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dubai forum for sustainable urban development



Rehabilitation of Deira and Bur Dubai

“...make no little plans; they have no magic to stir men’s blood and probably will themselves not be realized.....make big plans; aim high in hope and work, remembering that a noble diagram once recorded will not die.”



daniel burnham, architect

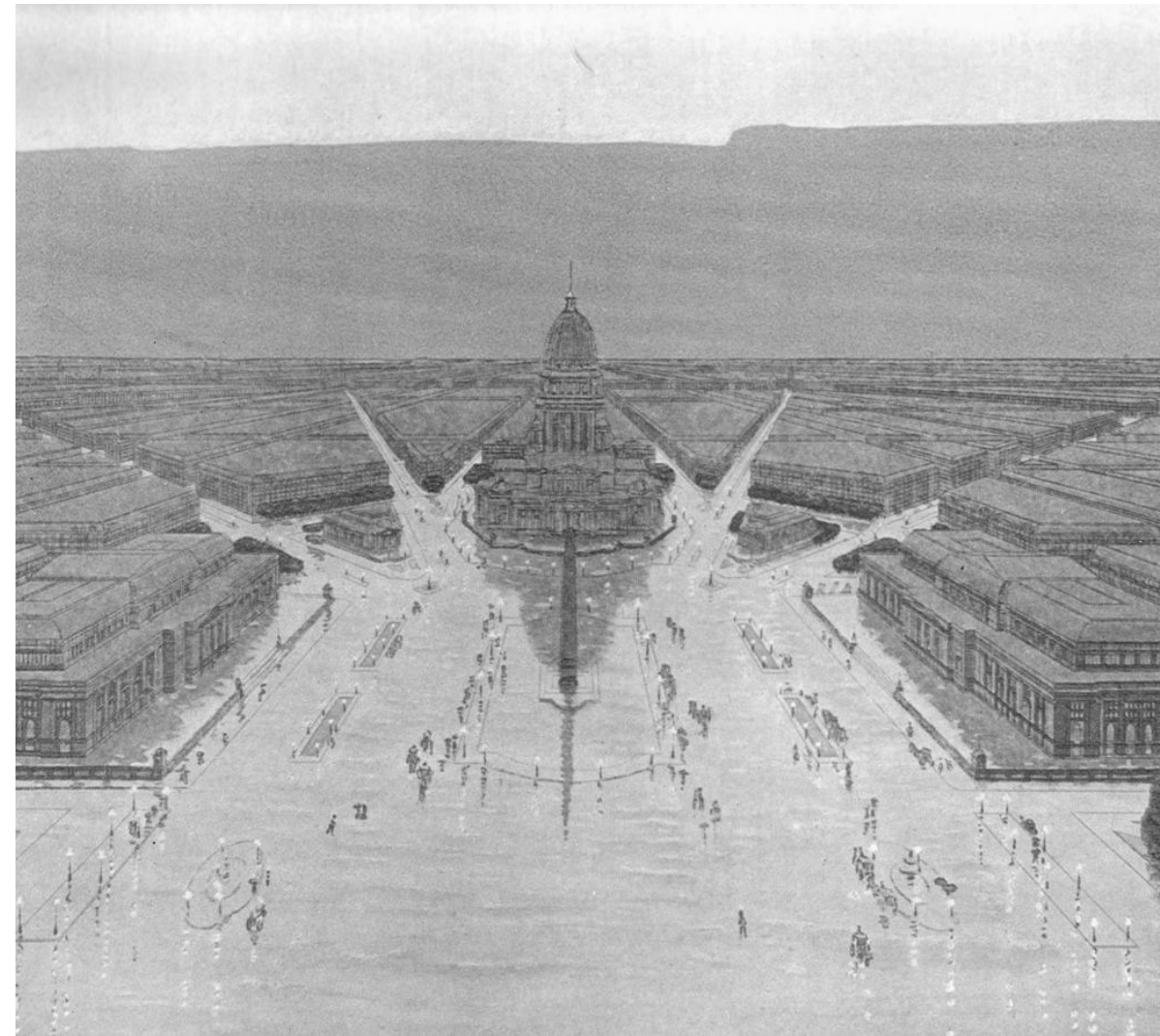
PLAN OF CHICAGO

PREPARED UNDER THE DIRECTION OF
THE COMMERCIAL CLUB

DURING THE YEARS MCMVI, MCMVII, AND MCMVIII

BY
DANIEL H. BURNHAM
AND
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ARCHITECTS

EDITED BY
CHARLES MOORE
CORRESPONDING MEMBER AMERICAN INSTITUTE OF ARCHITECTS



daniel burnham | plan of chicago

1906 | 1907 | 1908

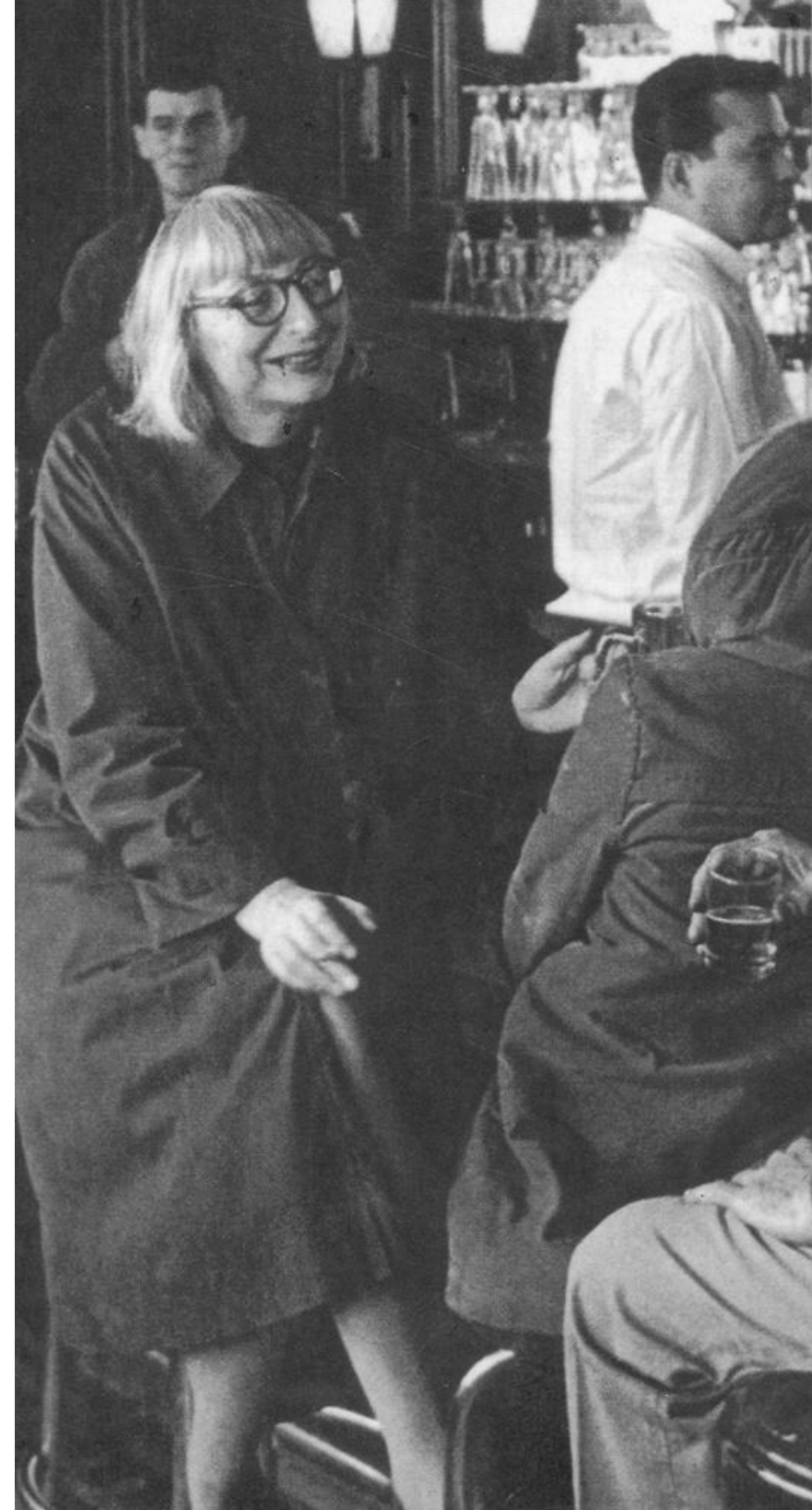
to generate exuberant diversity in a city's streets and districts, four conditions are indispensable:

the district, and indeed as many of its internal parts as possible, must serve more than one primary function, preferably more than two.

most blocks must be short; that is, streets and the opportunities for turning corners must be frequent.

the district must mingle buildings that vary in age and condition, including a good proportion of old ones.

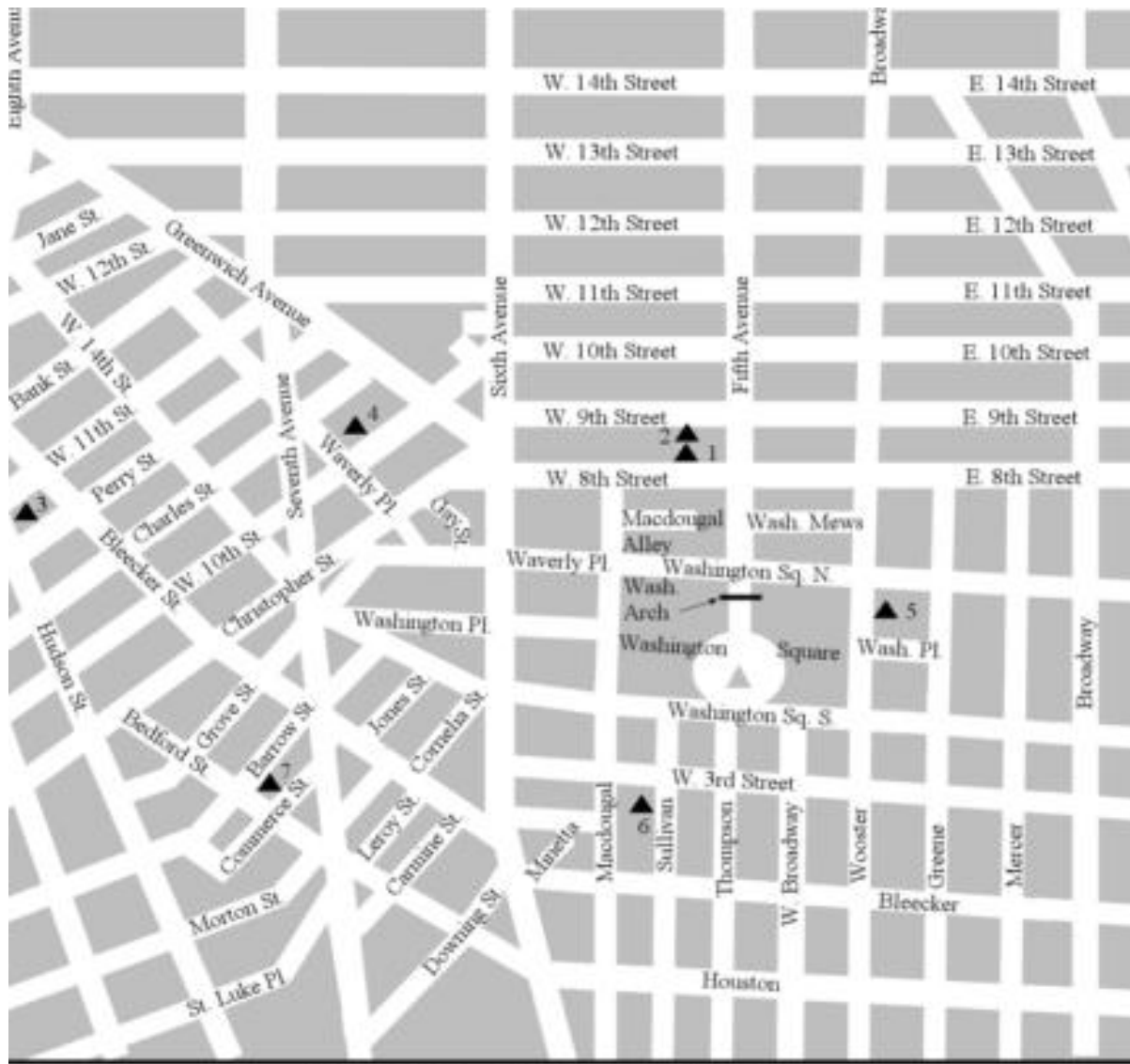
there must be a sufficiently dense concentration of people, for whatever purposes they may be there.



JANE
JACOBS

THE
DEATH
AND LIFE
OF GREAT
AMERICAN
CITIES





Map of Historical Greenwich Village Area



greenwich village | new york city

Situation: Analysis of Dubai

Lessons: American examples

Strategy: Green
Cool
Inhabit
Connect

Implement: Analysis

THE URBAN STRUCTURE OF DEIRA AND BUR DUBAI, LIKE CITIES EVERYWHERE, IS MADE UP OF THREE PARTS.

FIRST IS THE SUBDIVISION OF TERRITORY INTO PUBLICLY AND PRIVATELY OWNED LAND, WHETHER MADE UP OF THE LOTS AND BLOCKS AND STREETS OF CITIES IN THE U.S. OR THE CELLULAR STRUCTURE OF TRADITIONAL CITIES IN THE MIDDLE EAST. Much of the city's history and traditions are embedded in this underlying structure, which is the most permanent part of the city. Whether planned or unplanned, subdivision of property tends to expand in small increments.

SECOND IS THE DESIGN OF THE PUBLIC PARTS OF THE URBAN STRUCTURE. This is commonly known as the "public domain," because this land is owned by the city itself. It is also known as the "public realm," because it is open to the public and is the setting for public events, festivals and everyday life. The public domain includes all the spaces and buildings that connect the city together - streets and alleys, public spaces and plazas, public buildings and religious buildings.

THIRD IS THE DESIGN OF THE PRIVATE PARTS OF THE URBAN STRUCTURE. This includes all private buildings that occupy privately owned land. These buildings occupy the majority of land in most cities and contain their many diverse uses - houses and apartments, offices and retail spaces, restaurants and entertainment, industry and warehouses and many others. Unless they are declared historic and protected, these buildings are built and rebuilt over time and are less permanent than the public domain or the original land subdivision.



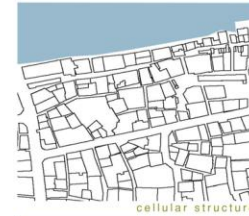
dubai: historic courtyard houses forming cellular structure



dubai: modern covered souk - 2005



dubai: existing development deira - 2005



cellular structure



traditional courtyard house



public domain



traditional souk - dubai



land parcels



existing development



cellular structure of private land subdivision



public domain within cellular subdivision



land parcels for private and public building

OBSERVATION: The Cellular Urban Structure of Deira and Bur Dubai

The traditional urban structure of Deira and Bur Dubai is similar to traditional cities in the Middle East. The structure began with the individual house, usually a courtyard arrangement with a surrounding wall. As the family grew to include multiple generations, the houses expanded, eventually sharing common walls with other houses or separated by narrow alleys to provide access. As the town and trade expanded, souks began to occupy some of the alleys. Over time, as the city modernized, some alleys were expanded into streets to allow automobiles, trucks and public transit. Gradually, most of the courtyard houses were demolished to make way for apartment buildings, offices, hotels and retail spaces. Deira and Bur Dubai have this cellular urban structure that is the result of the design and expansion of the private residence from the courtyard to the house and then from the house to the city. This is the opposite of the lot, street and block structure of cities in the U.S.

This cellular structure is what gives Deira and Bur Dubai their defining characteristic. Retaining this structure is the foundation for sustainable redevelopment - it will connect new development to important local traditions. This cellular structure also teaches an important lesson that applies equally to urban design and landscape concepts for the public domain and the architectural design concepts for private buildings: **ALWAYS DESIGN FROM THE INSIDE OUT AND THEN MAKE ADJUSTMENTS TO COMMON WALLS AND BOUNDARIES AND SPACES.**

OBSERVATION: Public Domain of Deira and Bur Dubai

The traditional public domain of Deira and Bur Dubai was probably like most cities in the Middle East, known mostly from old photographs - a casual space, occupied informally, and rarely embellished except in occasional entry courtyards of mosques. The public domain was treated as a utilitarian space - with craftsmen and shops spilling into the souks and alleys or simply providing access to private houses and their family courtyards. More recently, the major streets have taken on much of the same utilitarian character - mostly for moving cars, trucks and busses, not settings for pedestrians to enjoy.

Deira and Bur Dubai retain much of this tradition of an informal and, frequently un-kept, public domain. Many alleys have broken paving or are unpaved. Trash litters alleys and streets. Merchandise, carts and parked cars occupy many public spaces. Streets are given over to traffic and are often hostile to pedestrians. There are few comfortable, shaded, cooling public spaces for gathering or relaxation. The recent historic preservation projects and well designed covered souks are an exception and teach an important lesson: **IF THE PUBLIC DOMAIN IS DESIGNED TO BE A PUBLIC REALM - A SETTING FOR EVERYDAY LIFE AND PUBLIC EVENTS - THEN IT WILL BE ATTRACTIVE FOR A DIVERSE POPULATION OF RESIDENTS, VISITORS AND TOURISTS.**

OBSERVATION: Private Development of Deira and Bur Dubai

Although the current appearance of Deira and Bur Dubai bears little resemblance to historic photographs and maps, the underlying structure is the same. The sites once occupied by courtyard houses are now occupied by apartment buildings, offices and hotels. Built during the past 30 years or so for Dubai's expanding population, many of these buildings are obsolete, poorly maintained or even structurally unsound. It is doubtful that many would meet modern building and housing codes. Although the land parcels are small, they are valuable, reflecting the strong wholesale and retail economy. In other places, this would be viewed as a problem for redevelopment. In Deira and Bur Dubai, the small parcels and high prices are an asset. Instead of big projects, the cellular urban structure can be sustained.

The historical development processes of Deira and Bur Dubai - the transition from traditional courtyard houses to urban apartment and commercial buildings - teaches an important lesson: **BUILD AND DESIGN AND SMALL INCREMENTS, INFILLING THE SMALL PARCELS ONE AT A TIME.** Following this lesson will sustain the qualities and character of Deira and Bur Dubai's traditional structure and assist to bridge tradition to the present.

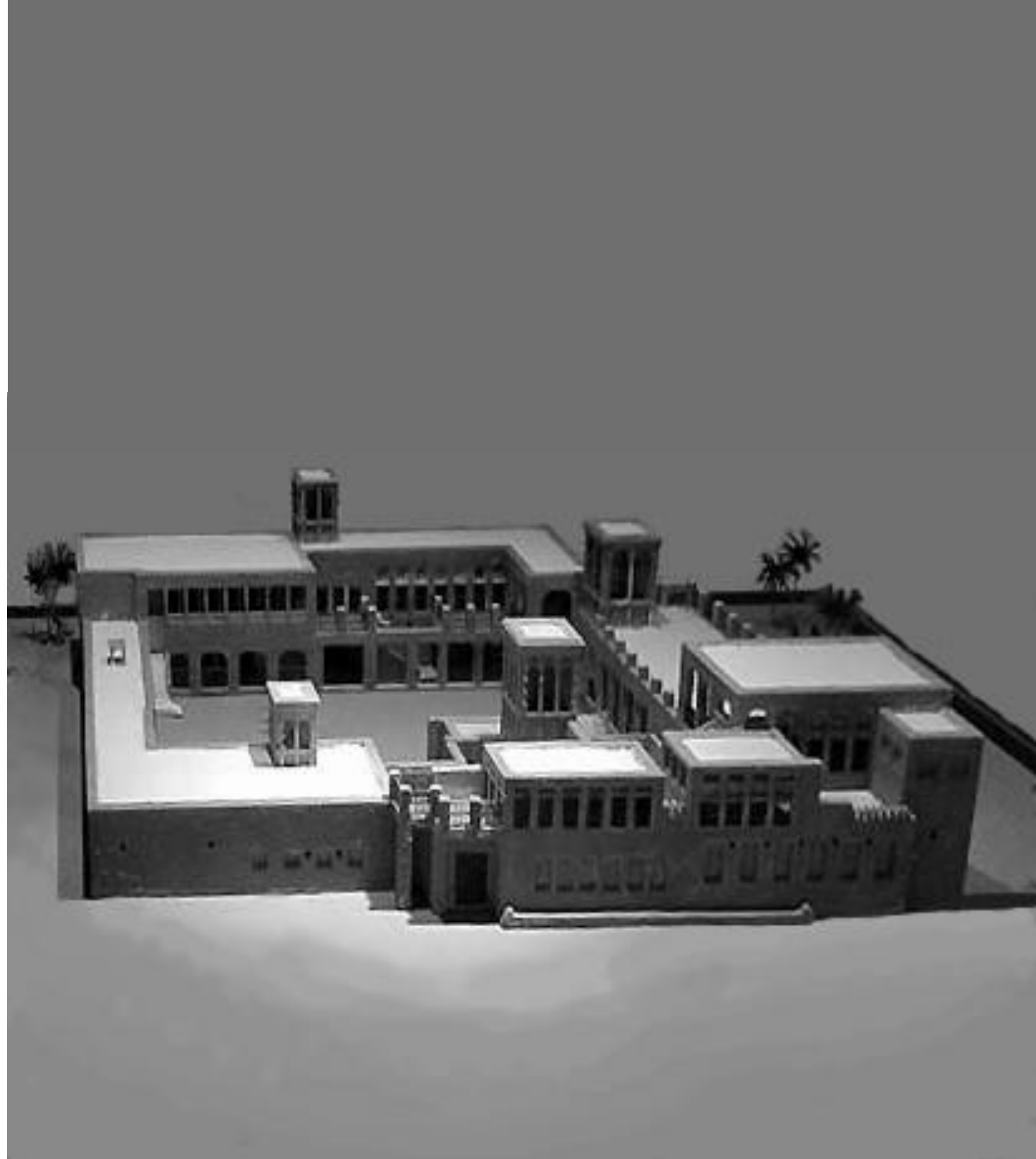


Situation | subdivision



Situation | building parcels





Situation | traditional courtyard house



Situation | courtyard houses forming original cellular structure



Situation | the cellular structure | private land subdivision



Situation | traditional dubai souk along linear alleys



Situation | traditional dubai souk along linear alleys



Situation | the public domain of alleys and streets



Situation | cellular urban structure | modern buildings



Situation | deira and bur dubai | modern streets and alleys



Situation | alleys and streets



Situation | bur dubai | public domain at alley intersections



Situation | bur dubai | public domain at alley intersections



subdivision



alleys and streets



building parcels

Situation | the cellular urban structure | deira and bur dubai

Rehabilitation of Deira and Bur Dubai

DOWNTOWN REHABILITATION IN THE U.S.

After declining for most of the last half of the 20th Century, American downtowns are coming back to life. However, instead of being centers for their regions, they are being re-inhabited as one important place among a network of many places. Portland and Seattle in the Northwest. San Diego and Denver in the Southwest. Minneapolis and Milwaukee in the Midwest. Providence and Boston in the Northeast. All teach important lessons.



wright square | savannah, georgia



tennessee riverpark | chattanooga, tennessee

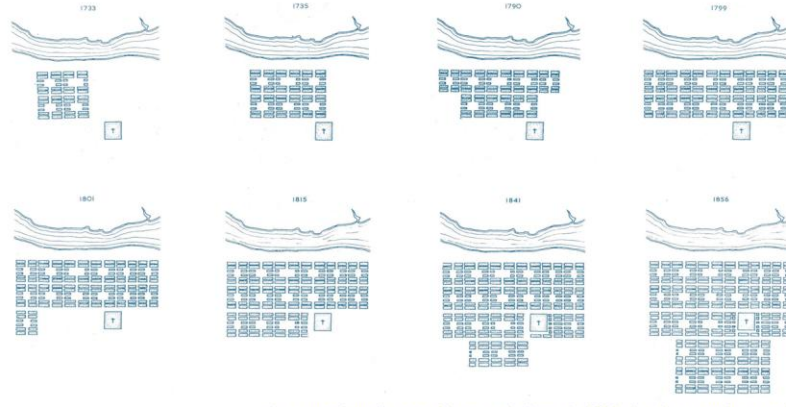


south beach at dusk | miami beach, florida

lessons: united states

ATLANTA AND GEORGIA TECH

Our location at Georgia Tech and in Atlanta provides us with an overview of cities in the Southeast. Atlanta itself is the anchor of the region and is rapidly becoming a global city, like Dubai. And, also like Dubai, Atlanta is searching for an identity for its downtown, which is now only one center among many in the metropolitan area. To find lessons, we looked beyond Atlanta, hoping both to find lessons for our proposals for Dubai and to learn lessons that would be useful for our future work in Atlanta.



the expansion of general james oglethorpe's 1733 plan | savannah, georgia



tennessee riverpark



chattanooga riverpark



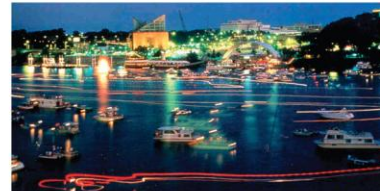
chattanooga riverpark



downtown, chattanooga 1969



downtown, chattanooga 2005



tennessee riverfest - chattanooga 2005



publix supermarket



miami beach lifeguard stands



miami beach lifeguard stands

SAVANNAH, CHATTANOOGA, MIAMI BEACH

Three cities captured our attention. Although very different, all have newly successful downtowns that teach important lessons for cities in the United States, as well as Deira and Bur Dubai. Importantly for us, all three found their success in high quality and award-winning design - urban, architecture, landscape.



case study map

SAVANNAH, GEORGIA | Re-inhabiting the Urban Framework

Located on the Savannah River near the Atlantic Ocean, Savannah has a population of about 200,000, but it is the center of a coastal region of about a million people. Stagnant for many decades, the economy and population is growing. The Port of Savannah, one of the five largest container ports in the U.S. and the largest on the East Coast and the Gulf of Mexico, drives a distribution and manufacturing economy. Tourism is equally important. Attracted by the historic downtown, cultural amenities, and the surrounding natural beauty, fifty million people visited Savannah during the 1990's. The bestselling novel, *Midnight in the Garden of Good and Evil*, and the movie version that was filmed in Savannah, stimulated a new interest in the city and popularized 'ghost tours' along with historical tours. The Savannah College of Art and Design, with its 5000 students living and studying downtown, created an explosion of cultural activities, including art, fashion design, film and architecture. The surrounding coastal marshes attract both research institutions and tourism for ecological excursions.

The British General James Oglethorpe founded Savannah in 1733, making it one of America's earliest colonial cities. Oglethorpe's plan is well known. It is a simple arrangement of repeating "wards" each with its central square surrounded by "trust lots" and "lithing lots," narrow streets and broad boulevards. This simple plan has guided Savannah for almost 300 years. Land uses changed, buildings were built and rebuilt, and the public landscape of squares and boulevards matured from utilitarian spaces into a luxurious urban arboretum. For the past two decades, Oglethorpe's plan has guided the rehabilitation of Savannah. It is this simple urban framework that enabled the Savannah College of Art and Design to purchase, restore and occupy dozens of buildings - theaters, schools, houses, office buildings. The urban framework maintained economic value for historic buildings as they were restored into - hotels and inns, retail shops, entertainment, and housing for a diverse population of students, retirees, local business people. That is Savannah's lesson for sustainable urban development: **DISCOVER, RESPECT, AND SUSTAIN THE CITY'S URBAN STRUCTURE - ITS SIMPLE ARRANGEMENT OF LOTS, BLOCKS AND STRETS.** A mayor of Savannah said: "Savannah's history is its future." He meant that Oglethorpe's simple plan set out the history that has guided and continues to guide Savannah as it is successfully re-inhabited for the 21st Century.

CHATTANOOGA, TENNESSEE | Re-inventing the Public Domain

Chattanooga Tennessee is a mid-sized city on the Tennessee River about 120 miles north of Atlanta. In 1969, it was voted most polluted city in the U.S. Even Los Angeles' air was better. The list of problems was long: industries closed or relocated elsewhere, unemployment rose to 20%, infrastructure deteriorated, the historic downtown riverfront was mostly abandoned. A group of city leaders from the Planning Commission and the Chamber of Commerce created Chattanooga Venture in 1984 with the objective to "clean up" the city. Beginning with a program called Vision 2000 the group established a public participation process that resulted in goals and projects to make Chattanooga a "sustainable city" on all fronts - environmental, economic and social.

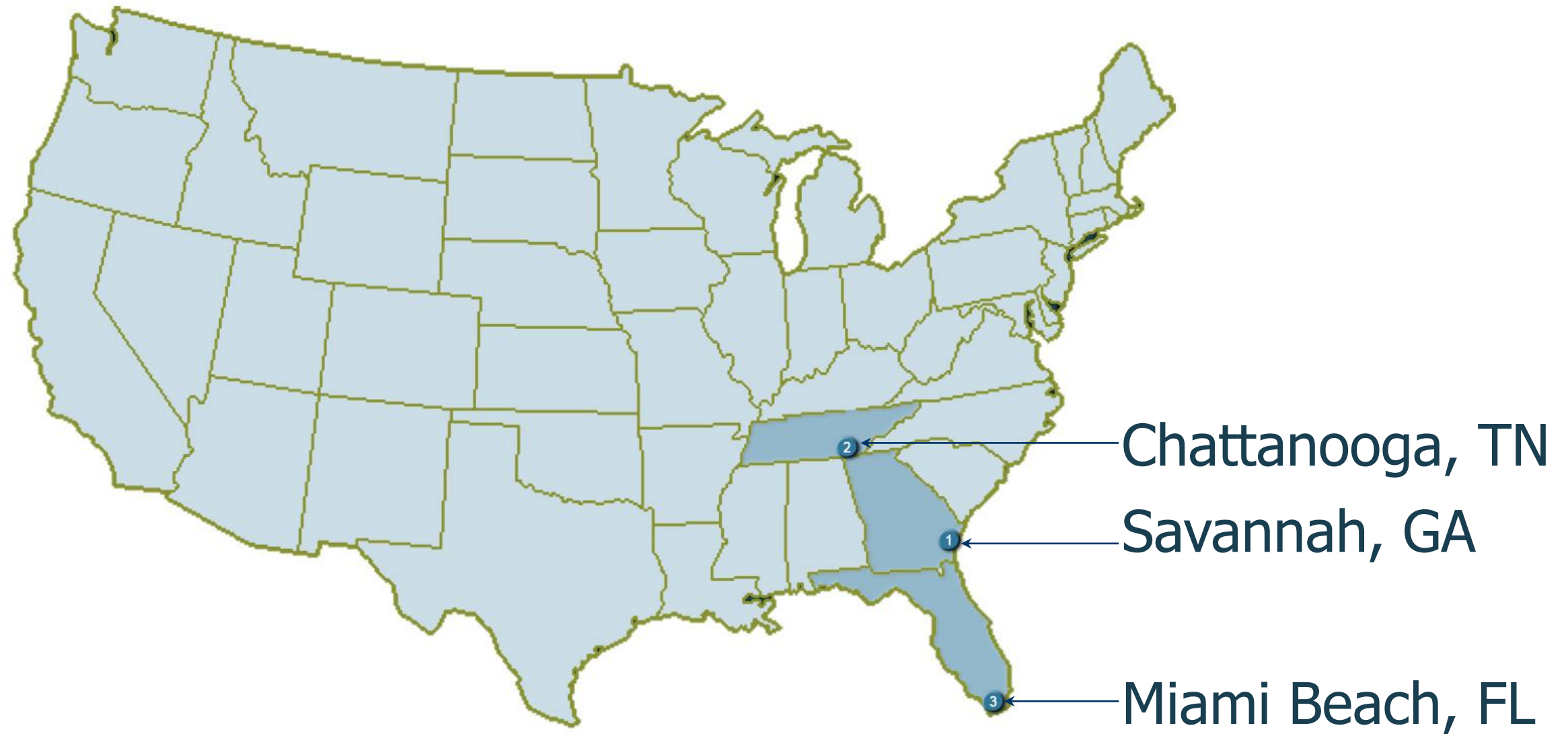
Recognizing the Tennessee River as the heart and soul of the city, action focused on the downtown and the riverfront. Many of the projects undertaken in the past 20 years are well known. The 22 mile Tennessee Riverpark re-connected downtown and neighborhoods to the river with public spaces, fishing piers, marinas, trails and parkland. The Tennessee Aquarium was built downtown with an emphasis on freshwater estuaries to highlight the ecological importance of the Tennessee River to the city and its future. Public parking decks were built at the periphery of downtown and linked to downtown activities by clean electric buses that were manufactured locally. A riverfront highway was demolished to become a part of the downtown Riverpark. New housing, restaurants, shopping, and museums were built in new and restored buildings. Riverfest, an annual festival with bands on barges in the river, attracts more than 250,000 people each year. All of these individual projects, however, had a common theme - they were to make downtown Chattanooga into the city's "living room" - to attract residents and tourists alike to downtown to visit, work, or live. The Tennessee Riverpark, downtown streetscapes, public spaces and urban design guidelines for new buildings to open into the city's "living room" made the successful re-inhabitation of downtown Chattanooga possible. Chattanooga's lesson for downtown revitalization is simple one: **RE-INVENT PUBLIC SPACES TO BECOME THE CITY'S "LIVING ROOM" BY DESIGNING AND GREENING THE CITY'S HISTORIC DOWNTOWN STRUCTURE OF LOTS, BLOCKS, STREETS AND THE RIVERFRONT.**

MIAMI BEACH, FLORIDA | Leading Edge Design

Although a city of only 90,000, Miami Beach is part of the Florida Gold Coast and its ethnically diverse population of almost five million. Miami Beach is known world-wide as a tourist destination, with the most beautiful beaches in North America, the best collection of Art Deco buildings, nightlife that is the equal of New York or Los Angeles, and the setting of leading edge fashion, music and film companies. Few recall, however, that only 30 years ago, Miami Beach attempted to demolish itself, turning the historic area into a "up to date" resort. A group of residents fought the demolition, eventually designating South Beach as a historic district. The struggle then began to re-inhabit the city that was built in the first boom of the 1920's and 30's, expanded with the second boom in the 1950's, and deteriorated during the 1960's and 1970's. Historic hotels were abandoned or converted into single room apartments for the elderly. Crime waves resulted from expanding drug trafficking. The tourist economy collapsed.

Recognizing that the Art Deco and Mid-Century Modern buildings were innovative for their times in the 1920's and 1950's, the new Miami Beach design regulations and guidelines required preservation of historic buildings but demanded innovative design solutions to modernize them. New buildings were not to copy historic ones, either from the 1920's or the 1950's. These new buildings were to be leading-edge design for today, like historic buildings were for their time. Many of these projects are well known: the uniquely designed lifeguard stands, the restored Delano Hotel, the Miami Beach Publix Supermarket, the "green" municipal parking garage design by Jim Wines of SITE, and the restoration of Maurice Lapidus' Lincoln Road Mall.

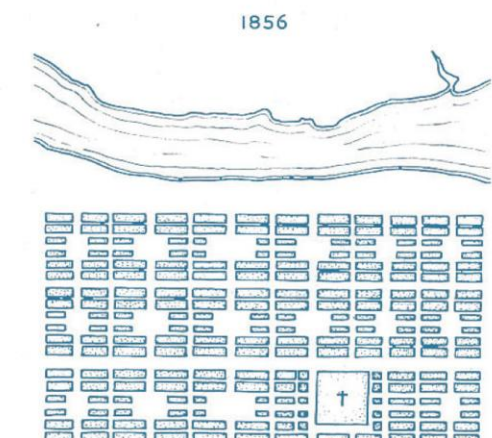
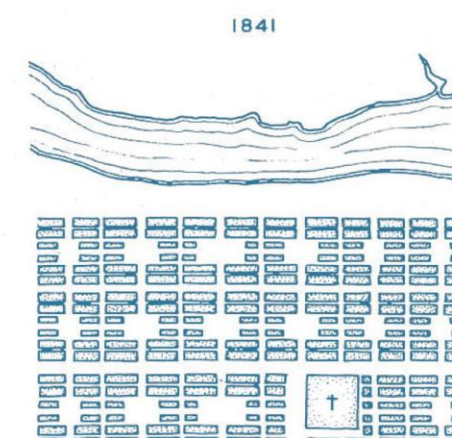
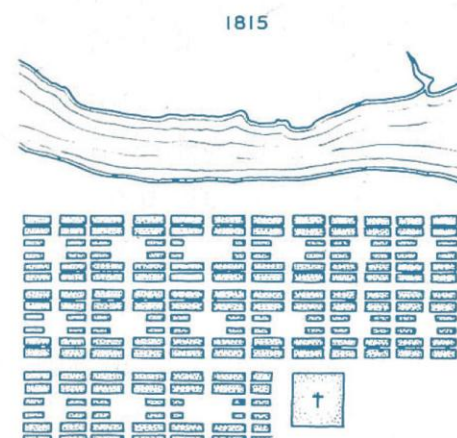
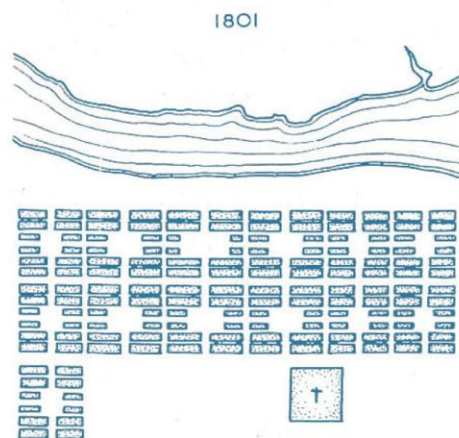
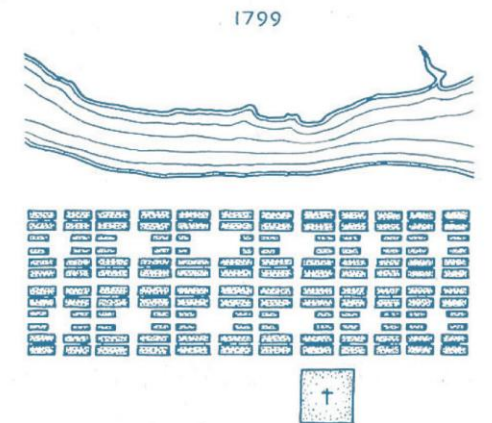
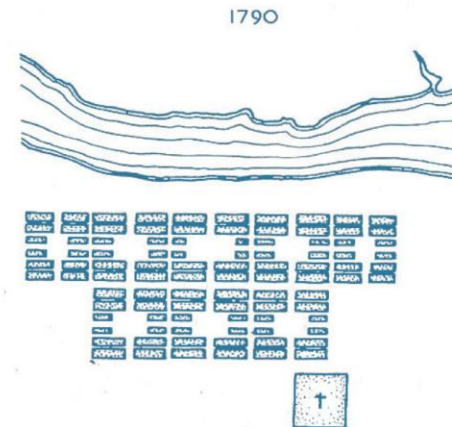
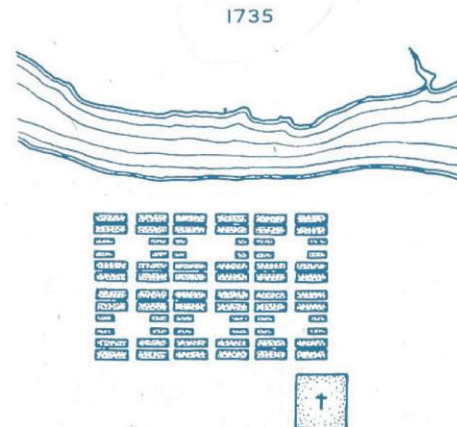
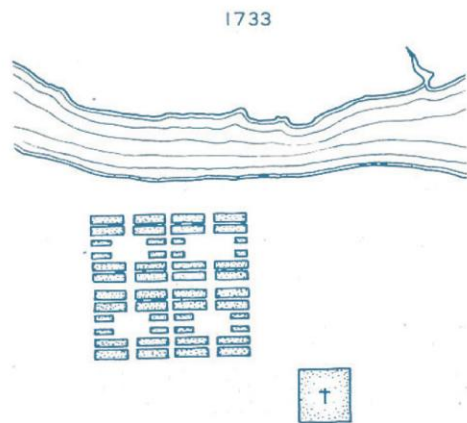
Design - whether architecture, landscape architecture or public art - has been an important part of the city's revitalization. Design attracted attention and stimulated a new tourist economy, but expanded it to 12 months by adding South American tourists during the summer months to the North American and European tourists who winter in Miami Beach. Design has also stimulated the economy to include music, fashion, film and art. Miami Beach's lesson for urban revitalization is important but often overlooked: **DESIGN ITSELF - LEADING-EDGE IDEAS - CAN STIMULATE TOURISM, NEW RESIDENTS AND A NEW ECONOMY.**



Lessons | three case studies

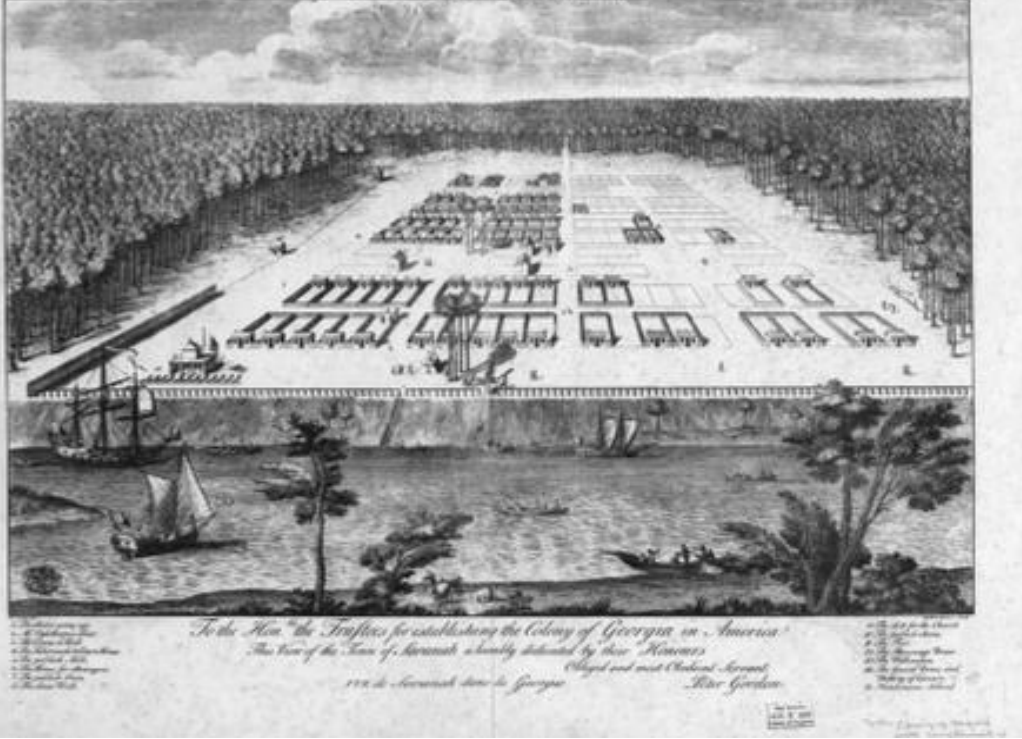


Lessons | savannah, georgia | re-inhabiting the urban framework



the expansion of general james oglethorpe's 1733 plan | savannah, georgia

Lessons | savannah, georgia | re-inhabiting the urban framework



1734



1837



1920's



1950's

Lessons | savannah, georgia | re-inhabiting the urban framework



Lessons | savannah, georgia | Wright Square 2003



market street in chattanooga 1969 and 2005

Lessons | chattanooga tennessee | reinventing the public domain



plan for the tennessee riverpark
phase 1: edaw, landscape architects
phase 2: hargreaves and associates, landscape architects.

Lessons | chattanooga tennessee | reinventing the public domain



Lessons | chattanooga tennessee | the 'green living room'



ocean drive in south beach

Lessons | miami beach, florida | leading edge design



miami beach lifegaurd stand competition

Lessons | miami beach, florida | leading edge design



municipal parking garage | james wines | site

Lessons | miami beach, florida | leading edge design

PRINCIPLE 1:

Preserve and enhance the cellular urban structure – streets, alleys and private building parcels – and build within it, designing from the inside out.

PRINCIPLE 2:

Redesign the public domain of streets and alleys into a diverse public realm – deira and bur dubai's public living room – for residents, visitors and tourists.

PRINCIPLE 3:

Build incrementally on existing private building parcels and public spaces to preserve the scale, character and diversity of deira and bur dubai.

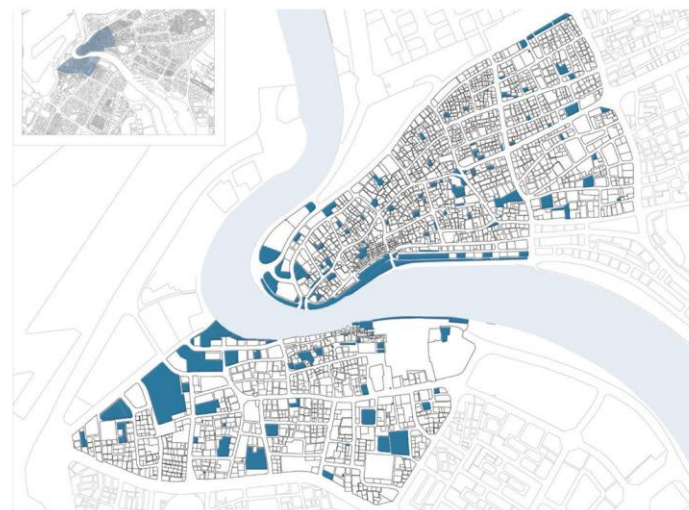
AND, FINALLY, AN OVERARCHING PRINCIPLE CALLS FOR WEAVING TRADITION AND THE PRESENT THROUGH URBAN, LANDSCAPE AND ARCHITECTURAL DESIGN.



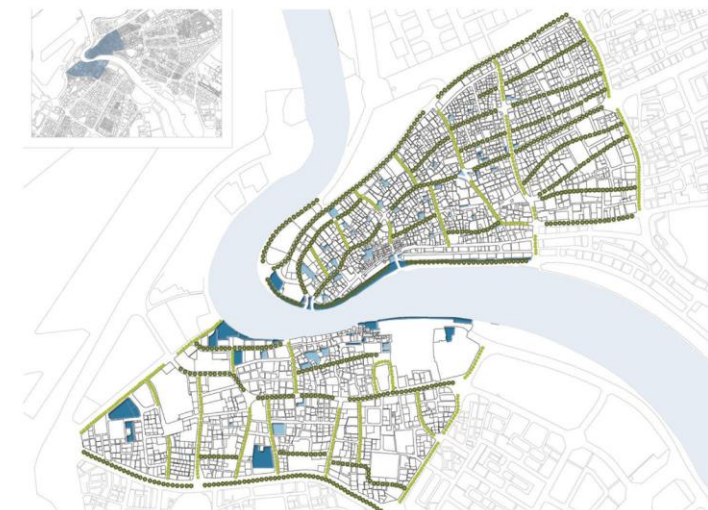
existing public space



waha/oasis



public land and buildings



GREEN: arboretum, garden, waha

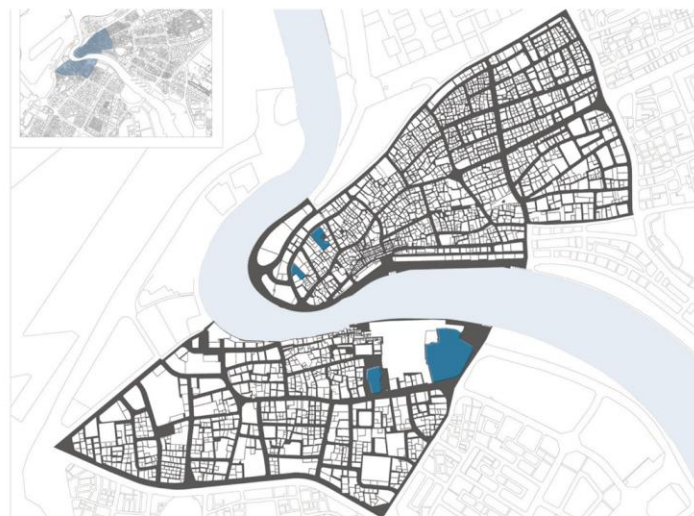
Green | design strategies for deira and bur dubai



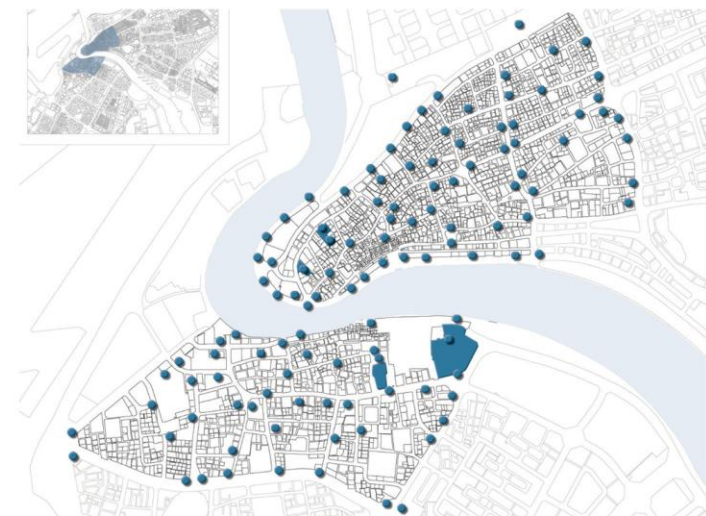
traditional wind towers



urban wind tower



public spaces: streets and alleys



COOL: wind towers

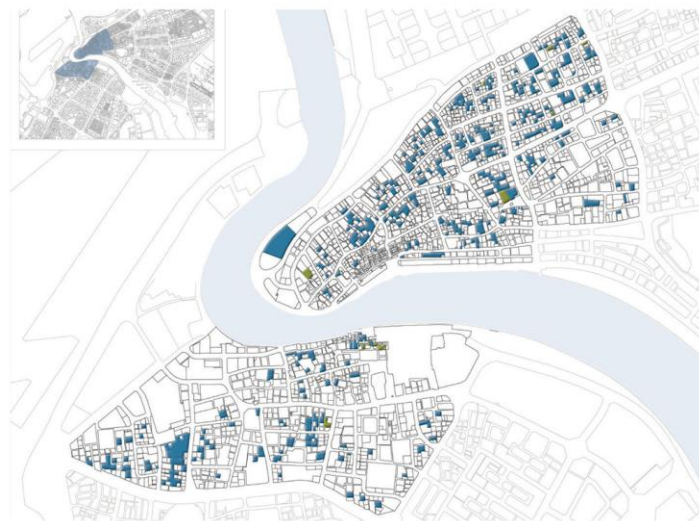
Cool | design strategies for deira and bur dubai



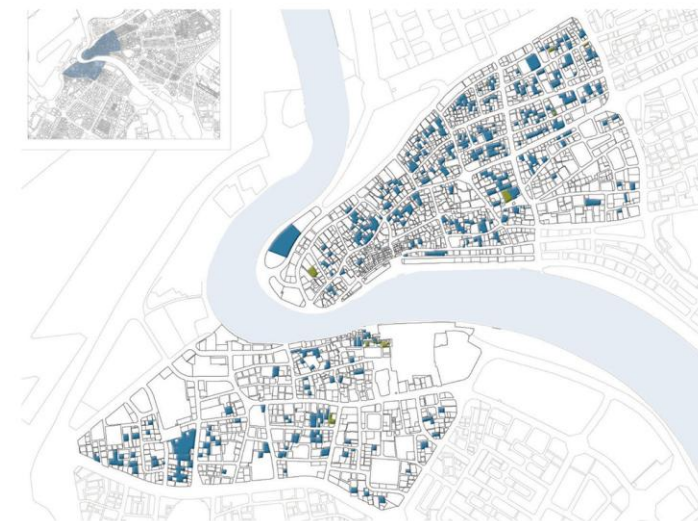
demolished building



new housing



deteriorated buildings



INHABIT: new housing infill

Inhabit | design strategies for deira and bur dubai



traditional abra



taxis and fast ferry



Connect | design strategies for deira and bur dubai

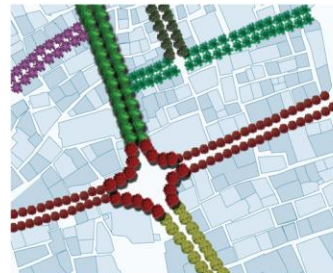
Rehabilitation of Deira and Bur Dubai

green

GREENING REINVENTS DEIRA AND BUR DUBAI'S UTILITARIAN PUBLIC DOMAIN INTO A GREEN LIVING ROOM. This brings the desert oasis or waha to the city as a place of refuge that is calm, refreshing and marked by trees and shade, a place to relax or gather with friends and become the public realm and places for everyday life. There are three major actions, all of which occupy existing public lands, including streets, alleys, public parking and publicly owned vacant land parcels. All three, taken together, are important for making historic Dubai attractive for new residents, visitors and tourists.



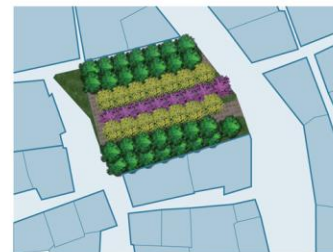
existing urban waha



arborium planting diagram



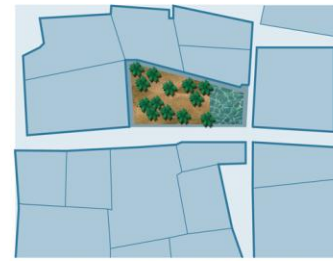
arborium street section



orchard parking garden diagram



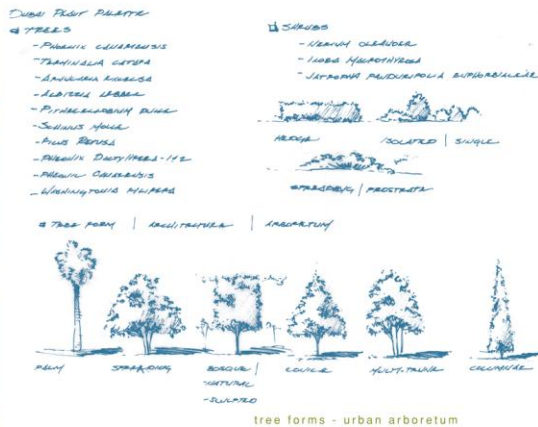
orchard parking garden section



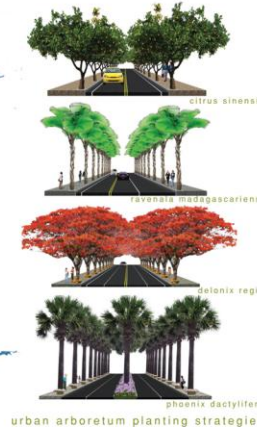
urban beach/cart parking waha diagram



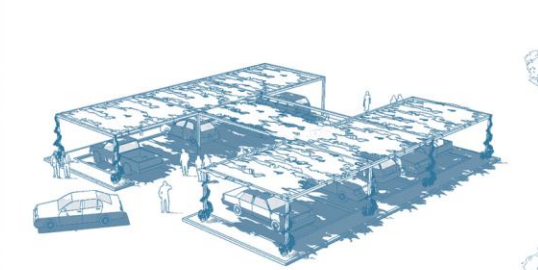
urban beach/cart parking waha section



tree forms - urban arborium



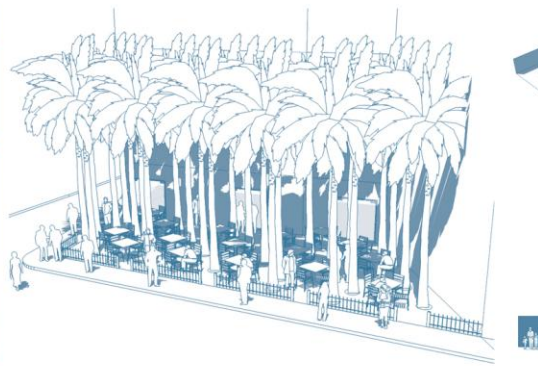
urban arborium planting strategies



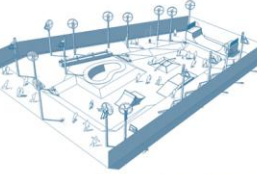
soccer parking garden



fruit tree parking garden



palm forest cafe waha



skate park and fan waha



water waha

An URBAN ARBORETUM, trees of different species planted along the streets and roads provides way-finding, air cleansing, shade and traffic calming for the historic district. PARKING GARDENS convert utilitarian parking lots into unique landscapes, so that visitors recognize that parking in the green living room is more about ecology and art than convenience. OASES or WAHAT are also unique landscapes serving urban activities recreation, outdoor seating for cafes, evening gathering places, and even storage places for delivery carts

URBAN ARBORETUM



existing landscape

All of the streets and roads in Deira and Bur Dubai become an URBAN ARBORETUM, with trees of different species lining both sides of each street parallel to the Creek and perpendicular to the Creek. In addition to providing shade, air cleansing, and traffic calming, the different species along different streets will also provide wayfinding for visitors and tourists. Follow the palms to the Creek. The URBAN ARBORETUM will provide an overall framework for the green living room and a demonstration of sustainable development the URBAN ARBORETUM will be both useful and beautiful. This can be an adjunct to Dubai's forestation projects.



typical site for arborium

PARKING GARDENS

The municipal parking lots are necessary, but they should be come PARKING GARDENS to provide places not just for parked cars but also cooling shade for the surroundings, places for children to play when the parking lot is empty, and places to sit and relax around the edge. These gardens will be for small space and large ones, extending the greening of parking lots that has been developed outside of historic dubai. Each PARKING GARDEN should be a unique landscape design, with visitors recognizing that parking in the green living room is more about art and beauty and ecology than just convenience.



existing parking garden



typical site for parking garden

OASES/WAHAT

OASES/WAHAT are places distributed throughout Deira and Bur Dubais alleys as places for recreation, relaxation and gathering. Like the Parking Gardens, these are unique landscape designs, but they are combined with urban activities. These OASES/WAHAT are useful and can be designed for many different activities. Some will be for recreation surfaces to kick soccer balls, childrens games, skateboard halftracks, and other games. Others will be for gathering in the evening for conversation or for outdoor seating for cafe's or restaurants. Still others can be utilitarian, such as places to store delivery carts or even places to for shopkeepers to temporarily store merchandise. The OASES/WAHAT are the furniture for the green living room.



typical site for waha/oasis



urban arborium



parking garden



waha/oasis



Green | mosque courtyard | bur dubai

URBAN ARBORETUM



existing landscape

for visitors and tourists. Follow the palms to the Creek. The **URBAN ARBORETUM** will provide an overall framework for the green living room and a demonstration of sustainable development the **URBAN ARBORETUM** will be both useful and beautiful. This can be an adjunct to Dubai's forestation projects.

typical site for arboretum

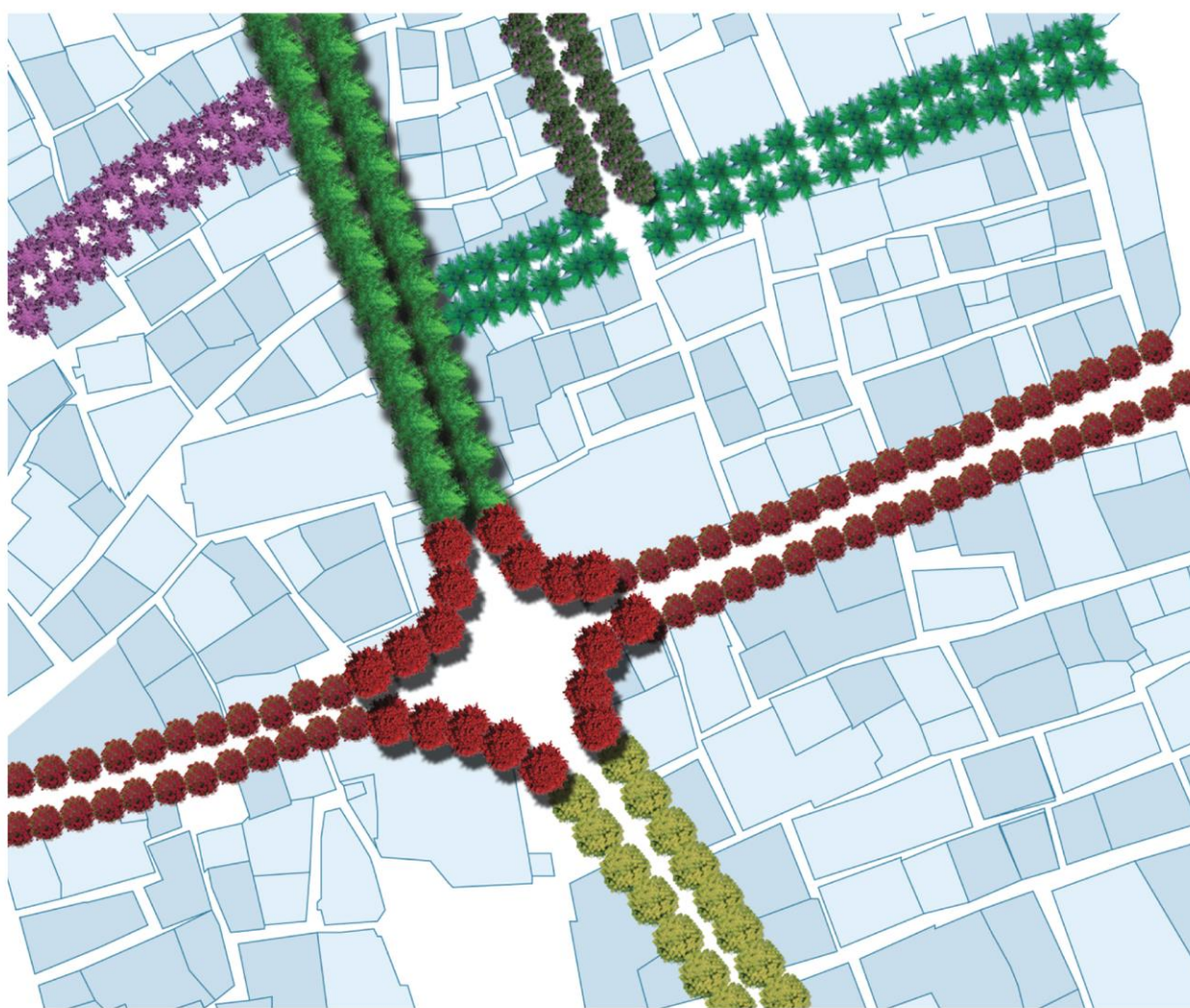
All of the streets and roads in Deira and Bur Dubai become an **URBAN ARBORETUM**, with trees of different species lining both sides of each street parallel to the Creek and perpendicular to the Creek. In addition to providing shade, air cleansing, and traffic calming, the different species along different streets will also provide wayfinding



Green | deira and bur dubai's living room | the urban arboretum



Green | dubai | greywater irrigation greening the desert



arboretum planting diagram



arboretum street section



citrus sinensis



ravenala madagascariensis



delonix regia



phoenix dactylifera

urban arboretum planting strategies

Green | deira and bur dubai's living room | the urban arboretum



Green | deira and bur dubai's living room | naif | existing



Green | deira and bur dubai's living room | naif | urban arboretum

PARKING GARDENS

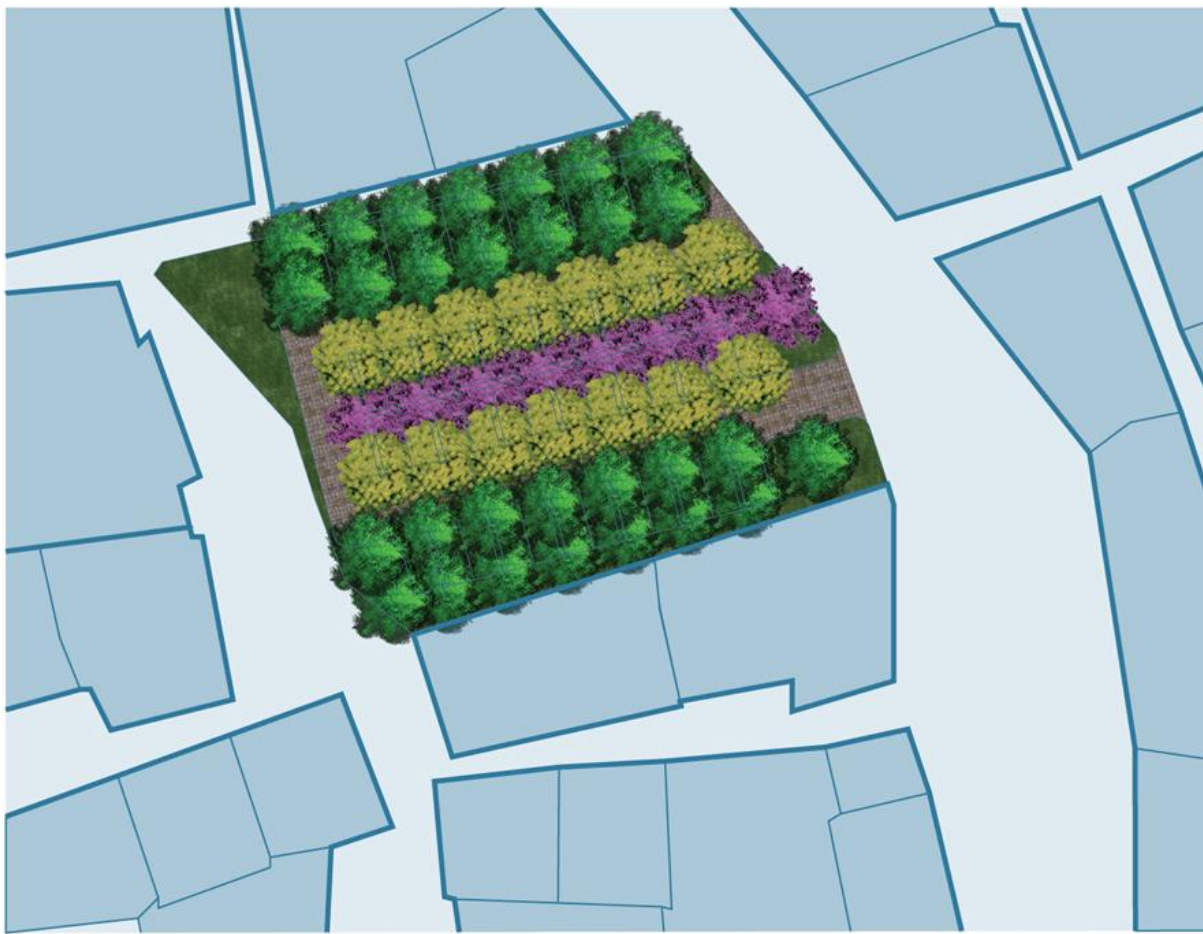
The municipal parking lots are necessary, but they should be come **PARKING GARDENS** to provide places not just for parked cars but also cooling shade for the surroundings, places for children to play when the parking lot is empty, and places to sit and relax around the edge. These gardens will be for small space and large ones, extending the greening of parking lots that has been developed outside of historic dubai.



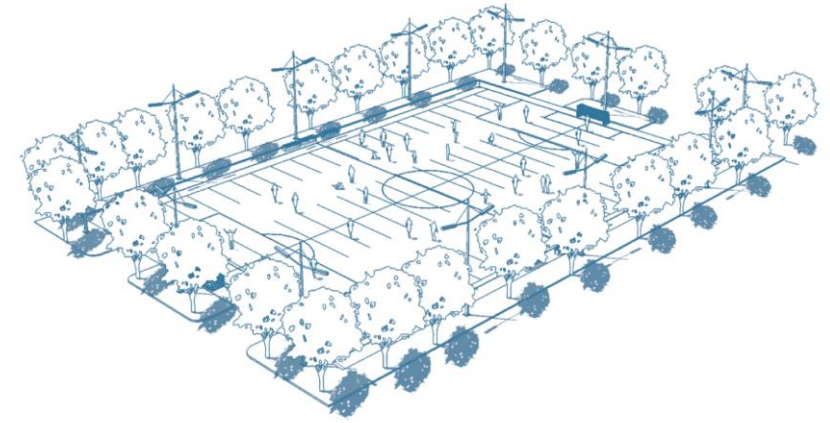
Each **PARKING GARDEN** should be a unique landscape design, with visitors recognizing that parking in the green living room is more about art and beauty and ecology than just convenience.



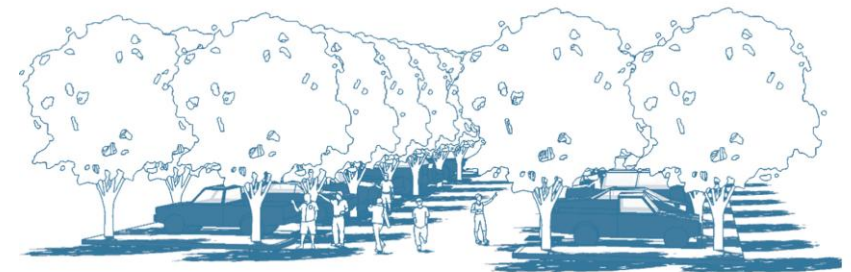
typical site for parking garden



orchard parking garden diagram



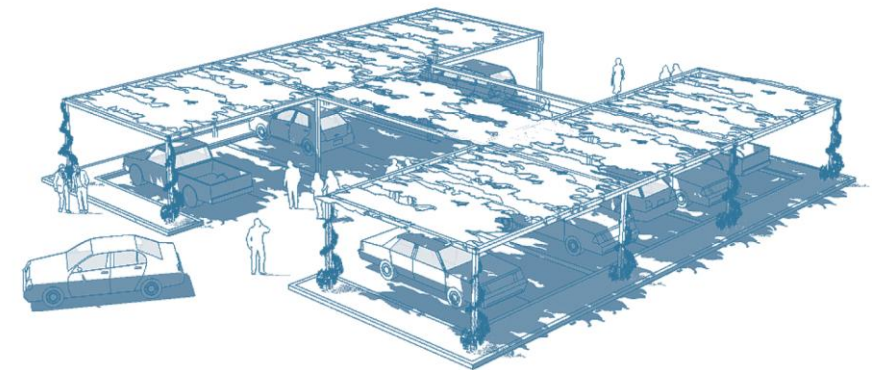
soccer parking garden



fruit tree parking garden



orchard parking garden section



Green | deira and bur dubai's living room | parking gardens



Green | deira and bur dubai's living room | parking gardens

OASES/WAHAT

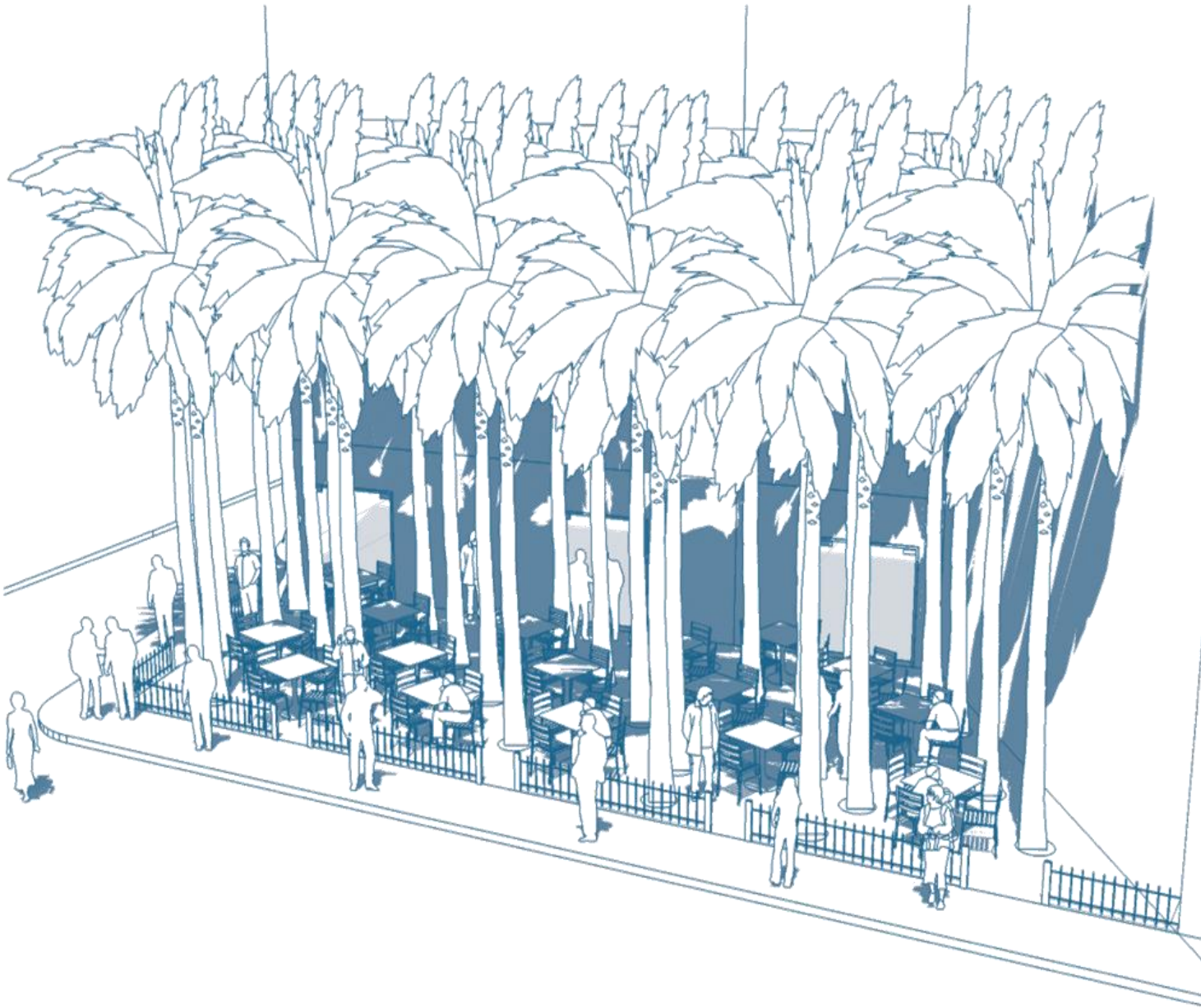
OASES/WAHAT are places distributed throughout Deira and Bur Dubais alleys as places for recreation, relaxation and gathering.. Like the Parking Gardens, these are unique landscape designs, but they are combined with urban activities. These **OASES/WAHAT** are useful and can designed for many different activities. Some will be for recreation surfaces to kick soccer balls, childrens games, skateboard halftracks, and other games. Others will be for gathering in the evening for conversation or for outdoor seating for cafe's or restaurants. Still others can be utilitarian, such as places to store delivery carts or even places to for shopkeepers to temporarily store merchandise.

The **OASES/WATAT** are the furniture for the green living room.

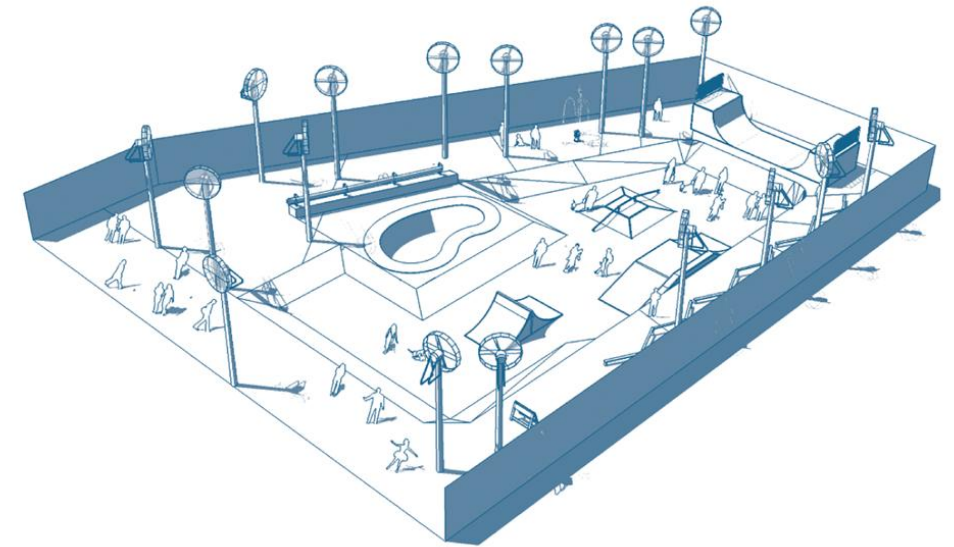


typical site for waha/oasis

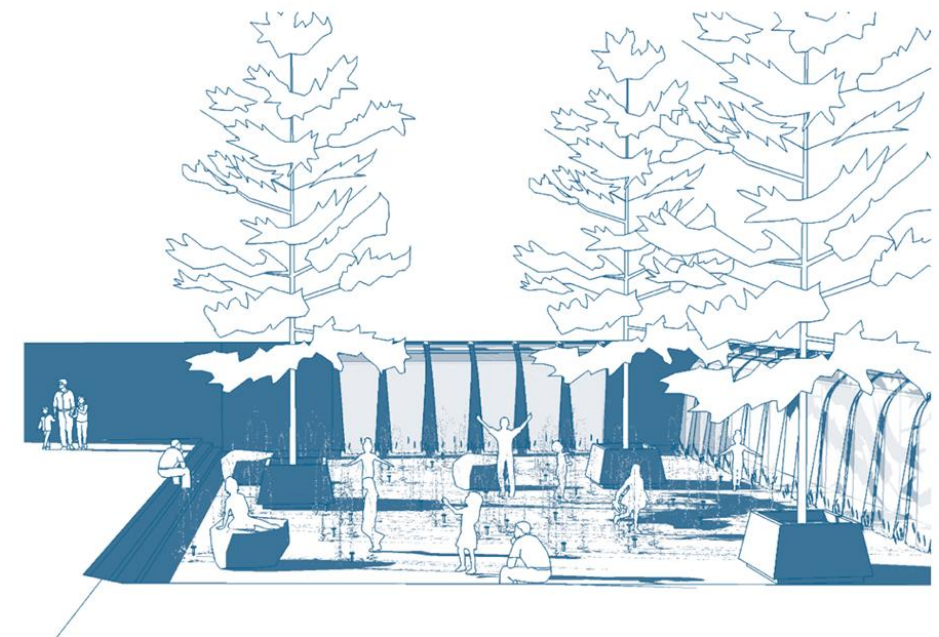
Green | deira and bur dubai's living room | waha/oasis



palm forest cafe'



skate park waha

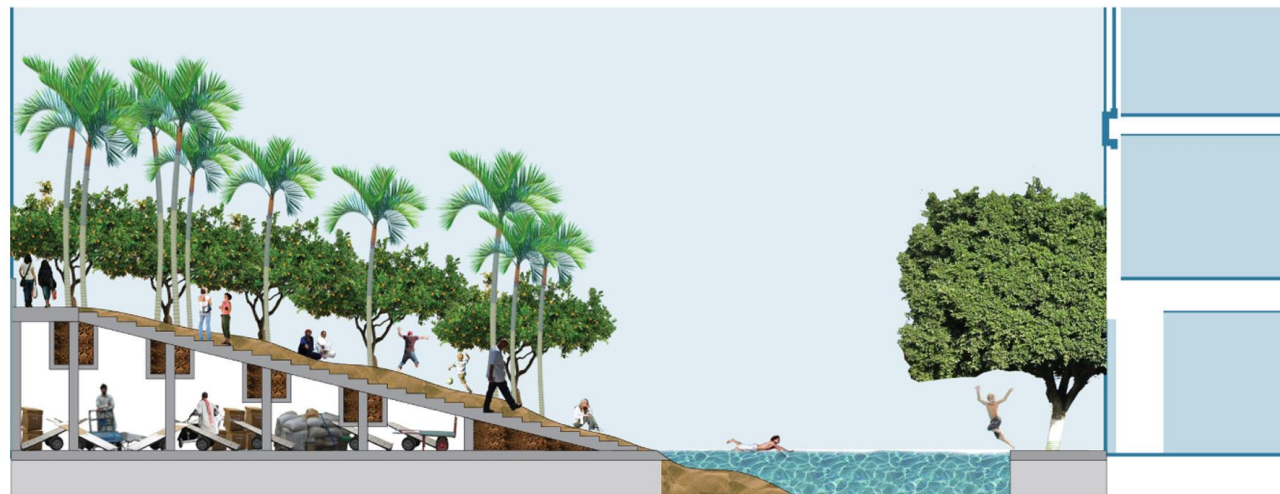


fountain waha

Green | deira and bur dubai's living room | waha/oasis



urban beach/cart parking waha diagram



urban beach/cart parking waha section

Green | deira and bur dubai's living room | waha/oasis



Green | deira and bur dubai's living room | urban beach waha



tower



frame



function



wind tower design

WIND TOWERS MARKED THE SILHOUETTE OF HISTORIC DUBAI, ESPECIALLY ALONG THE CREEK WHERE THE WIND WAS EASILY CAUGHT TO SUPPLY COOL AIR TO THE HOUSES AND COURTYARDS BELOW. The restored wind towers, although few still function for cooling, are popular tourist attractions. The historic towers also remind us that sustainable development often must look backward to go forward. New WIND TOWERS compliment the historic ones, but the new towers are distinctively designed structures located in public spaces -- in the "green living room" -- to cool everyday activities and events. The WIND TOWERS are public art.



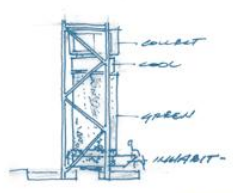
tower - plan diagram



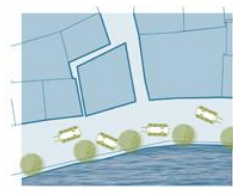
wind energy turbine



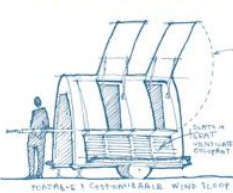
frame - plan diagram



traditional bedouin frame construction



creek cabana - plan diagram



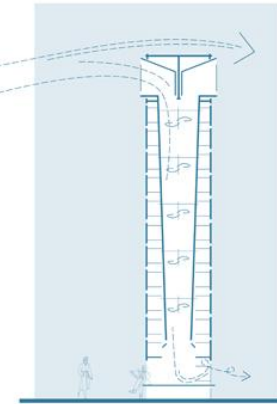
functional setting for public life



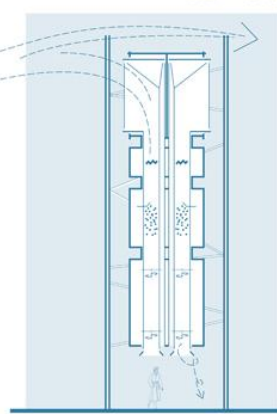
sculptural variation



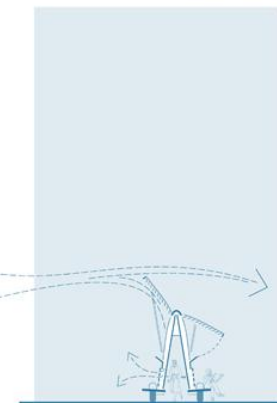
traditional tower



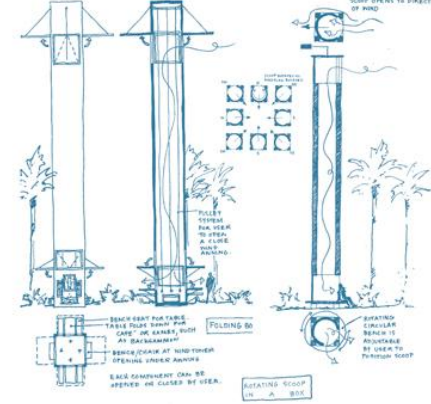
tower - section



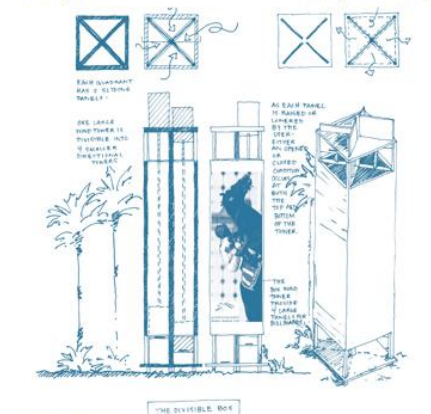
frame - section



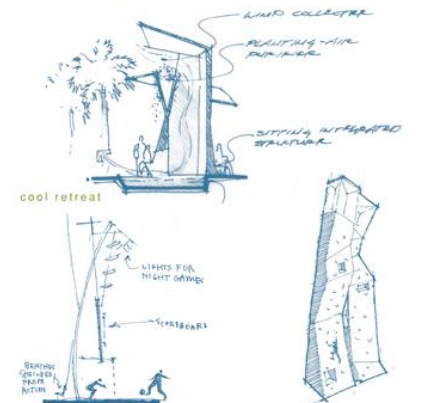
creek cabana wind tower - section



folding box



wrapped frame



mini soccer stadium

TOWER

The historic urban WIND TOWERS are one model for the new ones. They can be made of masonry, like the old ones, or panel construction using wood or steel plates. The panels can fold at the top, to catch the wind from one or more directions, and at the bottom to direct the breezes across seating areas, tables or pools of water. They could also have billboards advertising cultural events and, of course, would be lit at night. It would be possible to have tiny lights covering an entire tower.



typical site for wind tower

FRAME

The Bedouin towers are another model for WIND TOWERS, using frames instead of a box or solid panels. They would be made of steel frames, with various skins attached. One might be covered with a dense layer of vines to catch and channel wind. Others could have canvas skins tied to the frames. Still others could have no enclosure at all and be designed to deliver fog to the surroundings.



typical site for wind tower

FUNCTION

These WIND TOWERS can serve many different functions so that they become public art with a purpose. Some can have wheels so they can be moved around to different locations to catch the wind or to served different uses. These could serve as cool seating for Abra/Taxi stations. Others could be used for playing handball, cafe tables, and many others. All of the WIND TOWERS are additional furniture for Deira and Bur Dubai's "green living room".



typical site for wind tower



Cool | deira and bur dubai's living room | windtowers | historic



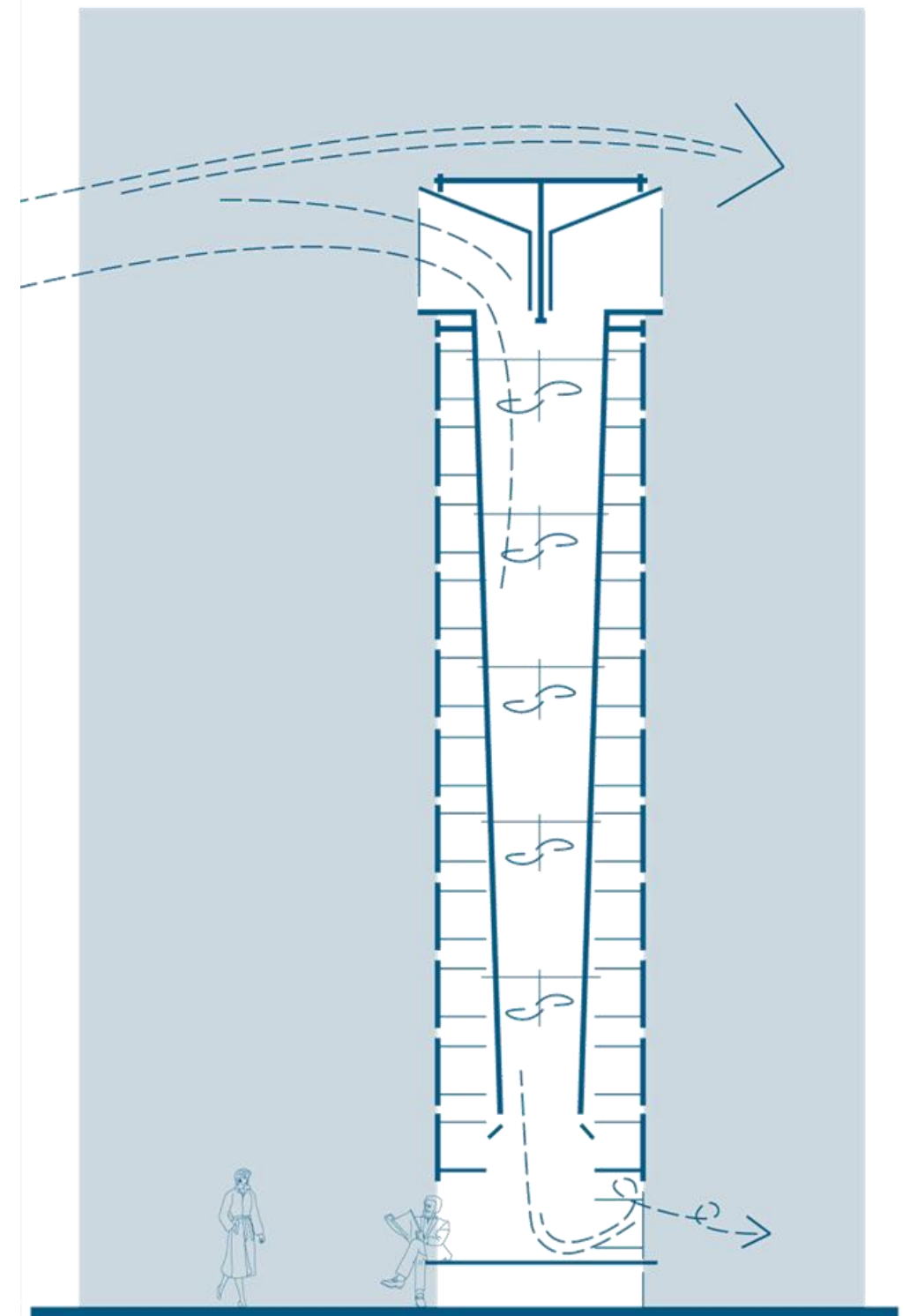
Cool | deira and bur dubai's living room | windtowers | bedouin

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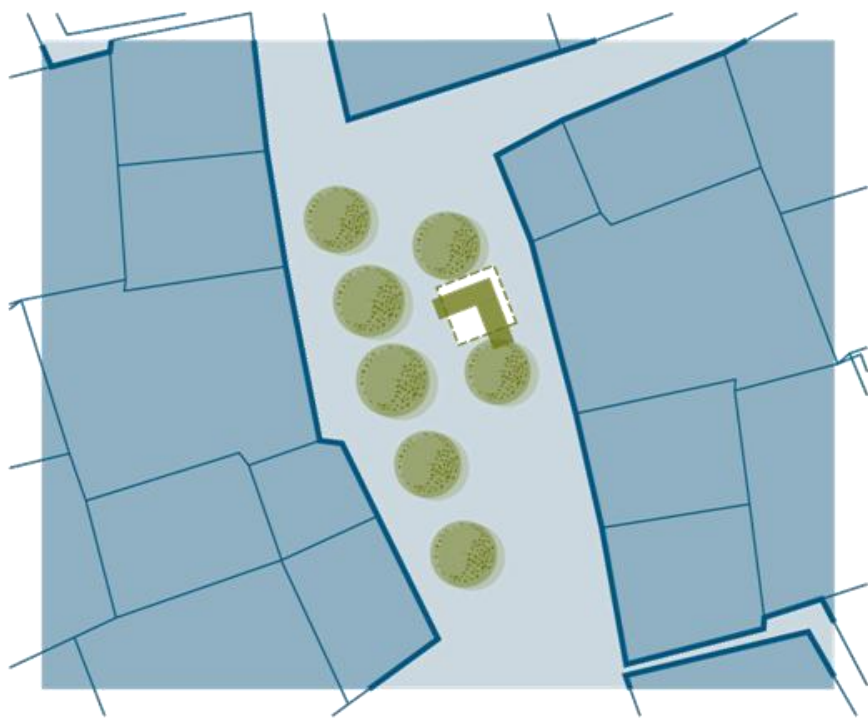


typical site for wind tower

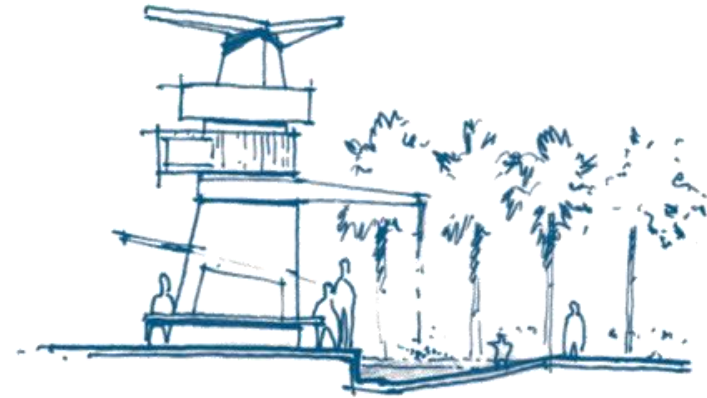


tower - section

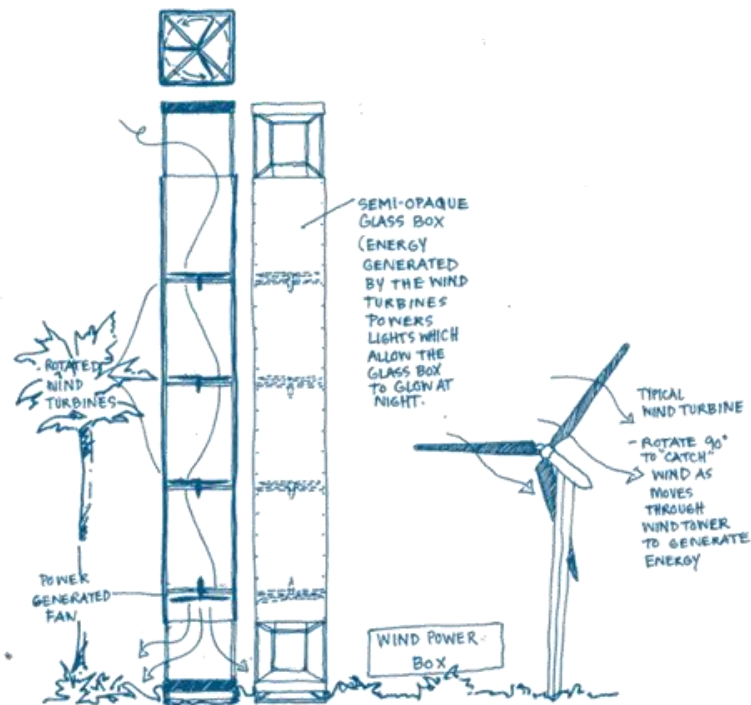
Cool | deira and bur dubai's living room | windtowers



tower - plan diagram



sculptural variation

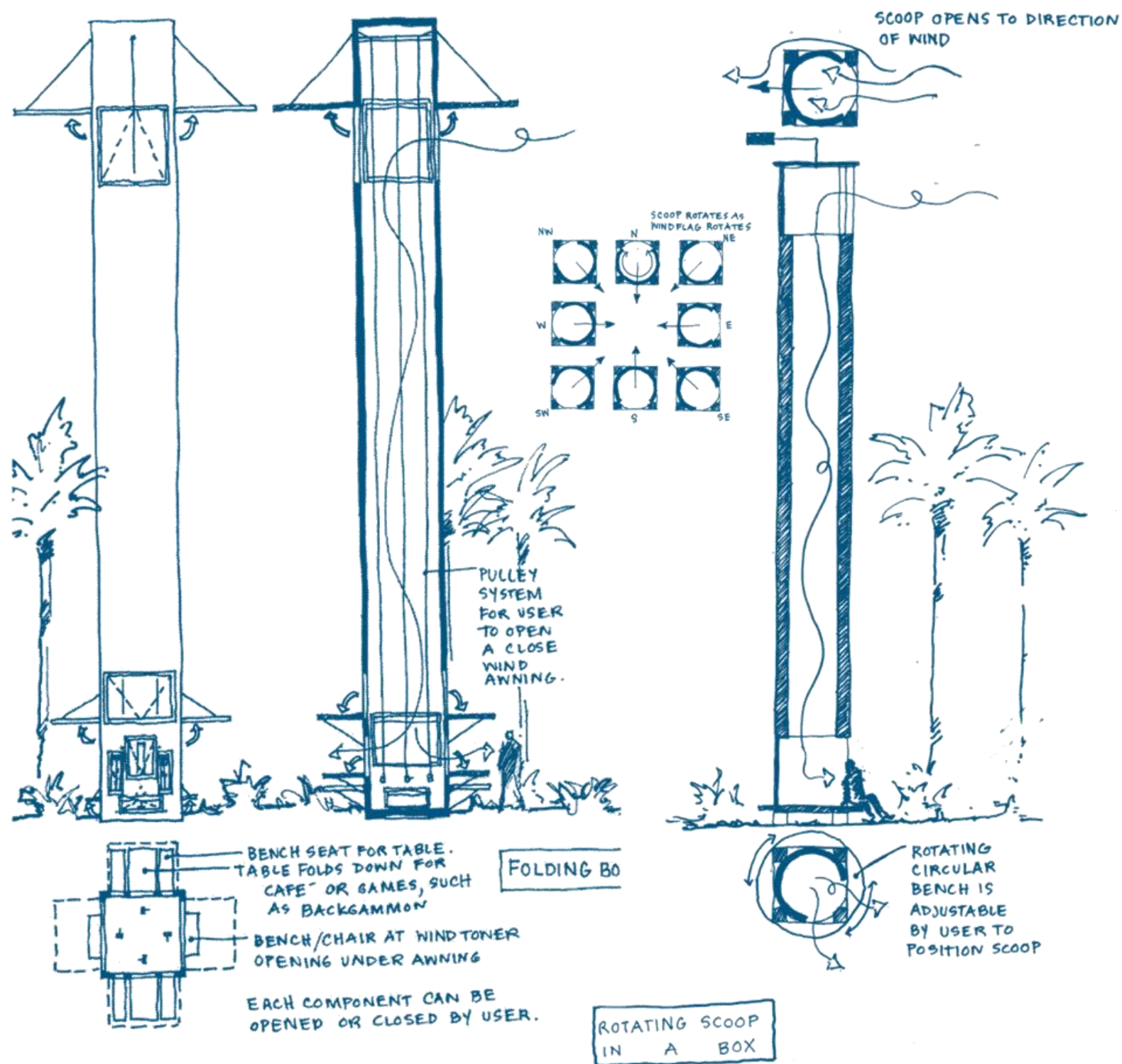


wind energy turbine



traditional tower

Cool | deira and bur dubai's living room | windtowers



folding box

rotating wind scoop

Cool | deira and bur dubai's living room | windtowers



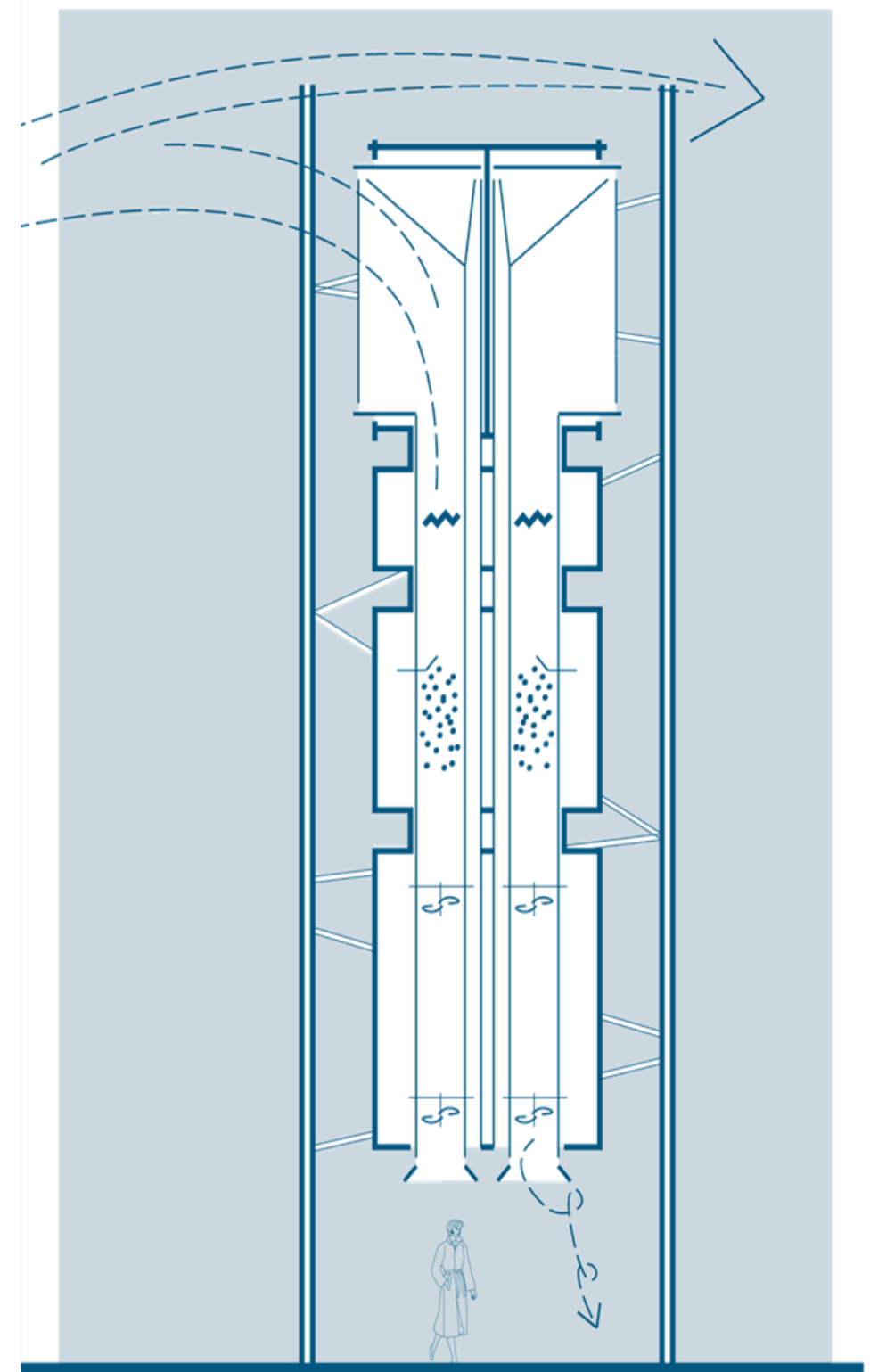
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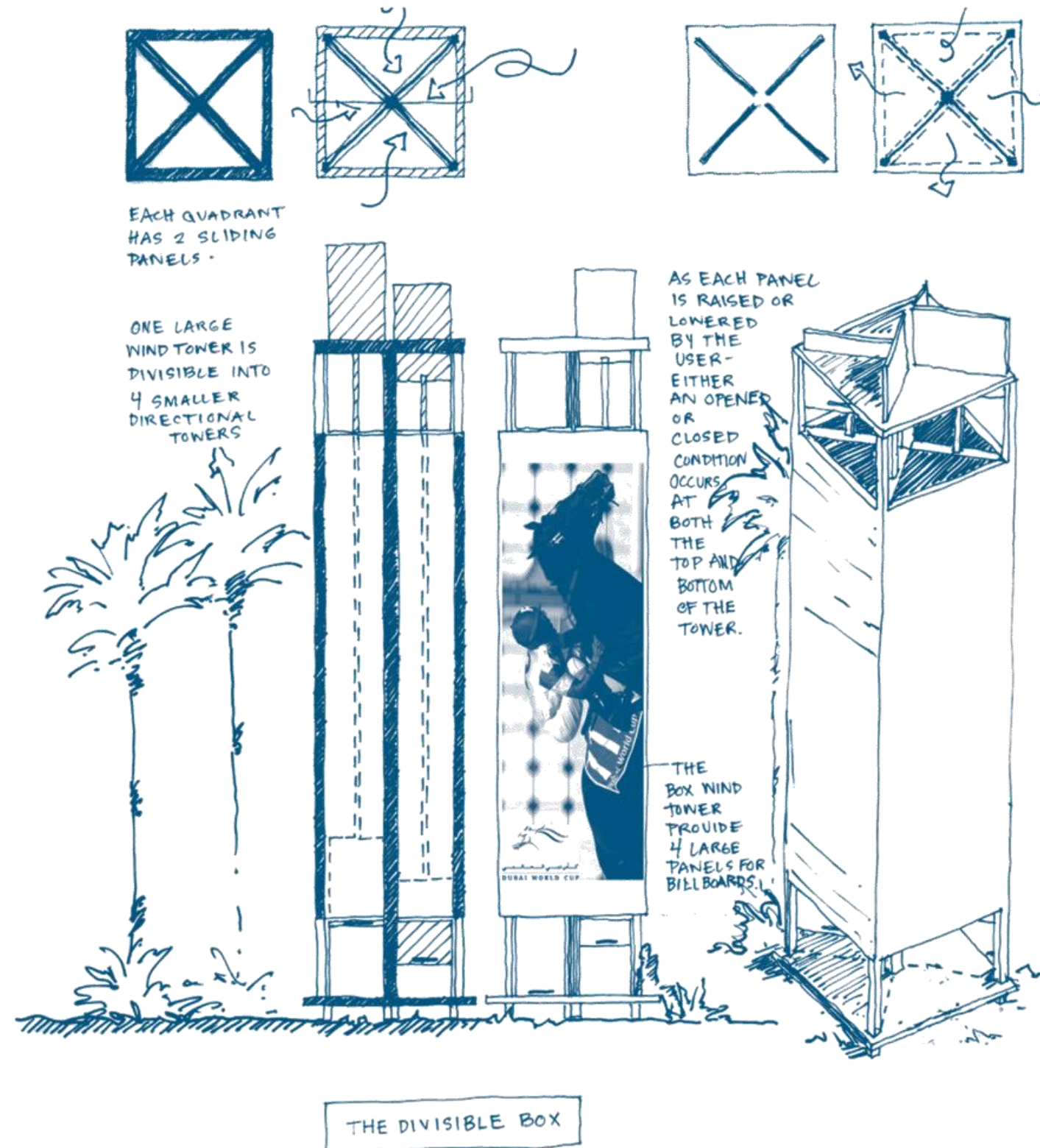


typical site for wind tower



frame - section

Cool | deira and bur dubai's living room | windtowers



wrapped frame

Cool | deira and bur dubai's living room | windtowers



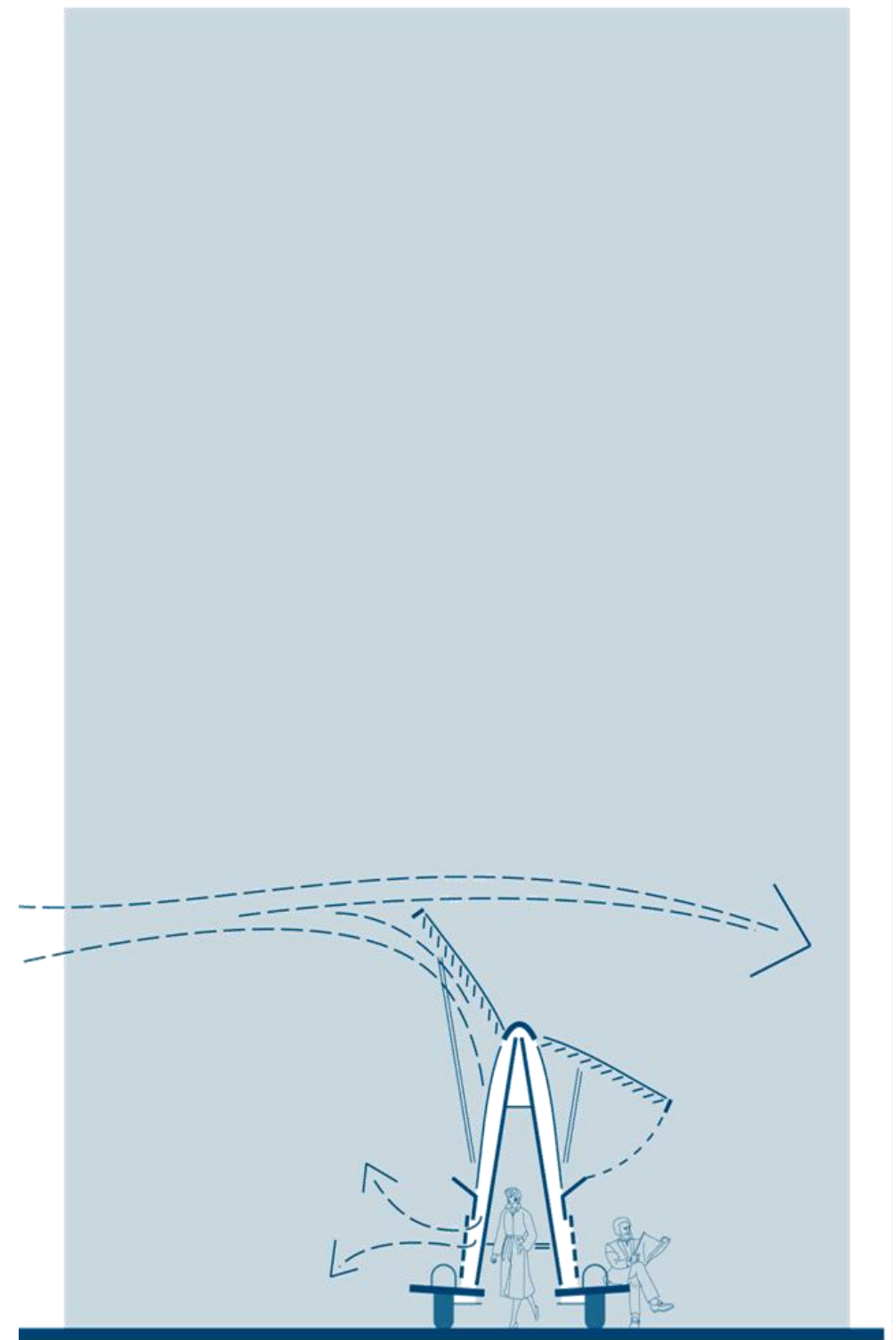
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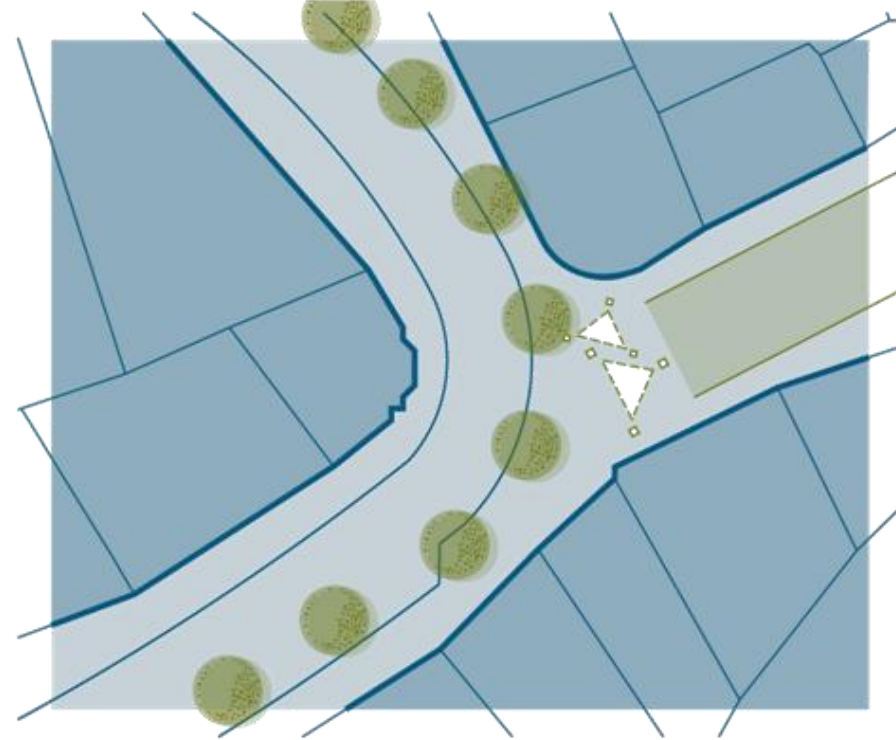


typical site for wind tower

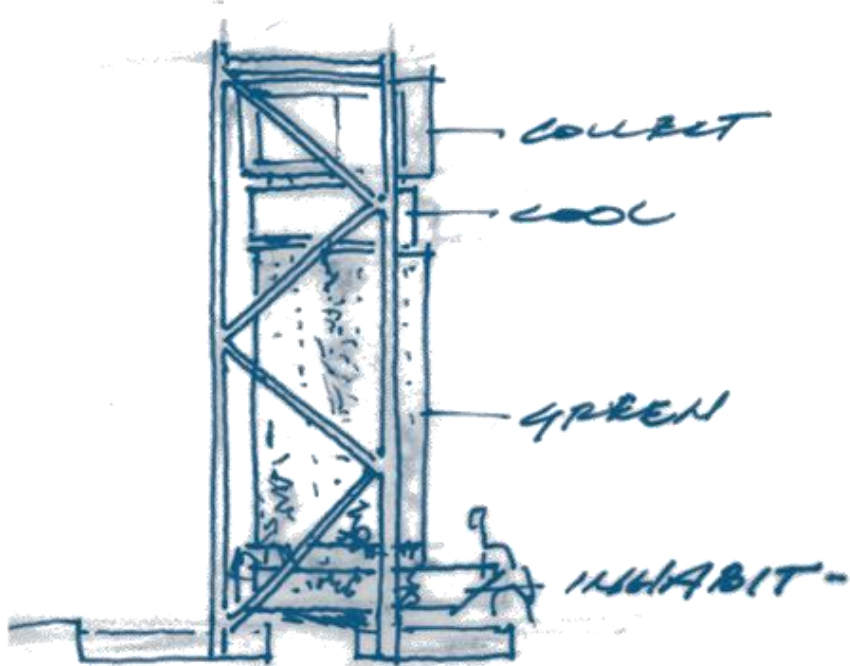


creek cabana wind tower - section

Cool | deira and bur dubai's living room | windtowers



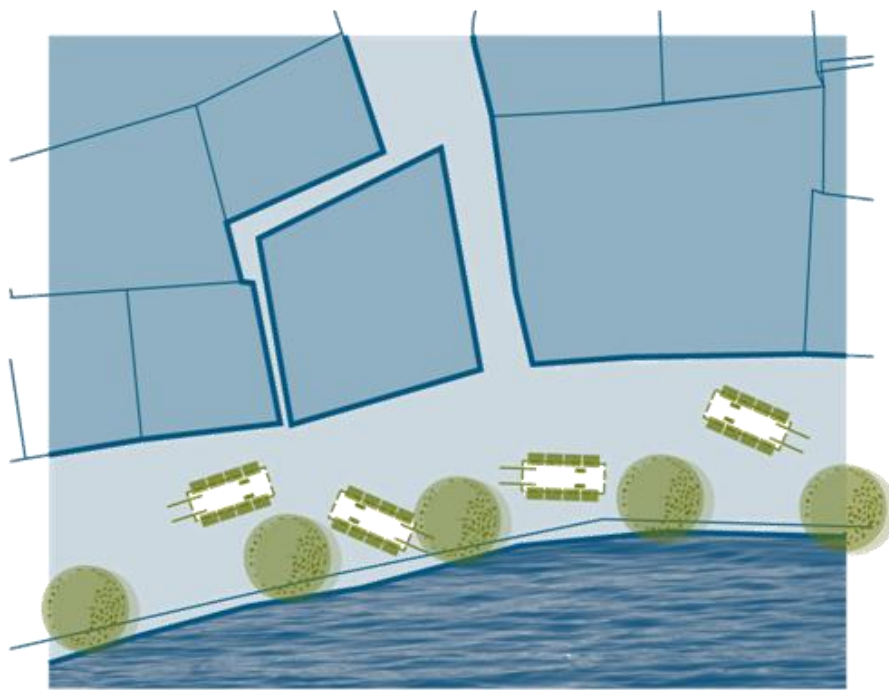
frame - plan diagram



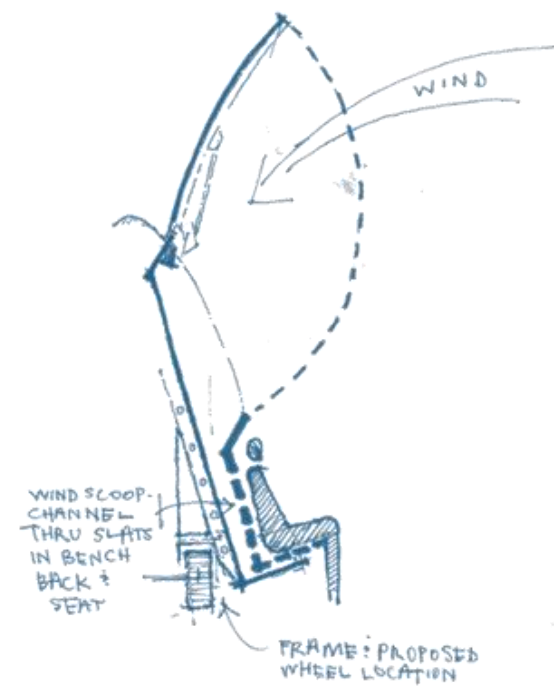
traditional bedouin frame construction



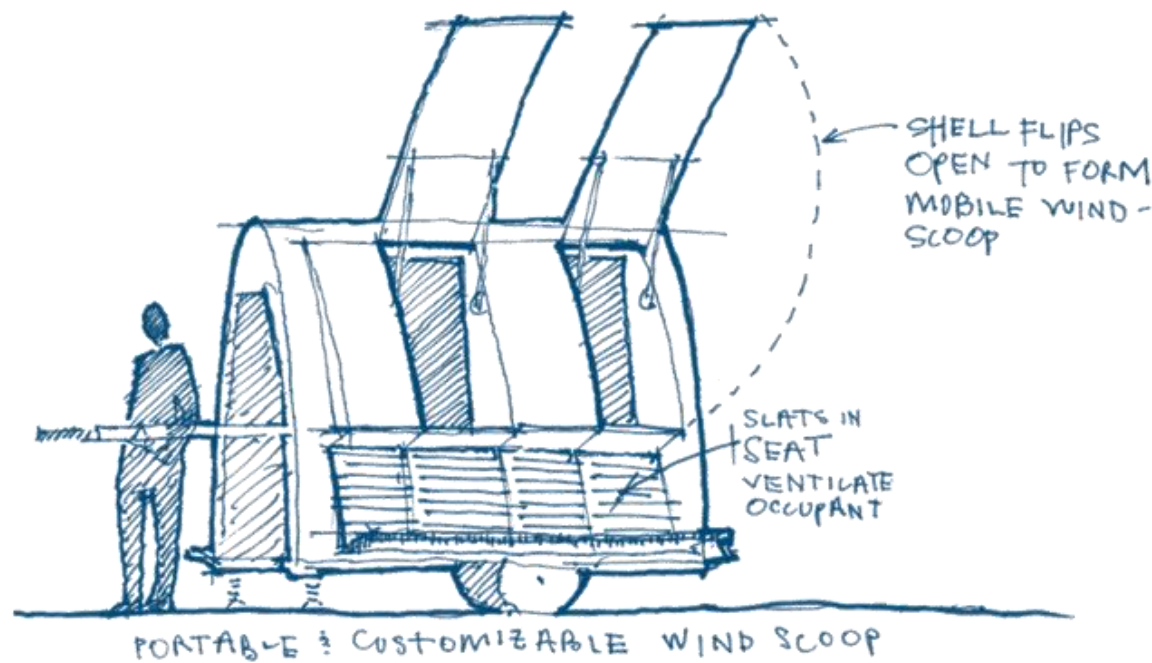
Cool | deira and bur dubai's living room | windtowers



creek cabana - plan diagram



creek cabana detail



functional setting for public life



Cool | deira and bur dubai's living room | windtowers



Cool | deira and bur dubai's living room | windtowers



courtyard apartments



tower apartment



cellular structure

COURTYARDS ARE THE PRIMARY FEATURES OF MIDDLE EASTERN HOUSE FORMS AND ARE THE BASIS FOR DESIGNING NEW HOUSING IN DEIRA AND BUR-DUBAI. The traditional house, surrounding its family oriented courtyard, is simply lifting it to make a penthouse on the top two floors of an apartment building. Apartments units on the lower floors are designed with interior courtyard-like spaces, functioning the same as family rooms in contemporary housing. Apartments below the penthouse are designed as flats or as double height loft units, depending on building depths. Commercial uses occupy the ground floor.



building sites



new construction

tower house
courtyard

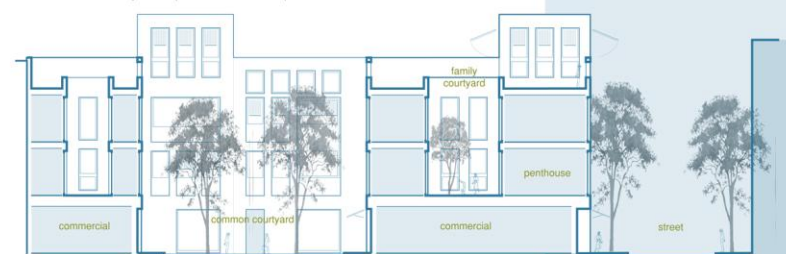
UNIT TYPES ARE ASSEMBLED INTO TRADITIONAL BUILDING TYPES. Design guidelines should be in three parts. First would be the guidelines for unit design, including the courtyard, outdoor space, and the bent entry arrangement. Second would be building type -- TOWER or COURTYARD -- and would be governed by site situations. Third would be the building envelope -- height related to adjacent public right-of-way, build-to lines, building entry locations to avoid interruptions of the street face on the ground floor.



dubai ... future



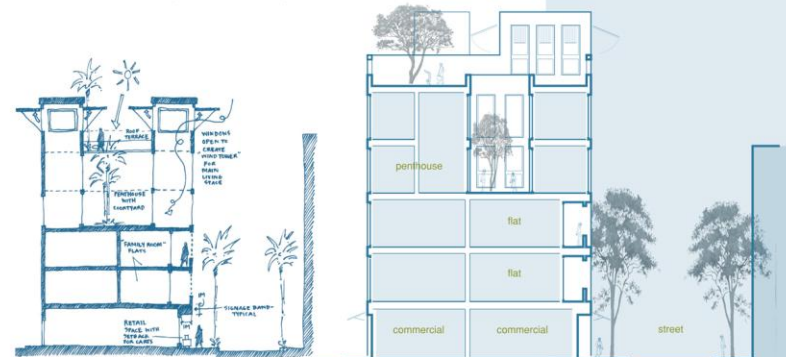
courtyard apartment - site plan



courtyard apartment - section

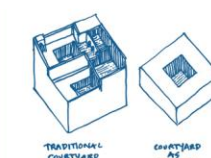


tower apartment - site plan



section diagram

tower apartment - section



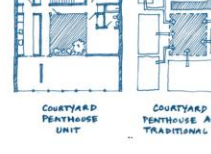
TRADITIONAL COURTYARD HOUSE
COURTYARD AS CENTRAL CELL



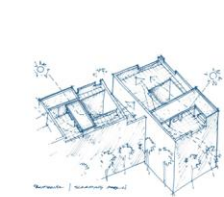
FAMILY ROOM FLAT UNIT
FAMILY ROOM AS CENTRAL COURTYARD SPACE



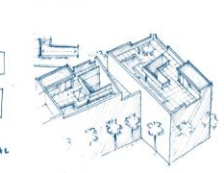
COURTYARD PENTHOUSE UNIT
COURTYARD IN PENTHOUSE AS IN TRADITIONAL HOUSE



SITE CONDITION
UNIT AND BUILDING CAN EASILY BE ADJUSTED TO FIT ANY SITE BY KEEPING THE CENTRAL CELL FAMILY ROOM OR COURTYARD AS THE FIGURE AND MULTIPLYING THE ROOMS AROUND THE CORE.



sleeping porch



swim-and-sun roof



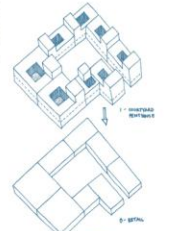
typical courtyard site

COURTYARD

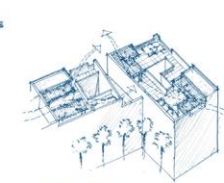
COURTYARD APARTMENTS are re-invented "khans," the traditional courtyard buildings located next to souks with apartments located over workshops. Courtyard Apartments would be built on the largest site. Like the Tower House, these buildings would have traditional courtyard/penthouse units on the top. The floors below would contain courtyard/family room flats or lofts depending on the depth of the individual unit. All units would face and open into the courtyard, which would be connected to the adjacent street or alley. Small offices or workshops would occupy the ground floor, excluding major retail spaces to maintain privacy for those living in the building. Penthouse units can be designed in many different arrangements to meet modern needs.



traditional khan



building-unit diagram



green roof



outdoor living room



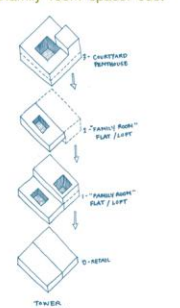
typical tower site

TOWER

TOWER HOUSES are apartment buildings that reinvent the traditional tower houses, like those in Yemen. These buildings would be built on small sites or joined together in rows for sites with long street frontages and small depths. The top two floors would be a penthouse unit, designed as a traditional courtyard house simply lifted on top of the building. Below the penthouse would be either flats or loft units, each with its own outdoor space joined with its internal courtyard/family room space. Just like traditional courtyard houses, the apartments would maintain the courtyard in the center with the surrounding rooms filling the site to make common walls with surrounding buildings.



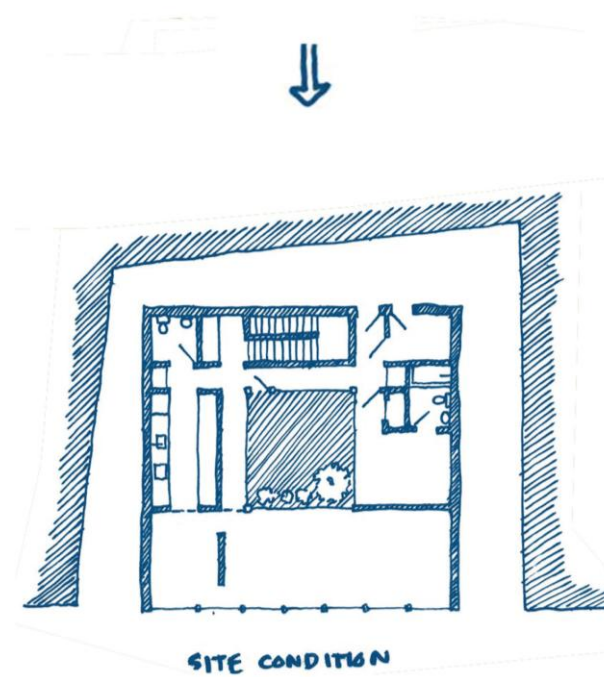
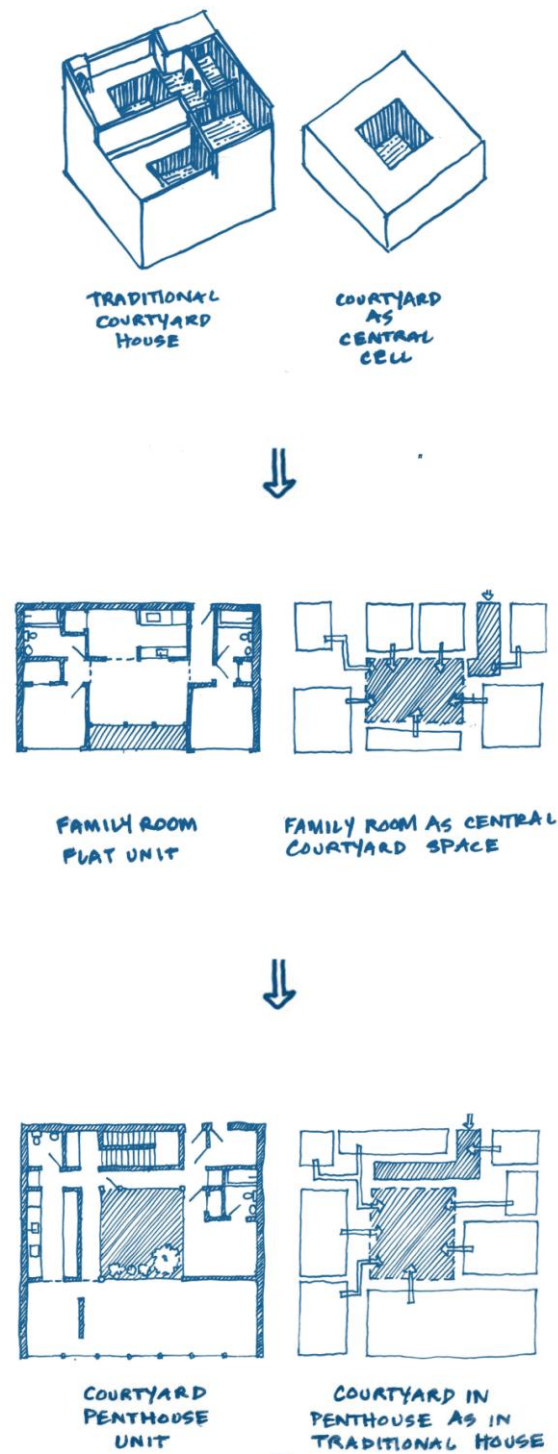
yemeni tower



building-unit diagram

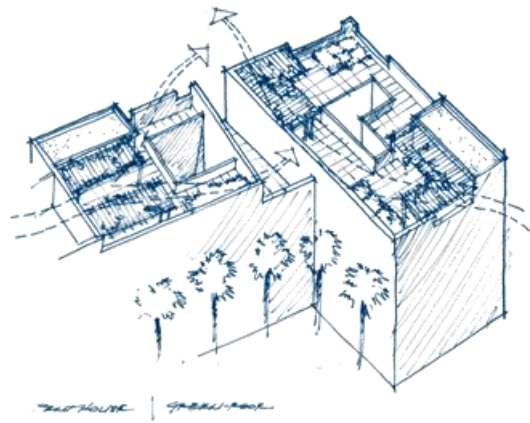


Inhabit | bur dubai | potential new housing site

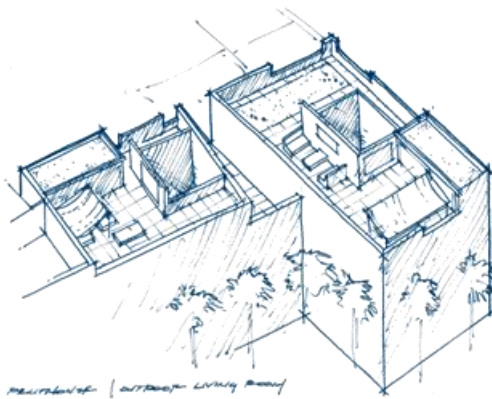


Inhabit | deira and bur dubai's living room | housing

TOWER



green roof



outdoor living room

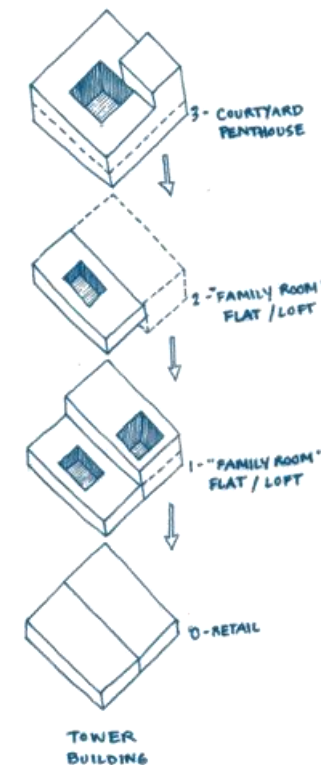


typical tower site

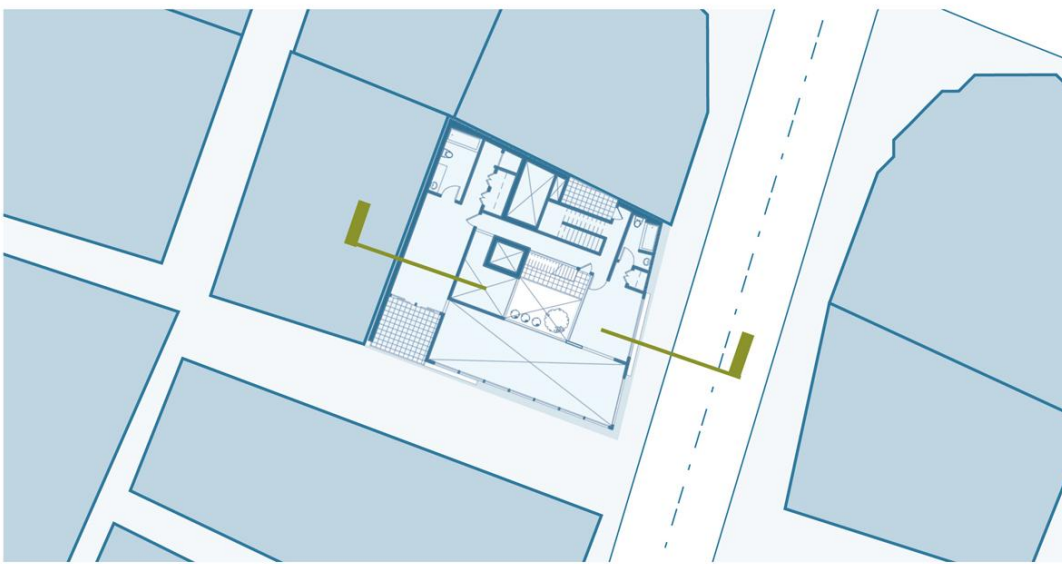
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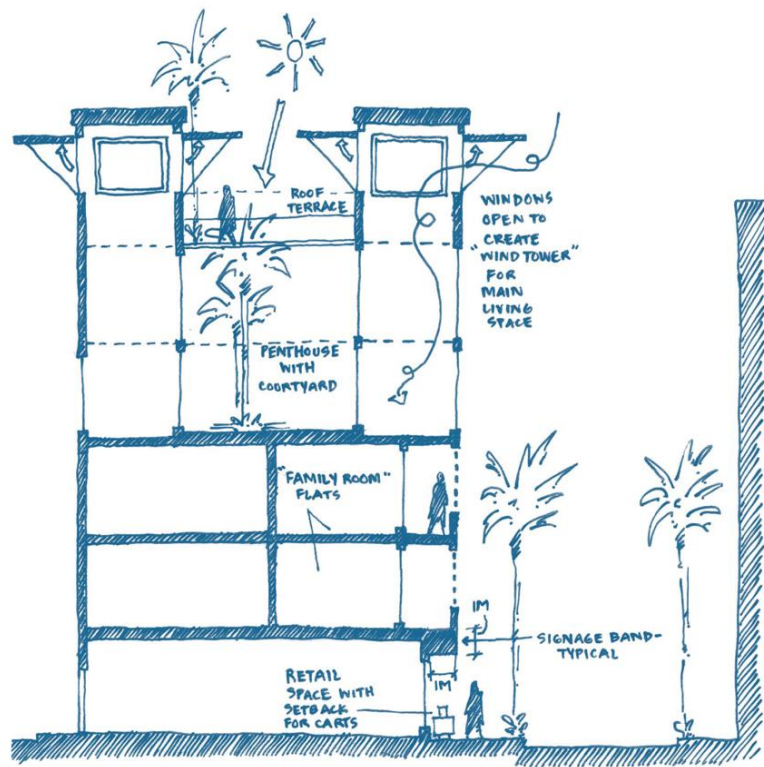
yemeni tower



building-unit diagram



tower apartment - site plan



section diagram

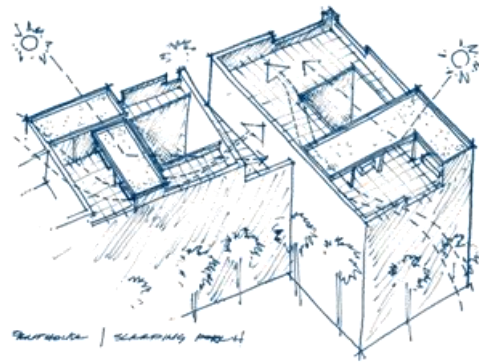


tower apartment - section

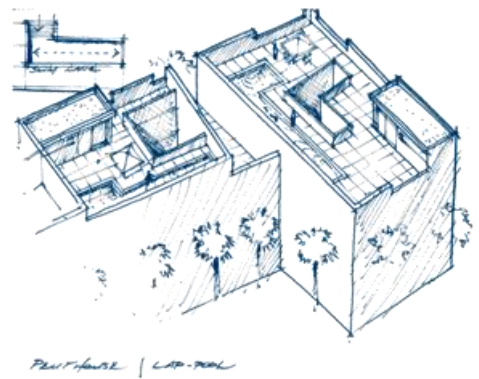
Inhabit | deira and bur dubai's living room | housing



COURTYARD



sleeping porch



swim-and-sun roof

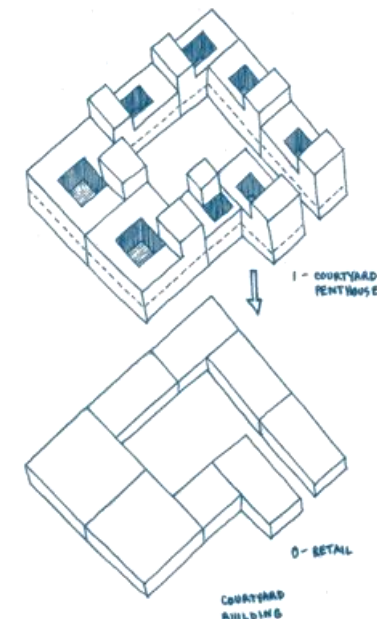


typical courtyard site

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traditional khan

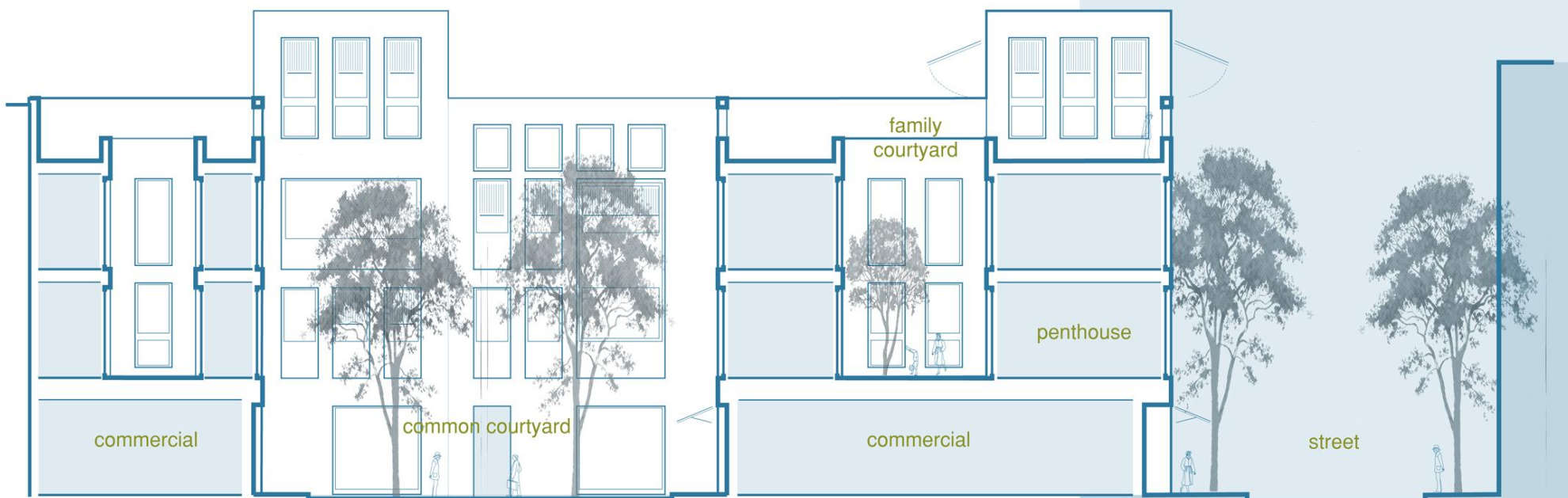


building-unit diagram

Inhabit | deira and bur dubai's living room | housing



courtyard apartment - site plan



courtyard apartment - section

Inhabit | deira and bur dubai's living room | housing





subterranean metro station



street access to transit station | paris, france

metro route | subterranean
10 minute walking | 800m
5 minute walking | 400m

metro station street access

metro station



dubai metro

DUBAI METRO : Regional Connections

The Dubai Metro will provide important connections between the historic center of Dubai and the rest of the city via the second phase Green Line. This line is to be built underground in the city center and under the Creek. The design of the stations in Deira and Bur Dubai are critically important. They can be architectural extravaganzas underground, but should make gentle appearance above ground, similar to metro entrances in Paris or London, for example; with simple stairs into access tunnels or access to elevators within small pavilion like buildings. **THE METRO ENTRANCES SHOULD BE DESIGNED AS FURNITURE FOR THE "GREEN LIVING ROOM" AND COULD BE COMBINED WITH OASES | WAHAT OR WIND TOWERS.** There should also have multiple entrances into the interiors of Deira and Bur Dubai, perhaps reaching 200 meters and to be next to the souks or important street or alley intersections.

Many connections of different types make the most interesting cities. The many connections within Deira and Bur make the historic area the most urban place in the Emirate. If protected and enhanced, this small area will be accessible in ways that almost all modern cities are not. Residents, visitors and tourists will have multiple ways to go from one place to another, creating opportunities for shopping, restaurants, entertainment and everyday public life.

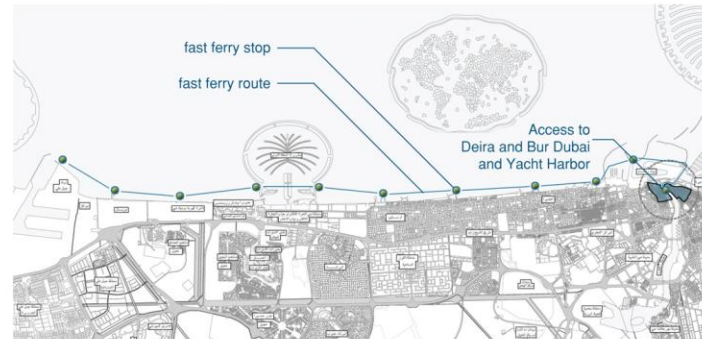
Four actions are important to enable these connections to be sustained inside Deira and Bur Dubai and to connect to the outside. The **DUBAI METRO** is critically important for the future, but in the historic area, it must be built underground. The **DHOW HARBOR** is a historic asset and will be expanded for other boats, especially yachts, making the historic area accessible from the new developments in the Gulf. **ABRA/TAXIS** will be developed into a water-taxi system with different lines making it easy to get around. Finally, **TRAFFIC CALMING** is applied to all streets and roads in the historic area.



abra/taxi stop



water taxi | new york city



regional water taxi

DHOW HARBOR : Sub-Regional Connections

The Dhow Harbor is an important functional port area and an important tourist attraction. It should remain as an active port. However it should also become an anchorage for other boats, especially pleasure craft and yachts from developments along the Gulf. The easier it is for these craft to reach the Creek and dock, the more feasible it will be to transform Deira and Bur Dubai with restaurants, entertainment and other activities. In addition, a fast ferry along the gulf might provide additional connection options to the city center. With stops along the gulf developments, transport could be more rapid than automobile travel and as convenient as the Metro for many residents and employees along the Gulf. **SPECIAL FAST FERRY STATIONS COMBINED WITH ABRA/TAXI STATIONS WOULD PROVIDE A WATER BORNE ALTERNATIVE TO BOTH AUTOMOBILE AND THE METRO TRANSPORTATION.**

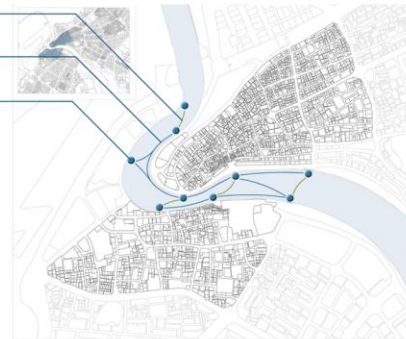


abra taxi | dubai creek



abra taxi | dubai creek

abra express route | line A
abra main route | line B
abra/taxi stop



abra/taxi routes

ABRA | TAXIS : Local Connections

Abras are important to Dubai's transportation infrastructure, carrying more than 15 million passengers annually. They are also an important part of the tourist infrastructure and the tourist economy of Deira and Bur Dubai. They can become even more important with an expansion of service to become more like a waterbus or water taxi service. The number of stations should be increased to provide easier access up and down the Creek. Also, it may be beneficial to organize service around different routes - an A Line and a B Line, perhaps, like the Metro that is under construction. Passengers could then determine the fastest way to cross the Creek to get to their destinations. **ABRA | TAXI STATIONS SHOULD BE LOCATED NEAR THE METRO STATIONS AND NEAR THE DHOW HARBOR AND FAST FERRY HARBORS.**

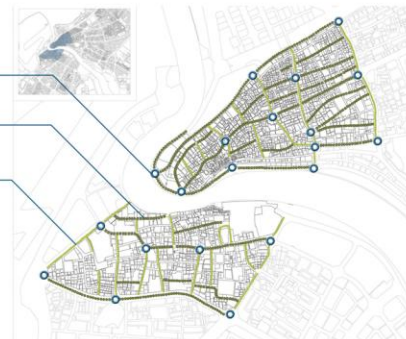


streetscape | pedestrian - planting/furniture zones



intersection condition | speed table and parking

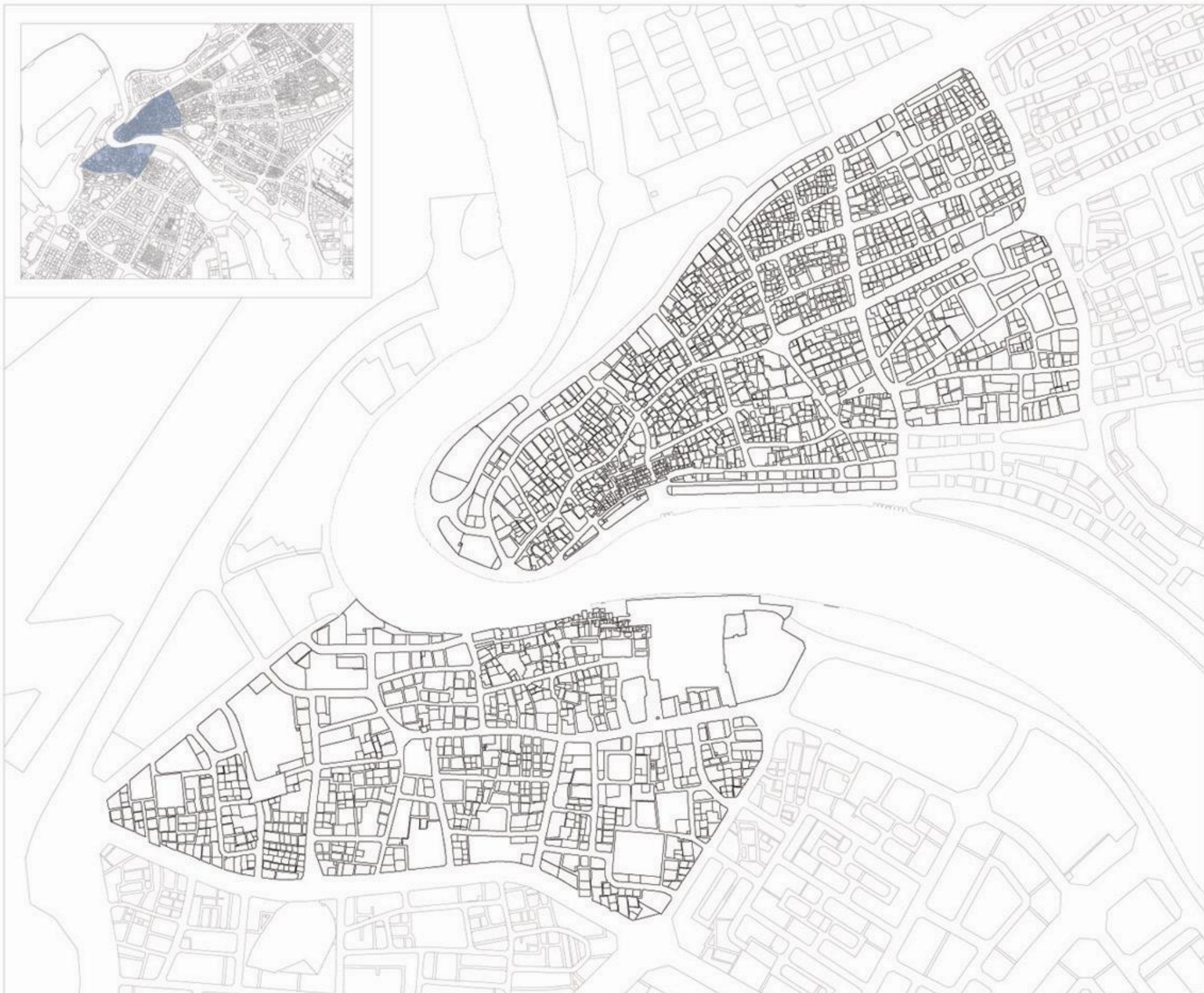
intersection enhancement
Streetscape A | East-West
Streetscape B | North-South



traffic calming | urban arboretum

TRAFFIC CALMING : Pedestrian Connections

Traffic calming is essential for Deira and Bur Dubai. Automobiles and other vehicles dominate every street and road. A "green living room" is impossible when vehicles dominate instead of being equal to pedestrians. Three actions are necessary. **SPEED TABLES** elevate every intersection surface by about 10 centimeters; they should be installed at every intersection. Second, **INTERSECTION BULB-OUTS** should be installed to reduce pedestrian crossing distance and contain on-street parking to the center of blocks. Third, trees - the **URBAN ARBORETUM** - should be planting in the parking aisles at about 10 meter intervals to shade parked cars and to reduce the spatial volume of the street, which automatically slows traffic. In addition, to protect pedestrians, on-street parking should be retained on all streets and all crossings should be marked and strictly enforced.



Connect | metro



Connect | metro line



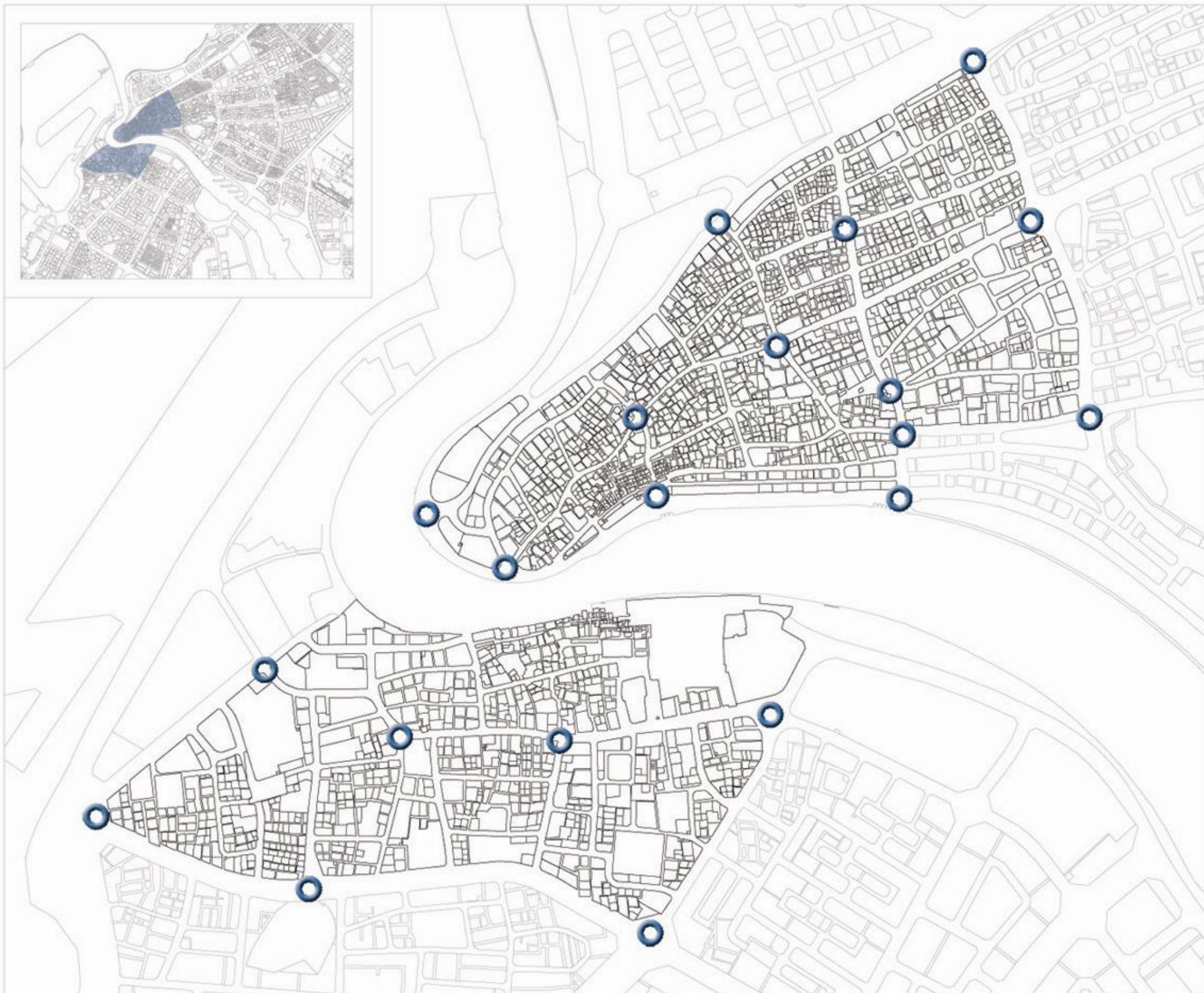
Connect | transit stations



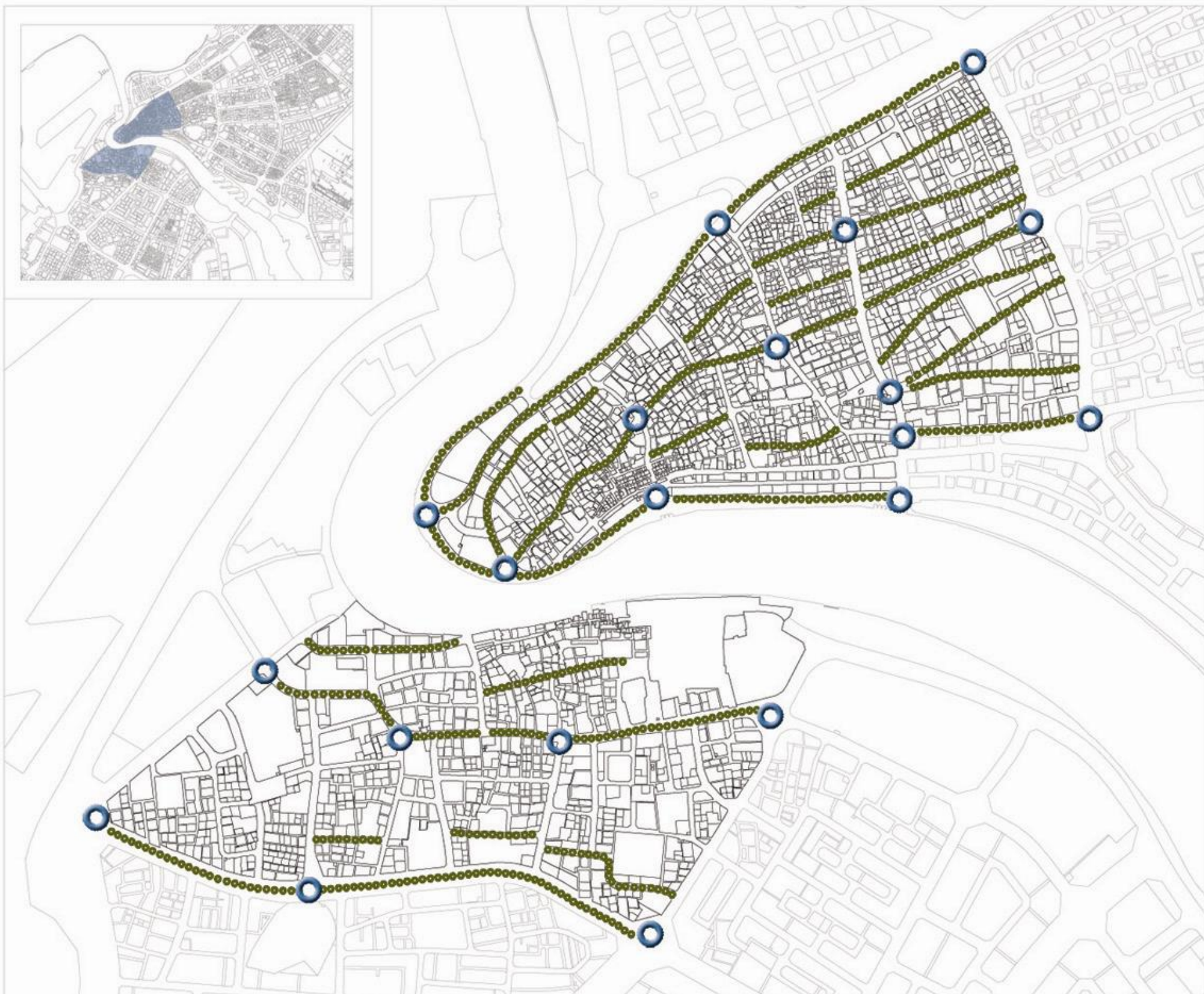
Connect | 5 minute walk



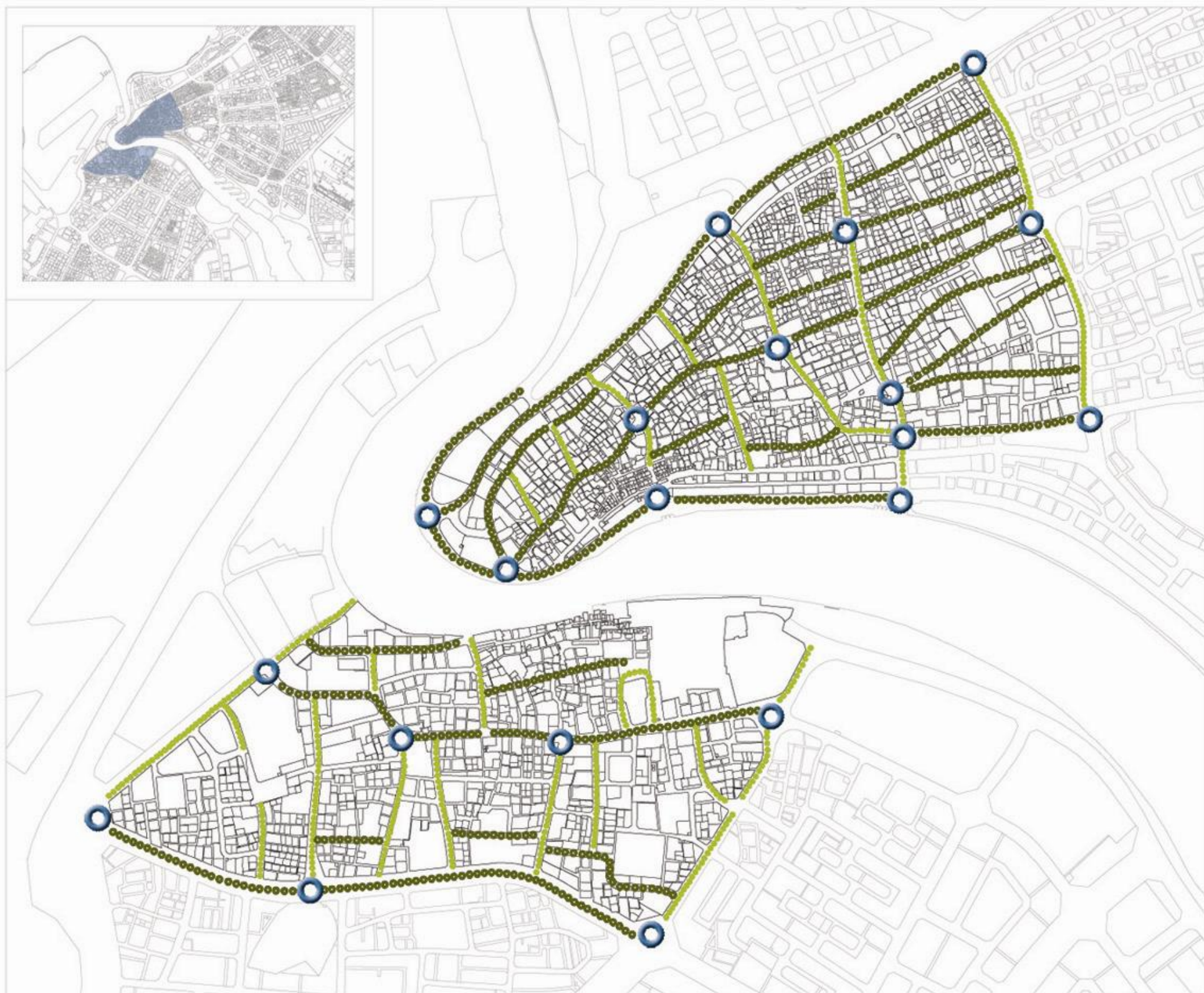
Connect | 10 minute walk



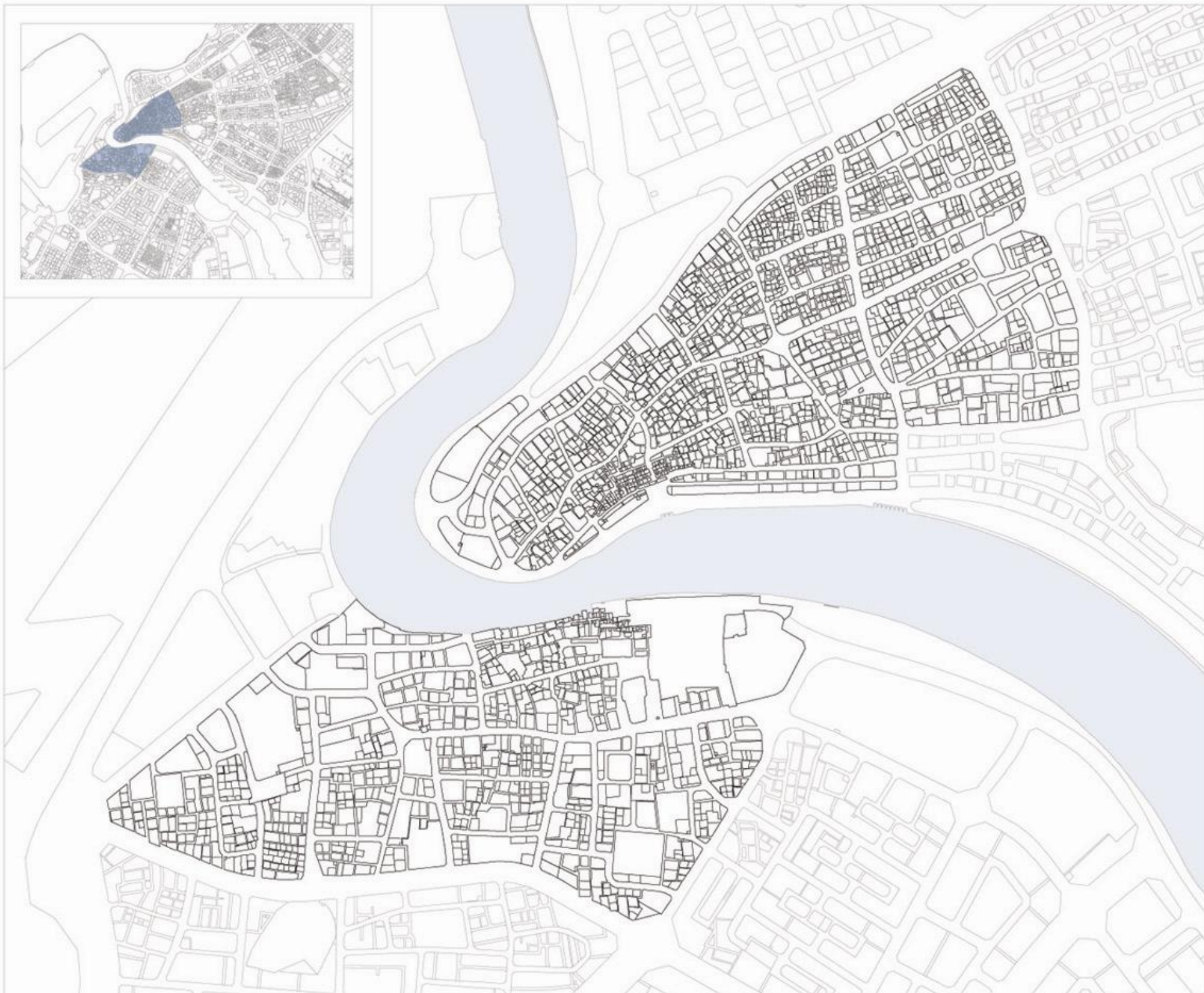
Connect | enhanced intersections



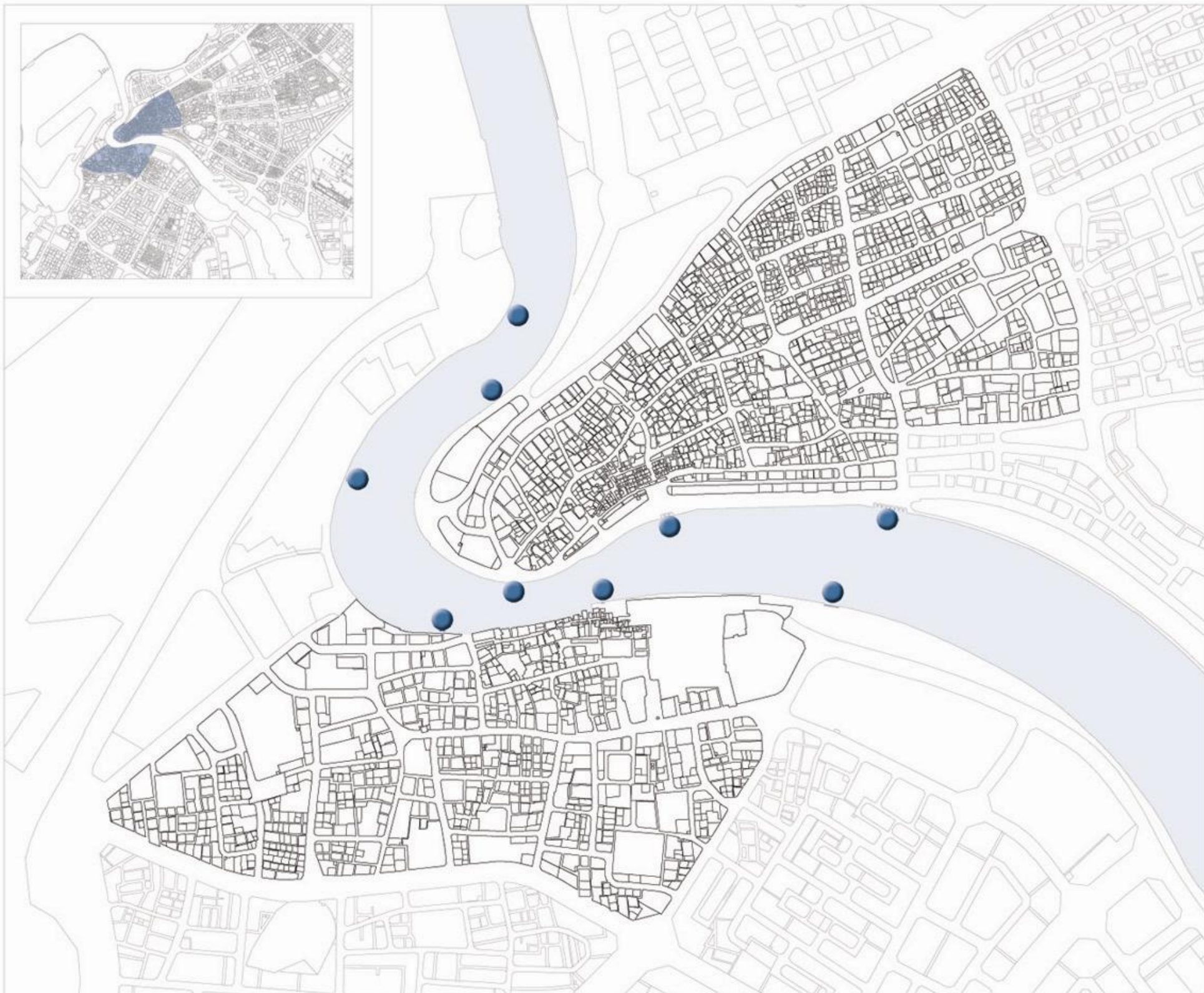
Connect | urban arboretum | streetscape 'a'



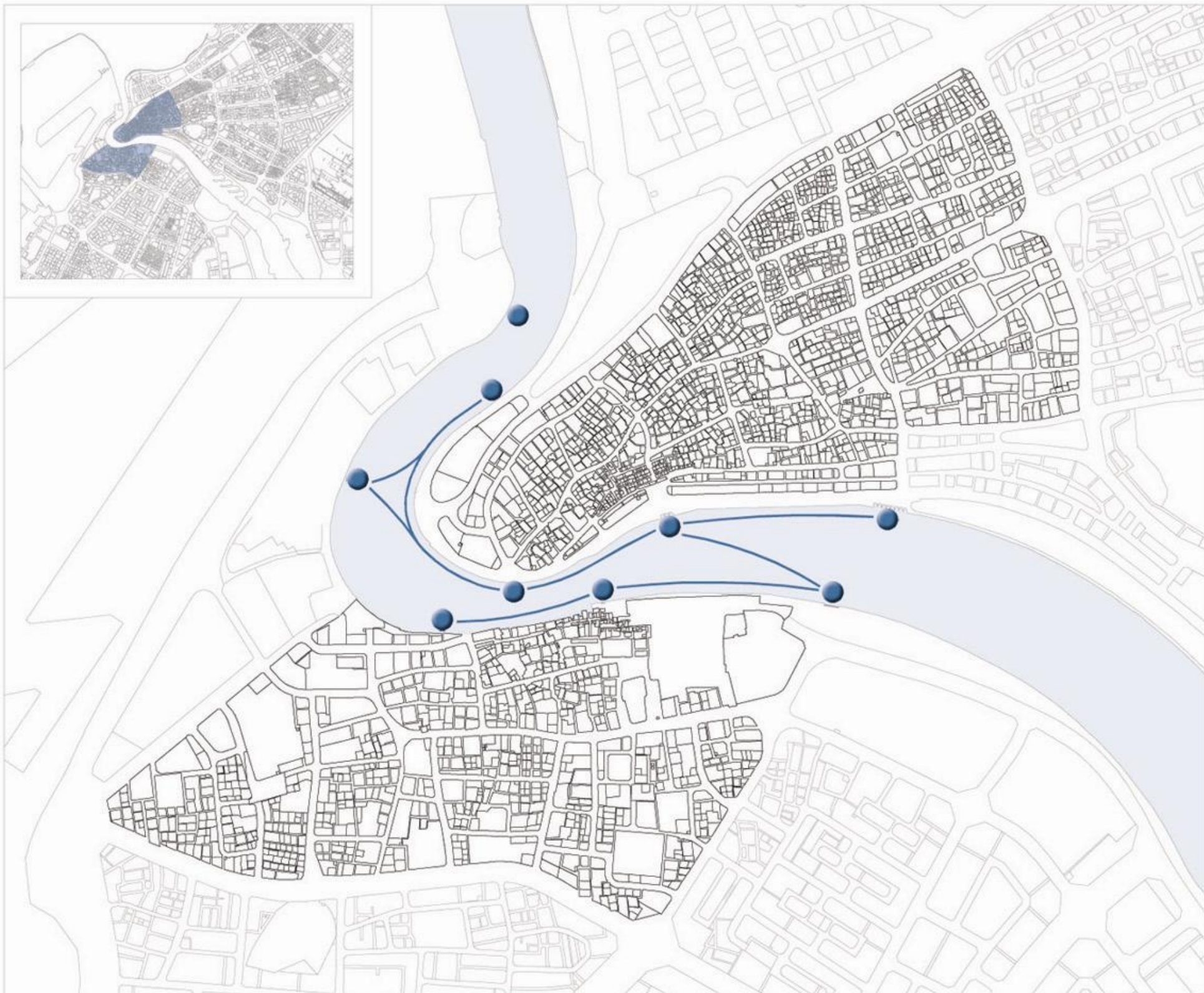
Connect | urban arboretum | streetscape 'b'



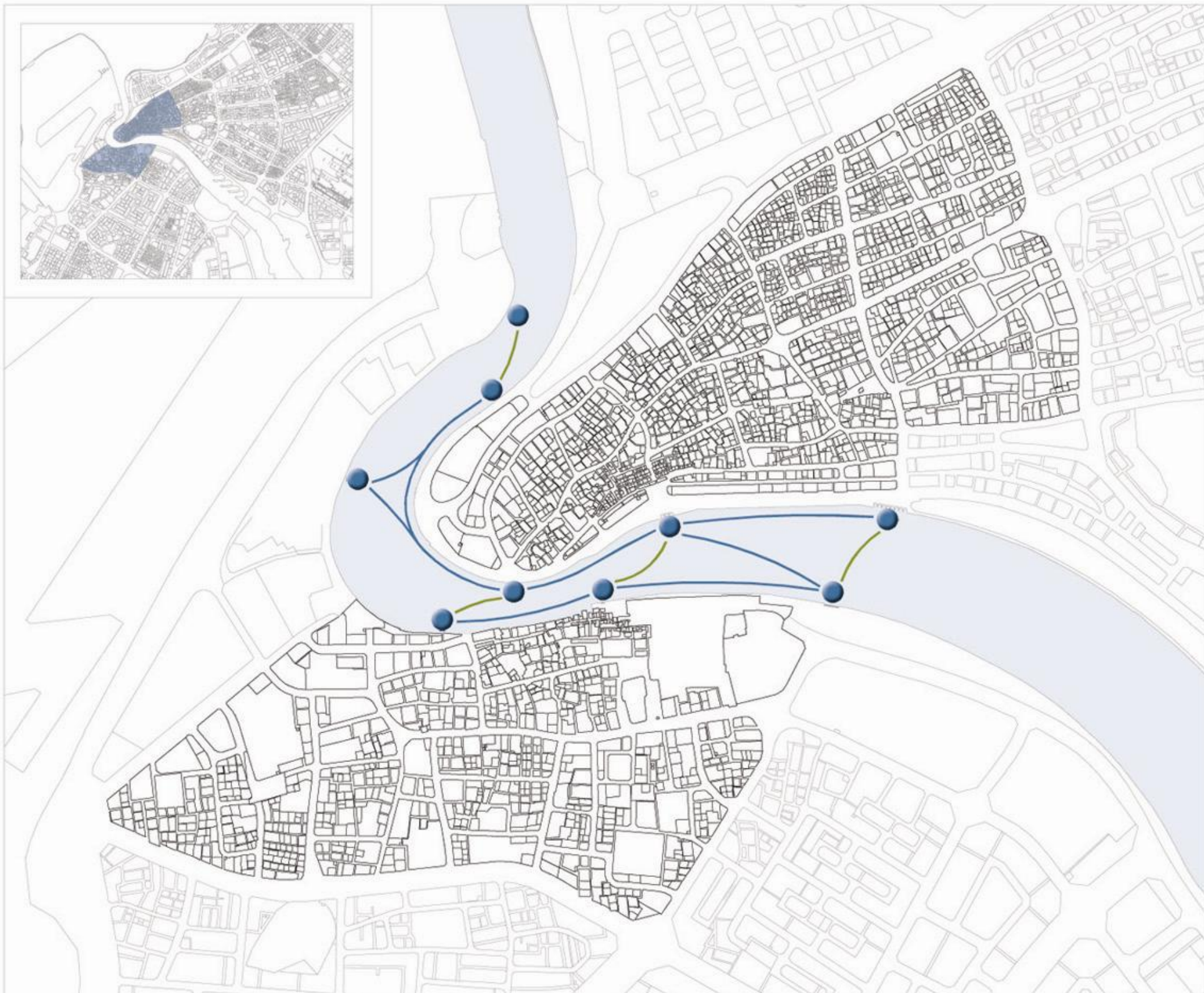
Connect | dubai creek



Connect | abra stops



Connect | abra route 'a'



Connect | abra route 'b' | rapid connection

implement



enlargement plan | strategic master plan

recommendations

PRINCIPLES

Adopt the Urban Design Principles for Deira and Bur Dubai

- Principle 1: Preserve and enhance the cellular urban structure - streets, alleys and private building parcels - and build within it, designing from the inside-out.
- Principle 2: Redesign the public domain of streets and alleys into a public realm - Deira and Bur Dubai's living room - for residents, visitors and tourists.
- Principle 3: Build incrementally on the existing private building parcels and public spaces to preserve the scale, character and diversity of Deira and Bur Dubai.

Finally, an over-arching principle calls for the weaving of tradition and the present through design excellence.

GREEN

Commission a Green Living Room Master Plan from a prominent Landscape Architecture and Urban Design firm, with consultants as needed, to include the following:

- Design of the Urban Arboretum.
- Design of traffic calming, street and sidewalk improvements.
- Phasing and Scheduling of Construction.
- Designation of catalytic projects, involving:
 - Location of first phase Parking Gardens
 - Location of first phase Oases/Wahat
 - Location of first phase Wind Towers
 - Design of Alley-scape improvements in catalytic project areas.

Commission leading landscape architects - as individuals, not firms - to design Parking Gardens in the Green Living Room.

Commission teams of landscape architects and land artists - as individuals, not firms - to design Oases/Wahat in the Green Living Room.

COOL

Organize and conduct an International Wind Tower Competition to include:

- International publicity and independent operation, such as through the UIA or other international organizations involved in design and public art.
- Selection of an international jury composed of architects, artists, and mechanical engineers.
- Organize an exhibition and publication of selected entries to the Wind Tower Competition.
- Select up to 10 finalists and fund development of the designs, including technical operations testing.
- Select 5 winners from the 10 finalists, award prizes, and commission full development of the design, construction document and construction.

Commission teams of architects, artists and engineers - as individuals, not firms - to design wind towers to be constructed along with the winners of the competition.

INHABIT

Enforce housing codes and property maintenance codes, revising or adopting as needed, in Deira and Bur Dubai to initiate the process of improvement and re-inhabitation.

Working with the Aga Khan Program for Islamic Architecture, commission working group of architects to develop prototypes for new housing, weaving traditional Islamic housing with modern urban housing appropriate for Deira and Bur Dubai. This work will result in a publication and will be the basis for new housing design guidelines for Deira and Bur Dubai.

Implement revisions to zoning or other regulations to incorporate housing design guidelines as developed above.

Implement revisions to zoning to incorporate urban design regulations specific to Deira and Bur Dubai, including:

- Prohibiting aggregation of existing land parcels.
- Establishing new building heights related to street right-of-way.
- Locations and size of building lobbies and access.
- Location and arrangement of building services and service access.
- Sign and lighting regulations.

Develop incentives for new housing development with the targeting of catalytic project areas that involve Oases/Wahat, Parking Gardens, and Wind Towers.

CONNECT

Insure that the Green Line Metro is constructed underground with underground stations as it passes through Deira and Bur Dubai and insure that station entrances are unobtrusive, connect directly to streets and public spaces in the interior of Deira and Bur Dubai, and are coordinated with the Oases/Wahat and Wind Towers.

Investigate a waterborne urban transit - a fast ferry - to connect the growing developments along the Gulf with the Creek, allowing access to Deira and Bur Dubai by water from the entire city.

Expand the existing Abra service to become Abra/Taxis with additional stations along the Creek on both sides, multiple routes (Blue Line, White Line, etc.) as well as water taxi service.

Design and implement traffic calming measures to equalize the rights of vehicles and pedestrians in Deira and Bur Dubai. This should include speed tables at intersections, bulb-outs for pedestrians at intersections, and tree planting within the on-street parking area to narrow the visual corridor of the street and thereby slow traffic. This traffic calming plan should be completed as part of the Green Living Room Master Plan.



Implement



Dubai Creekfest | 2007