Paso, U.S.A




620 Meter

Cars





Pedestrians





The Border





Abandoned EU-Checkpoints by Jozef Schulz

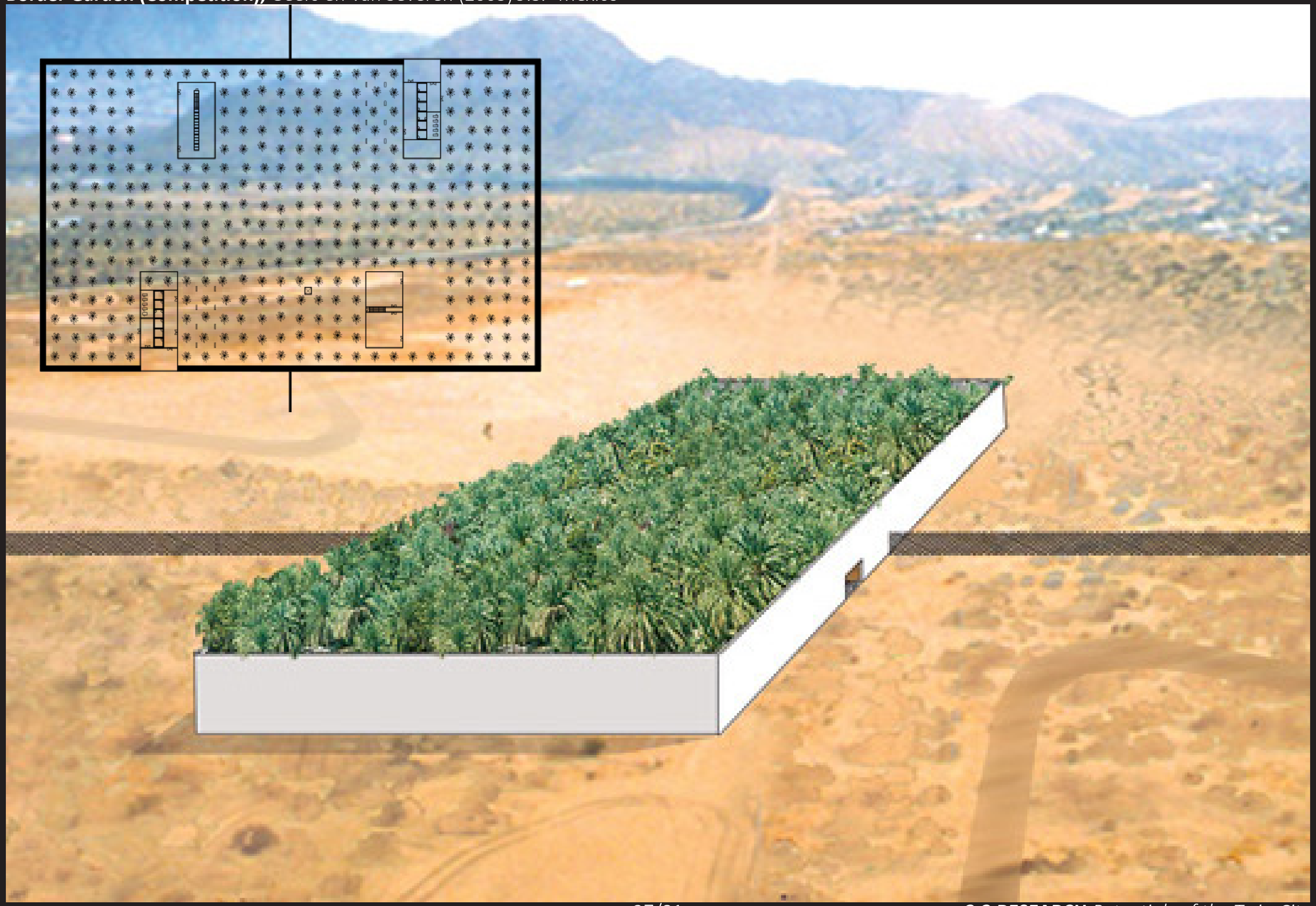






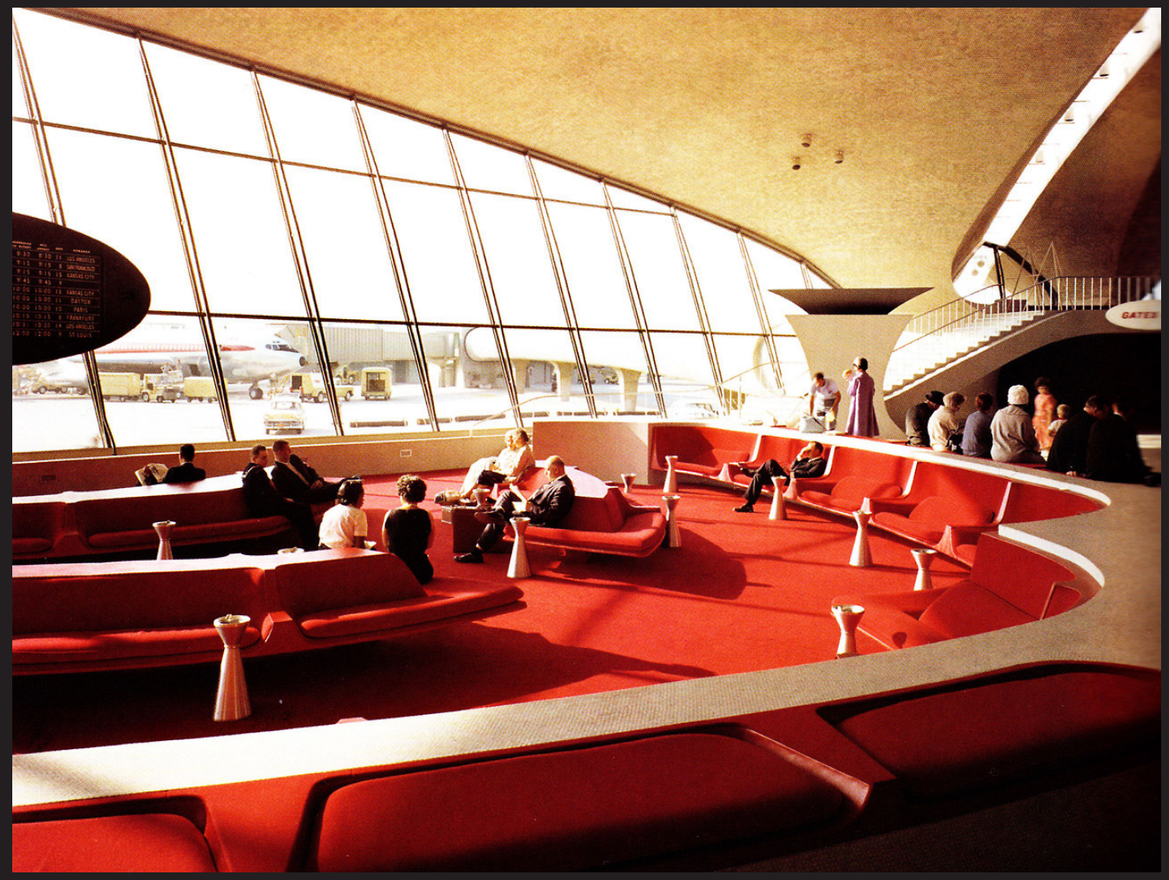


Border Garden (Competition), Geers en Van Severen (2005)U.S.- Mexico



TWA Flight Center, Eero Saarinen (1962), U.S.A.





Border architecture has the potential to:



Represent a country and its aspirations
Through architectural language



Take a critical postision, raise questions
By creating a strong and unexpected experience



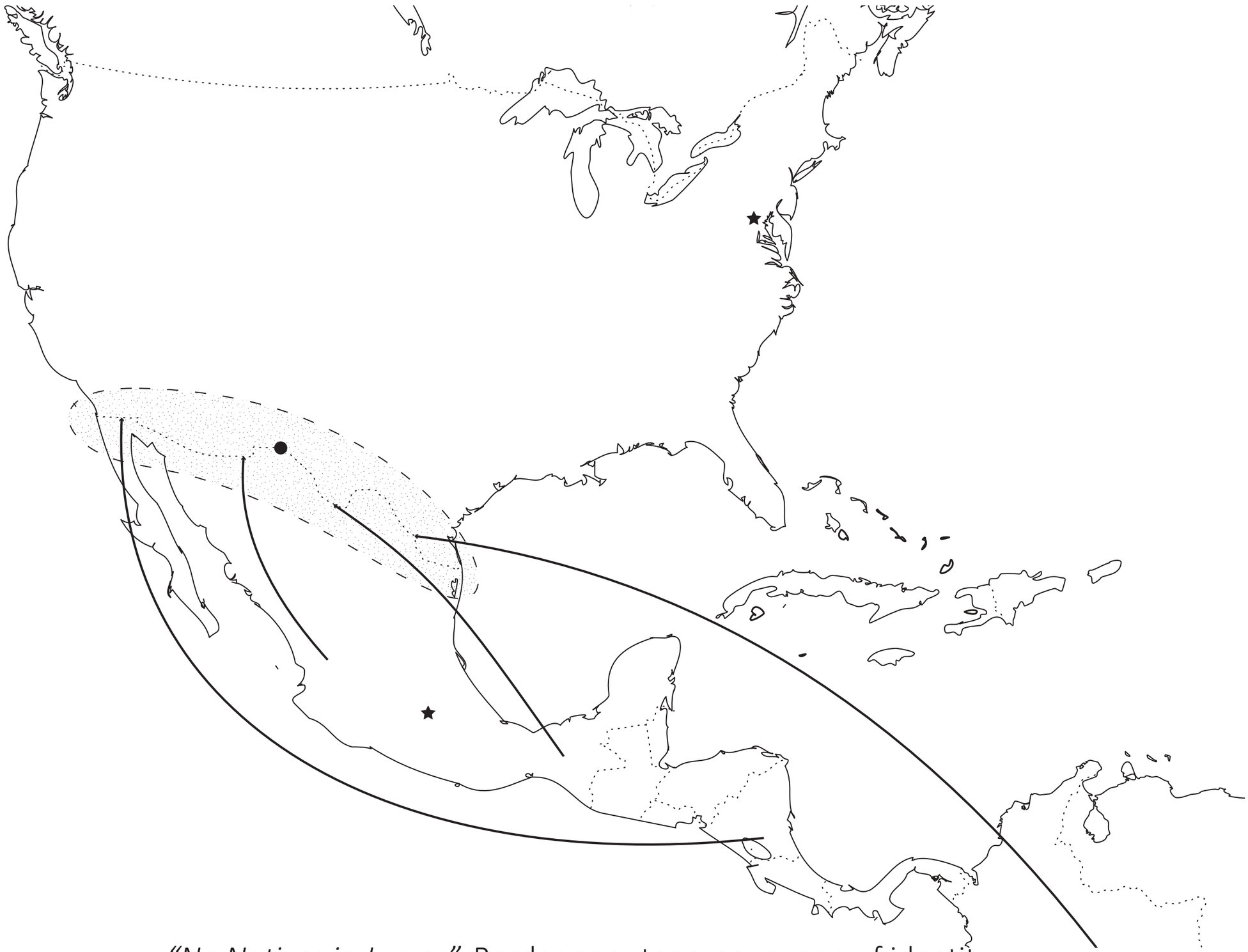
Accomodate waiting & regulate movement
By being suggestive and enticing in architectural language
By offering shelter and prospect

2. Research

1. The Dynamic Border

2. Potentials of the Twin city

3. The Border Community



“No Natives in Juarez”, Border as autonomous zone of identity

El Paso, U.S.

Juarez, Mexico

Paso Del Norte
2nd Bussiest in the US

9,600,000 (70%)

2,500,000 (22%)

Daily northbound traffic:
26,300 Pedestrians
6,850 People in P.O.V.'s

33,150 People/Day

REASON # 1 SHOPPING

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Accounts for 20 to 25 % of border-crossings

Mexican shopper crosses for: price, Quality and variety

American shopper crosses for: cost, medical products, hedonistic factors

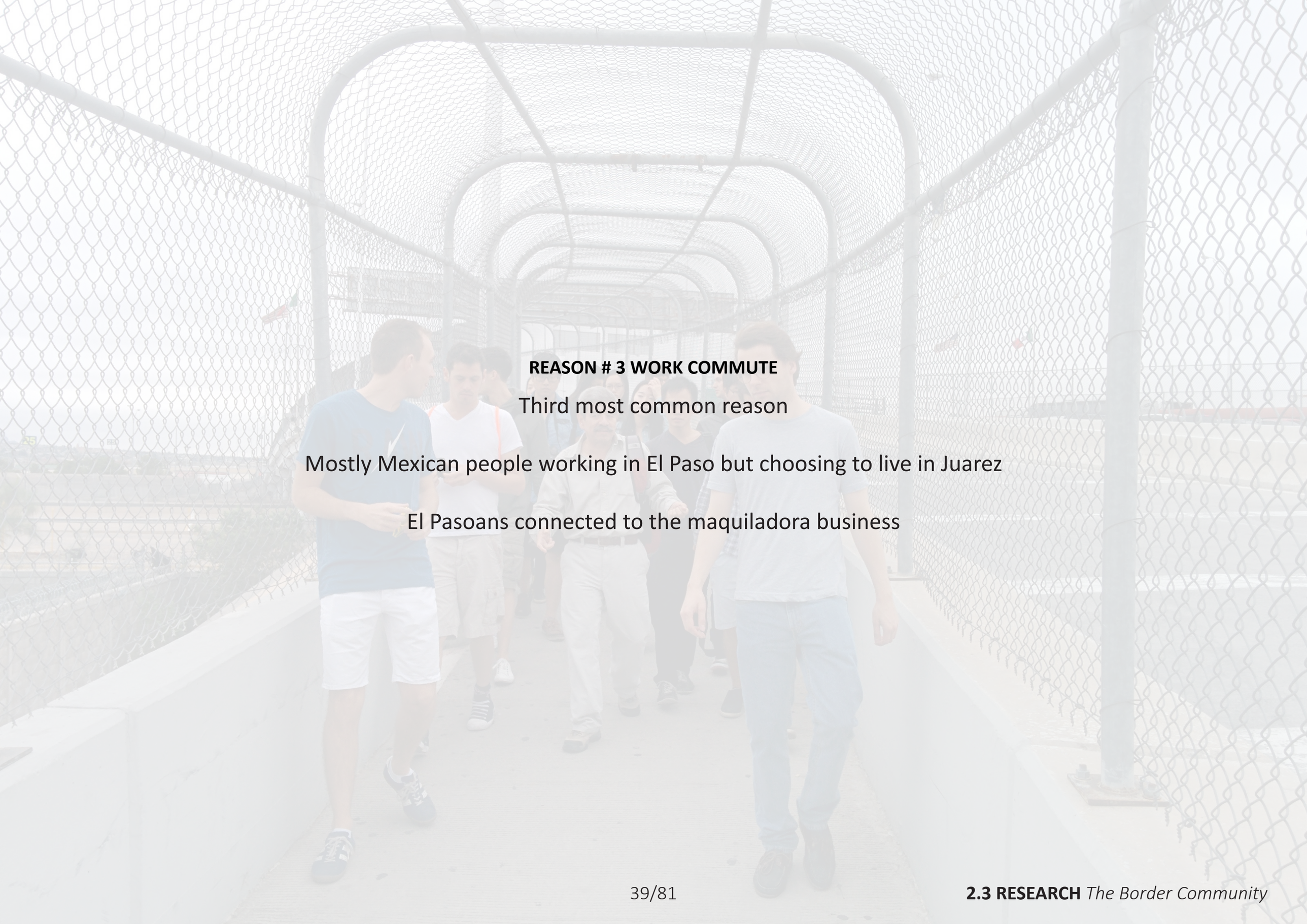
REASON # 2 SOCIAL VISITS

REASON # 2 SOCIAL VISITS

Second most common reason

El Paso 81.2% Hispanic, 4th highest in the U.S.

REASON # 3 WORK COMMUTE



REASON # 3 WORK COMMUTE

Third most common reason

Mostly Mexican people working in El Paso but choosing to live in Juarez

El Pasoans connected to the maquiladora business

REASON # 4 EDUCATION



REASON # 4 EDUCATION

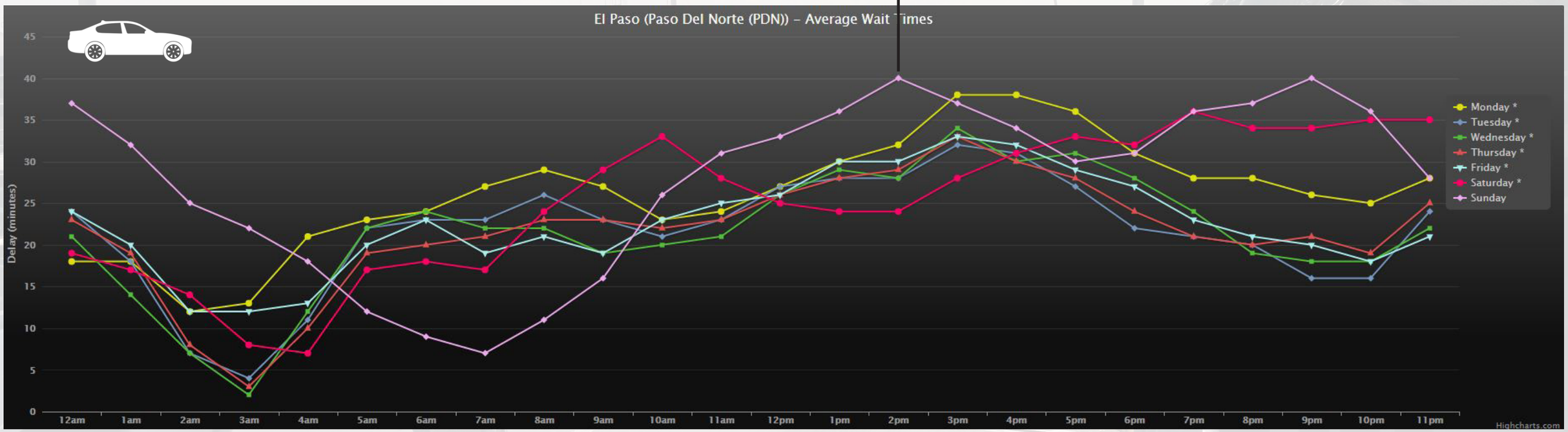
Forth most common reason

El Paso offers better education then Juarez.

Daily about 1.200 students cross back and forth on the Paso del Norte crossing

“*Once in El Paso, Arlet is on her own. Her mom doesn’t have a passport and can’t cross the border. If something happens to Arlet on the U.S. side, her mom couldn’t come and help.*” - Kate Mcgee

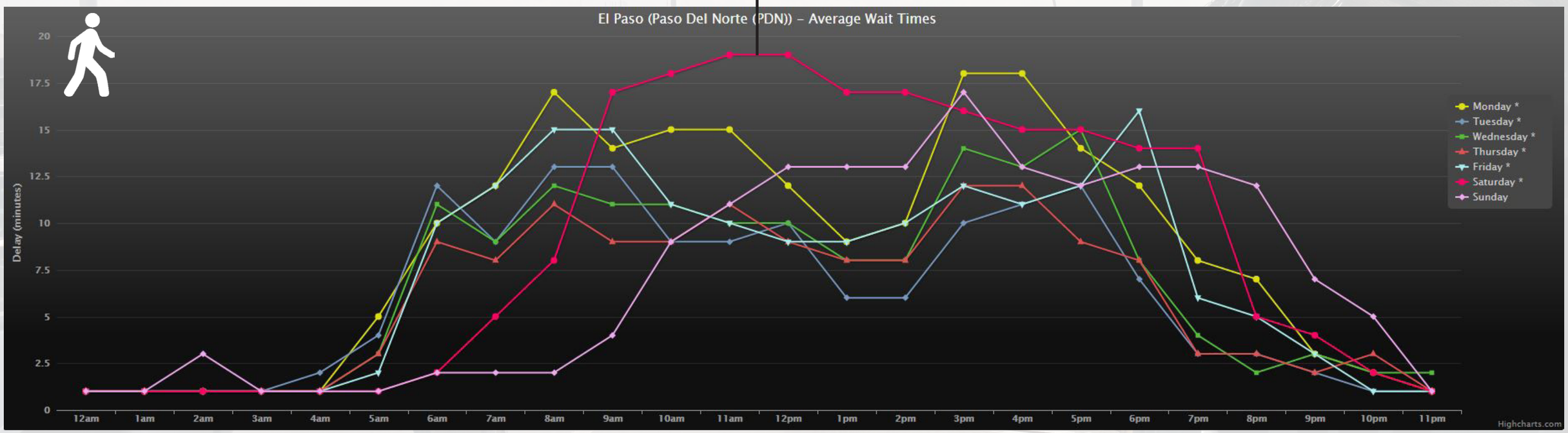
Car crossing delay



Max average wait time: 40 min
Longest wait times: 2PM Sunday, 9 PM Sunday, 3-4 PM Monday
Max lanes: 11
Max lanes in use 7

Pedestrian crossing delay

20 Min wait time



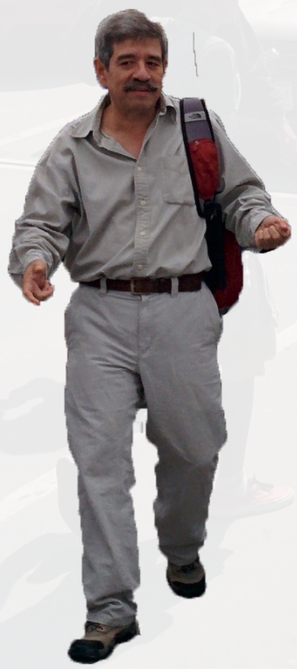
Max average wait time: 19 min
Longest wait times: 10 am- 12 pm Saturday, 9, 3-4 PM Monday Max lanes: 14
Max lanes in use: 10



1. SHOPPERS



2. SOCIAL VISITERS



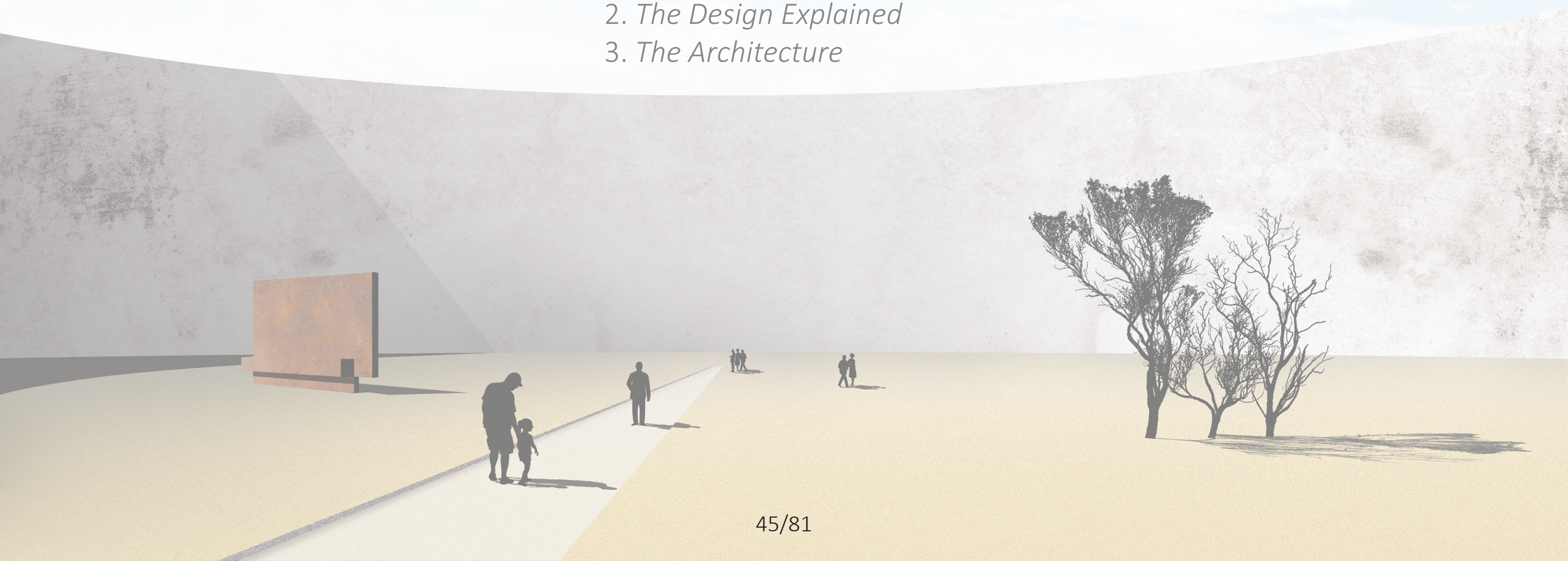
3. COMMUTER WORKERS



4. STUDENTS

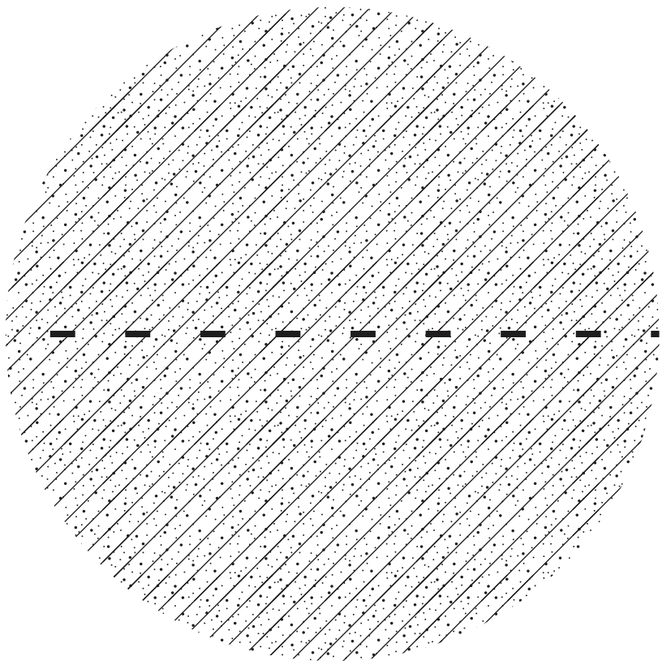
3. Design

1. *The Intentions*
2. *The Design Explained*
3. *The Architecture*



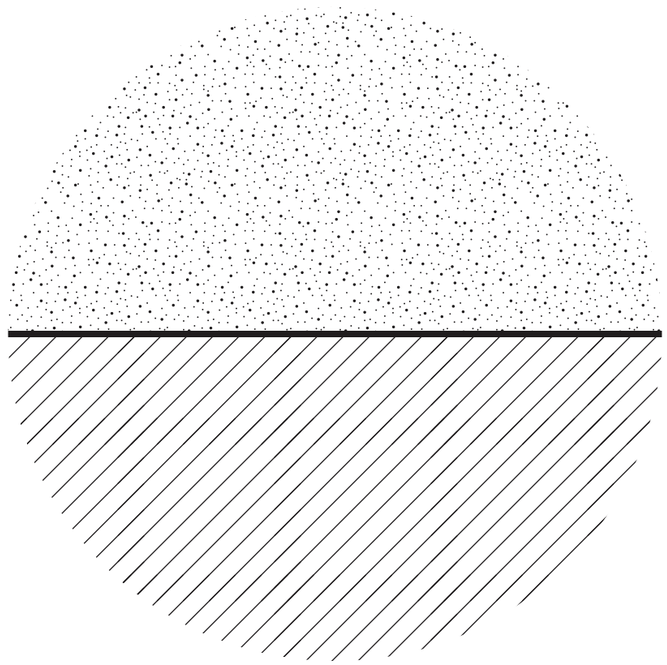
“Borders need resistance and porosity” - Sennet, 2004

Porosity



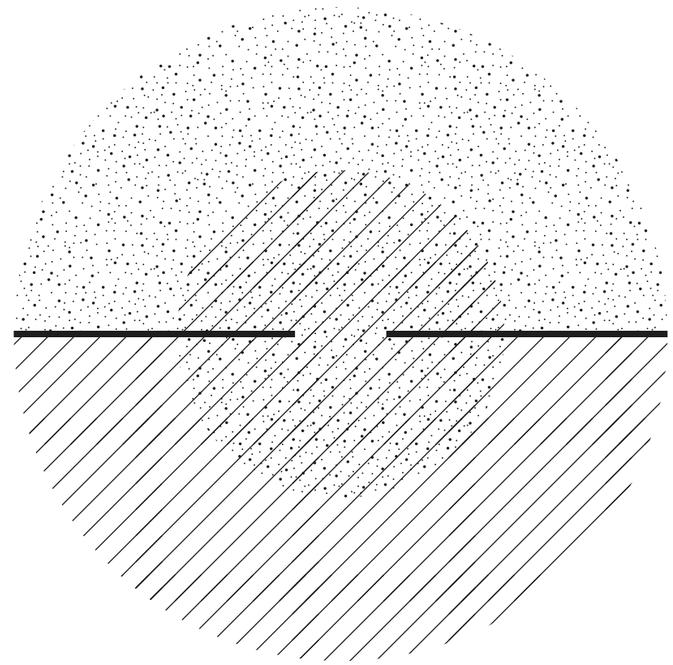
Homogeneity

Resistance



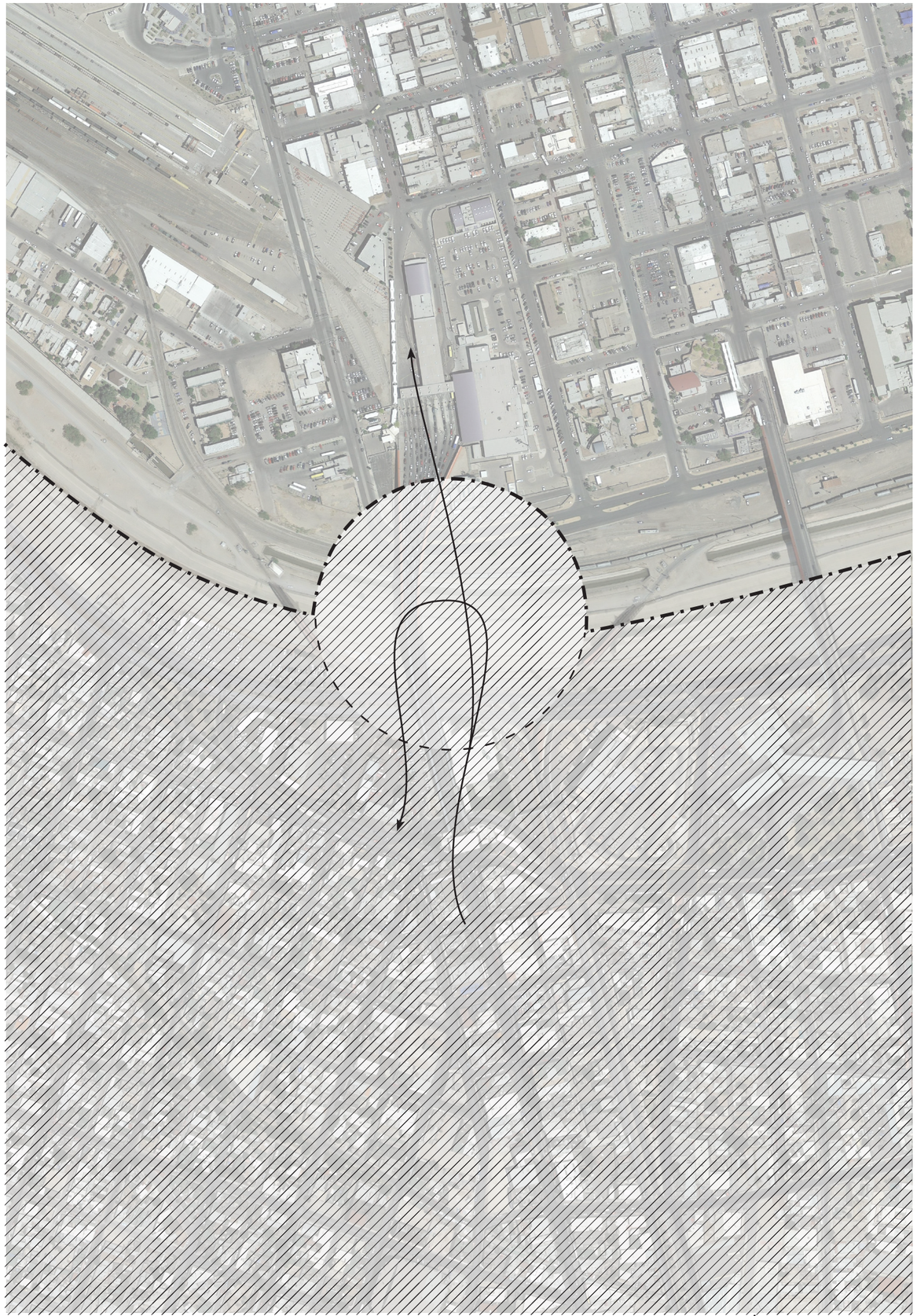
Isolation

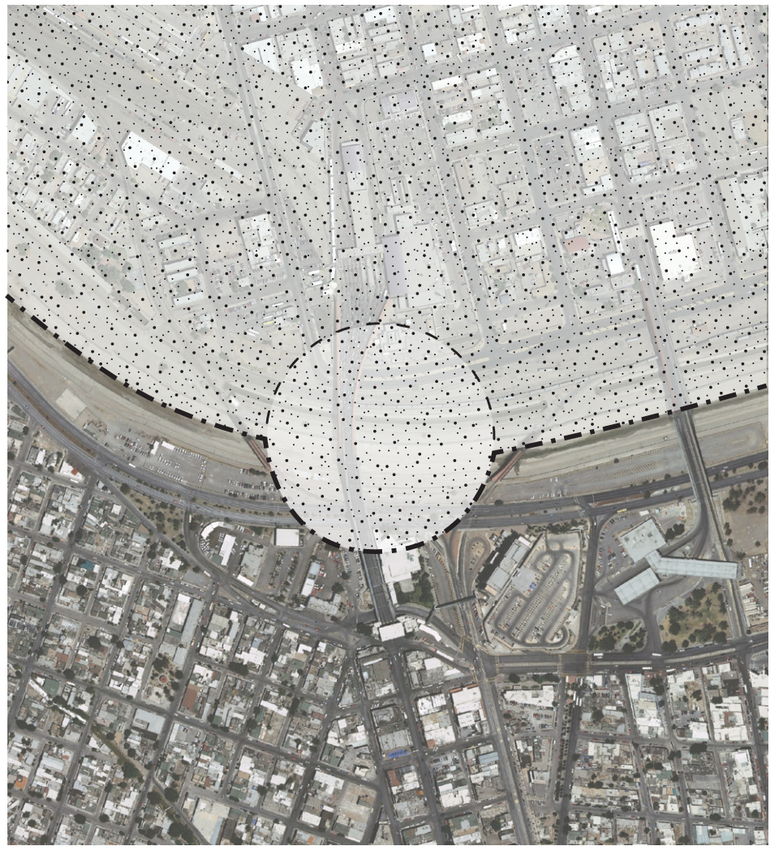
Resistance & Porosity

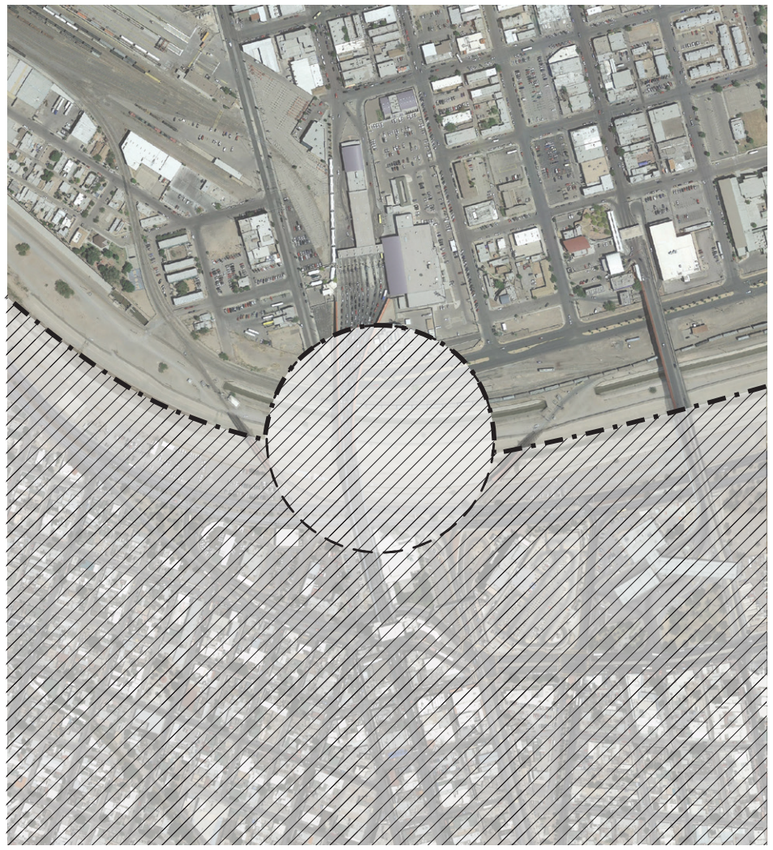


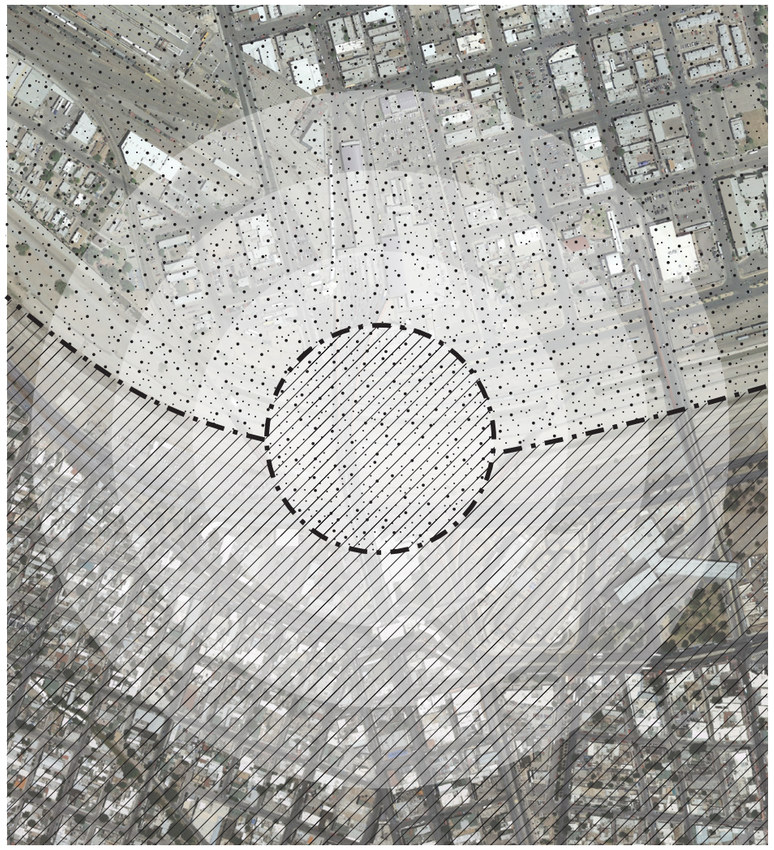
Authenticity & Diversity

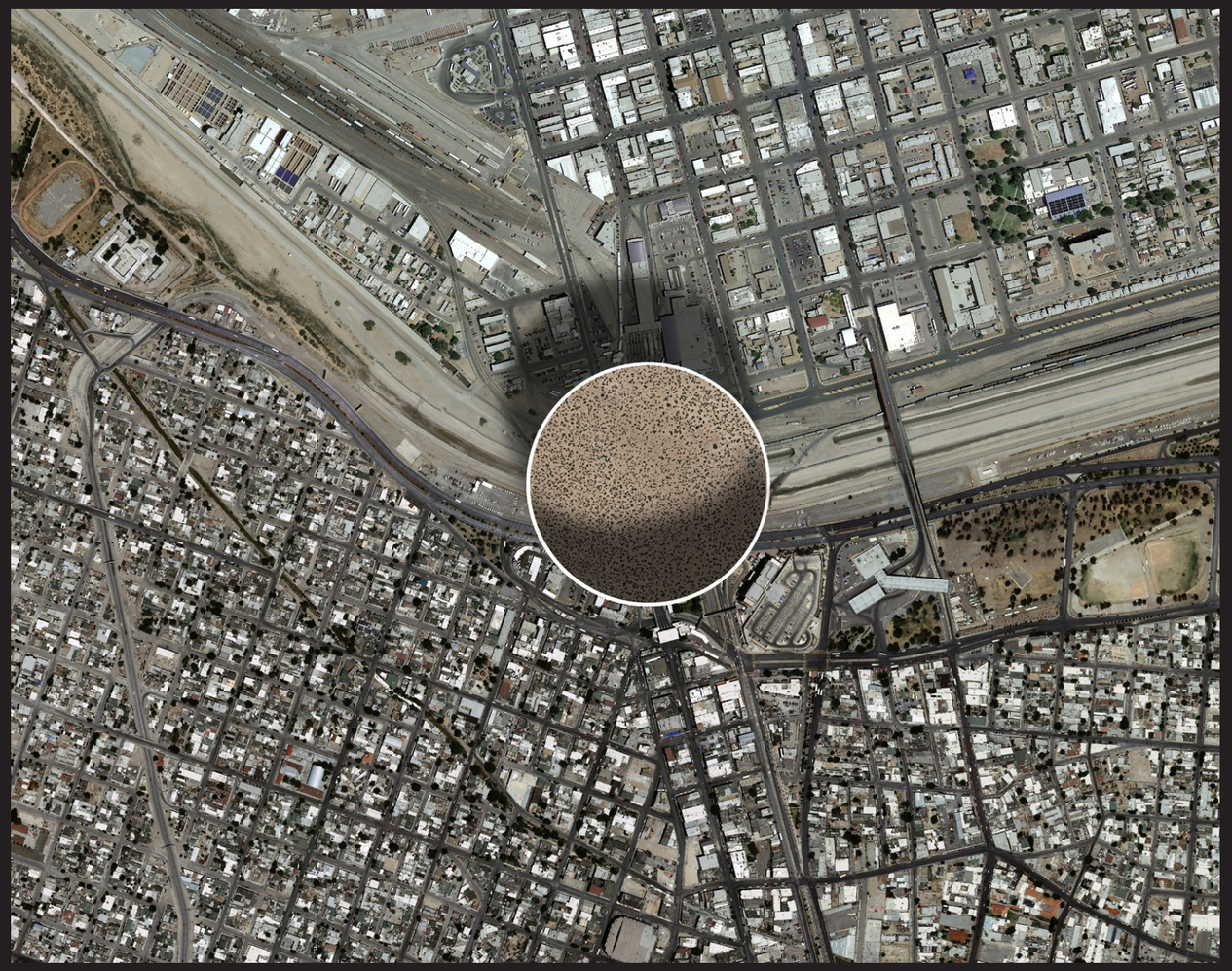


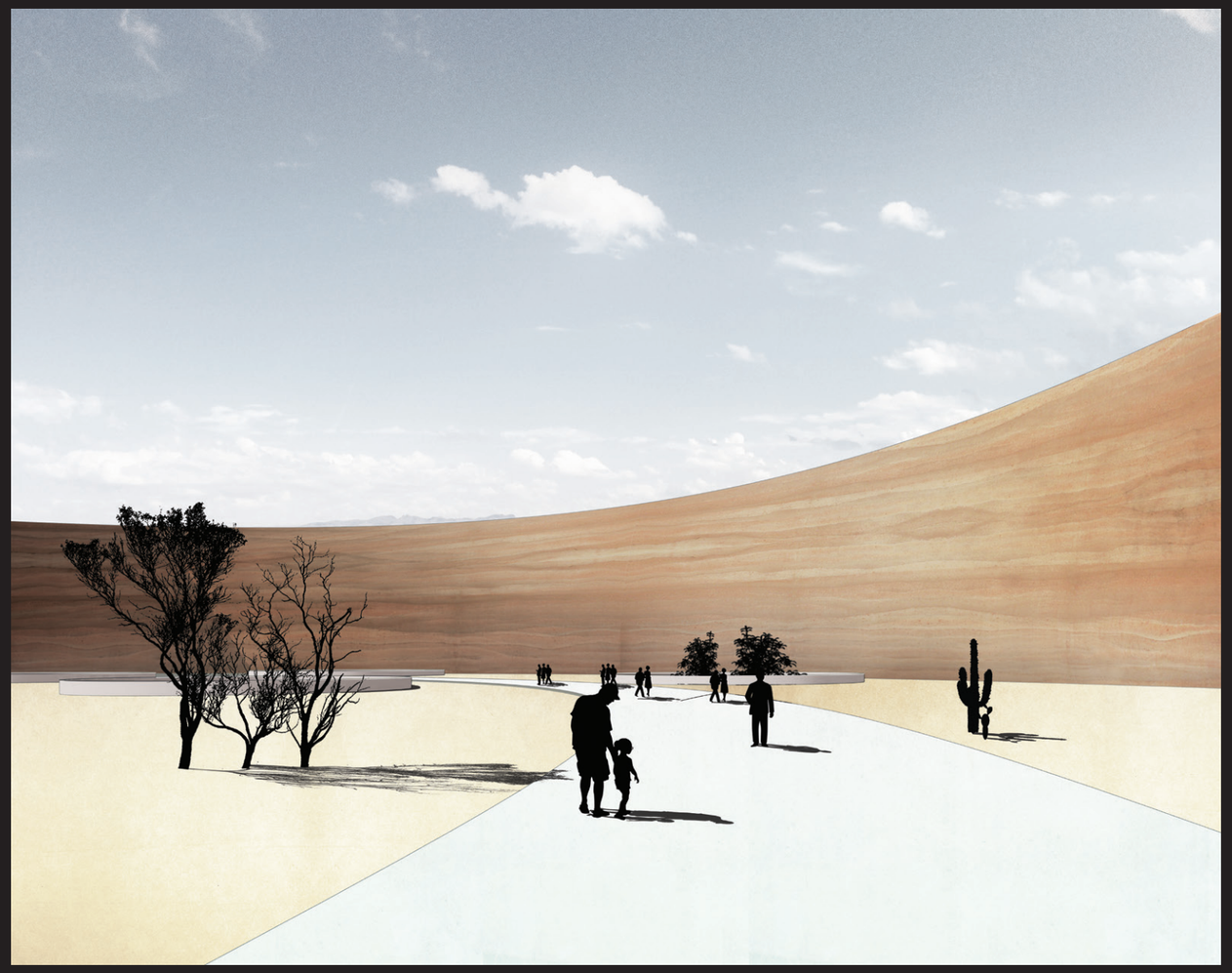


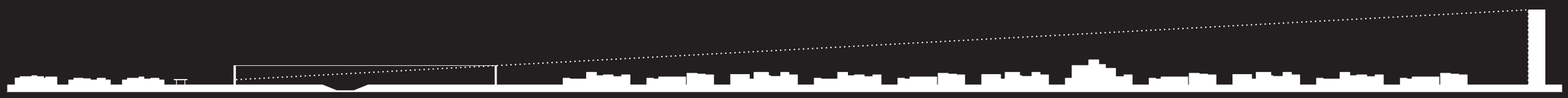








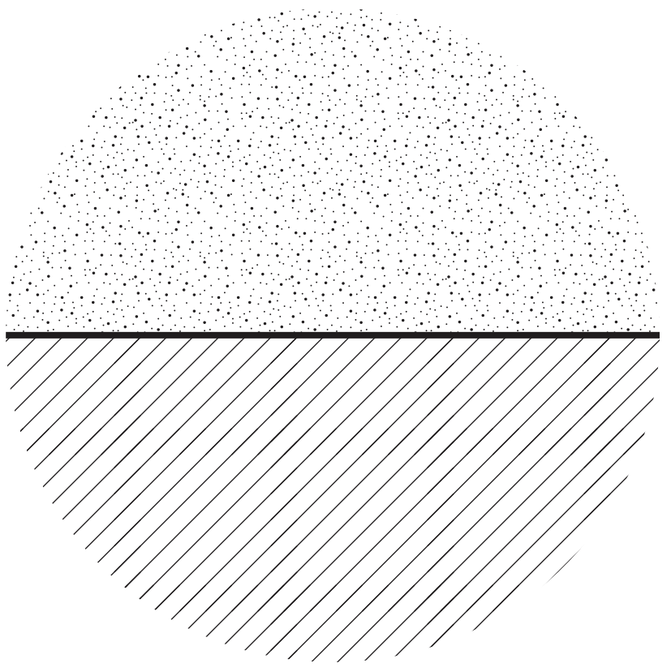


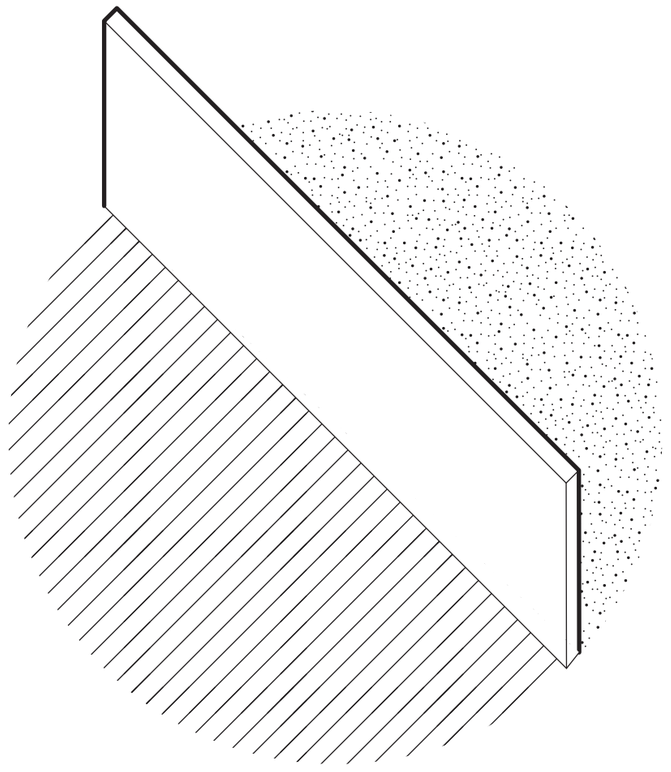


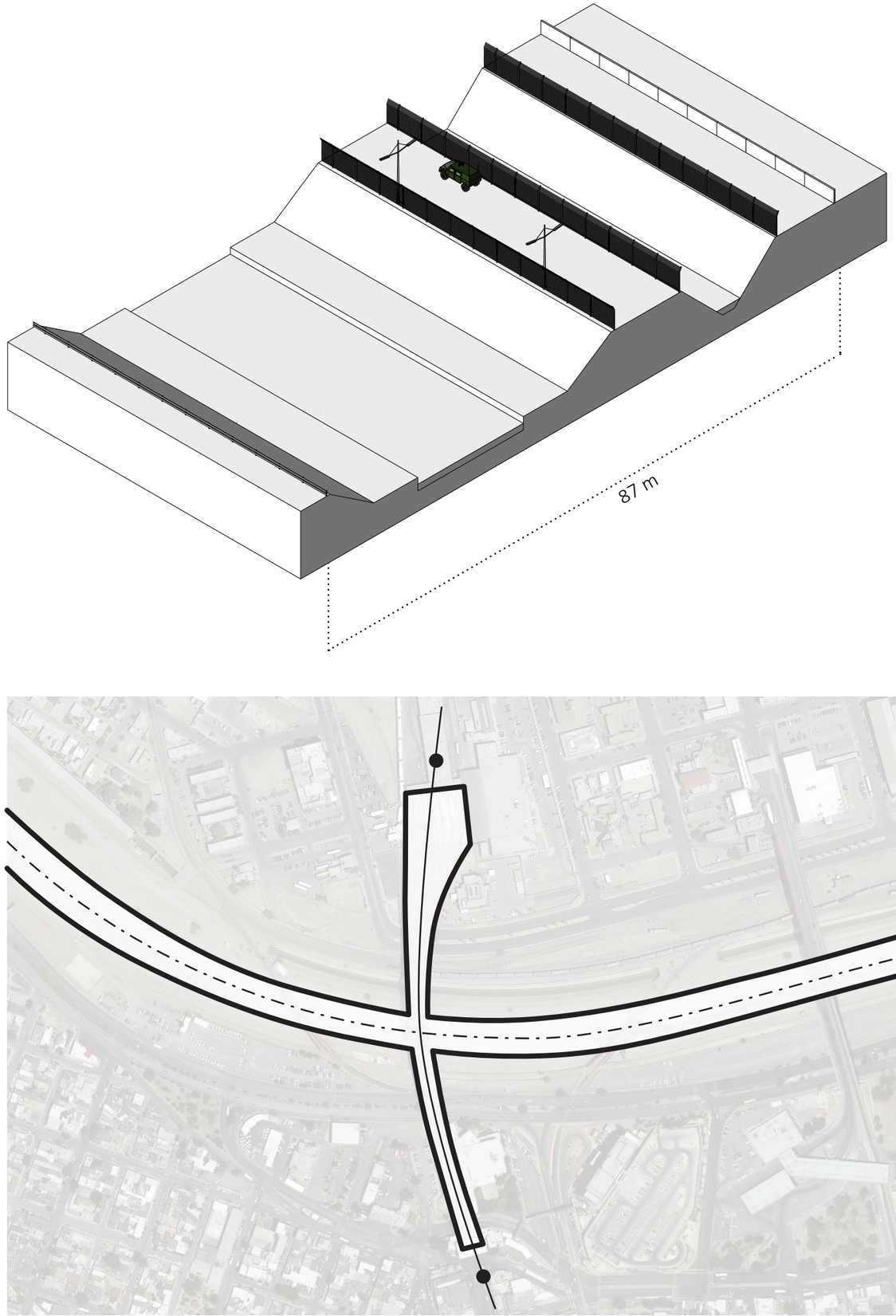
Decontextualize

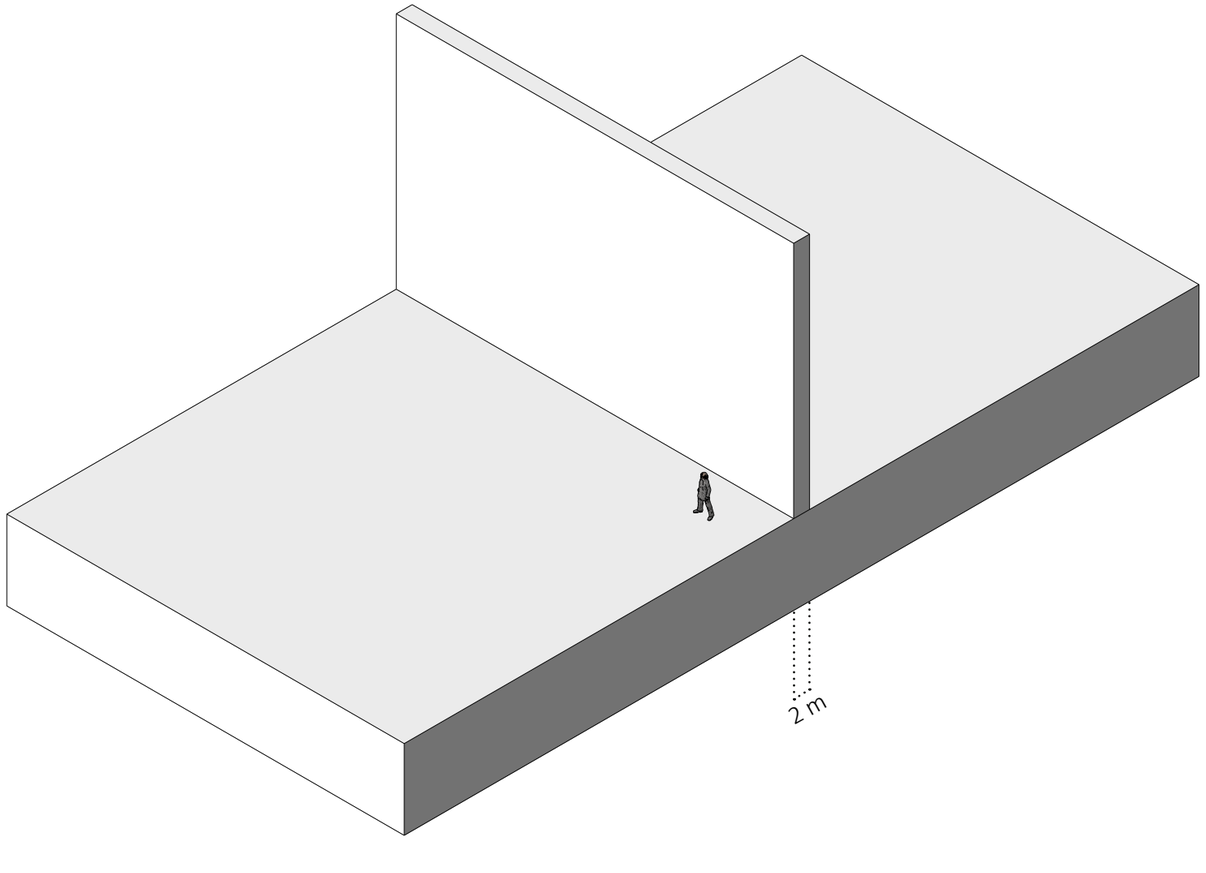


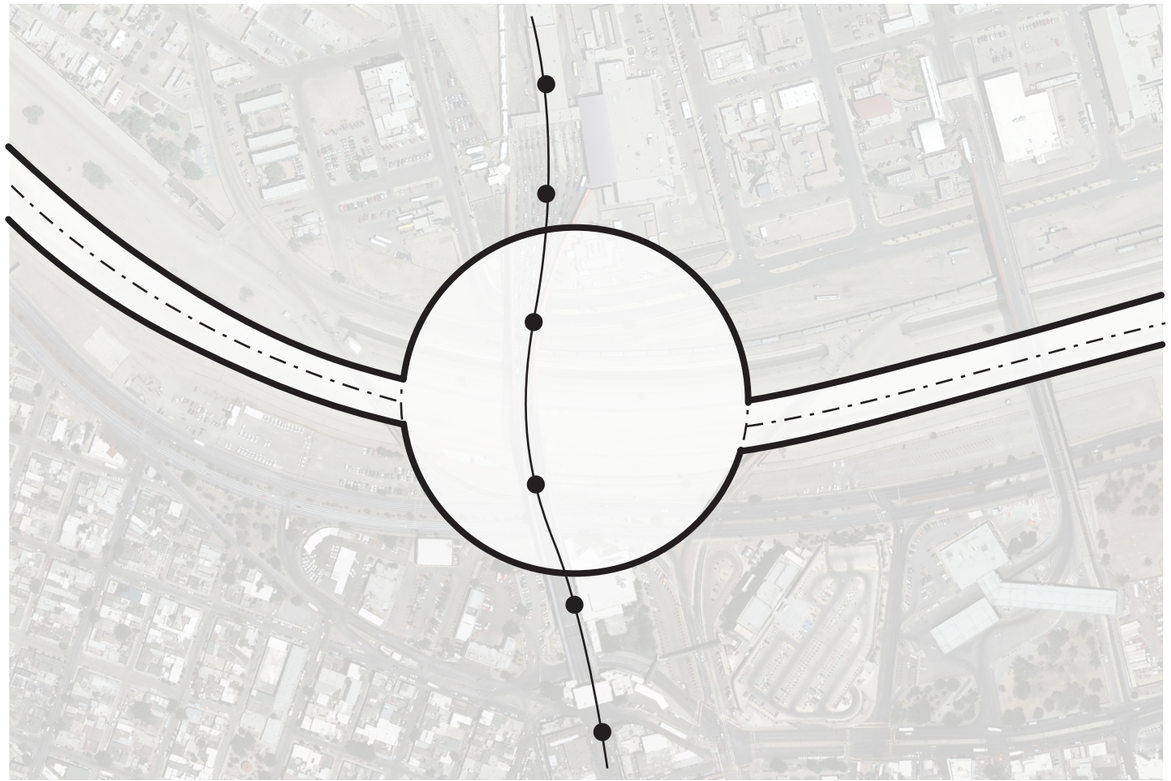
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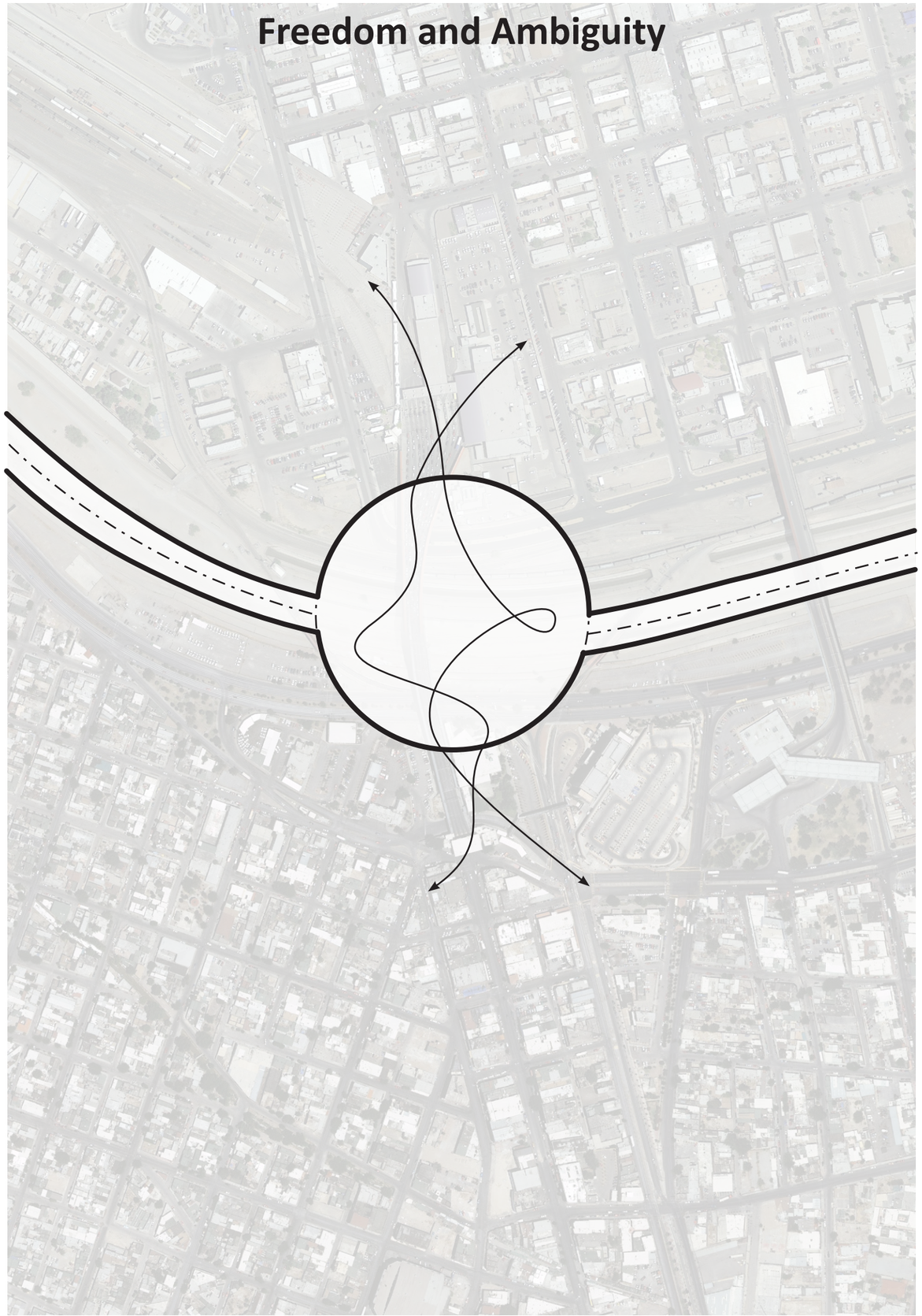


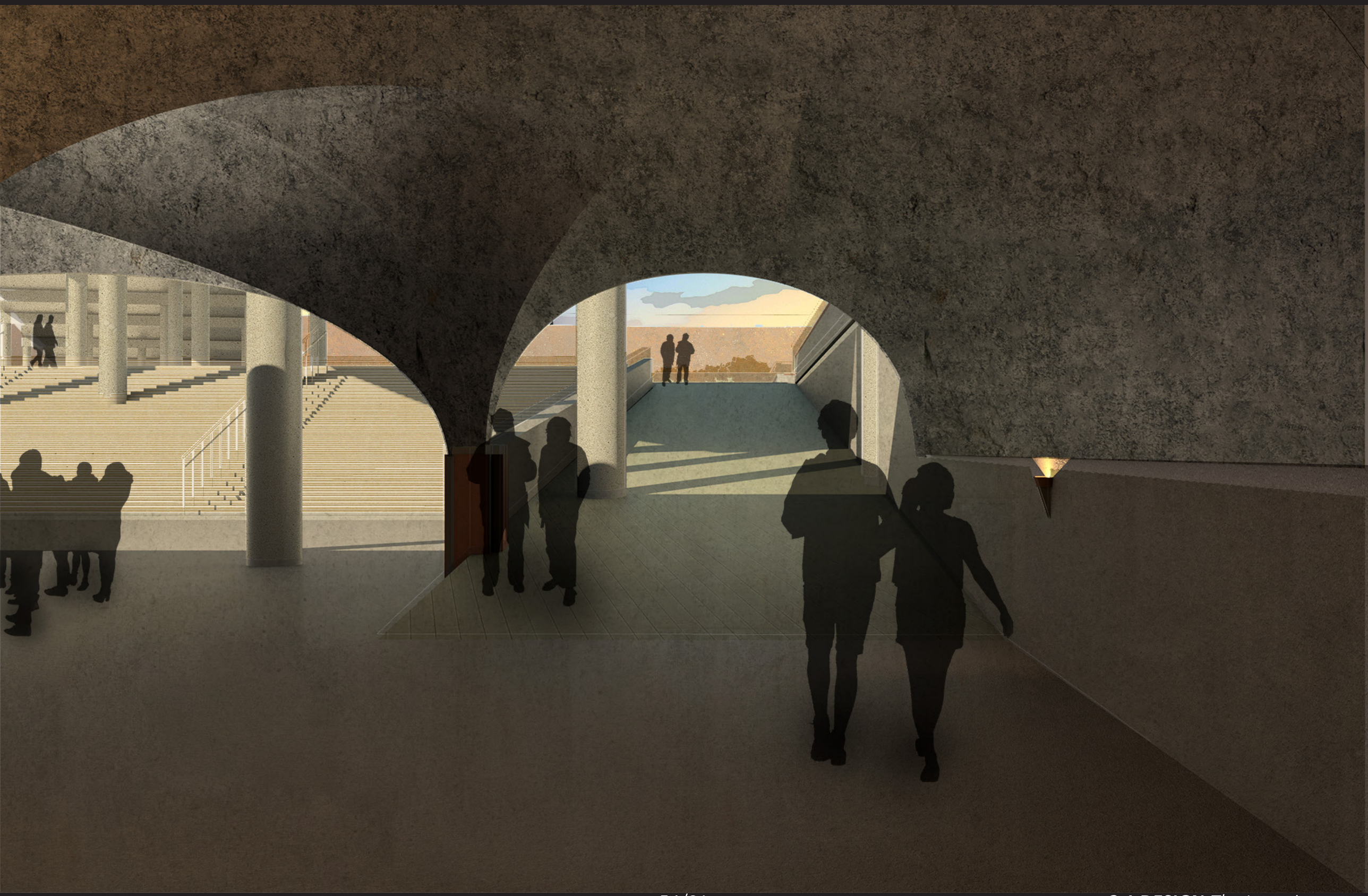

87 m

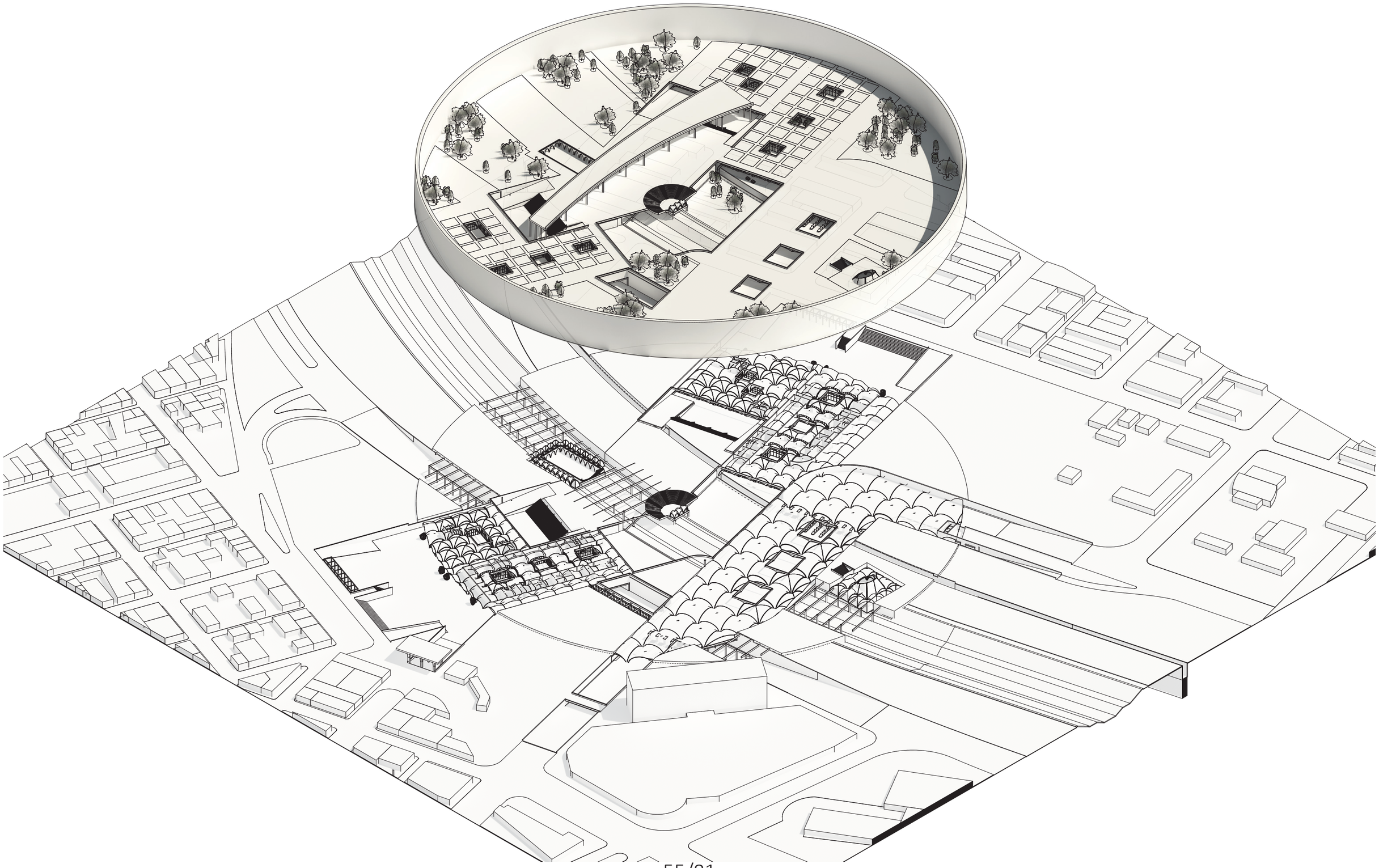

2 m




Control and Efficiency


Freedom and Ambiguity



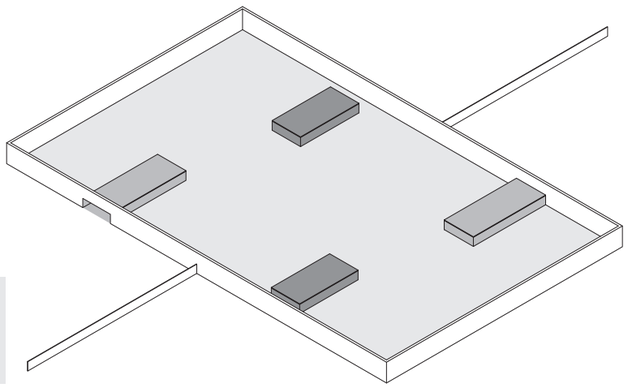


3. Design

1. *The Intentions*
2. *The Design Explained*
3. *The Architecture*

Total surfacearea:	22.000 m2	100 %
Customs facilities:	1050 m2	4,7 %
Offices:	850 m2	3,9 %
Additional program:	20.100 m2	91,4 %

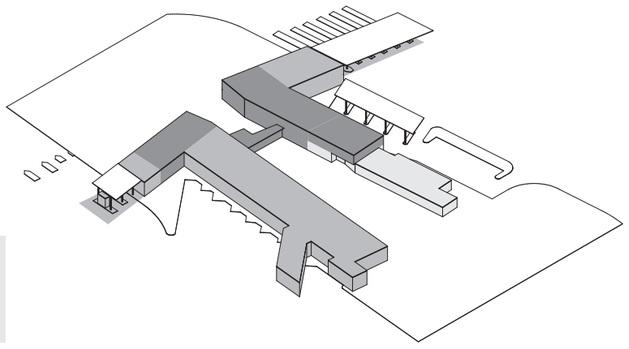
Type: pedestrian border crossing



4,7 % 3,9 % 91,4 %

Total surfacearea:	7.000 m2	100 %
Customs facilities:	3.090 m2	44 %
Offices:	2.170 m2	31 %
Additional program:	840 m2	25 %

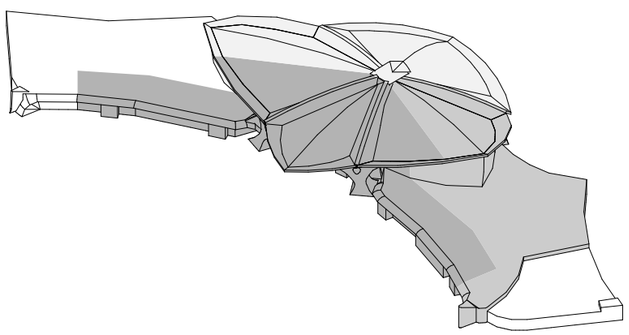
9000 Cars & Trucks/day
Type: vehicle border crossing
Car lanes: 6
Truck lanes: 3



44 % 31 % 25 %

Total surfacearea:	13.250 m2	100 %
Customs facilities:	1.500 m2	11 %
Offices	3.250 m2	25 %
Additional Program	3.200 m2	24 %
Other	5.300 m2	40 %

Peak hours: 1000 people inside
Overturn of 2000 people /hour
Type: Airport Terminal



11 % 32,5 % 24 % 40 %

Total surfacearea:	**24.000 m2**	**100 %**
Customs facilities:	**6000 m2**	**25 %**
Offices	**6000 m2**	**25 %**
Additional Program	**12.000 m2**	**50 %**

From 6.850 to 9.000 people in cars /day
From 33.150 to 41.000 pedestrians /day
Peak hours: 2000 people 400 cars inside
Type: Pedestrian & POV border crossing

PROPOSAL

25 % 25 % 50 %

Border Crossing Mexico — 1600 m2 inside / 1600 m2 outside

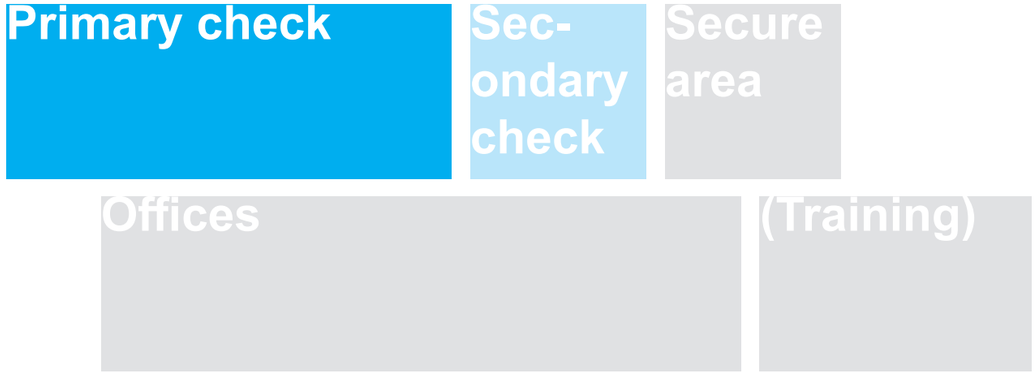
Personal Vehicles:	**750**	**m2**	**1000 m2**
- 5 checkpoints (now 0)		15 x 30 m2	
- Inspection parking spaces		10 x 15 m2	
- Secure parking spaces		5 x 15 m2	
Pedestrians	**450 m2**		**600 m2**
- Entering customs hall		300 m2	
- 10 Checkpoints		10 x 4 m2	
- Restrooms		30 m2	
- Leaving customs hall		100 m2	
- 3 Checkpoints		3 x 4 m2	
- Inspection rooms		3 x 15 m2	
Staff (Assuming 30 people)	**400 m2 (+450 m2)**		**500 m2**
- Office spaces		5 x 16 m2 + 2 x 40 m2	
- Meeting spaces		2 x 20 m2 + 1 x 50 m2	
- Cantine		70 m2	
- Lounge		30 m2	
- Restrooms		60 m2	
(- Parking spaces)		30 x 15 m2	
Other	**160 m2**		**200 m2**
- Secure Storage space		2 x 30 m2	
- Mechenical space		100 m2	

Border Crossing U.S.A. — 3700 m2 inside / 3000 m2 outside

Personal Vehicles:	**750**	**m2**	**1000 m2**
- 15 checkpoints (now 11)		15 x 30 m2	
- Inspection parking spaces		10 x 15 m2	
- Secure parking spaces		5 x 15 m2	
Pedestrians	**600 m2**		**750 m2**
- Entering customs hall		300 m2	
- 20 Checkpoints (now 14)		20 x 4 m2	
- Restrooms		50 m2	
- Leaving customs hall		100 m2	
- 3 Checkpoints		3 x 4 m2	
- Inspection rooms		6 x 15 m2	
Staff (Assuming 60 people)	**1200 m2 (+900 m2)**		**1600 m2**
- Office spaces		10 x 16 m2 + 2 x 40 m2	
- Meeting spaces		2 x 20 m2 + 2 x 50 m2	
- Cantine		150 m2	
- Lounge		70 m2	
- Restrooms		100 m2	
- Lecture space/classroom		150 m2 + 50 m2	
- Fire arms range		200 m2	
- K9 Facilities		100 m2	
(- Parking spaces)		60 x 15 m2	
Other	**300 m2**		**350 m2**
- Secure Storage space		2 x 40 m2	
- Mechenical space		200 m2	

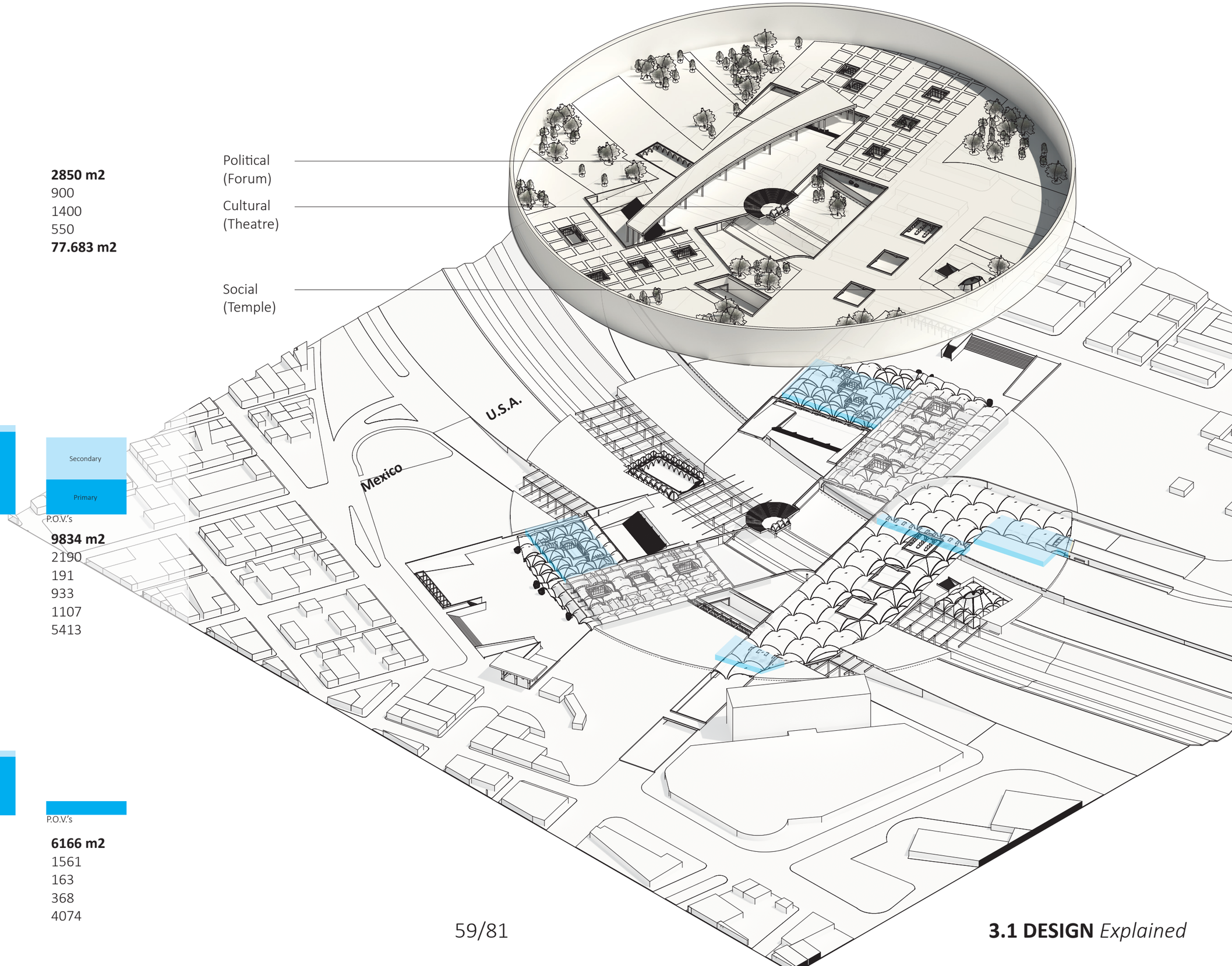
Additional Park: 12.000 m2

Relaxation	**180 m2**		**250 m2**
- Pavilions		4 x 20 m2 + 2 x 50 m2	
Exhibition	**1000 m2 (+900 m2)**		**1200 m2**
- Event Space		800 m2	
- Stage		200 m2	
Meeting	**150 m2**		**200 m2**
- Pavilions		5 x 30 m2	



Primary and Secondary checkpoints

Border patrol and customs offices



Other:	**2850 m2**
Temple	900
Forum	1400
Theatre	550
Total walled area	**77.683 m2**

Offices

Secondary
Primary
Pedestrians

Secondary
Primary
P.O.V.'s

U.S.A Customs	**9834 m2**
Primary pedestrian hall	2190
Secondary inspection spaces	191
P.O.V. Primary insepction	933
P.O.V. Secondary Inspection	1107
Offices	5413

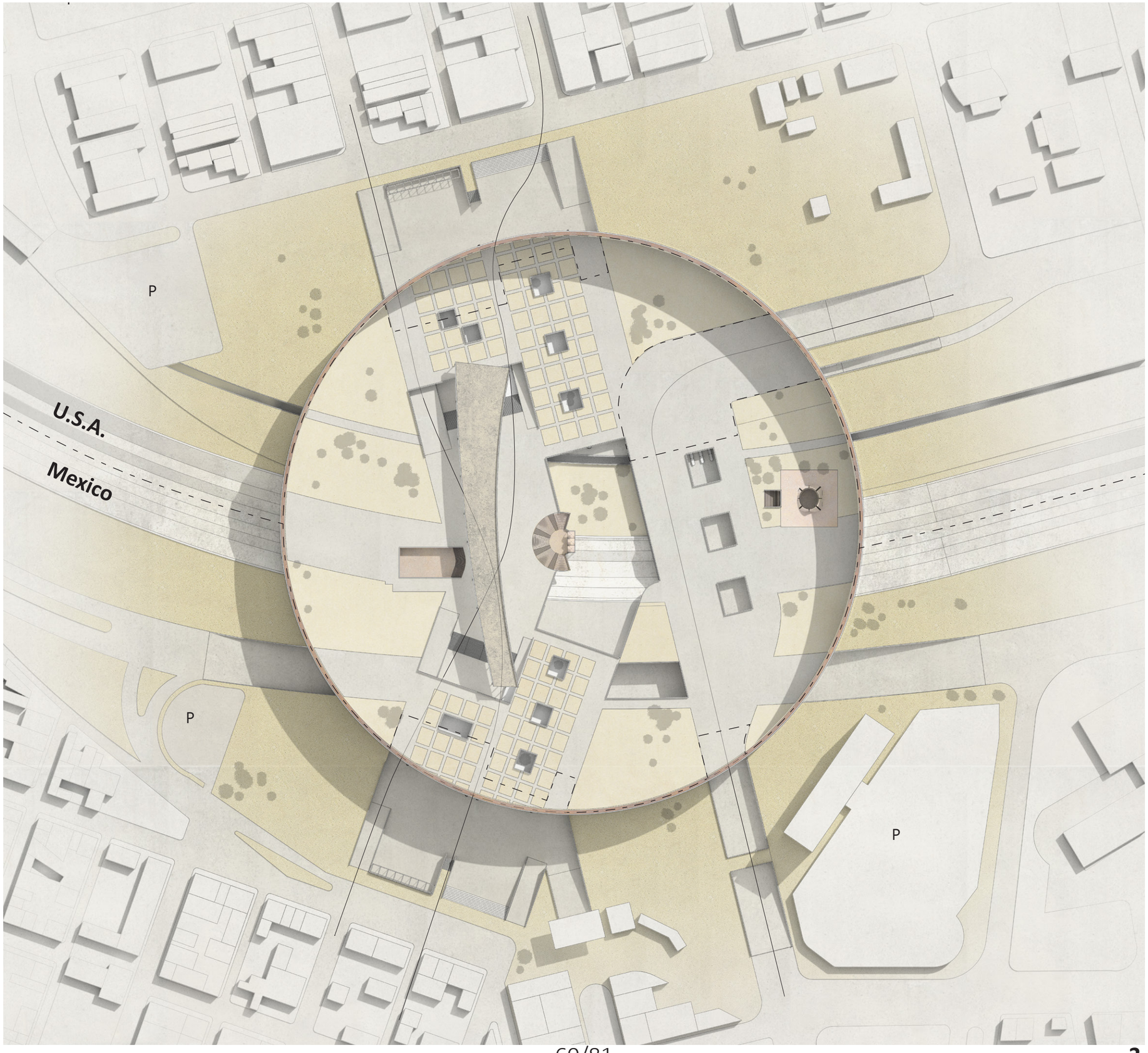
Offices

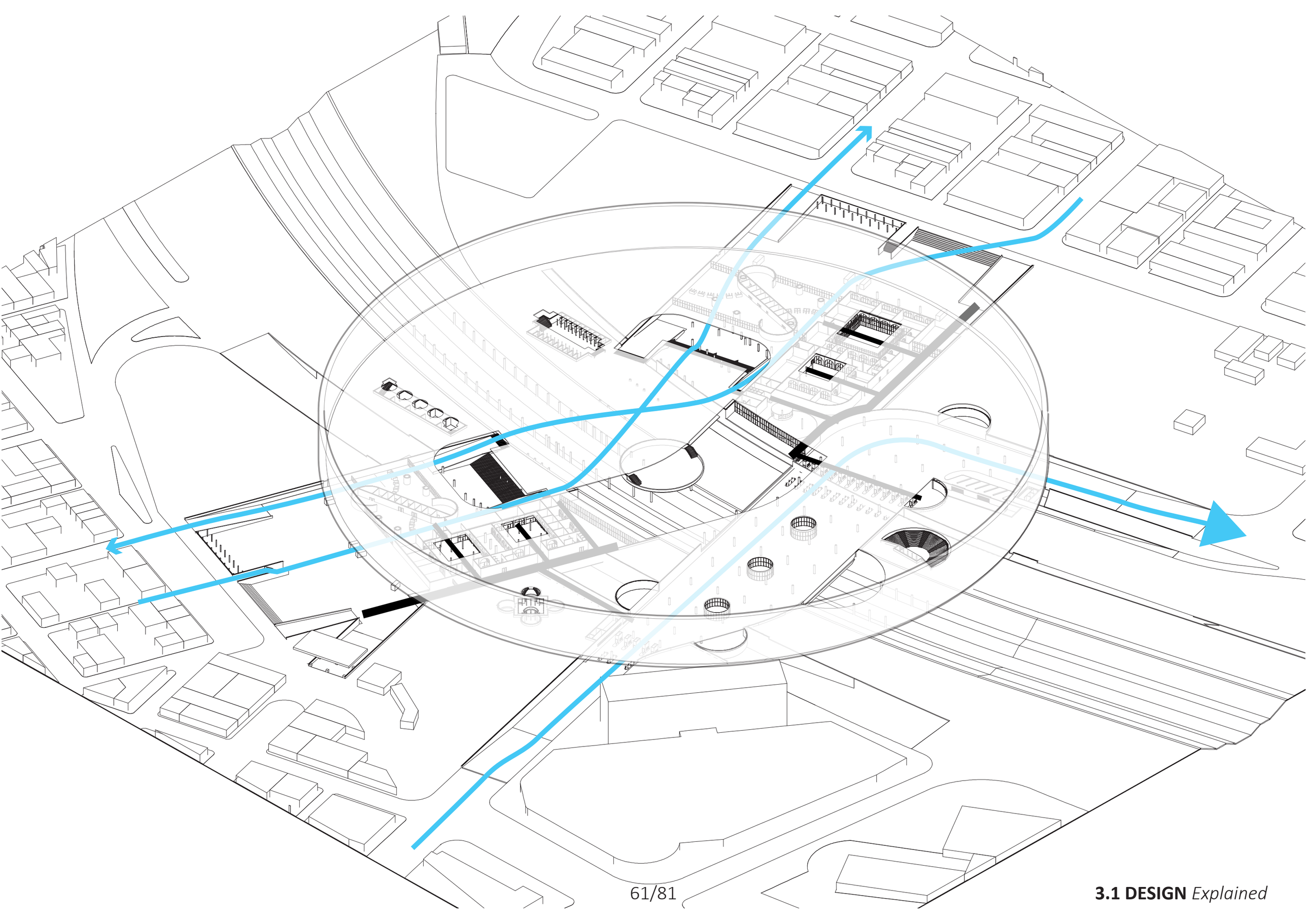
Secondary
Primary
Pedestrians

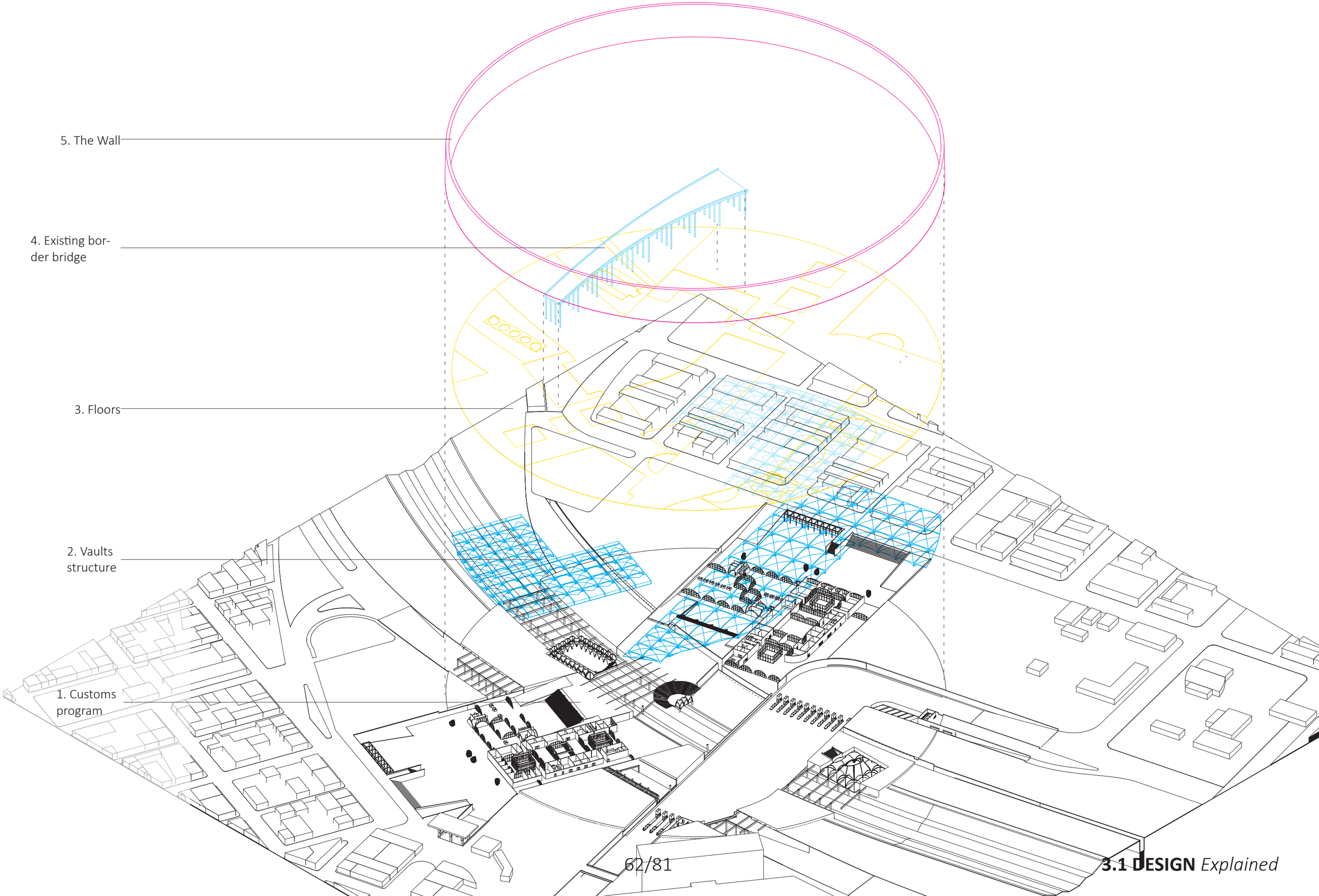
P.O.V.'s

Mexico Customs:	**6166 m2**
Primary pedestrian hall	1561
Secondary inspection spaces	163
P.O.V. Inspection	368
Offices	4074

Site plan

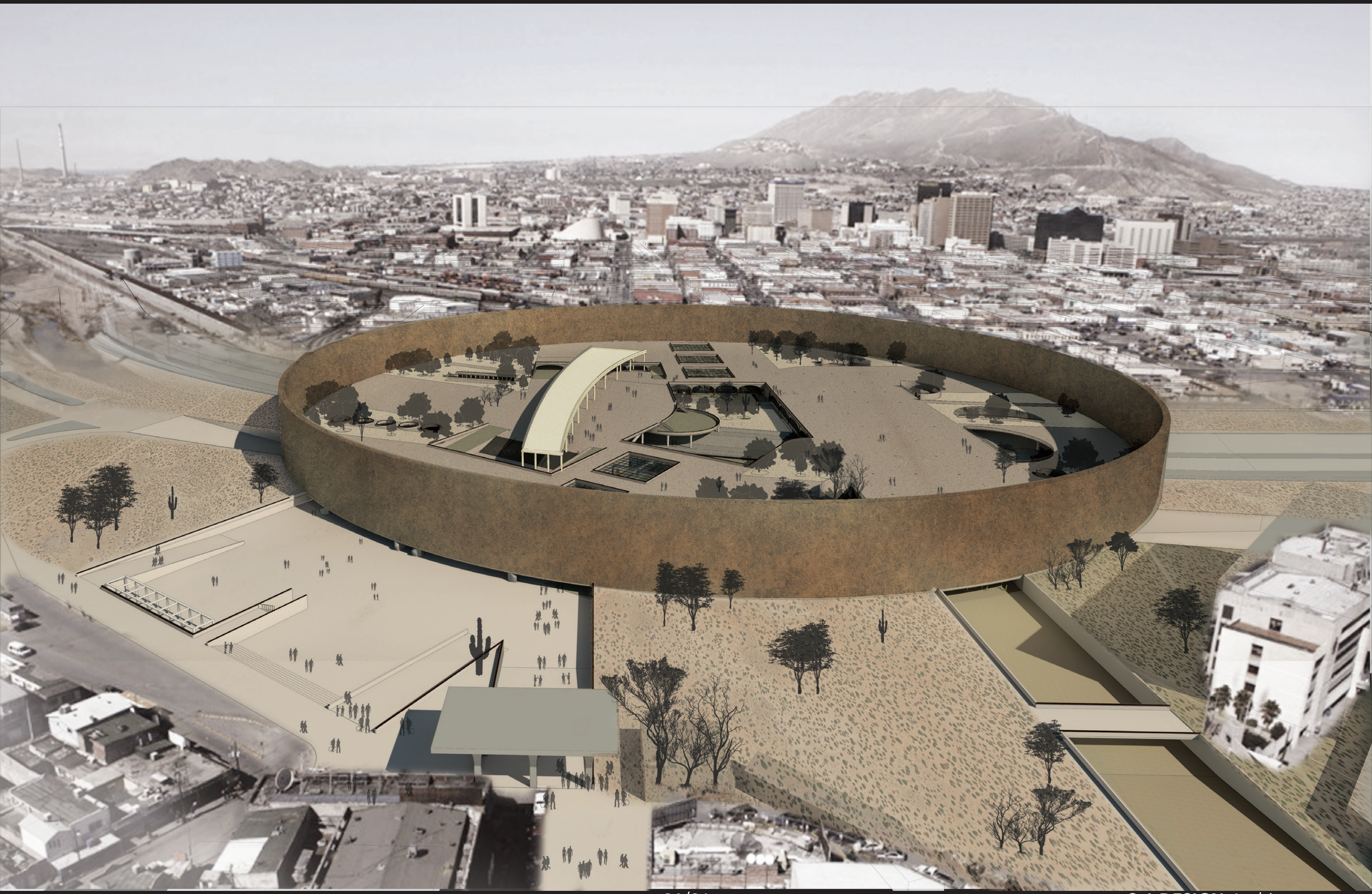


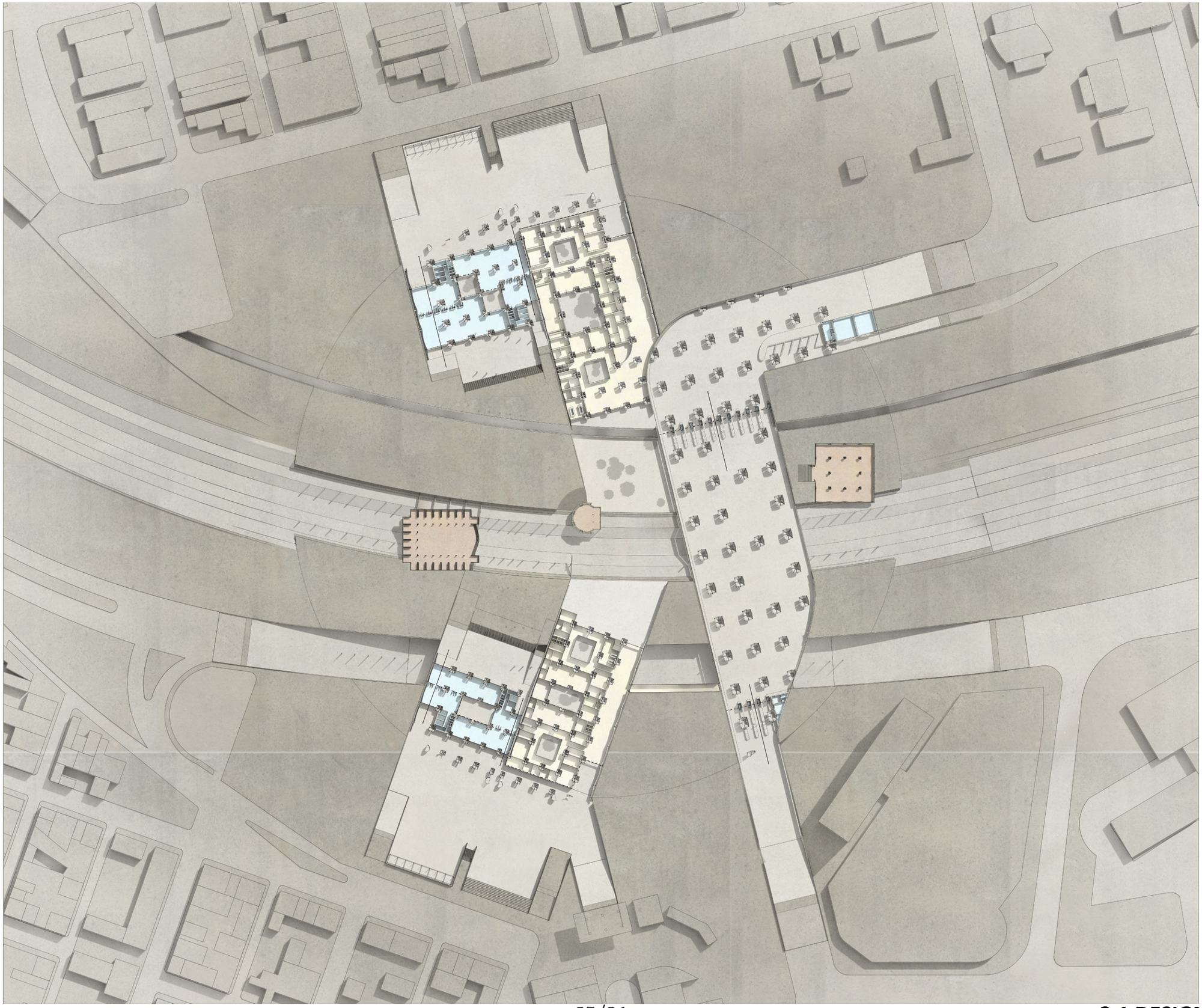



5. The Wall
4. Existing bor-
der bridge
3. Floors
2. Vaults
structure
1. Customs
program

3. Design

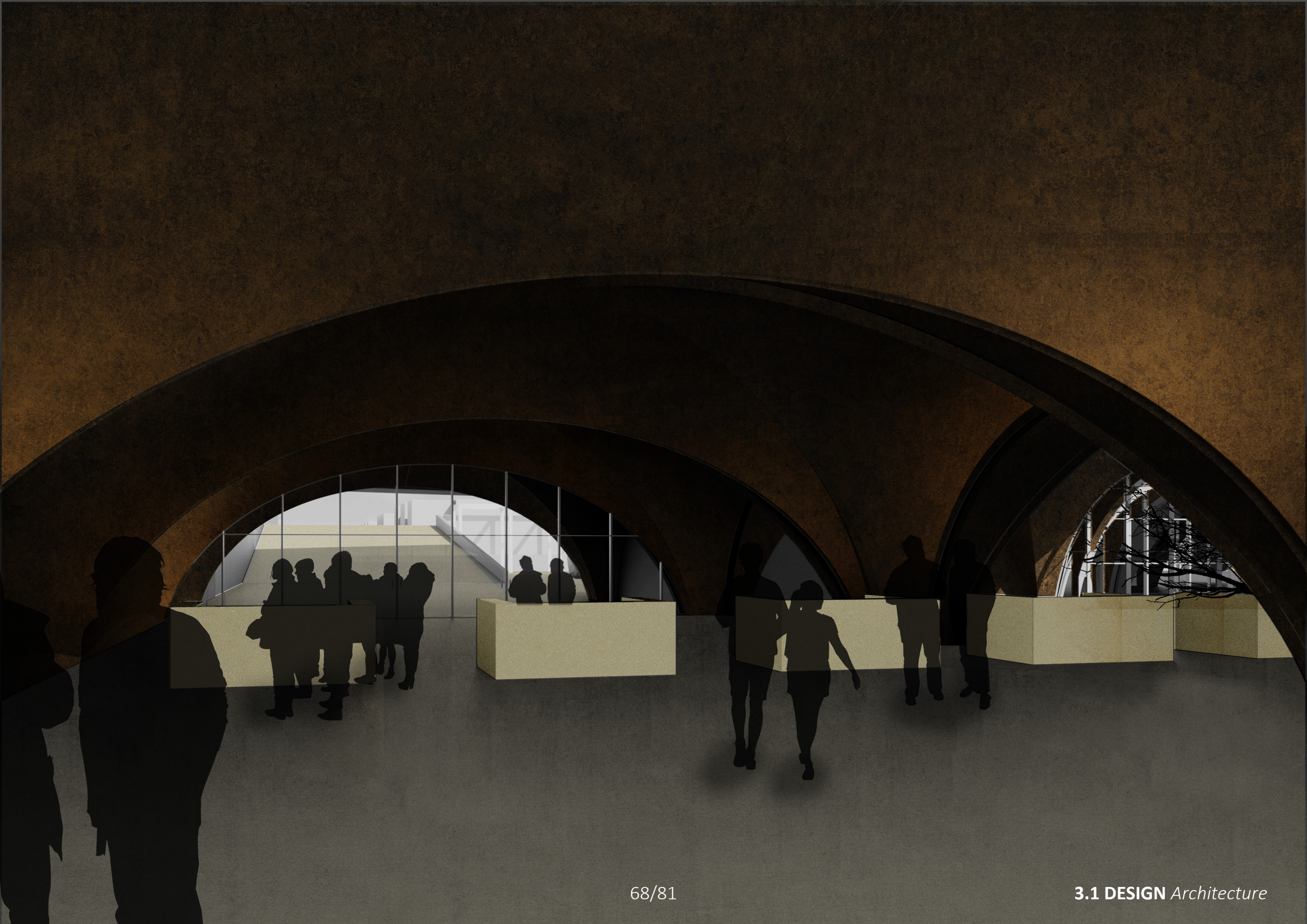
1. *The Intentions*
2. *The Design Explained*
3. *The Architecture*

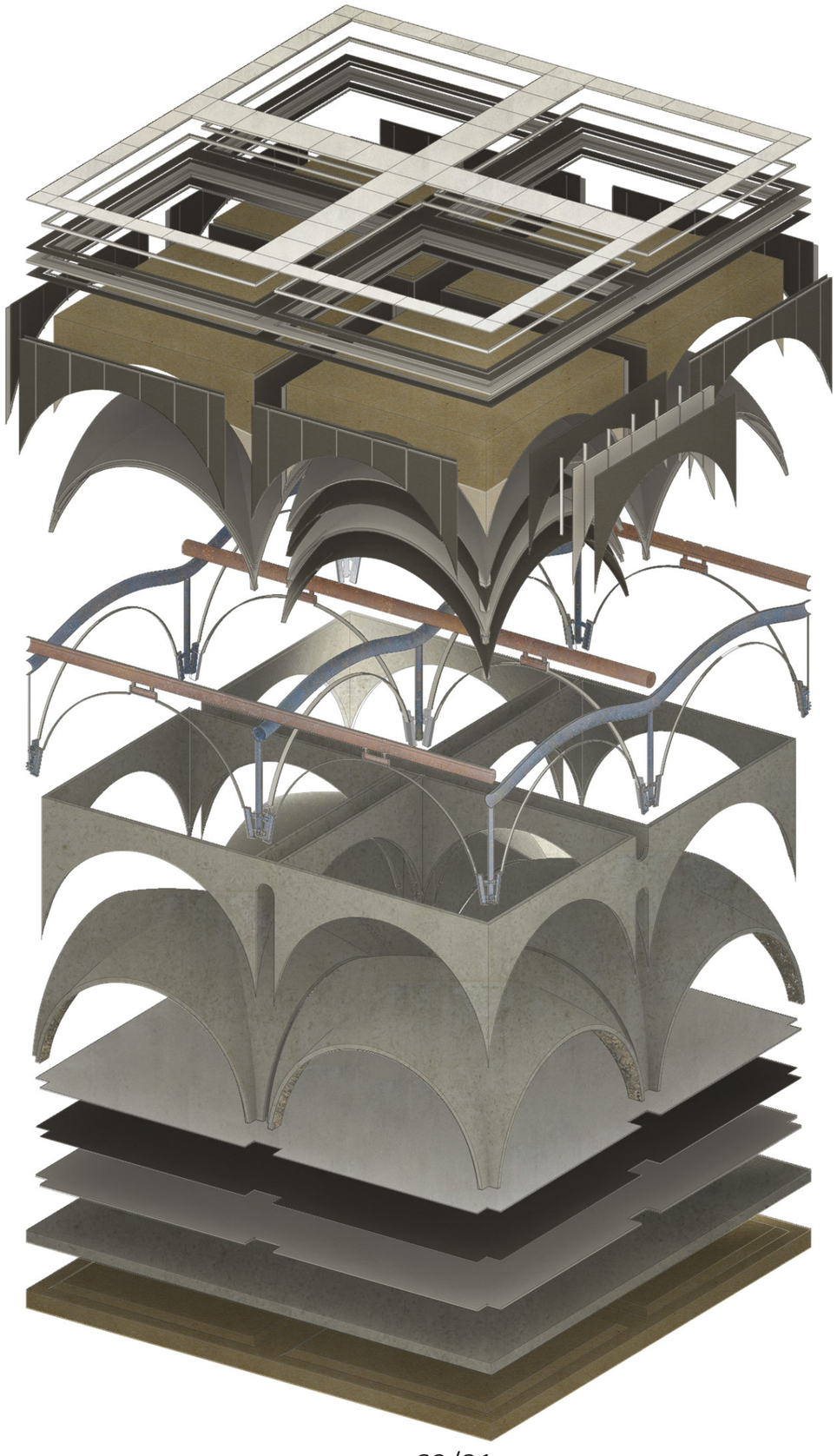












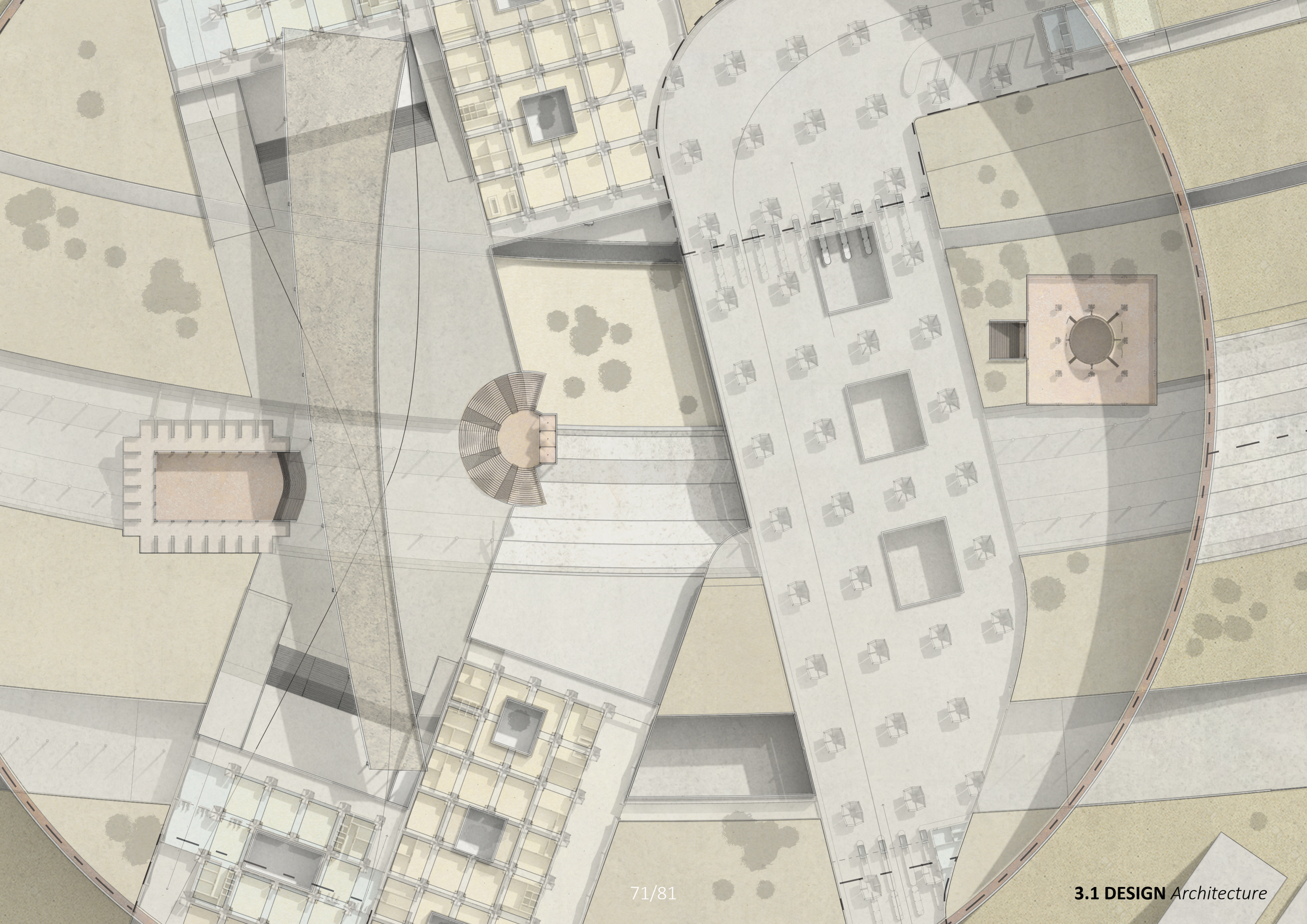
Tiles & Soil ,insulated and with water resevoir

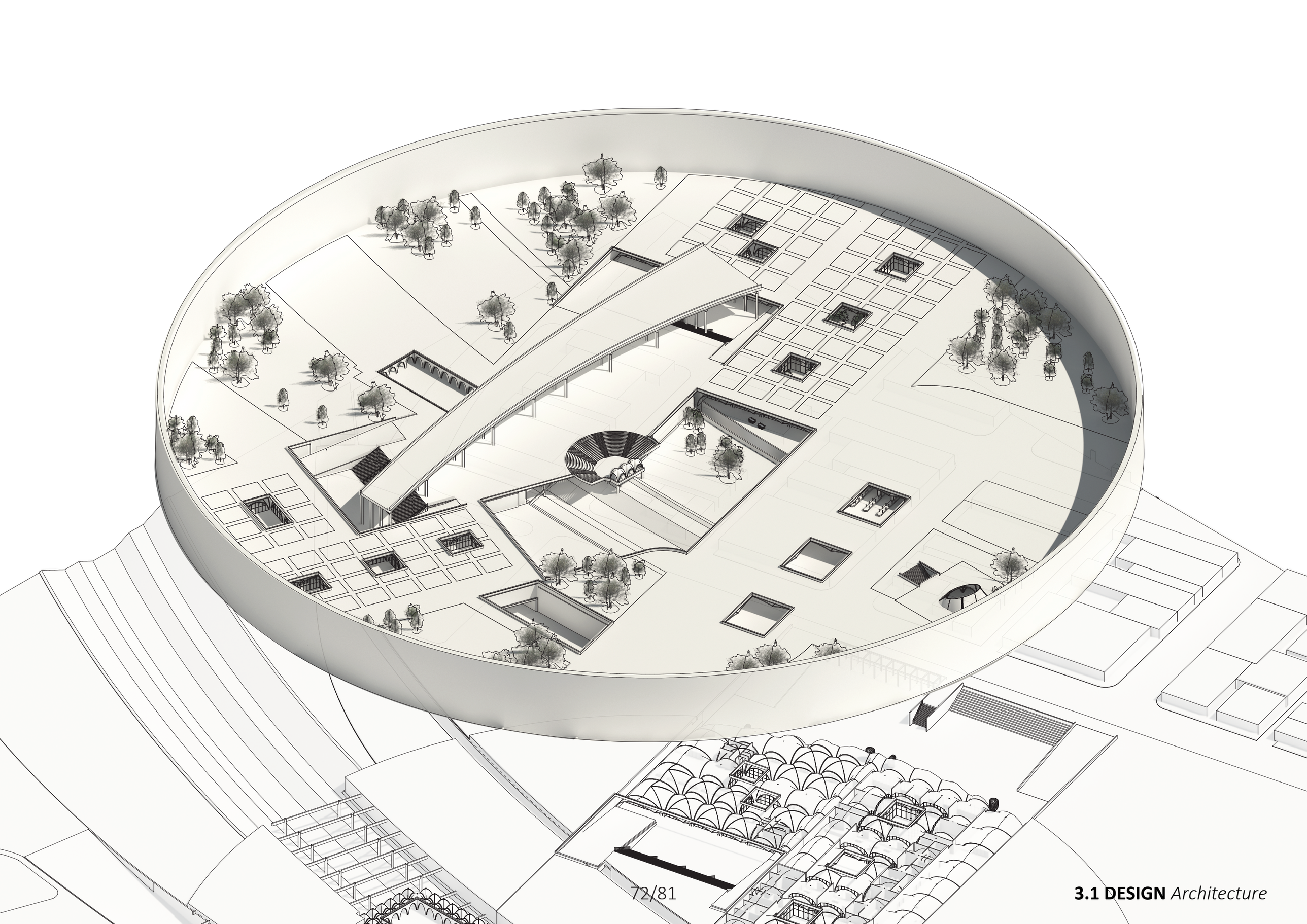
Ventilation & Light

Structural Vaults & Walls

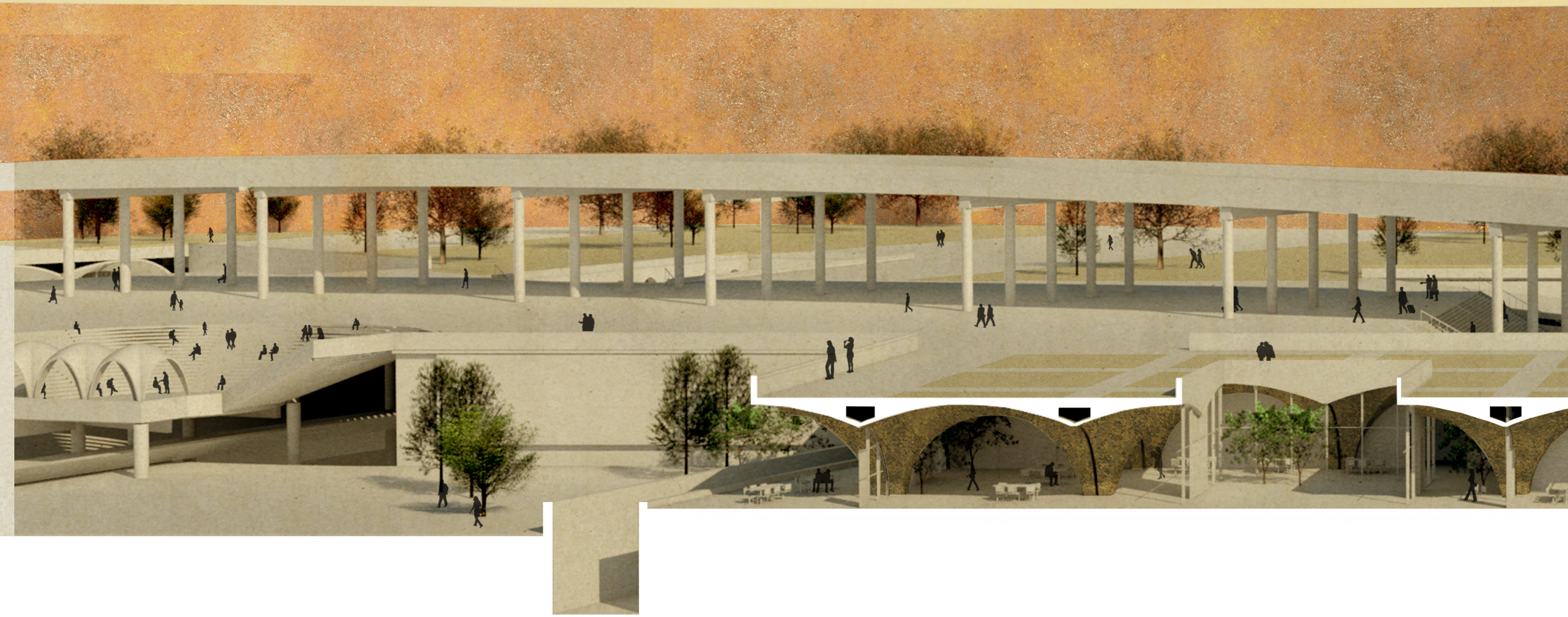
Ground floor, perforated for water drainage

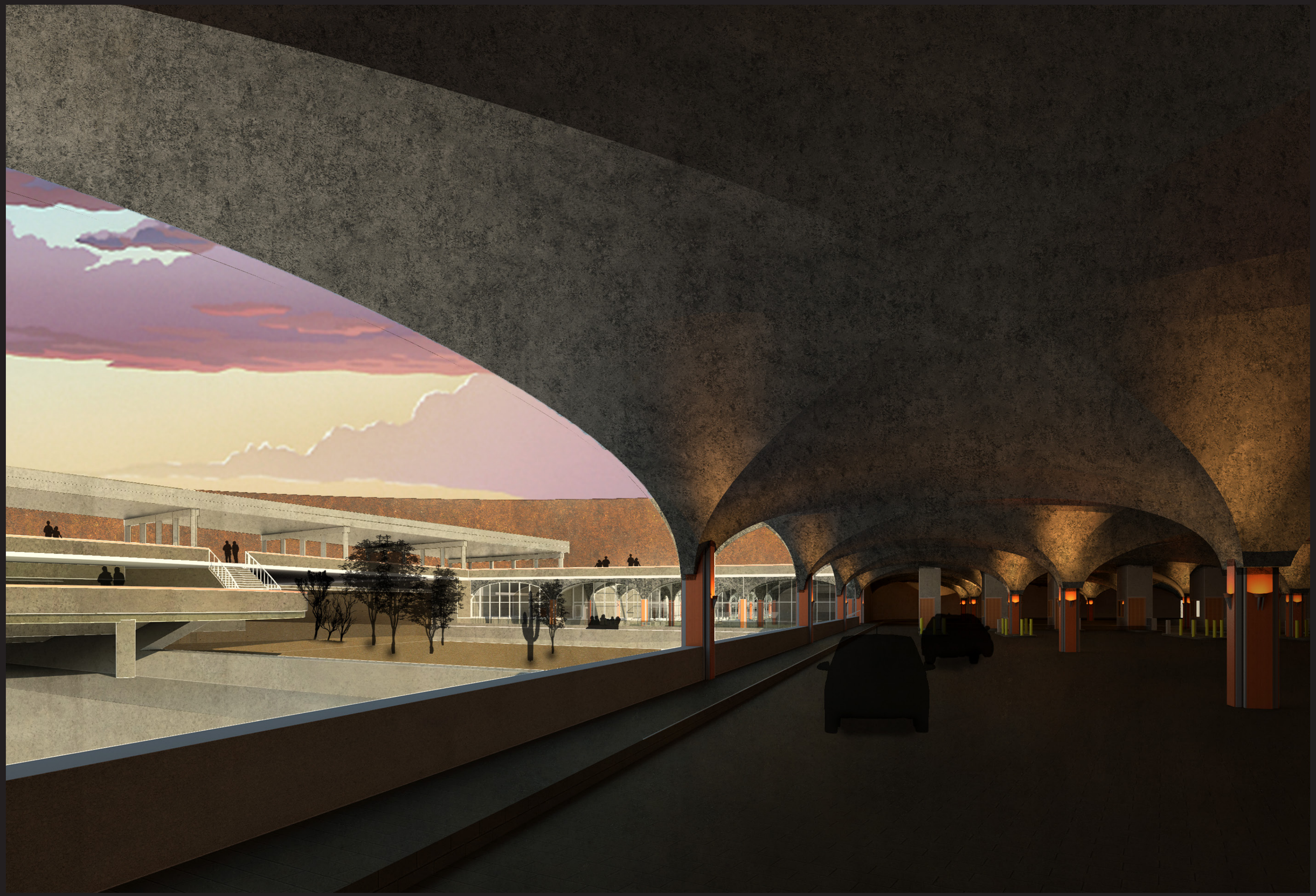


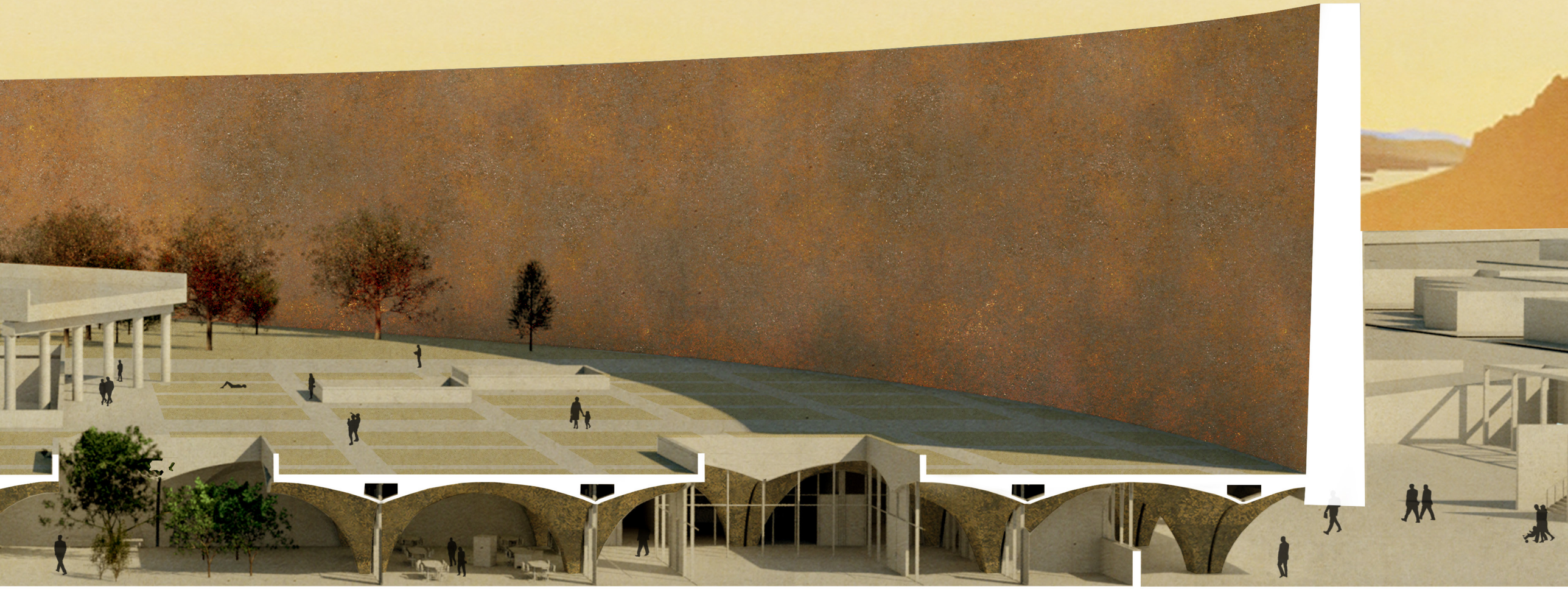




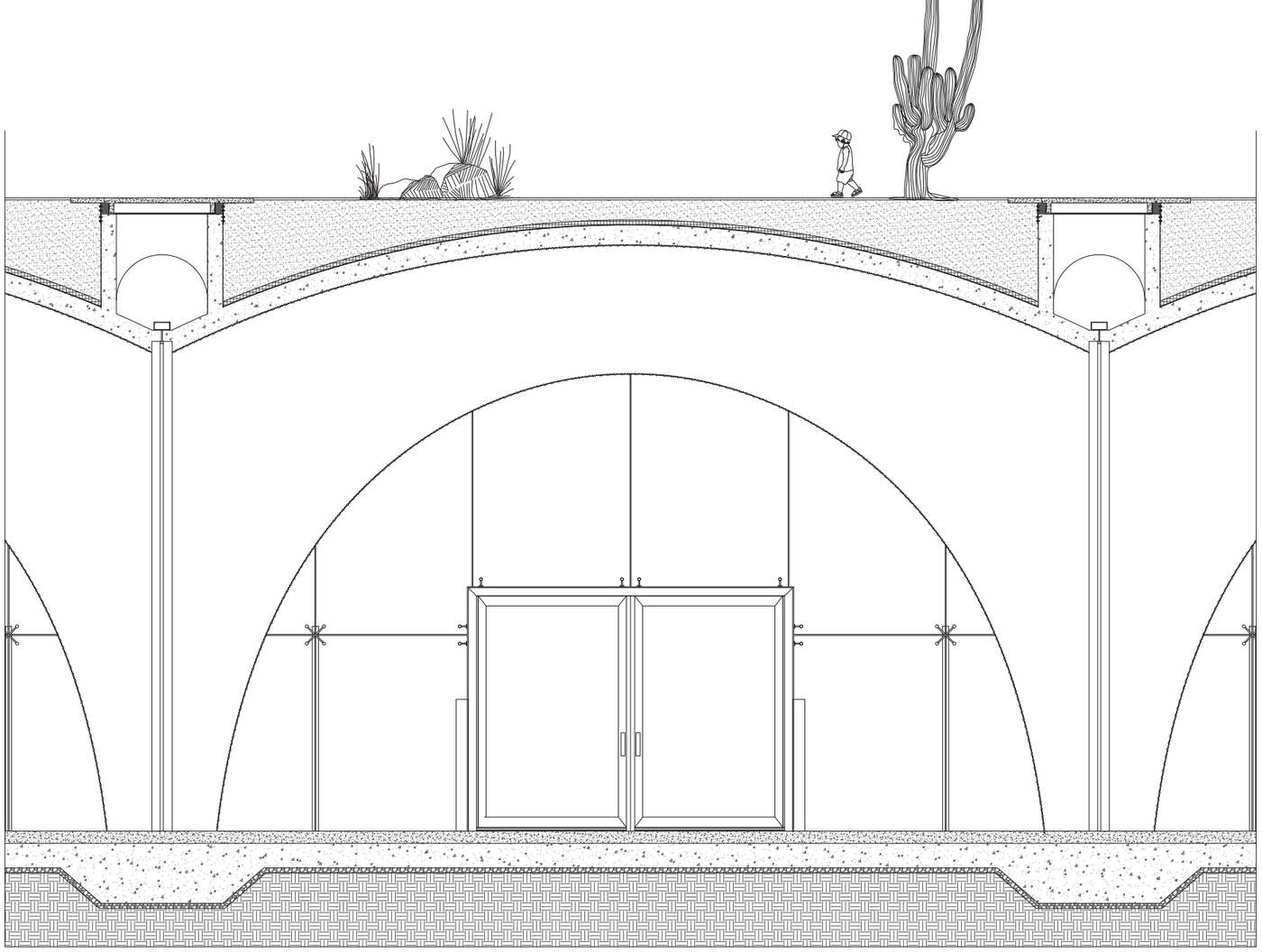


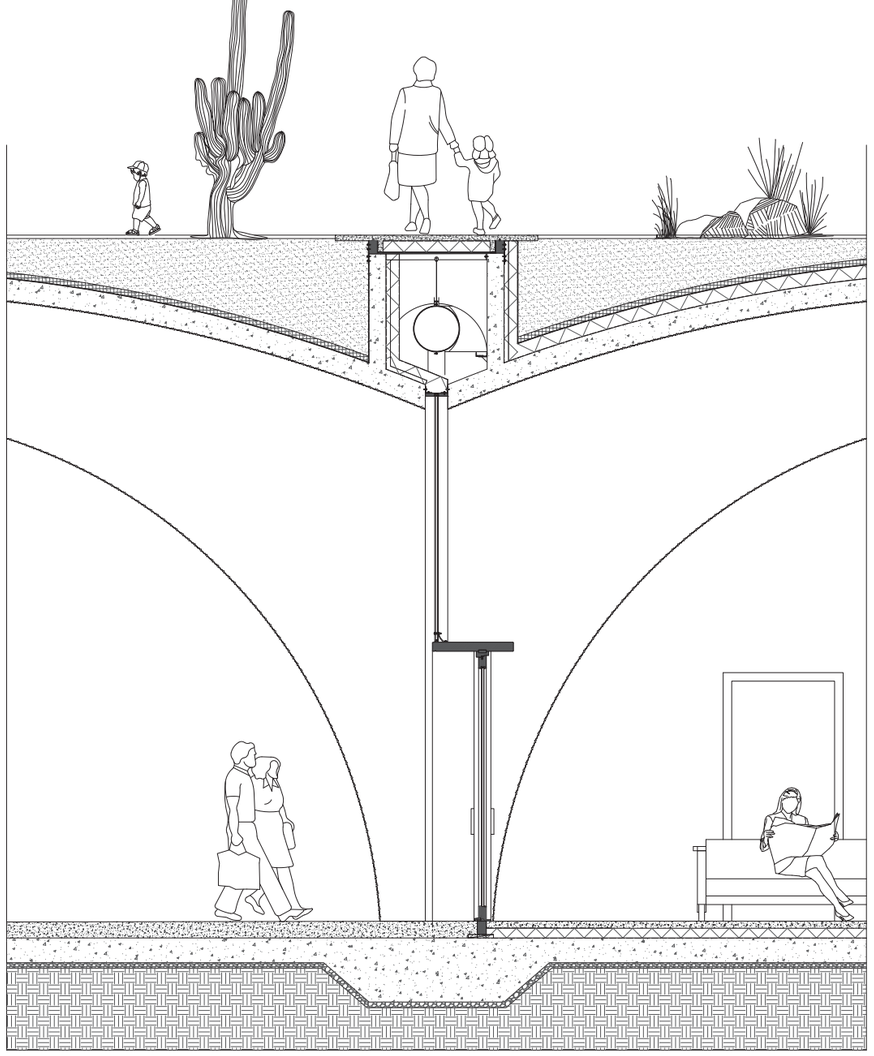


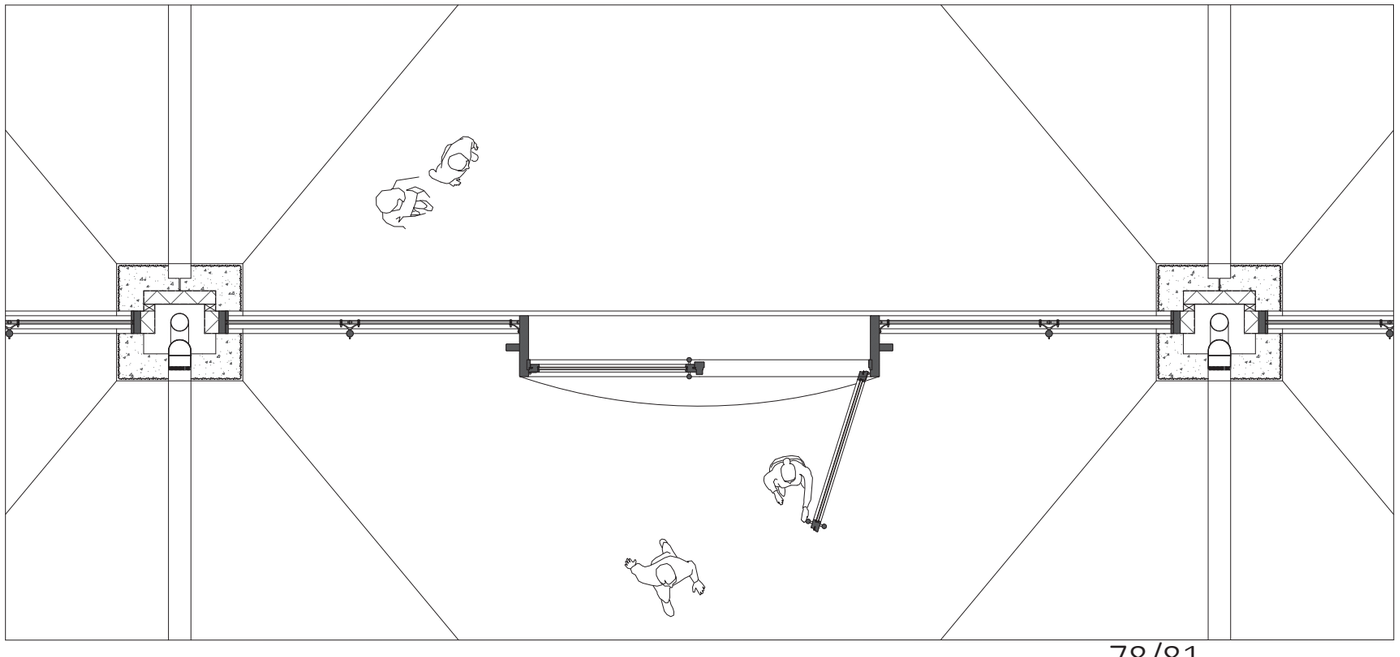


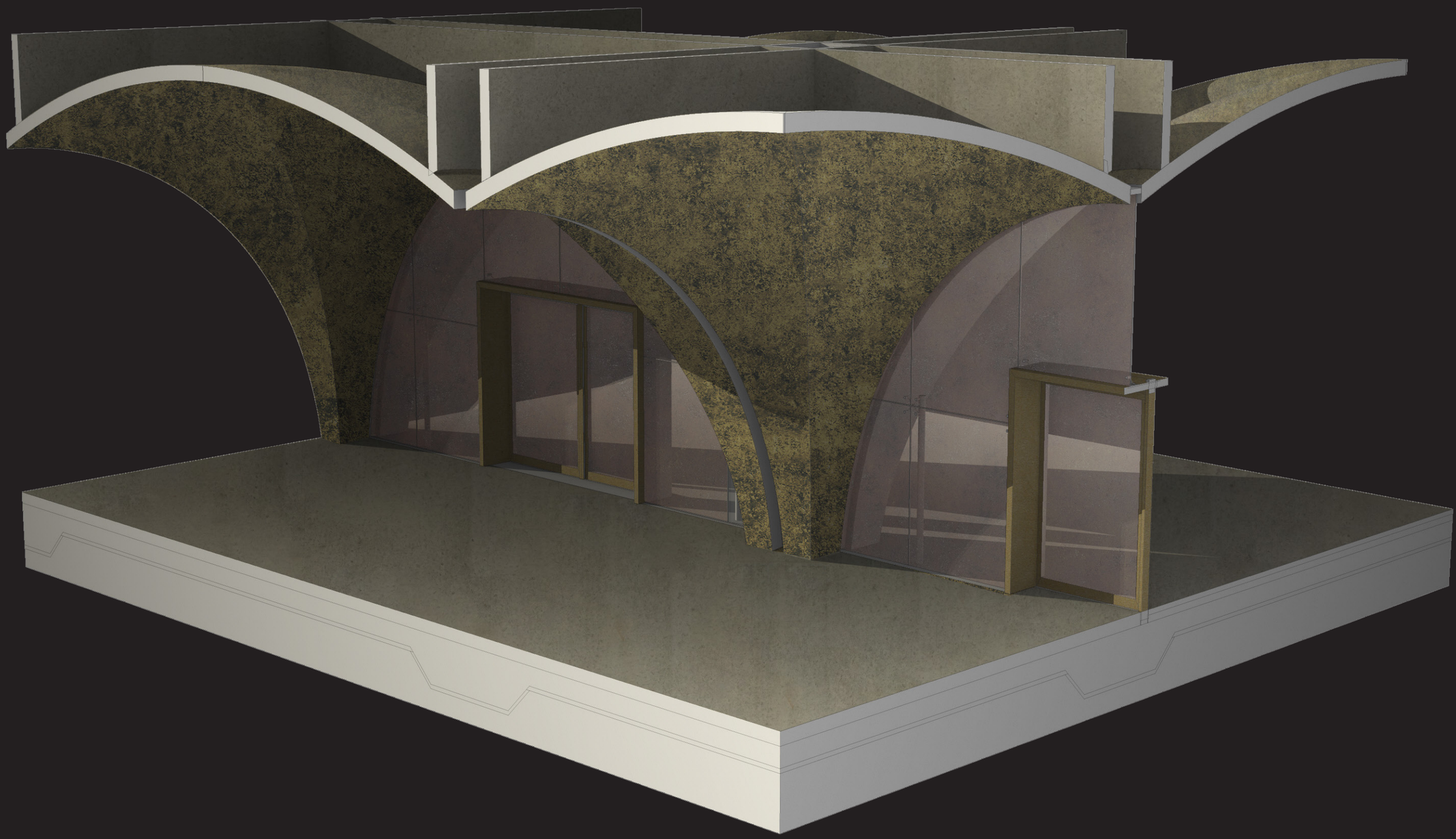


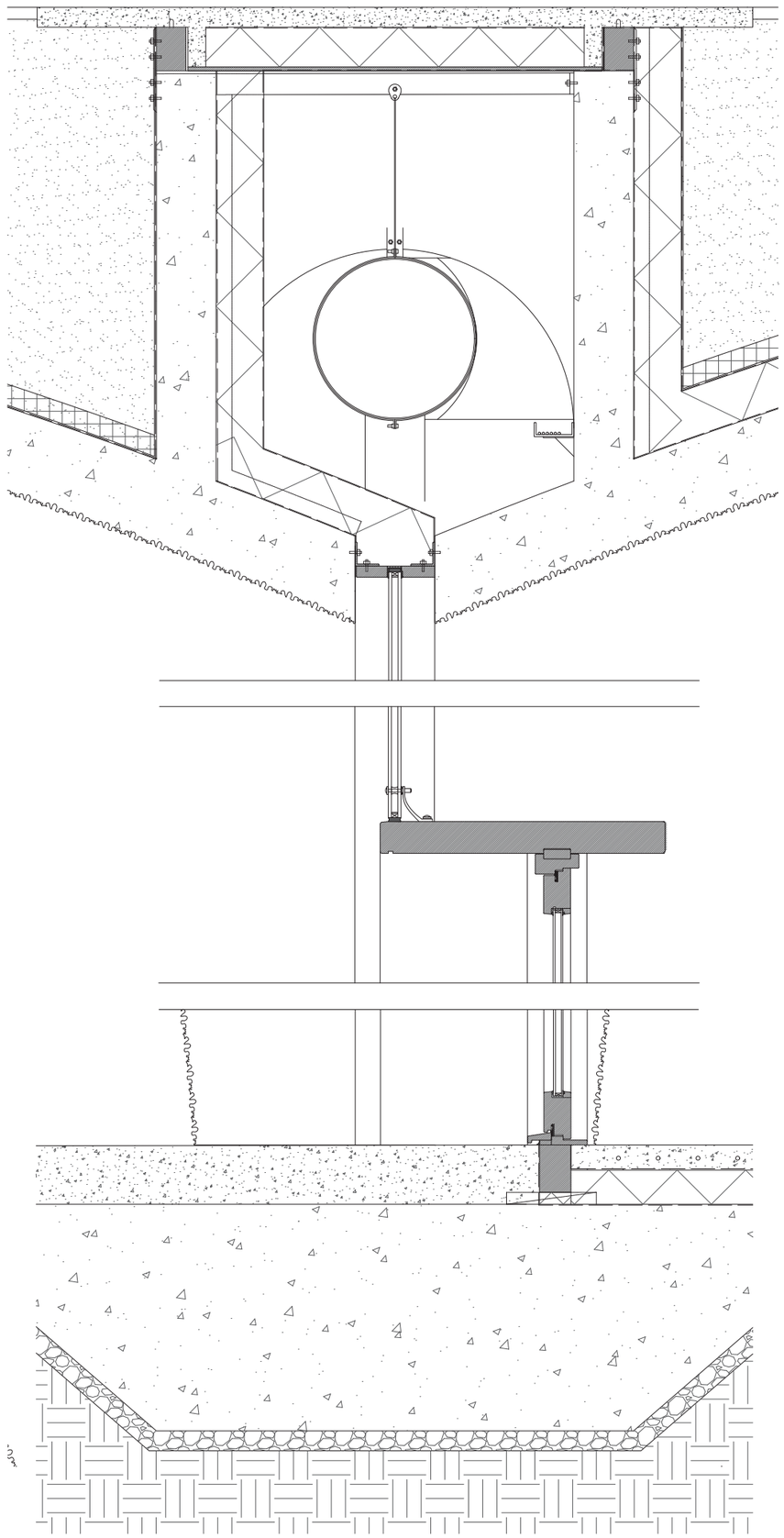




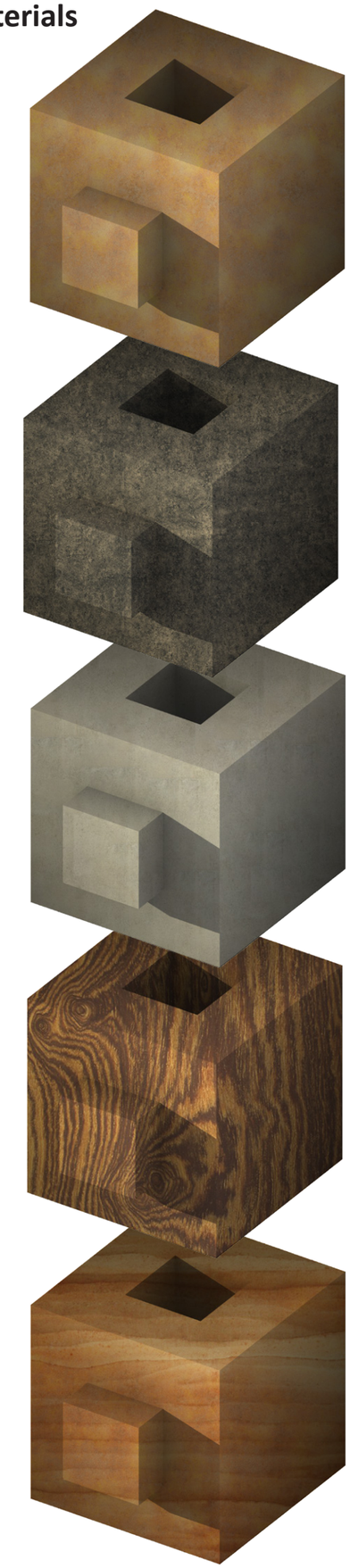








Materials



Soil

Concrete
Bush hammered to expose aggregate of rocks found at site

Concrete
Troweled

Mexican Bocote wood

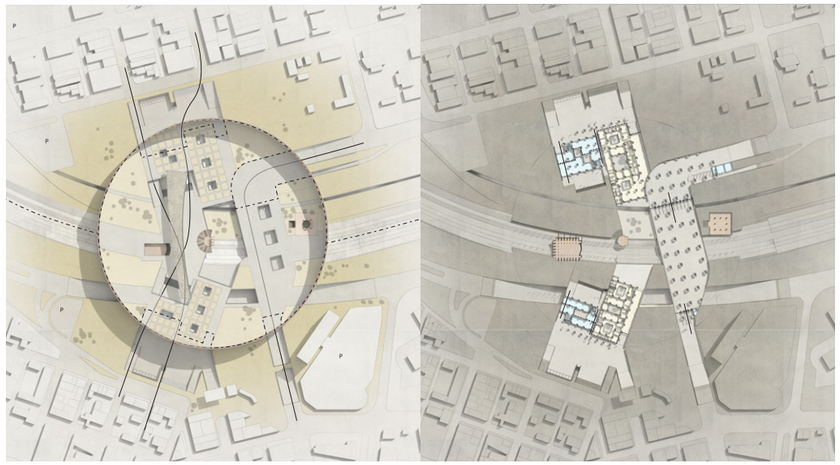
Cast Earth
local sand and gravel is used with gypsum in the Concrete mix



4. Reflection

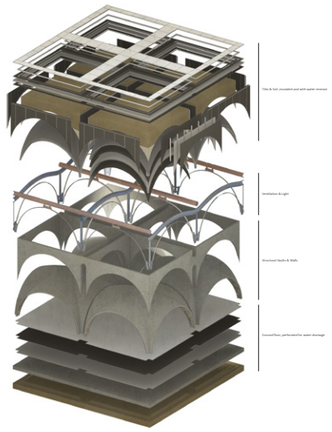
A1s

Site plan
1:1000



Site plan - 6
1:1000

Exploded View



Trim & Turf, consolidated and well-rounded

Ventilation & Light

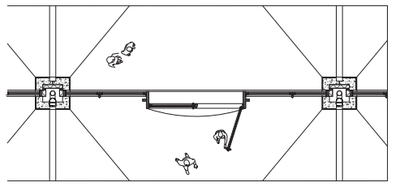
Structural Shells & Walls

Ground Floor, pre-faceted for water drainage

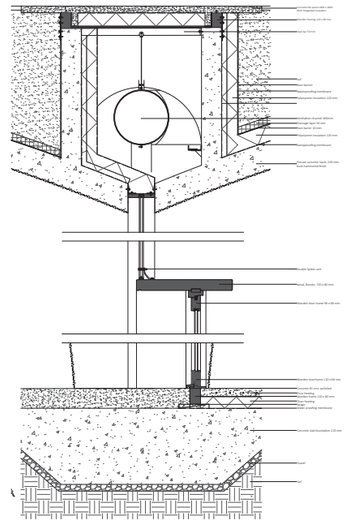
Section Customs Mexico
1:20



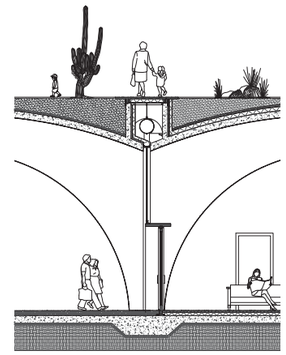
Plan Customs Mexico
1:20



Details
1:5



Section Customs Mexico
1:20



Materials



Soil

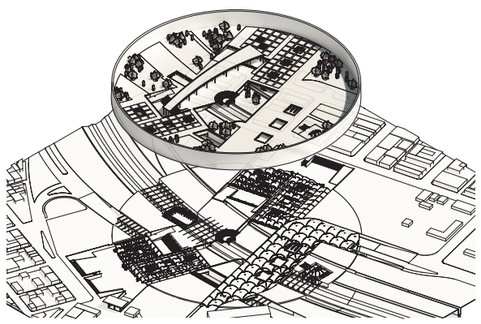
Concrete
finish: lightweight concrete aggregate of rocks found at site

Concrete
Finished

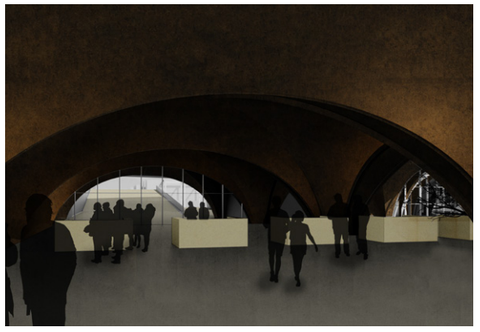
Mexican Bacote wood

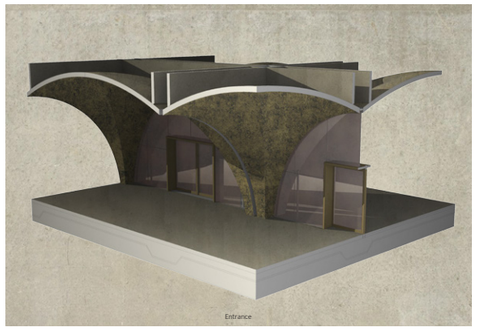
Cast Earth
Cast earth will be used in a mix with gypsum in the Concrete mix

A3s







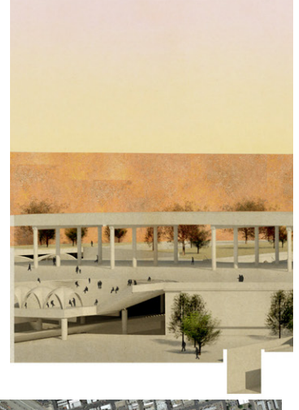


Entrance

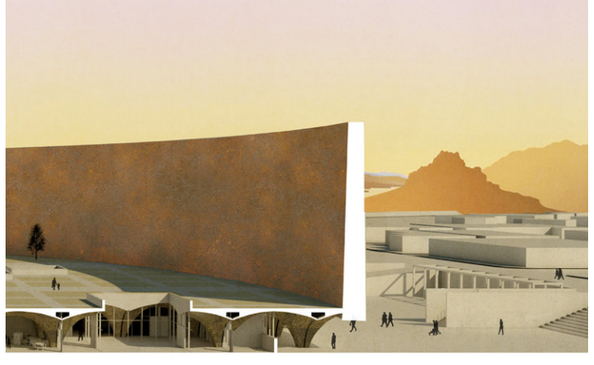


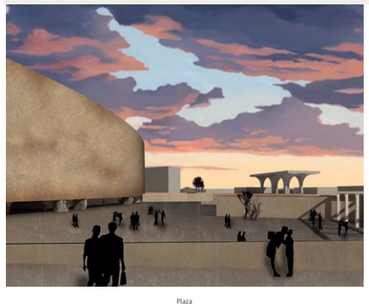








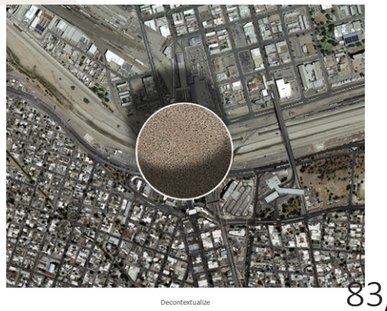




Plaza



Decontextualize



Decontextualize



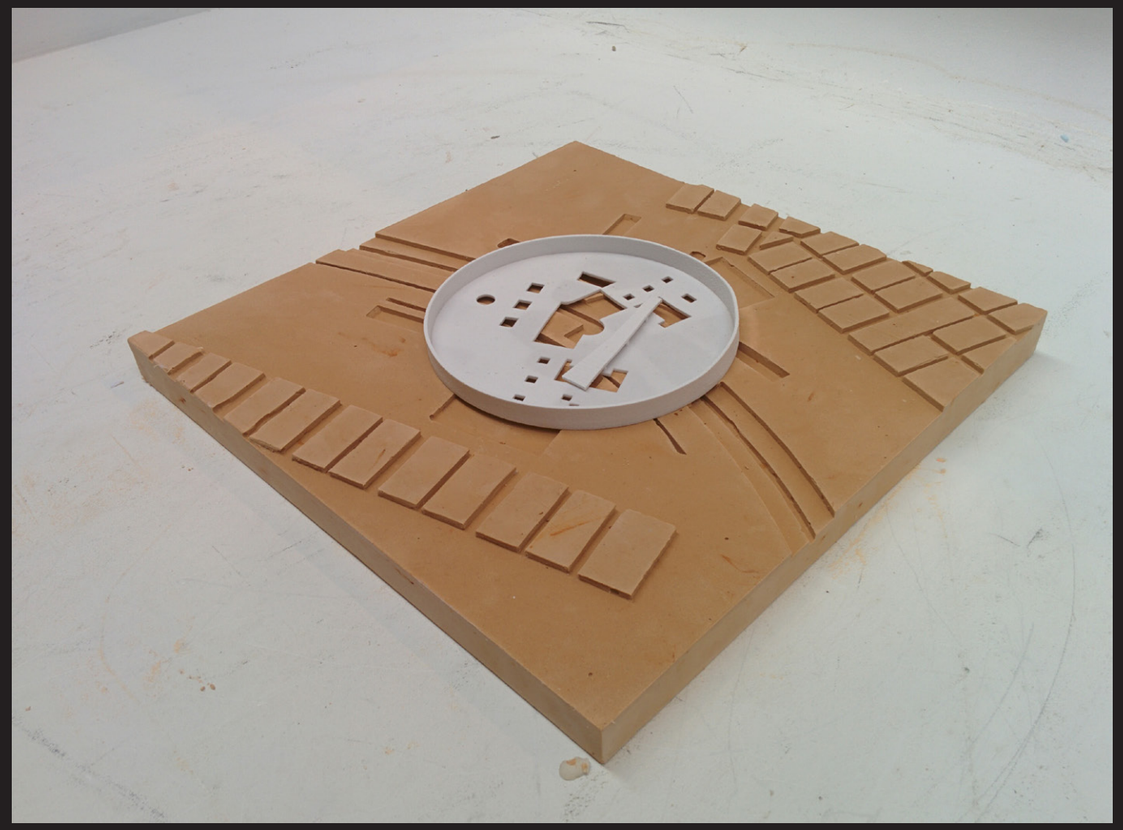




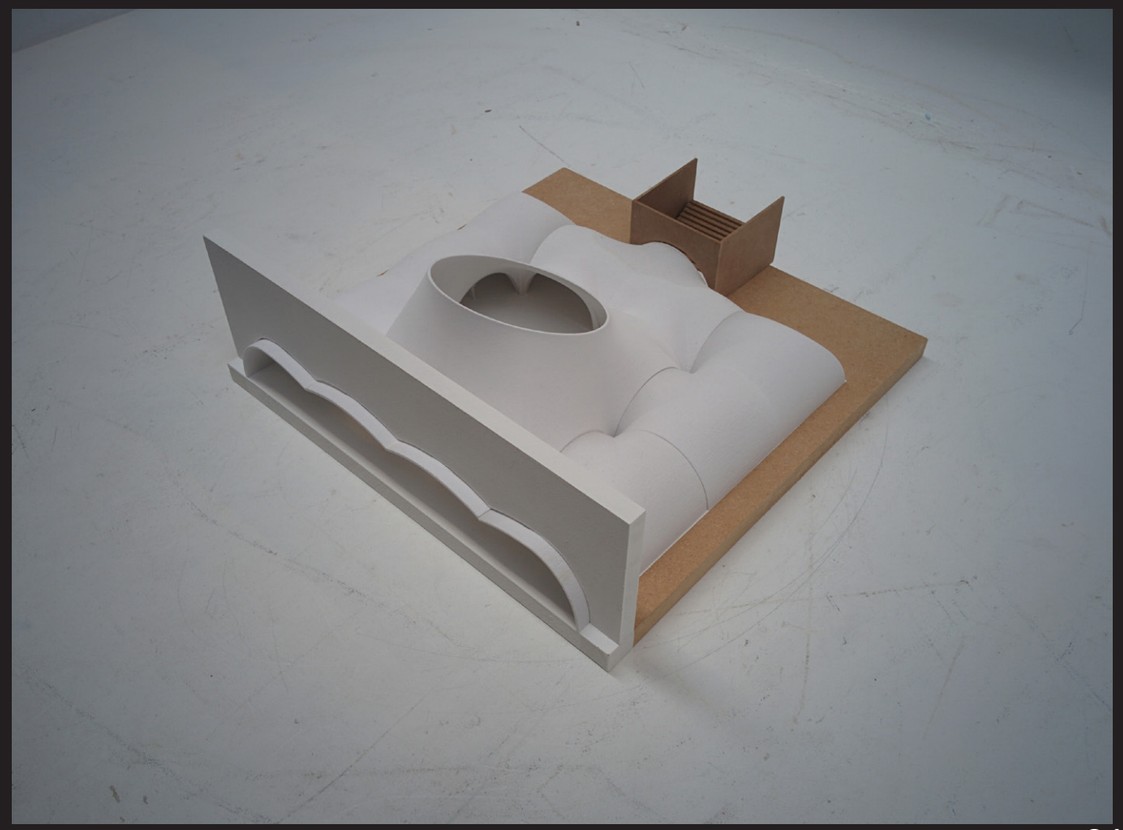
Materials & Landscape



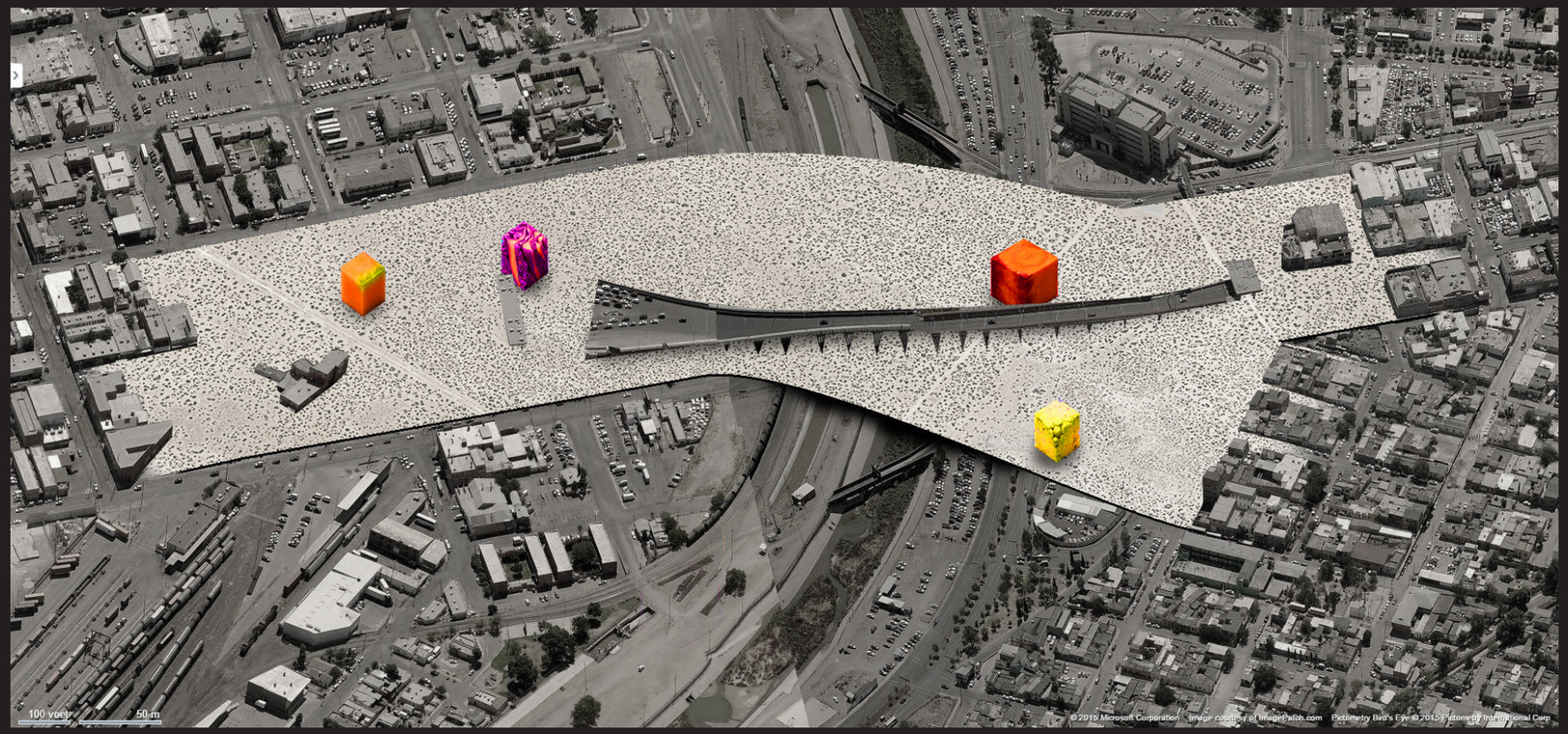
Materials & Landscape

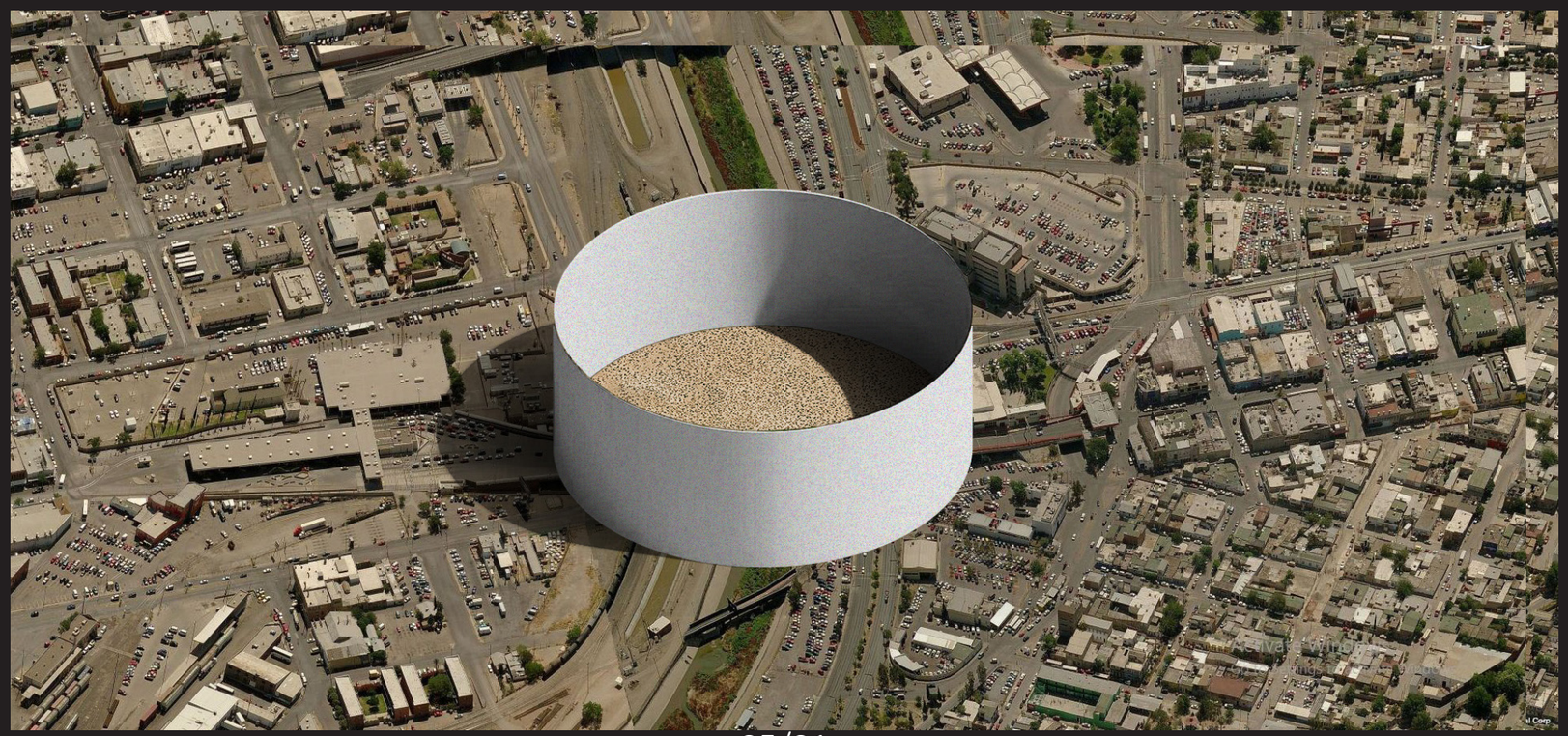


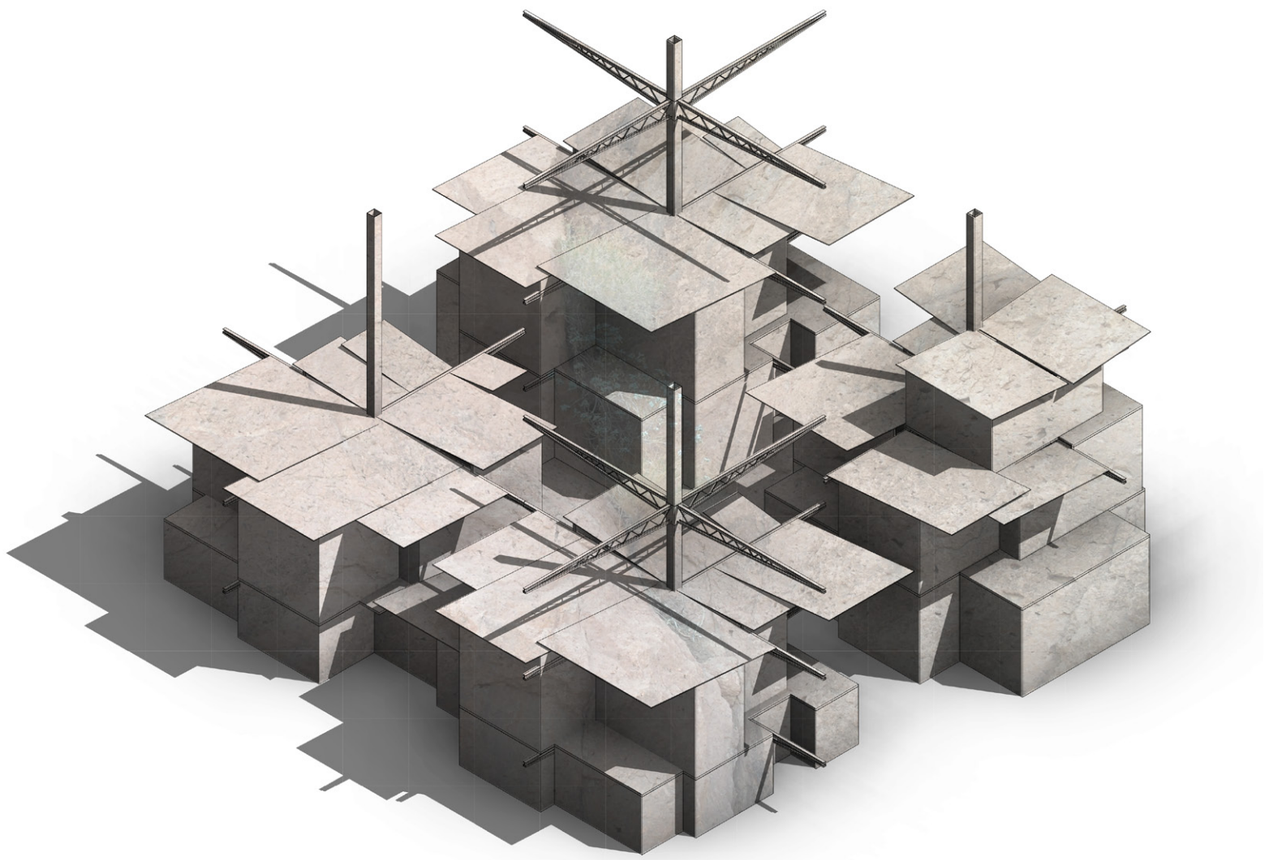


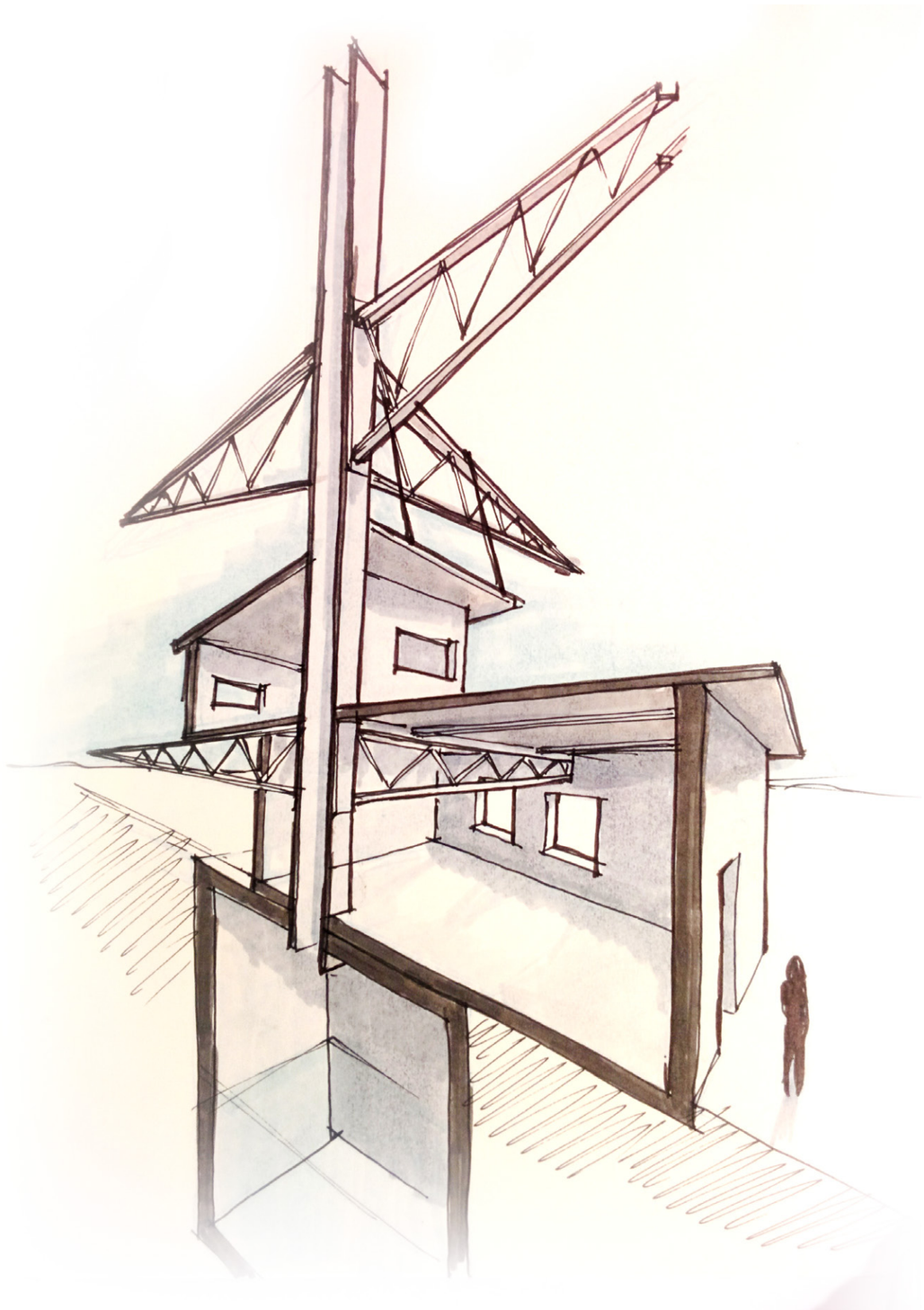


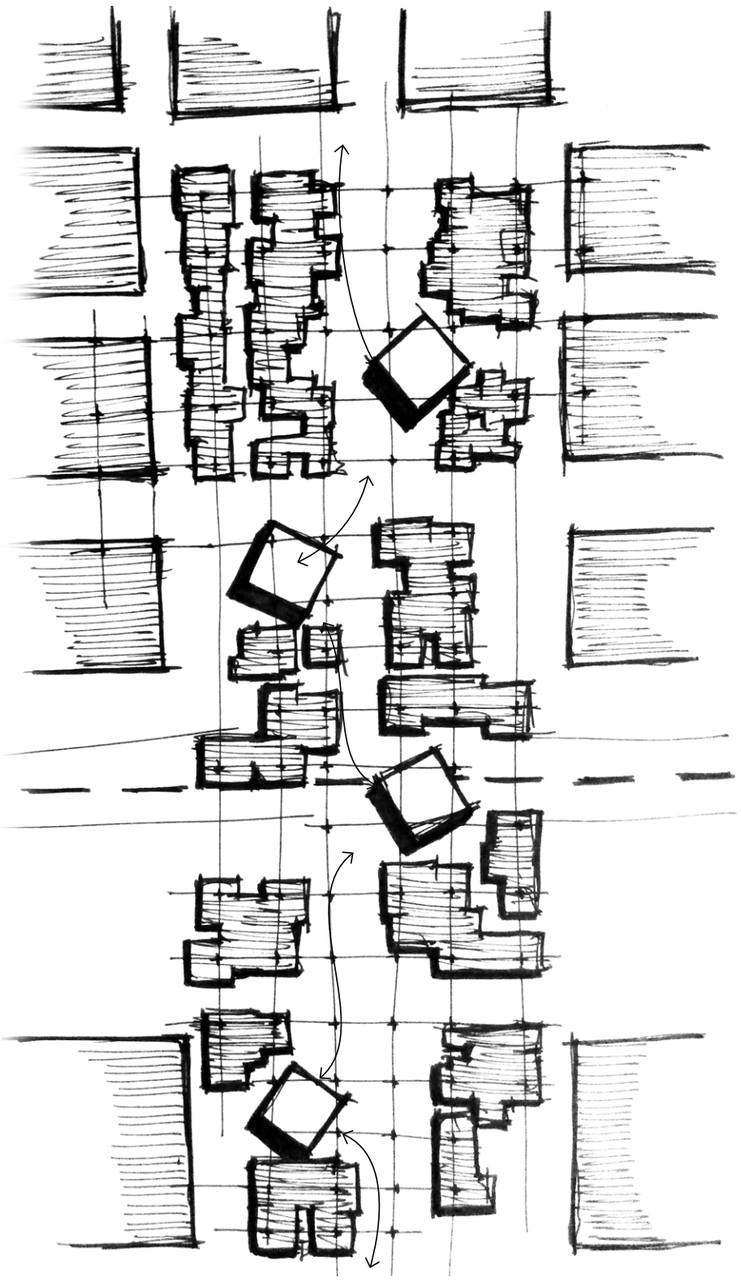



100 voet
50 m
© 2015 Microsoft Corporation Image courtesy of ImageParch.com Pictometry Bird's Eye © 2015 Pictometry International Corp

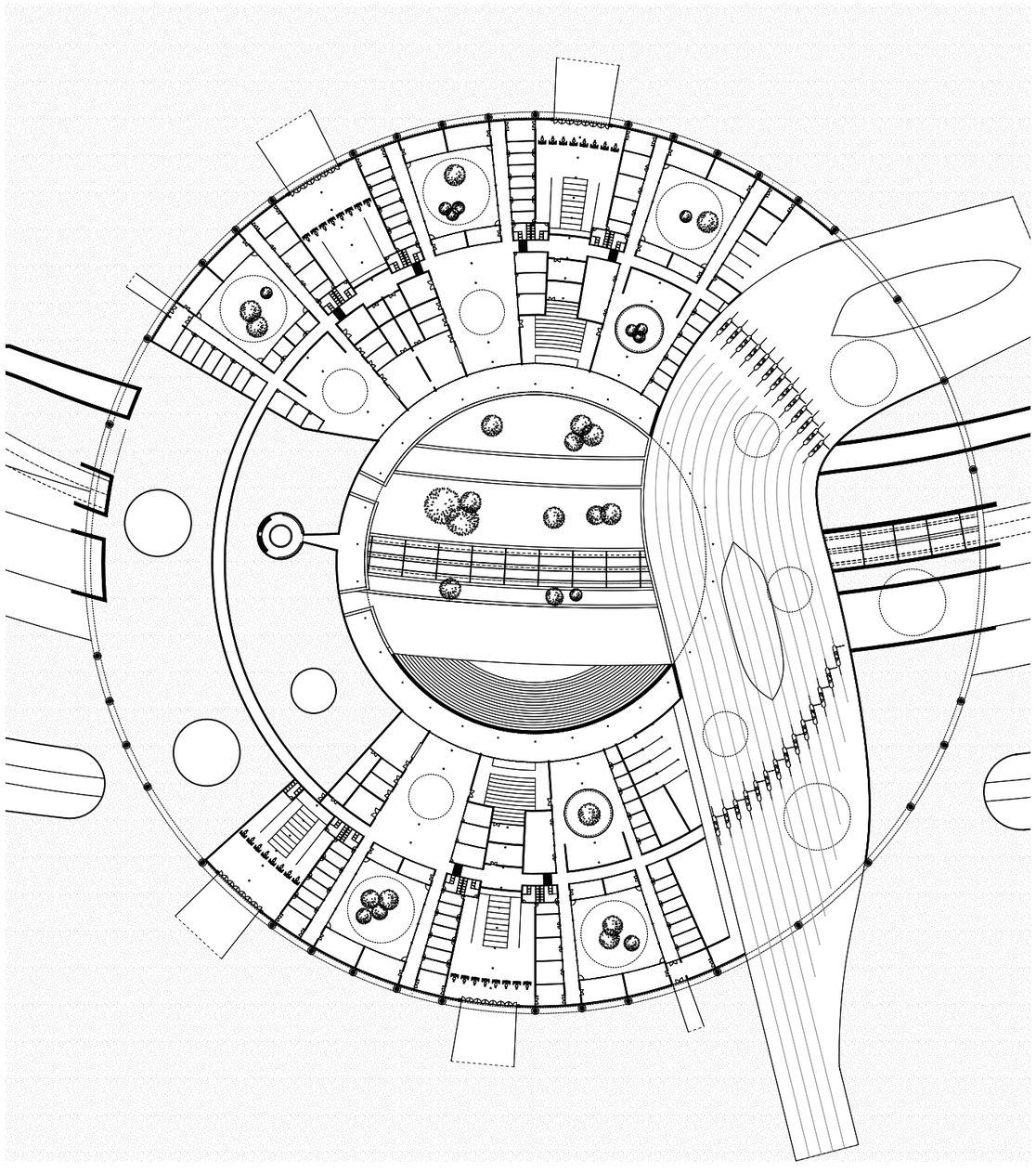


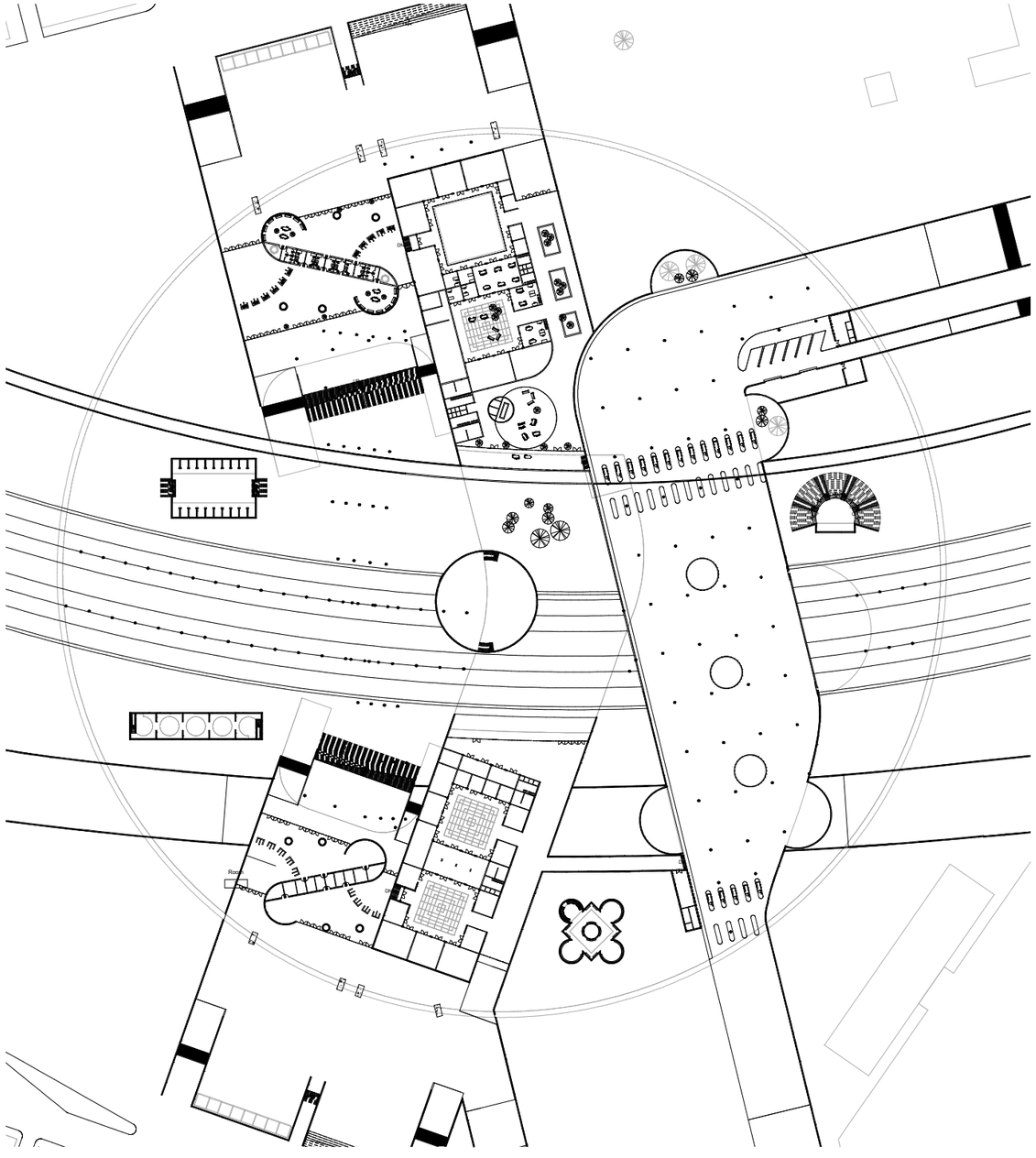


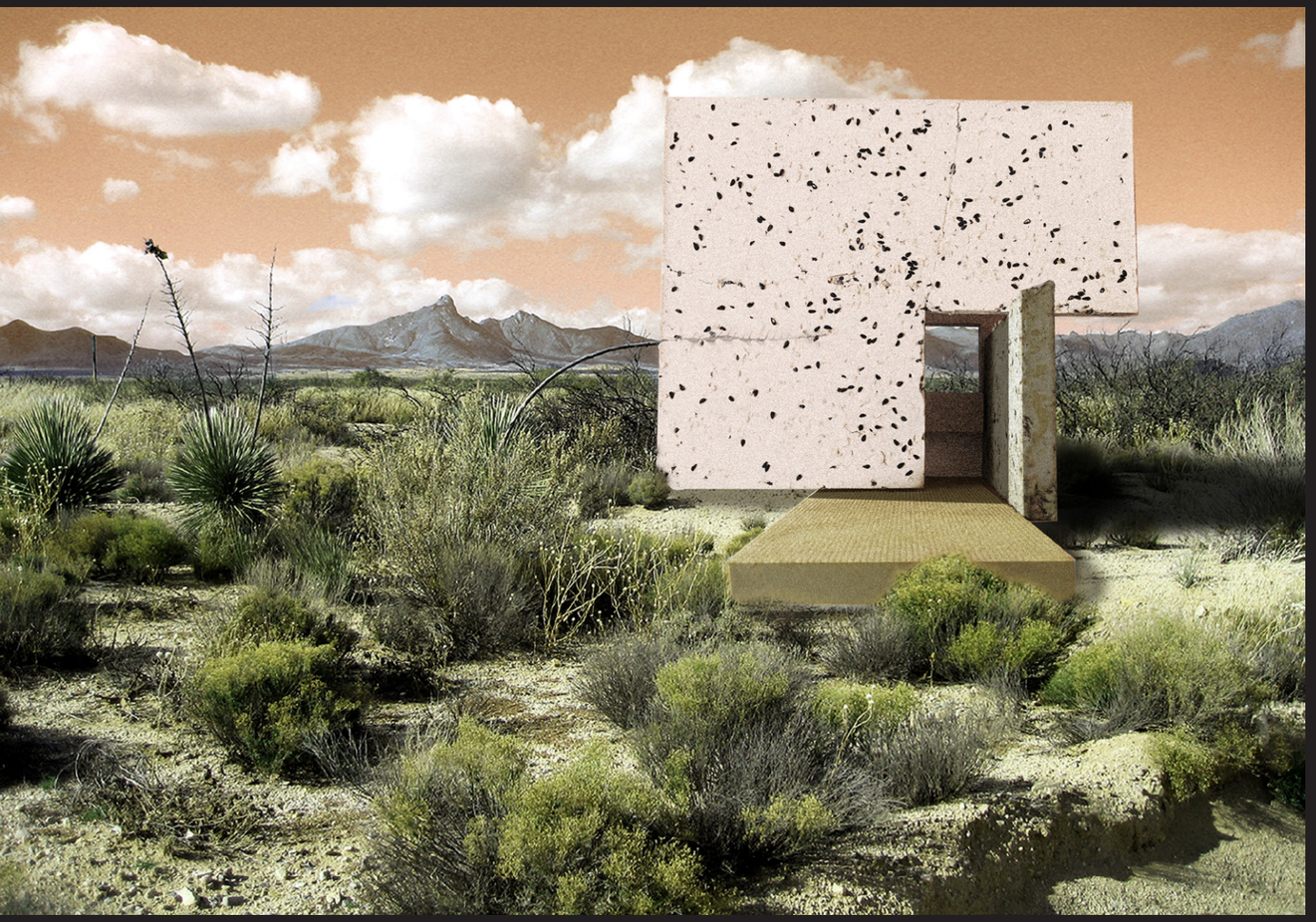










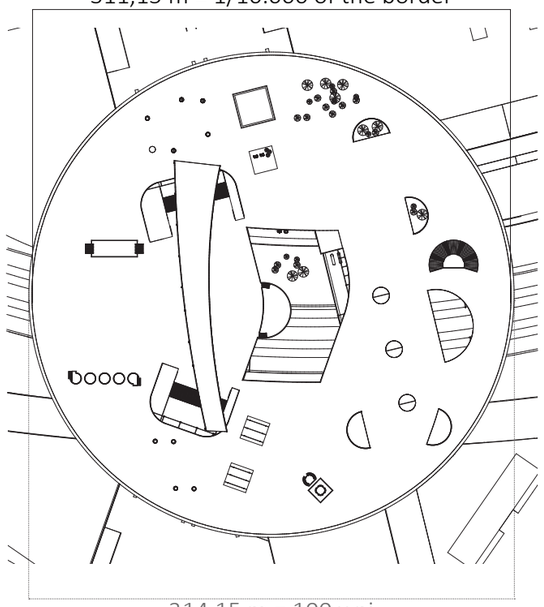






A square?

311,15 m = 1/10.000 of the border



314,15 m = 100 x pi

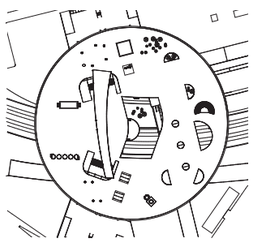


De Grote Markt, Delft



De Damrak, Amsterdam

A park?





Park la Villette, Paris



Museupark, Rotterdam

