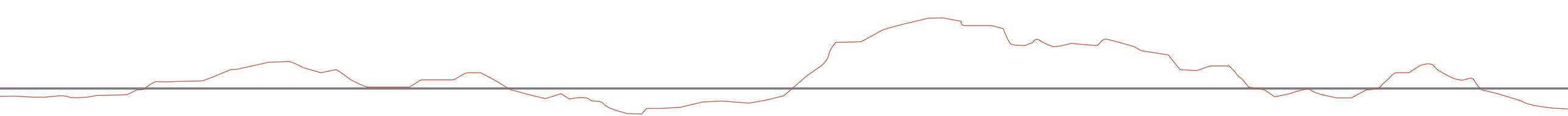
2C

ANDREI ARANYI AND TRISTAN O'GORMAN
STUDIO 7: INTEGRATED DESIGN

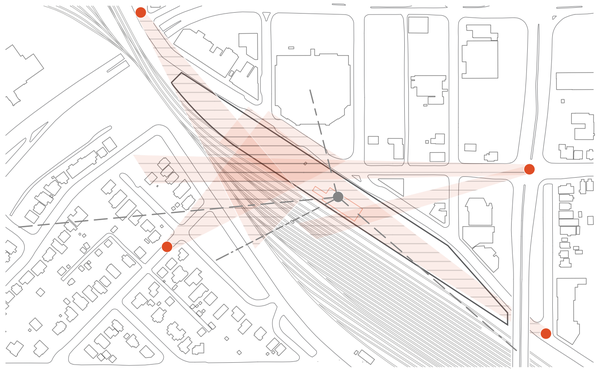


SITE ANALYSIS

URBAN SCALE | SITE SCALE

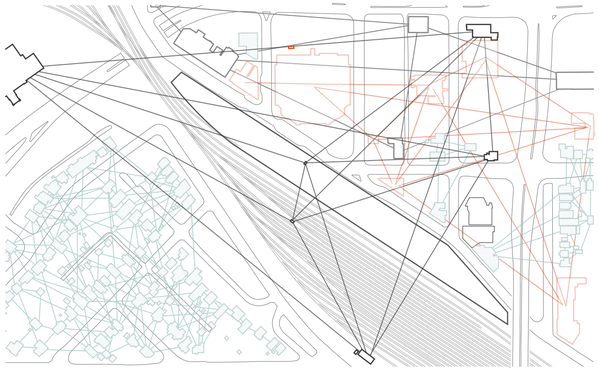
SITE ANALYSIS

SLIDE 01



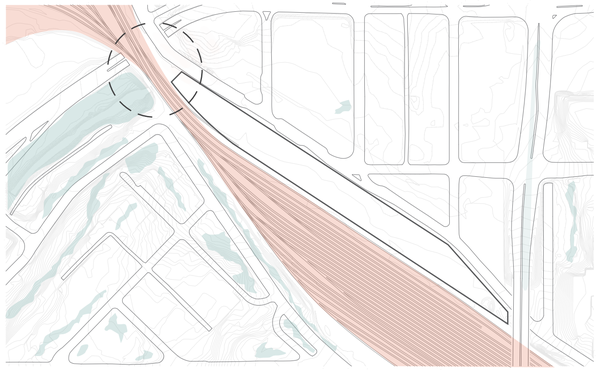
01. INWARD AND OUTWARD VIEWS TO SITE

POSITIVE RELATION TO COMMUNITIES BEYOND



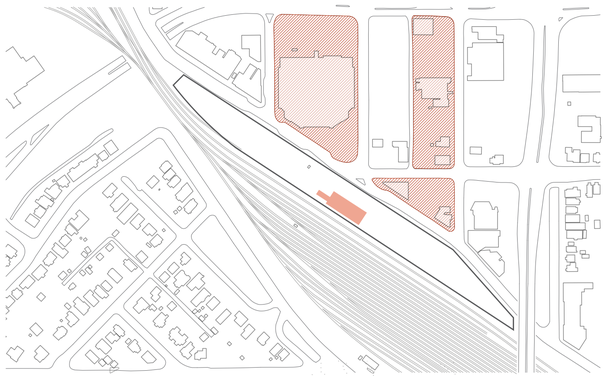
02. ZONES STAKED FOR REDEVELOPMENT

POTENTIAL OPPORTUNITIES FOR COLLABORATION



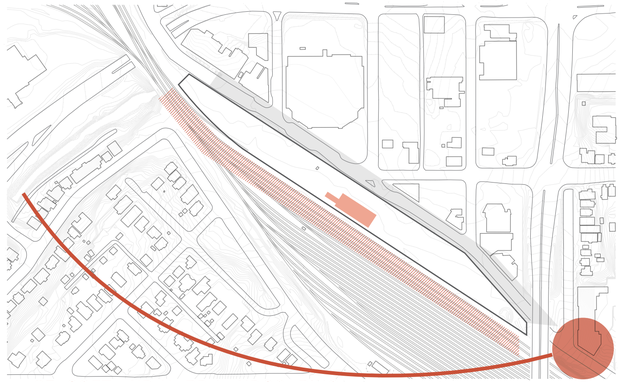
03. BUILDING TYPOLOGIES

EXISTING NETWORKS OF BUILDING TYPES



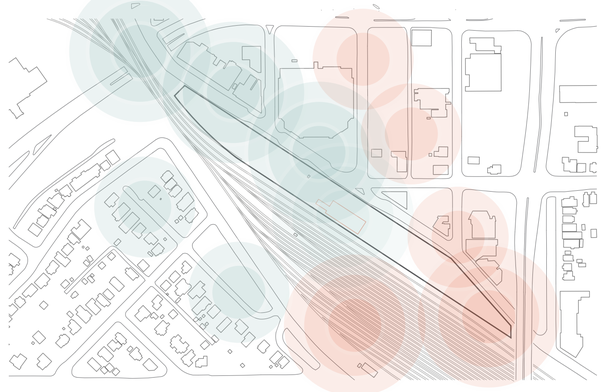
04. SOLAR CONSIDERATIONS

RISK OF INHIBITING COMFORT ON STREETS



05. SOFT AND HARD LANDSCAPING

BARRIER TO LIFE IMPOSED BY TRAIN

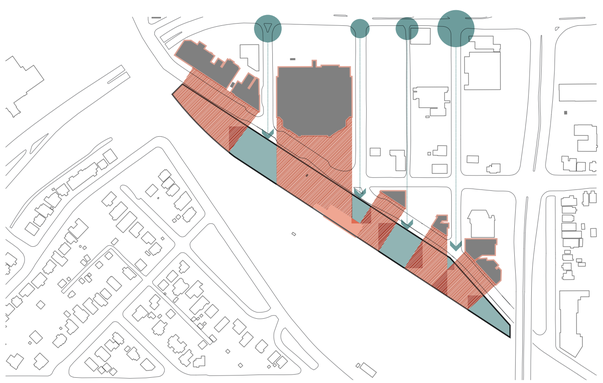


06. PERSONAL COMFORT

EXPERIENTIAL ASPECT OF SITE

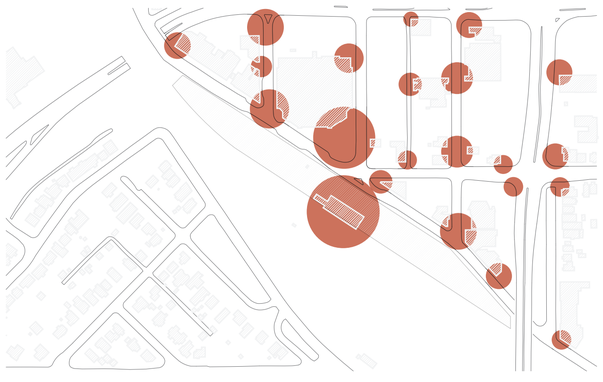
SITE ANALYSIS

SLIDE 02



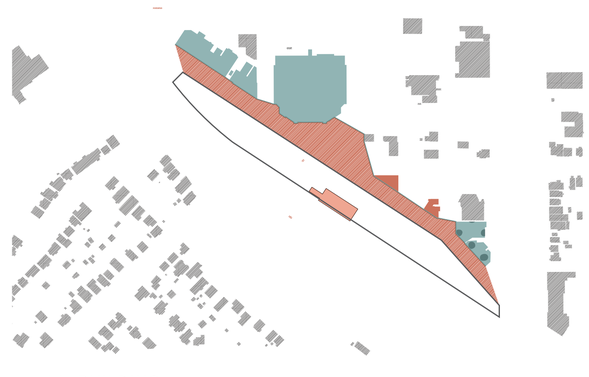
07. BUILDING FACE

BUILDING FACE AND URBAN VOID



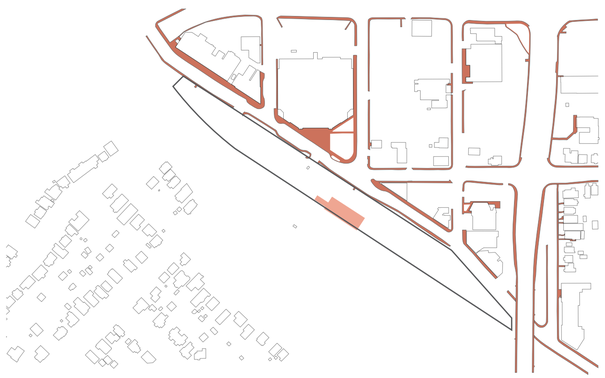
09. NODES

BUILDING AND URBAN CORNERS



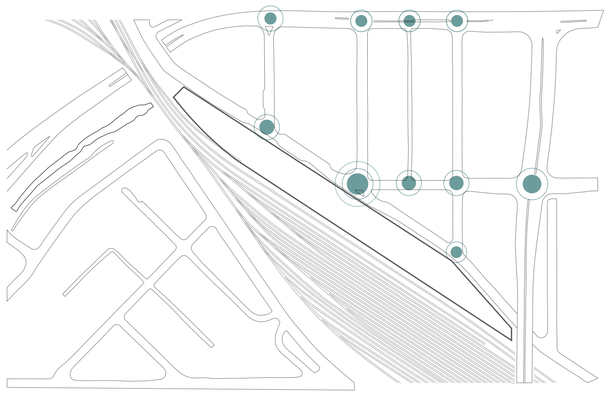
11. BUILDING

BUILDING FACE AND MAINTENANCE



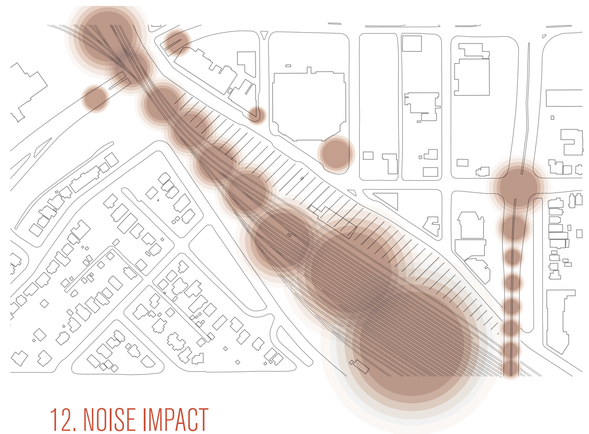
08. PEDESTRIAN

PEDESTRIAN SURFACE



10. MOVEMENT

FLOW OF TRAFFIC



12. NOISE IMPACT

NOISE INFLUENCE

01. ELGIN GREENWAY
BEAUTY AND PRIDE

- Green edge to an urban centre
- Buffer core from industrial rail
- Connection to communties beyond
- Microcosm of northern landscape

02. TRANSIT HUB
ACCESS AND CONNECTIONS

- Prioritize sustainable transportation
- Optimize relation to major arteries
- Minimize vehicular dominance
- Bike, path, bus, train, taxi diversity

03. ARENA IMPROVEMENTS
ACTIVITY AND GROWTH

- Discussions of relocation to Kingsway
- Potential disruption to urban vitality
- Social concentration at off-peak times
- Maximize expression of identity

04. RIVERSIDE DRIVE PEDESTRIANS
ACCESS AND CONNECTIONS

- Existing infastructure unsafe
- Removal of access resulting in isolation
- Potential for community connections
- Increased urban presence

05. PARIS STREET BEAUTIFICATION
BEAUTY AND PRIDE

- Positive welcome to northern urban core
- Natural and cultural expression fostered
- Manifestation of city's regreening attempts
- Agressive relandscaping to establish pace

06. DURHAM STREET UPGRADE
BEAUTY AND PRIDE

- Cultural, commercial and social hybrid
- Reimagine as a public realm
- Mitigate vehicle dominance - shared space
- Support longevity and inhabitation

07. ELM STREET REBUILD
ACTIVITY AND GROWTH

- Prioritize pedestrian access
- Establish baseline quality of life
- New streetscape treatment
- Foster connections to urban parks

08. CARLETON STREET PARK
BEAUTY AND PRIDE

- Emphasize moments of healthy vegetation
- Encourage community inhabitation
- Increase accessibilty and interest
- Further develop regreening in core

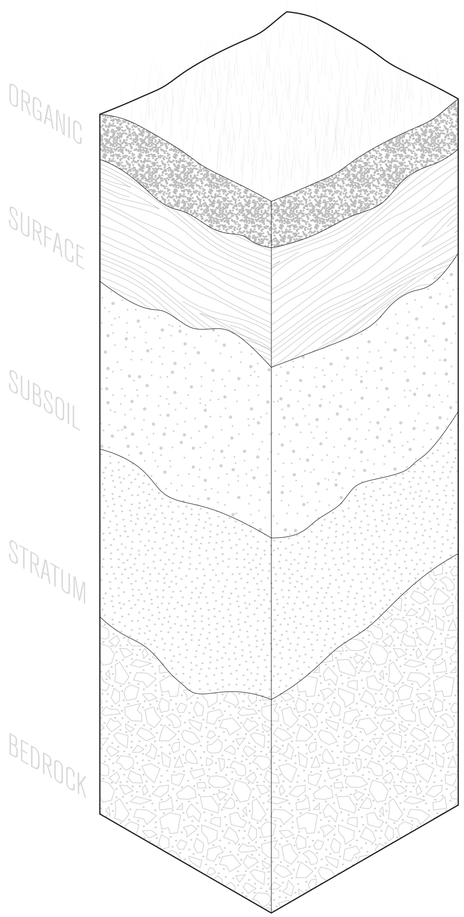
CONCEPTUAL INTENTIONS

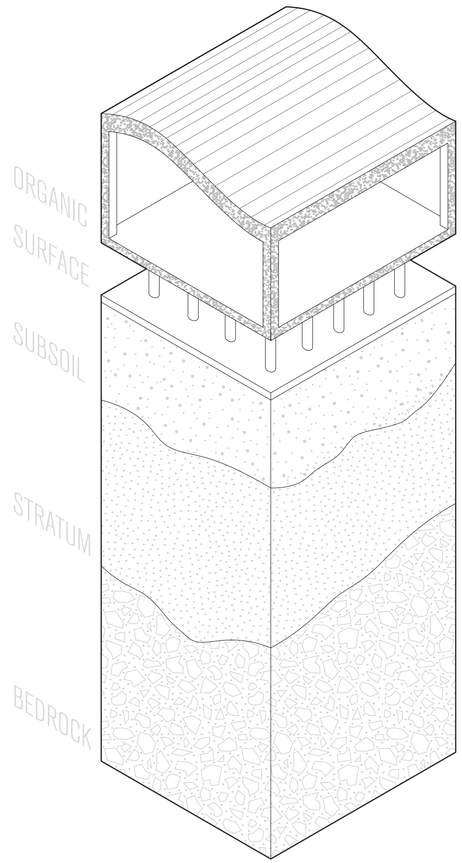
PARTI | THESIS | PROCESS

Sudbury's social and **ecological well-being** is compromised by the widespread dependency on vehicular transportation, which has contributed to the pervasive deterioration of the **urban density** and **vitality of downtown**. Defined by the railway tracks and a large municipal parking lot, the southern perimeter of the downtown core is characterized to a significant degree by its **social disparities, economic shortcomings** and **environmental degradation**.

Paradoxically, the key to revitalizing this seemingly 'dead' site in a way that enacts a movement towards **ecological urbanism** is to reimagine Sudbury's urban fabric as **fertile ground** composed of **symbiotic nutrients**. To these ends, our proposed intervention – Isthmus – addresses the current urban conditions by rebuilding the ground in ways that privilege socially **inclusive topographical relations** and **sustainable temporal evolution**.

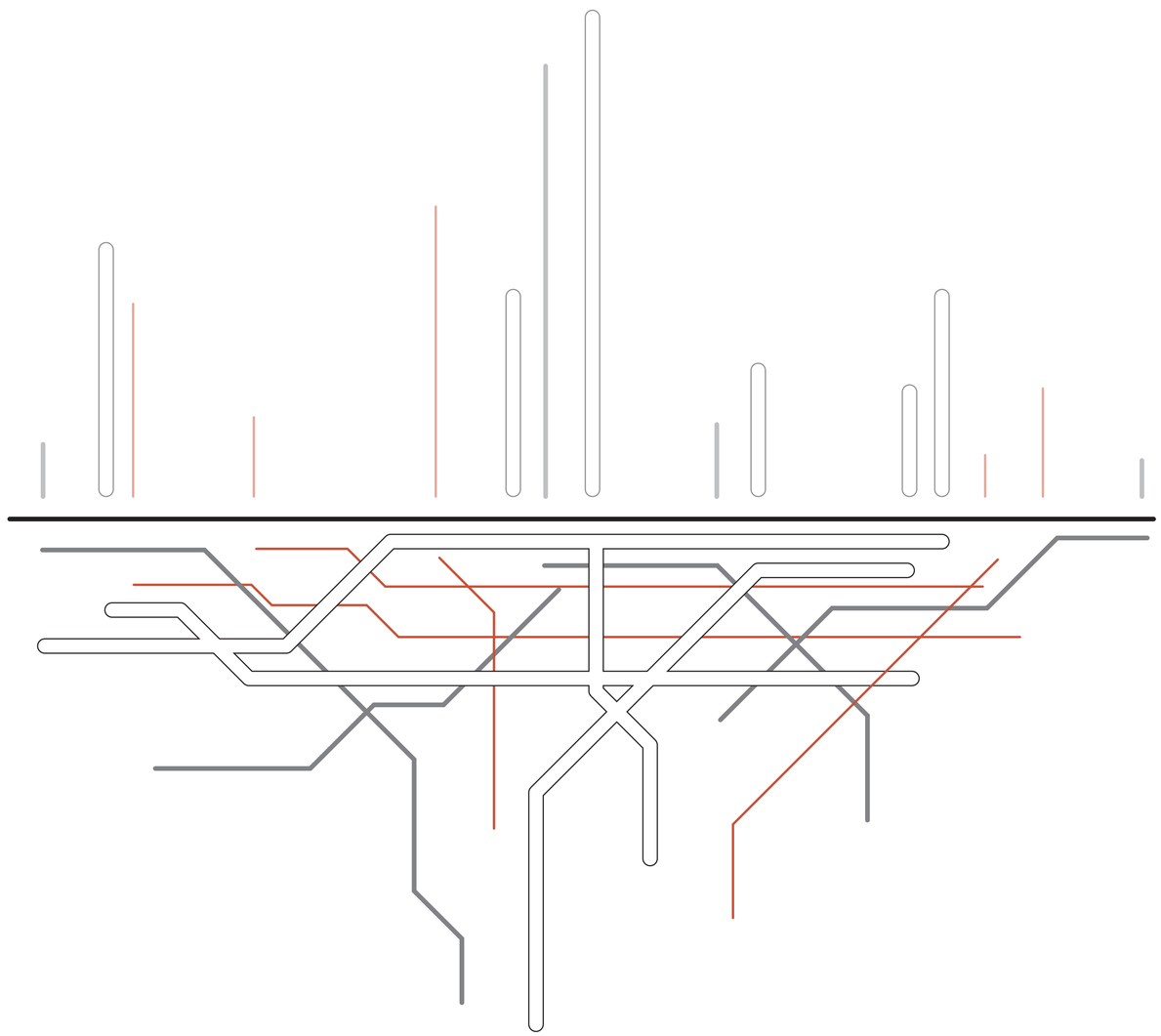
2C AA TO


ORGANIC
SURFACE
SUBSOIL
STRATUM
BEDROCK


ORGANIC
SURFACE
SUBSOIL
STRATUM
BEDROCK

2C AA TO

LANDSCAPE SEGREGATE

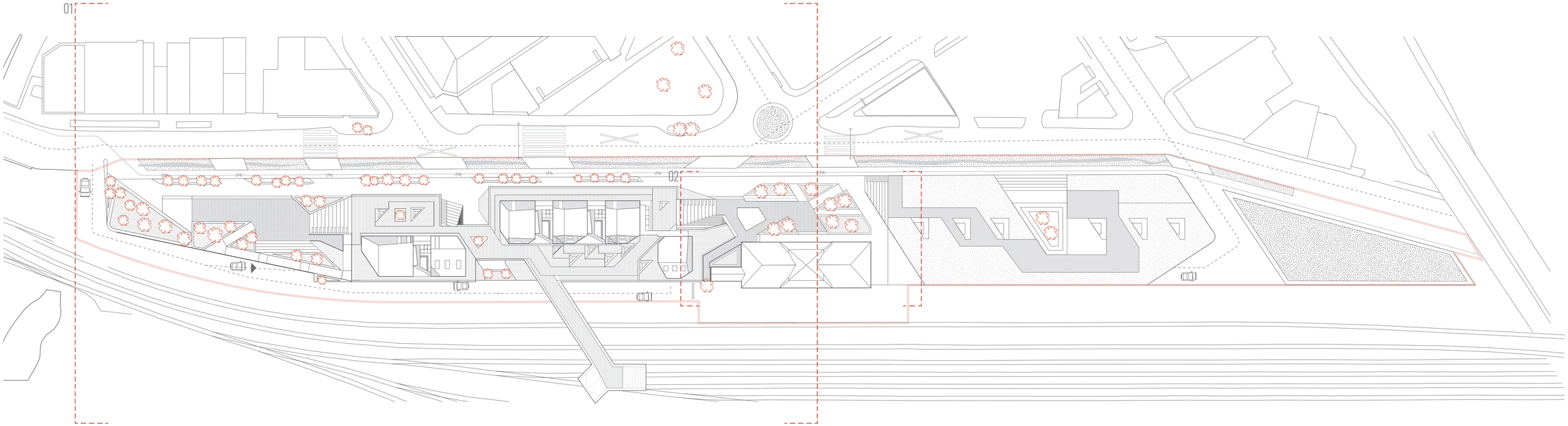


URBAN SITE STRATEGIES

ANNOTATED 1:600 SITE PLAN | ANNOTATED 1:300 SITE PLAN | PRECEDENTS

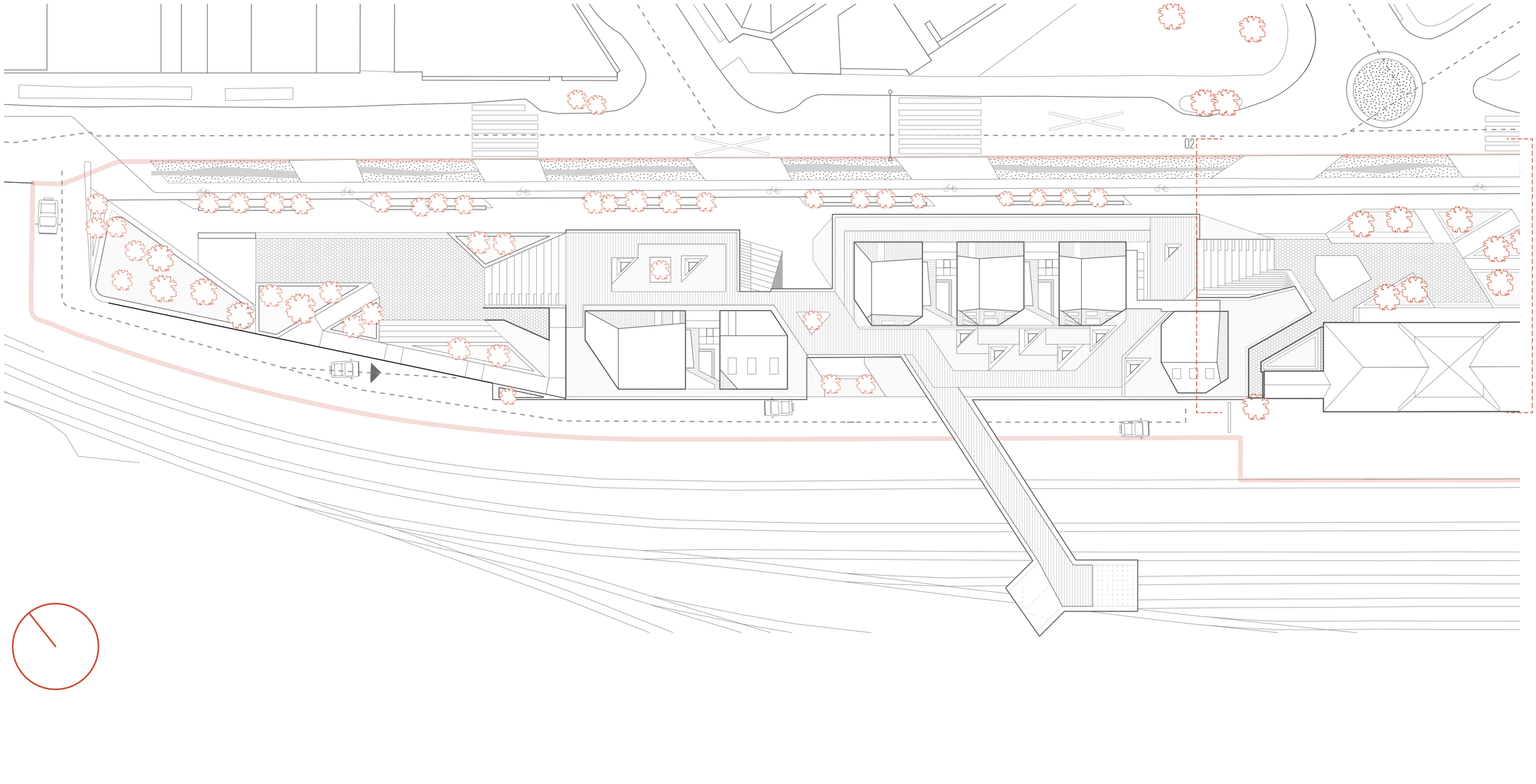
SITE PLAN

COMMUNITY CONNECTIONS | GREEWAY CONTINUATION | PUBLIC REALMS



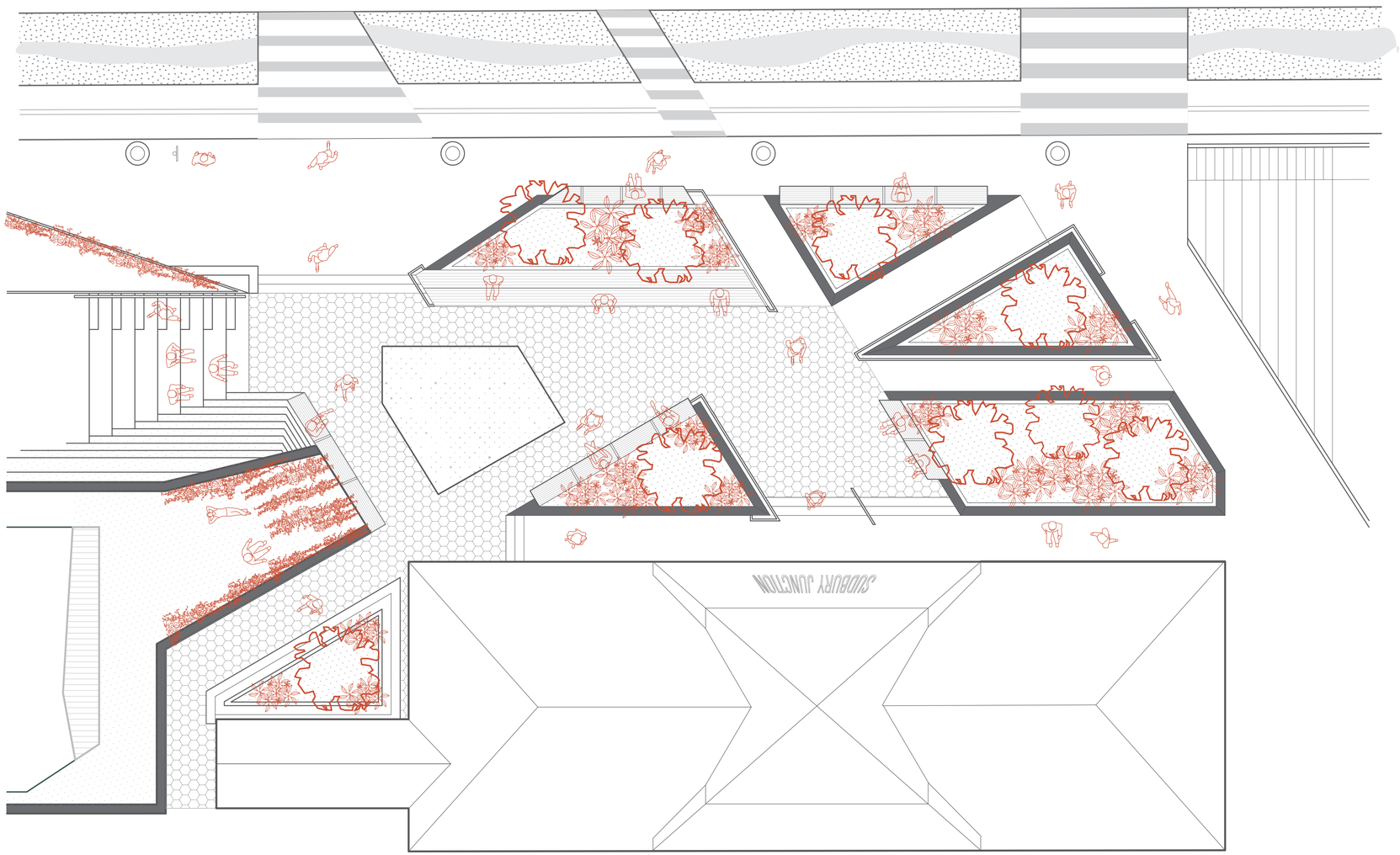
SITE PLAN - FOCUS

COMMUNITY CONNECTIONS | GREEWAY CONTINUATION | PUBLIC REALMS



DETAIL SITE PLAN - PUBLIC REALM AT THE CPR STATION

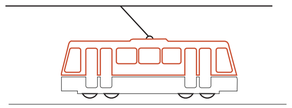
TOPOGRAPHICAL VARIATIONS | FRAMED PUBLIC LIFE | MEANS OF MOVEMENT



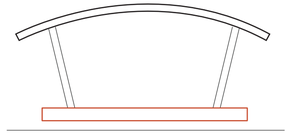
1 16

5

CHOICE OF MOVEMENT
OFFER DIVERSE MEANS OF TRANSPORT
BIKE, BUS, TRAIN, CAR, WALKING, WHEELCHAIR

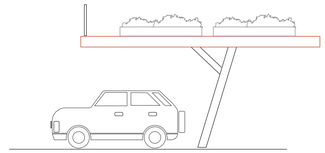


EXPERIENTIAL DIVERSITY
OFFER A RANGE OF STIMULI
WATER FEATURE, PERFORMANCE STAGE

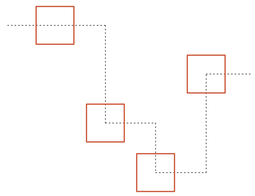


EXPOSURE TO NATURE
PHYSICAL AND COSMOLOGICAL CONNECTION
GRADENS, MASS TIMBER CONSTRUCTION, BIOPHILIA

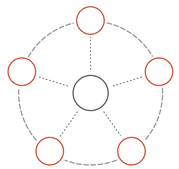
ADAPTABLE SURROUNDINGS
ACCOMODATE DYNAMIC NEEDS AND DESIRES
HOURLY, MONTHLY, YEARLY TRANSFORMATIONS



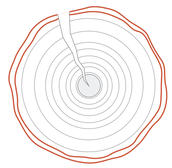
EASE OF UNDERSTANDING
CONSISTANT INTERPRETATION OF A SPACE
DEFINED INTERSPERSED PUBLIC SQUARES



STATUS ASCRIBED TO OCCUPANTS
POSITIVE REFLECTION OF PEOPLE WITHIN
STAGES, MURALS, PAVILLIONS, FESTIVALS

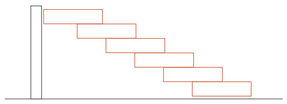


INSPIRATION DERIVED FROM A SPACE
INVITE INTERACTION AND DELIGHT
PASSIVEHAUS, MASS TIMBER

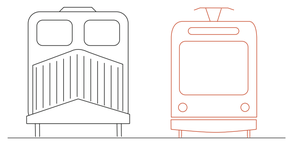


REGENERATIVE POTENTIAL
OPTIMIZE NATURAL SITE CONDITIONS
BIOSWALES, POROUS PAVINGS

INTERPERSONAL CONNECTIONS
FOSTER SPONTANEOUS INTERACTIONS
LANDSCAPE AS SEATING ELEMENT



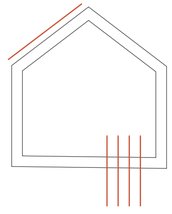
MATURITY OF COMMUNITY
DEFINE A TYPOLOGY TO FOSTER AN IDENTITY
MANIFESTATION OF THE SUDBURY STORY - TRAIN



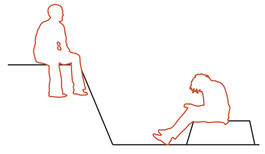
PLAYABILITY OF OUR ENVIRONMENTS
FORMAL AND INFORMAL OPPORTUNITIES TO PLAY
WATER FEATURE, LANDSCAPE FORM

GLOBAL IMPACT
CARBON-NEUTRAL ASPIRATION
CAR-SHARING, MASS TIMBER, BIKE PARKING

SELF SUFFICIENCY
ABILITY TO SUSTAIN ONE'S OWN GROWTH
GEOTHERMAL HEAT EXCHANGE, SOLAR



DIVERSE EXPRESSIONS OF INHABITATION
ALLOW PEOPLE TO OCCUPY A SPACE NATURALLY
SOFTENED EDGE CONDITIONS



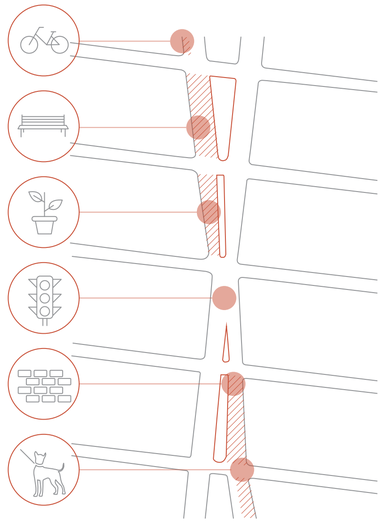
BROADWAY STREET
PEDESTRIAN REVITALIZATION

DESIGNER: JAN GEHL

LOCATION: MANHATTAN, USA.

TYPE: URBAN DESIGN

DATE: 2008 - 2010



RELEVANCE TO SUDBURY

POWER OF SUGGESTION
PROGRESSIONAL DEVELOPMENT
WIDESPREAD BENEFITS
URBAN BEHAVIOURAL CHANGE

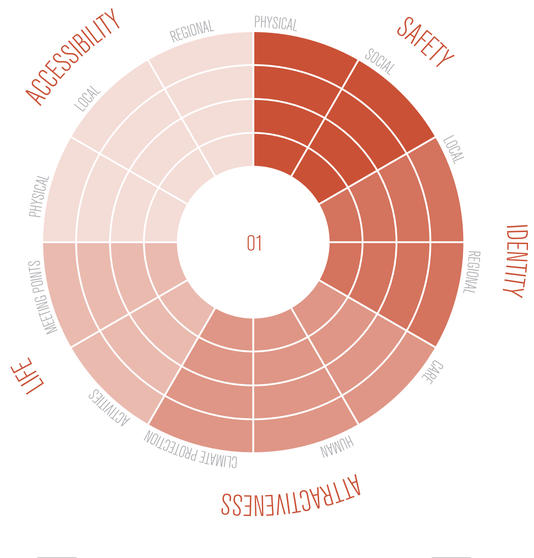
SKANE REGIONAL TRANSIT
TRANSIT HUBS AS SOCIAL SPACES

DESIGNER: JAN GEHL

LOCATION: SKANE, SWEDEN

TYPE: URBAN DESIGN

DATE: CURRENT



RELEVANCE TO SUDBURY

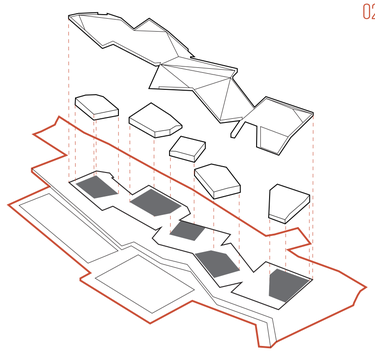
POTENTIAL OF PUBLIC TRANSPORT
HUMAN ASPECT OF DEVELOPMENT
PUBLIC LIFE AS SOCIAL CATALYST
LOCAL CHARACTERISTICS

01 DRAWN BY AUTHOR AFTER
Jan Gehl, "Transit hubs as meeting places in Skane," *Gehl People*,
Accessed November 2019, https://gehlpeople.com/projects/region-skane/

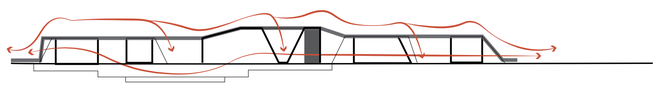
02 DRAWN BY AUTHOR AFTER
"Vestre Fjord Park," *ADEPT*,
Accessed November 2019, http://www.adept.dk/project/vestre-fjordpark?fbclid=IwAR1_pQKv5pwevjI9CO7ijaGdimT2ox8dJ1YW1hgZ3xgkJjirOeadj5lptKU

VESTRE FJORD PARK
EXPERIENTIAL LANDSCAPE

DESIGNER: ADEPT
LOCATION: AALBORG, DENMARK
TYPE: ARCHITECTURAL LANDSCAPE
DATE: 2015 - 2017



02

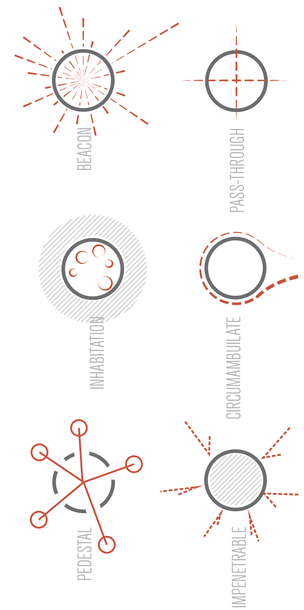


RELEVANCE TO SUDBURY

LAYERED PROGRAMMING
LANDSCAPE AS PLAY SPACE
TRULY PUBLIC AREAS
BIOMIMICRY IN FORM

LÖYLY
MULTI-USE LANDSCAPE

ARCHITECT: AVANTO ARCHITECTS
LOCATION: HELSINKI, FINLAND
TYPE: PUBLIC WELL-BEING
DATE: 2016

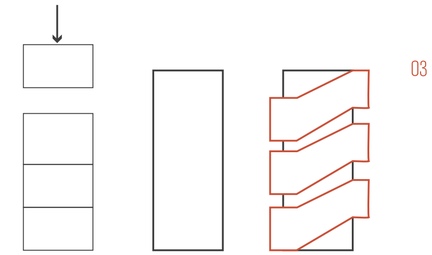


RELEVANCE TO SUDBURY

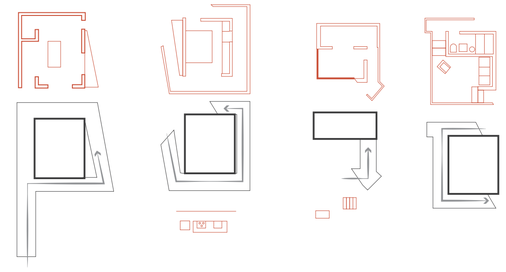
INDUSTRIAL REVITALIZATION
WAYS OF INHABITING A SPACE
TOPOGRAPHICAL RELATIONS
MULTI-USE COMMERCIAL

HELIX HOUSE
RESIDENTIAL EXPRESSION

ARCHITECT: ONISHIMAKI ARCHITECTS
LOCATION: TAITO, JAPAN
TYPE: PRIVATE RESIDENTIAL
DATE: 2011



03



04

RELEVANCE TO SUDBURY

MEANS OF EXPRESSING MOVEMENT
COHESION BETWEEN MODULES
POTENTIAL FOR GROWTH
DISTINCT CHARACTER

03 DRAWN BY AUTHOR AFTER
"Double Helix House" *Onishimaki + Hyakudayuki Architects,*
Accessed November 2019, https://www.archdaily.com/777435/
double-helix-house-onishimaki-plus-hyakudayuki-architects?fbclid=IwAR1
tsduWVeBQkgX9c9kZsMghAkfUlsGtmtnFMqwvK6PUzI3ahZYu-HMpJZ0

04 DRAWN BY AUTHOR AFTER
"Double Helix House" *Onishimaki + Hyakudayuki Architects,*
Accessed November 2019, https://www.archdaily.com/777435/
double-helix-house-onishimaki-plus-hyakudayuki-architects?fbclid=IwAR1
tsduWVeBQkgX9c9kZsMghAkfUlsGtmtnFMqwvK6PUzI3ahZYu-HMpJZ0

SPATIAL RELATIONS

PROGRAM ADJACENCIES

PRIMARY CIRCULATION

VISUAL CONNECTION

PHYSICAL CONNECTION

PUBLIC NODE

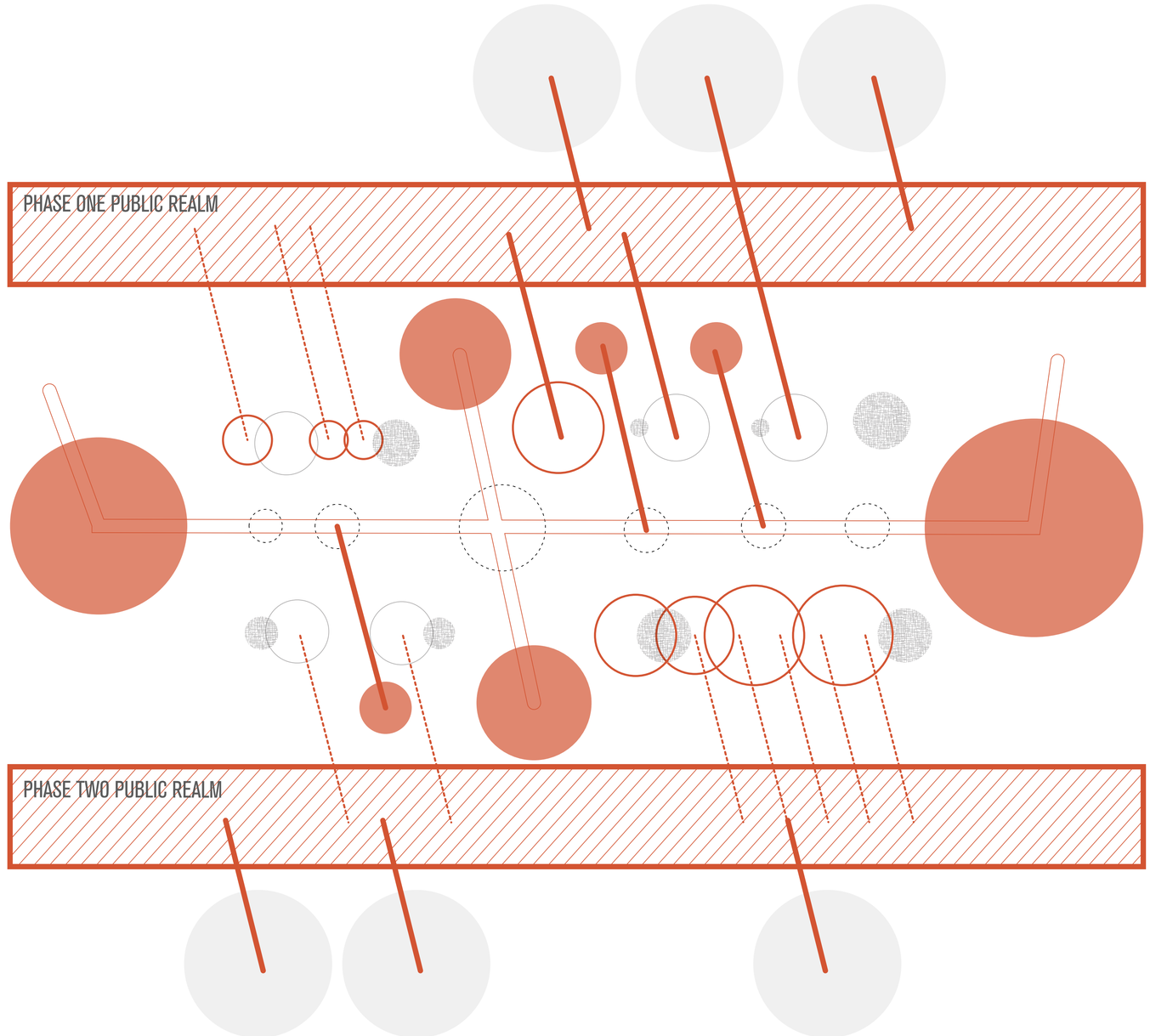
MARKET PROGRAM

THRESHOLD

RESIDENTIAL

SUPPORT PROGRAM

HYBRID PROGRAM



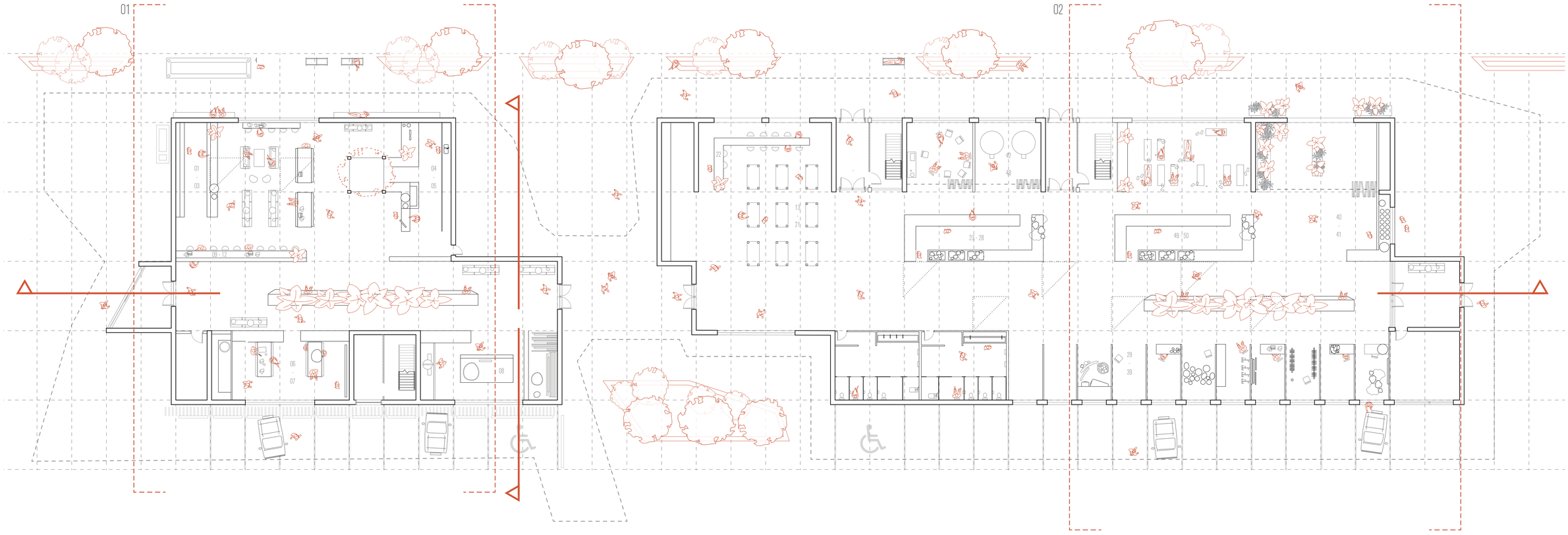
2C AA TO

BUILDING DRAWINGS

ELEVATIONS (2) | SECTIONS (2) | PLANS (3)

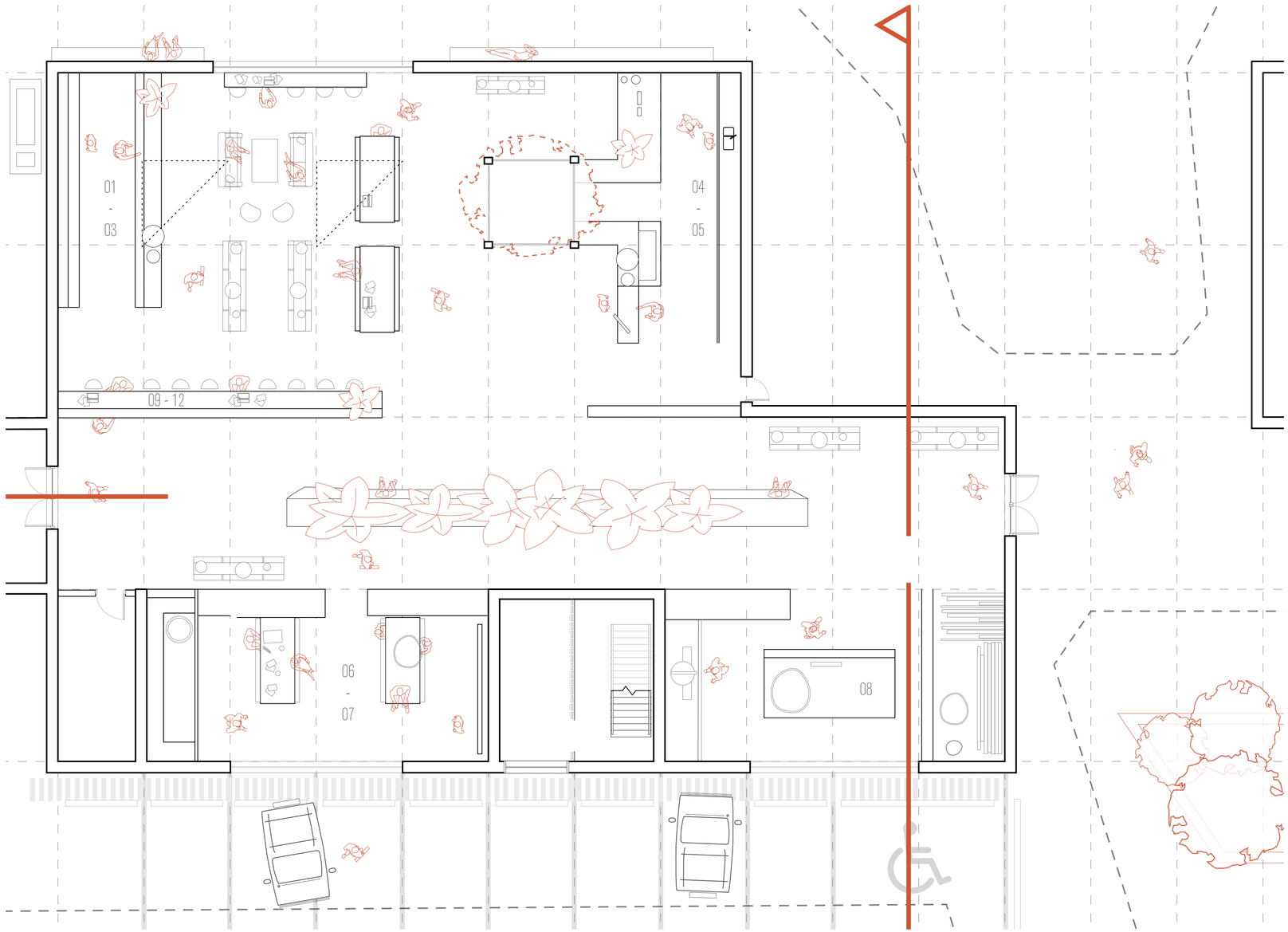
GROUND FLOOR PLAN

DYNAMIC PROGRAMMING | POROSITY TO PUBLIC REALMS | INCREASED ACTIVITY DENSITY + VITALITY



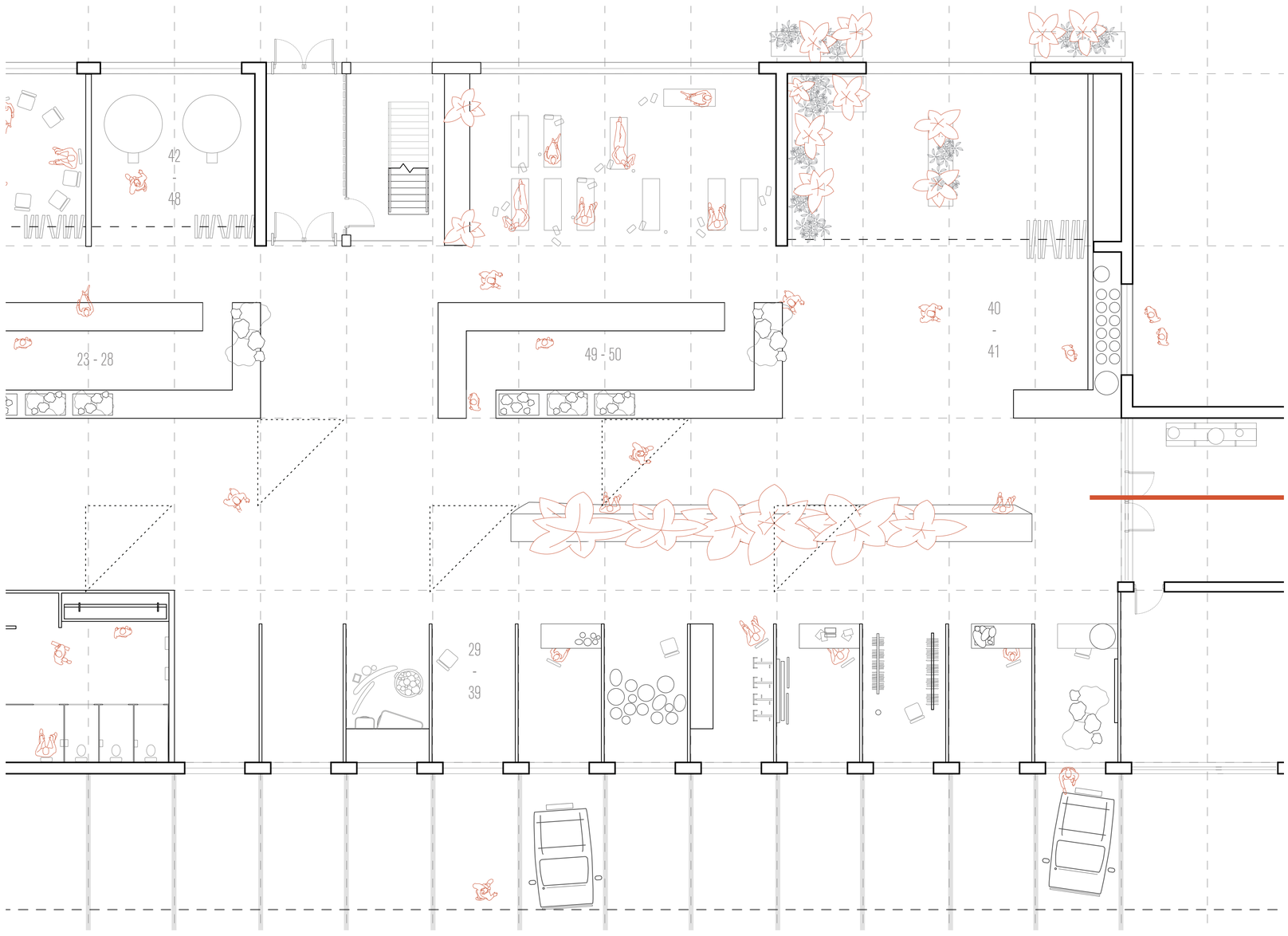
GROUND FLOOR PLAN - FOCUS

DYNAMIC PROGRAMMING | POROSITY TO PUBLIC REALMS | INCREASED ACTIVITY DENSITY + VITALITY



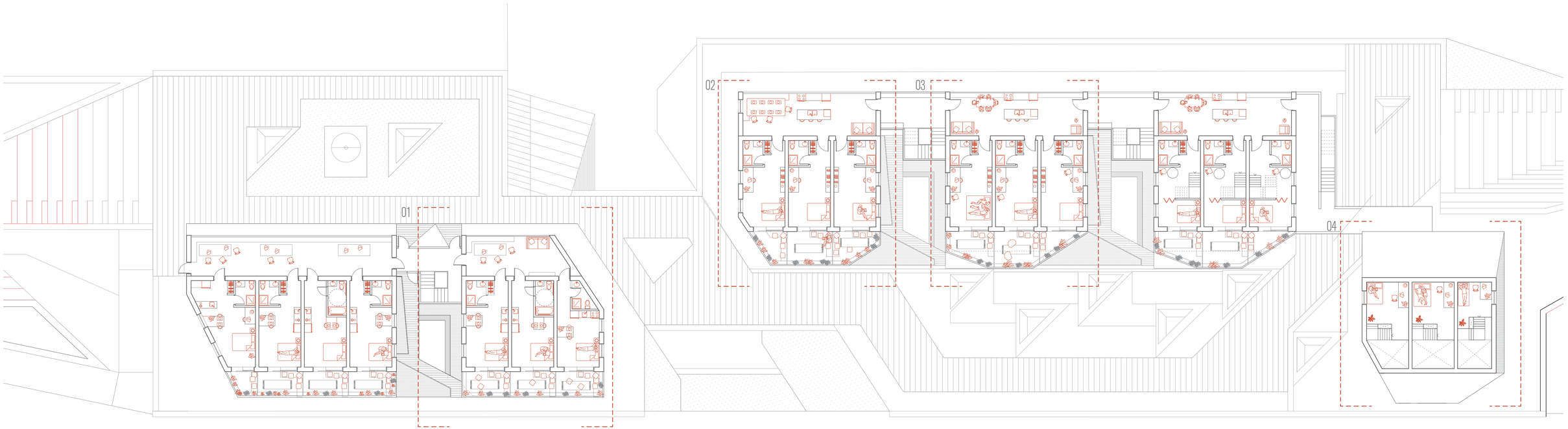
GROUND FLOOR PLAN - FOCUS

DYNAMIC PROGRAMMING | POROSITY TO PUBLIC REALMS | INCREASED ACTIVITY DENSITY + VITALITY



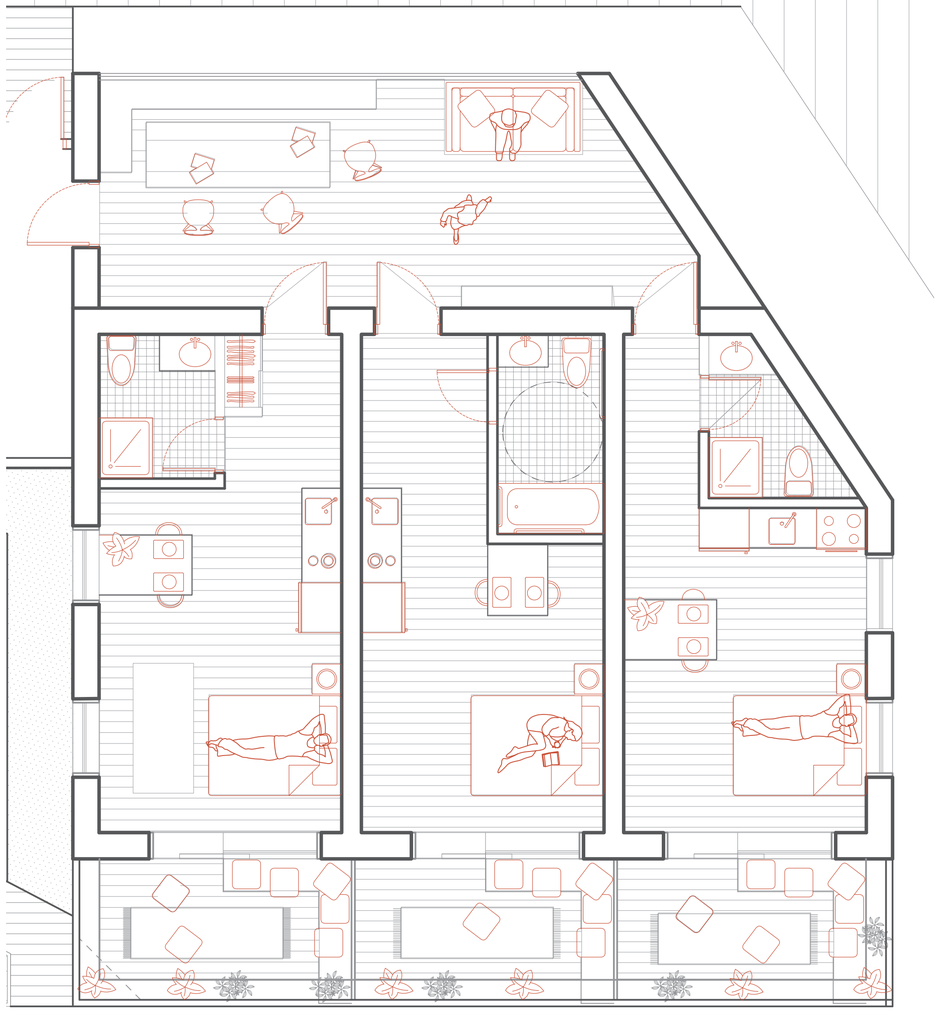
RESIDENTIAL FLOORPLANS

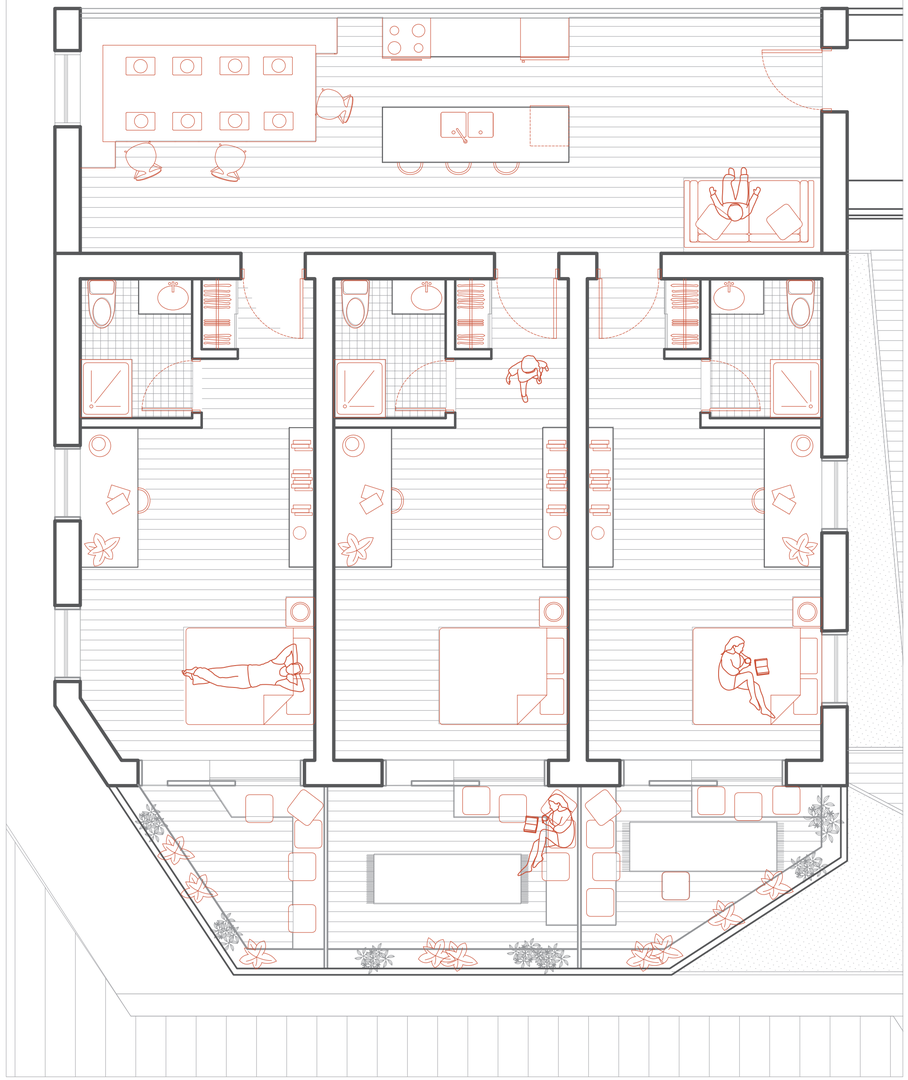
RELATION TO STREET | CIRCULATION STRATEGY | DISTRIBUTION



DETAIL RESIDENTIAL FLOORPLANS

DISTINCT COMPOSITIONS BASED ON USERS | MINIMALISM | PUBLIC / PRIVATE HIERARCY



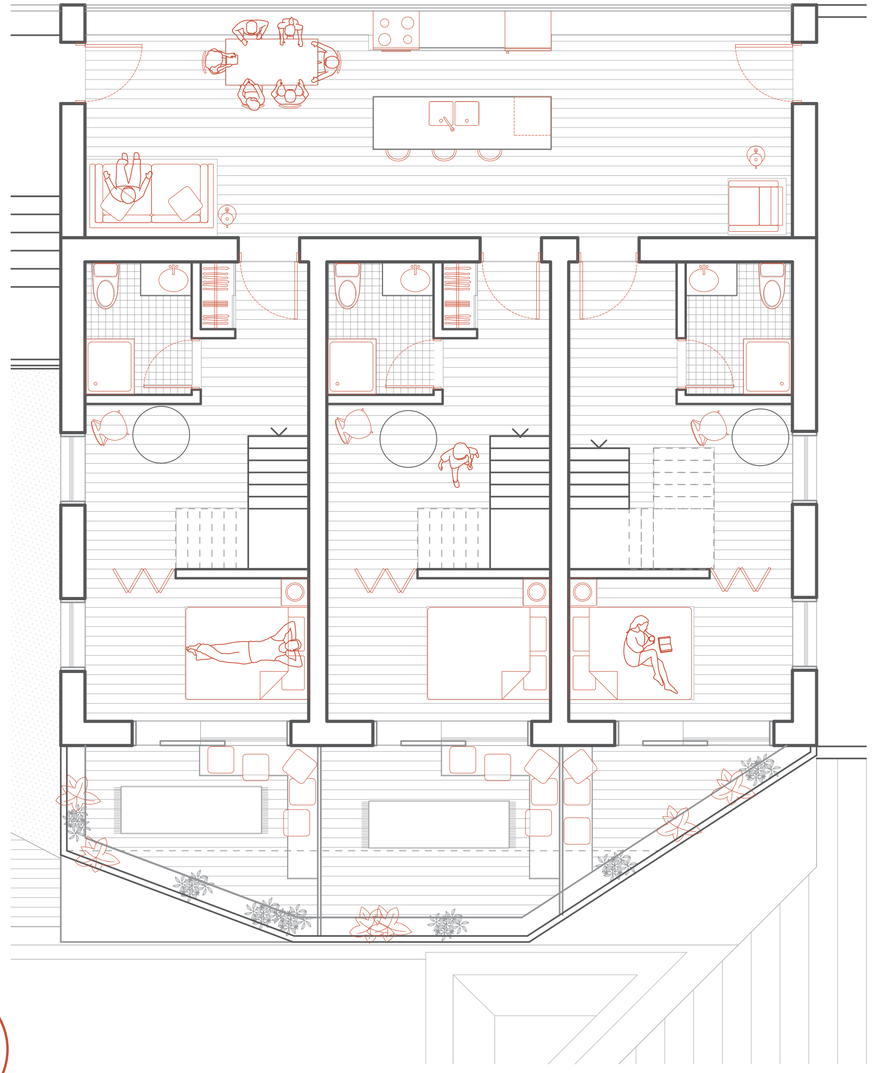


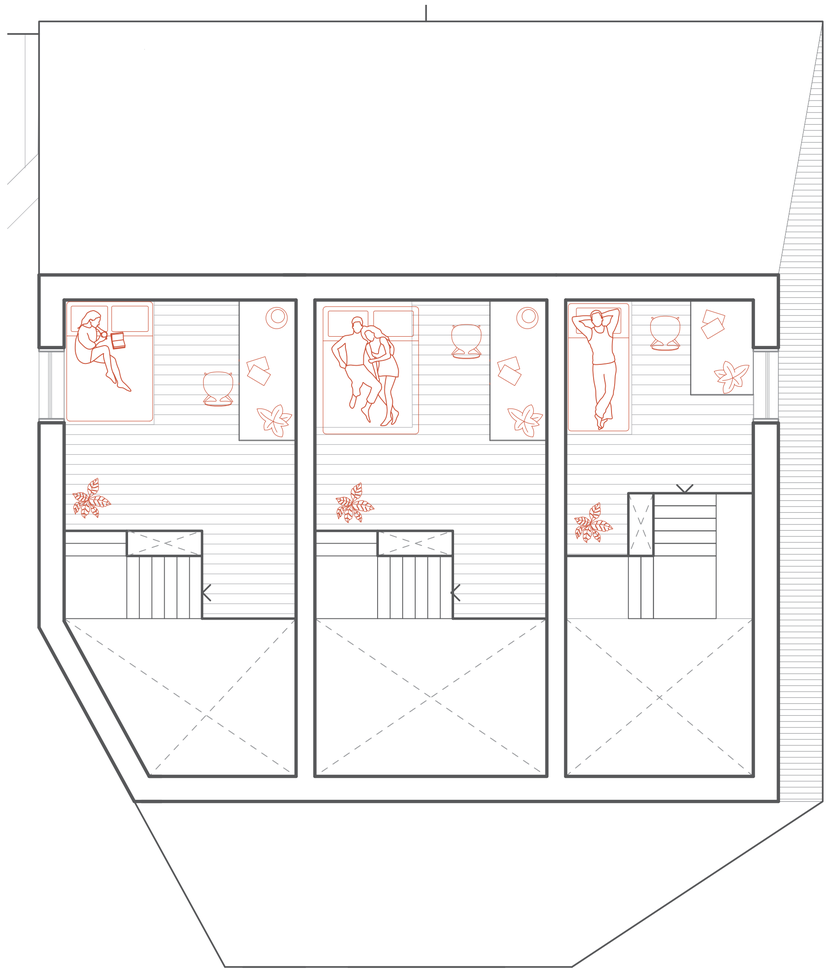
1 5

2 10

DETAIL RESIDENTIAL FLOORPLANS

DISTINCT COMPOSITIONS BASED ON USERS | MINIMALISM | PUBLIC / PRIVATE HIERARCY





1
2
5
10

2C AA TO

GROUND FLOOR

ARITISTS' RESIDENCE

42.7m²
24 UNITS - 24 BEDS

BUILT-IN FOURNISHINGS
BREAKOUT SPACE
PRIVATE KITCHEN
TWO-WAY EXTERIOR VIEW

MODULAR
PASSIVE HOUSE
MINIMALIST LIFESTYLE
REDUCED COSTS
CO-HOUSING

SECOND FLOOR

STUDENT

36.1m²
24 UNITS - 24 BEDS

WORKSTATION
DYNAMIC FOURNISHING
STANDARDIZED
SHARED AMENITIES

MODULAR
PASSIVE HOUSE
MINIMALIST LIFESTYLE
REDUCED COSTS
CO-HOUSING

UPPER LEVELS

YOUNG PROS

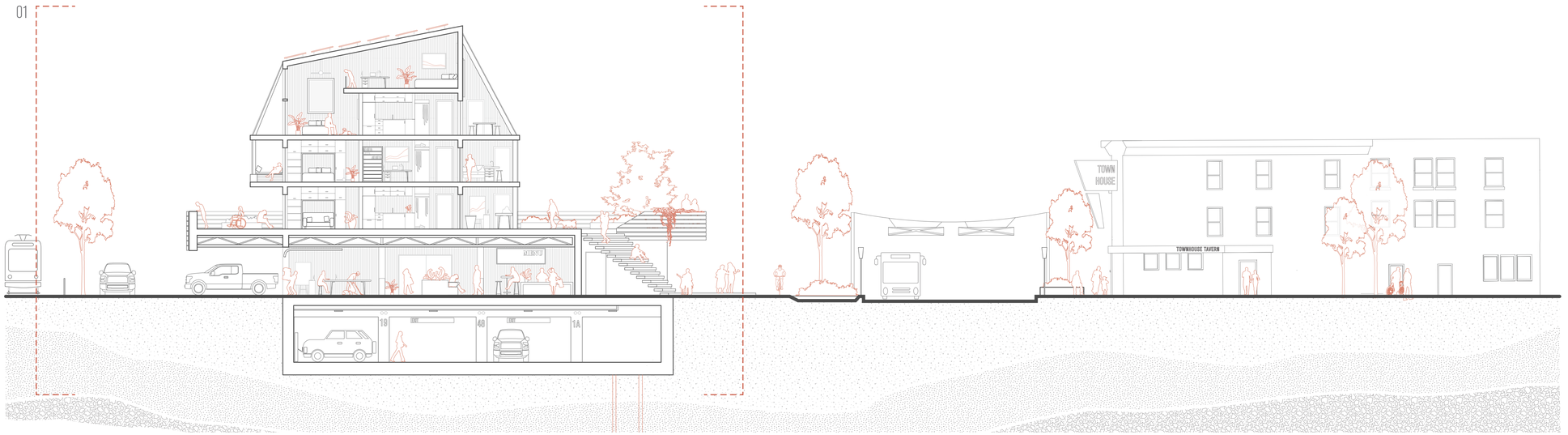
59.0m²
12 UNITS - 24 BEDS

LOFT-STYLE
DYNAMIC FOURNISHING
MAXIMUM EXPOSURE
CUSTUMIZABLE

MODULAR
PASSIVE HOUSE
MINIMALIST LIFESTYLE
REDUCED COSTS
CO-HOUSING

BUILDING SECTION 01

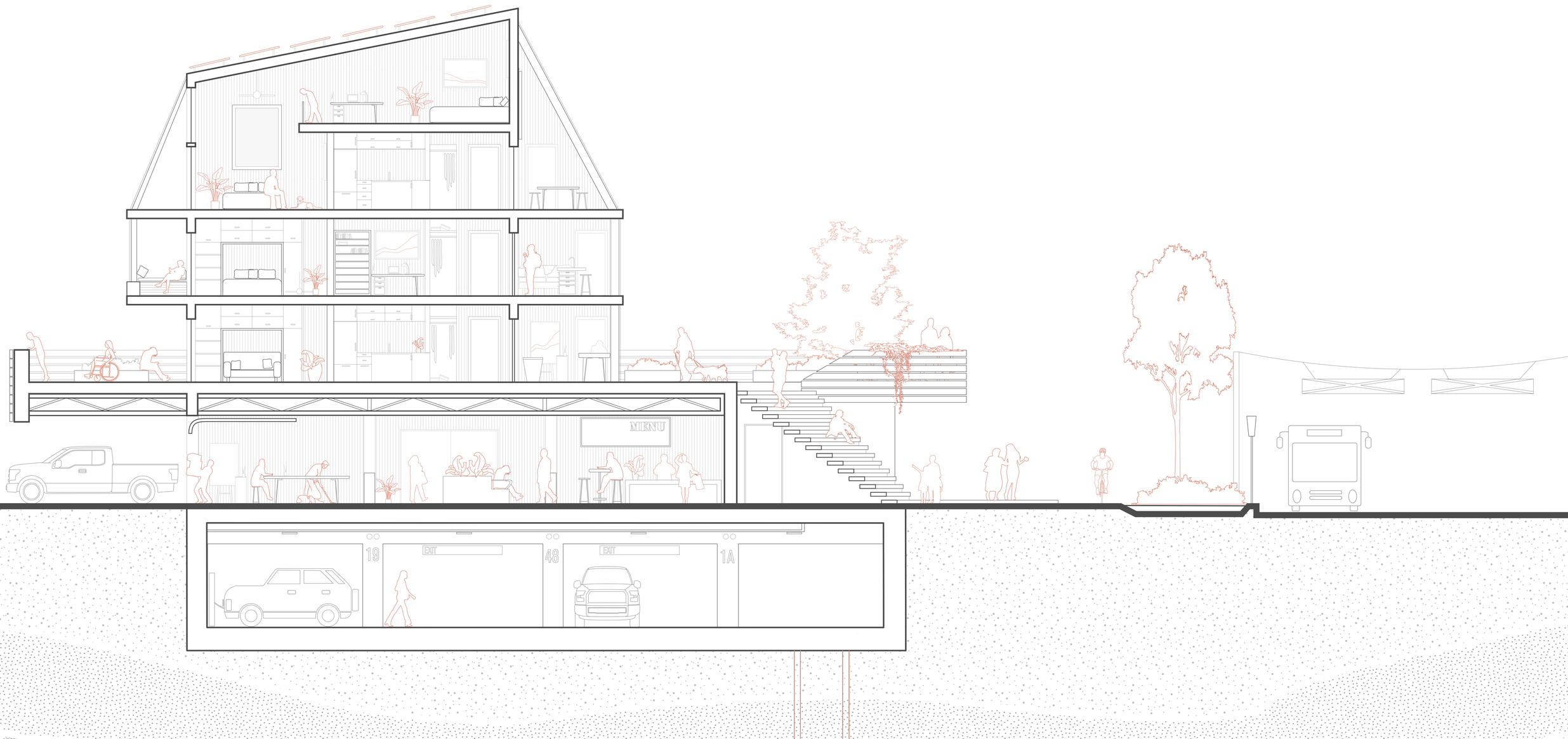
FRAMED PUBLIC REALM | RELATION TO STREET | FLEXIBLE BUILDING OPERATION



1 5 10

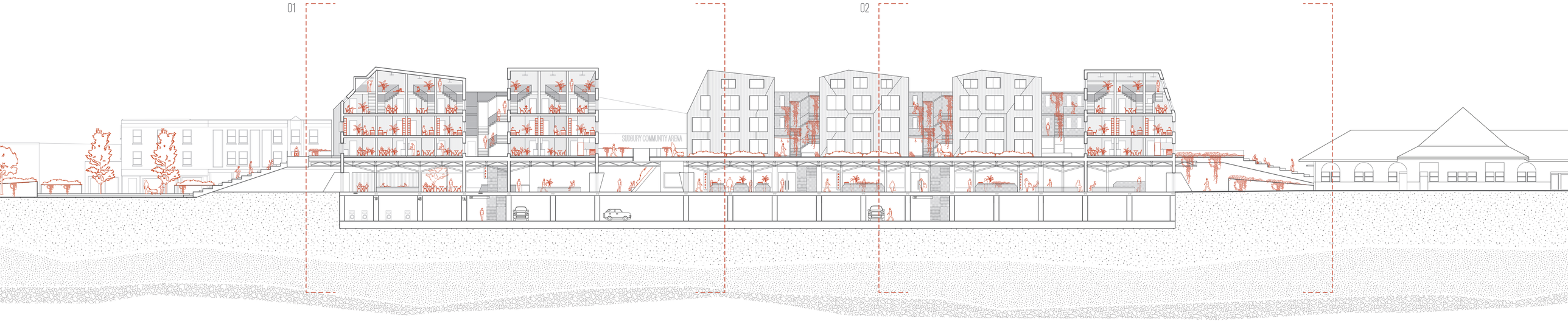
BUILDING SECTION 01

FRAMED PUBLIC REALM | RELATION TO STREET | FLEXIBLE BUILDING OPERATION



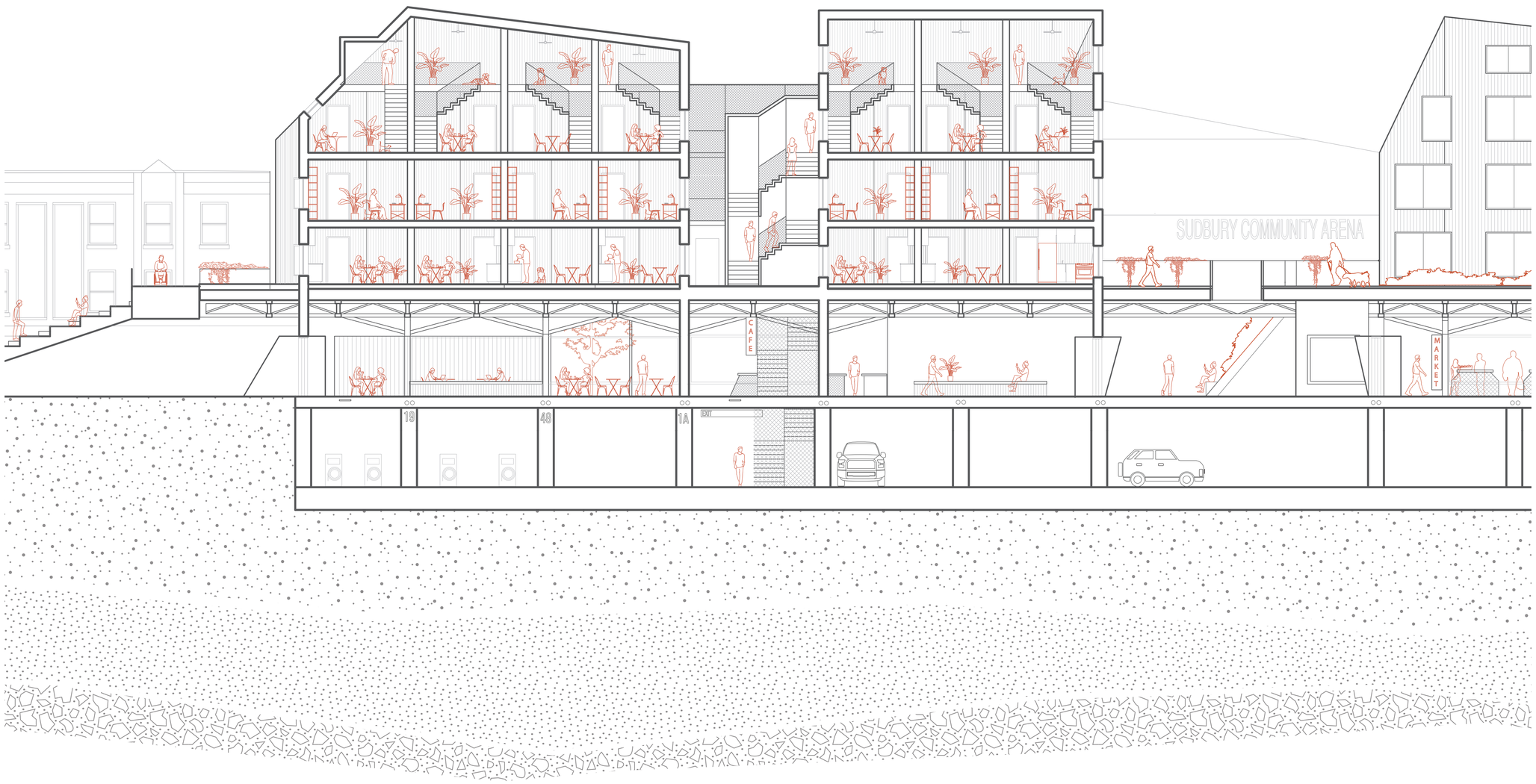
BUILDING SECTION 02 | SOUTH ELEVATION

VERTICAL GROWTH | NEW GROUND | BUILDING FACADE



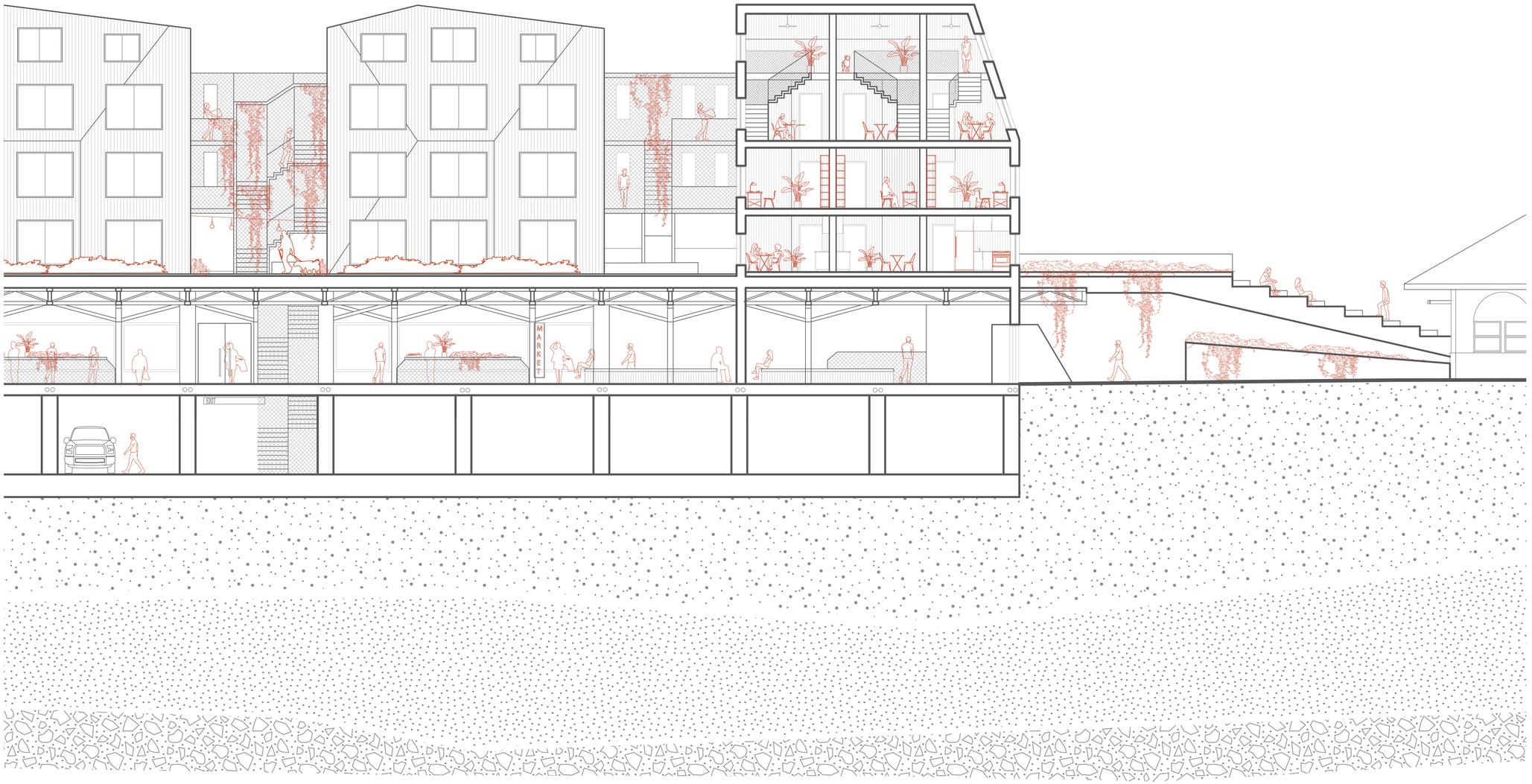
BUILDING SECTION 02 | SOUTH ELEVATION

VERTICAL GROWTH | NEW GROUND | BUILDING FACADE



BUILDING SECTION 02 | SOUTH ELEVATION

VERTICAL GROWTH | NEW GROUND | BUILDING FACADE

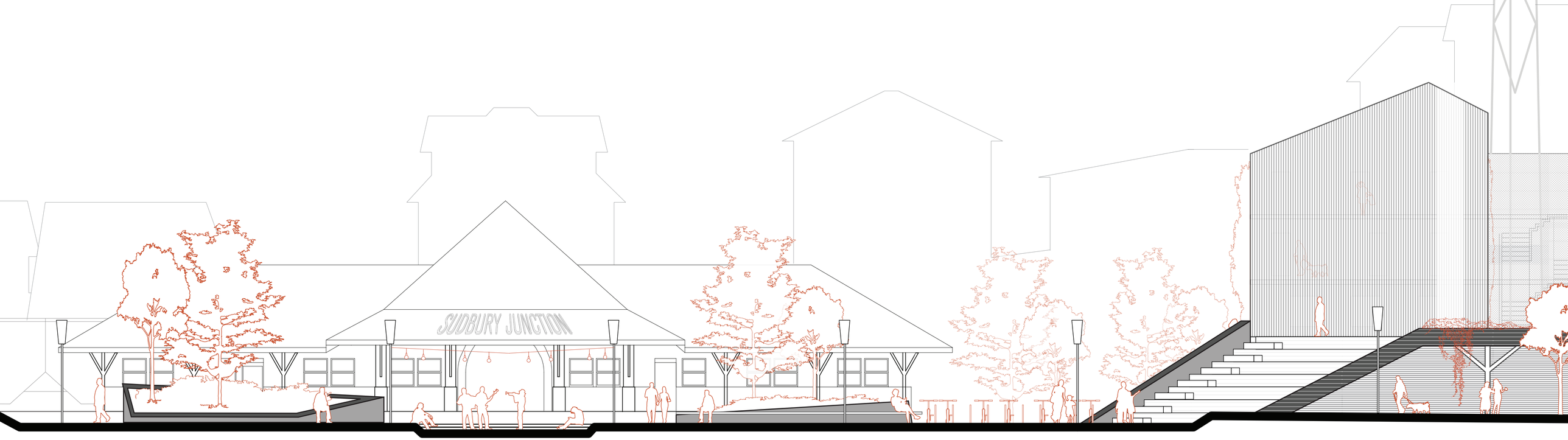


NORTH ELEVATION

LANGUAGE OF PUBLIC REALM | POROSITY | BUILDING GROWTH

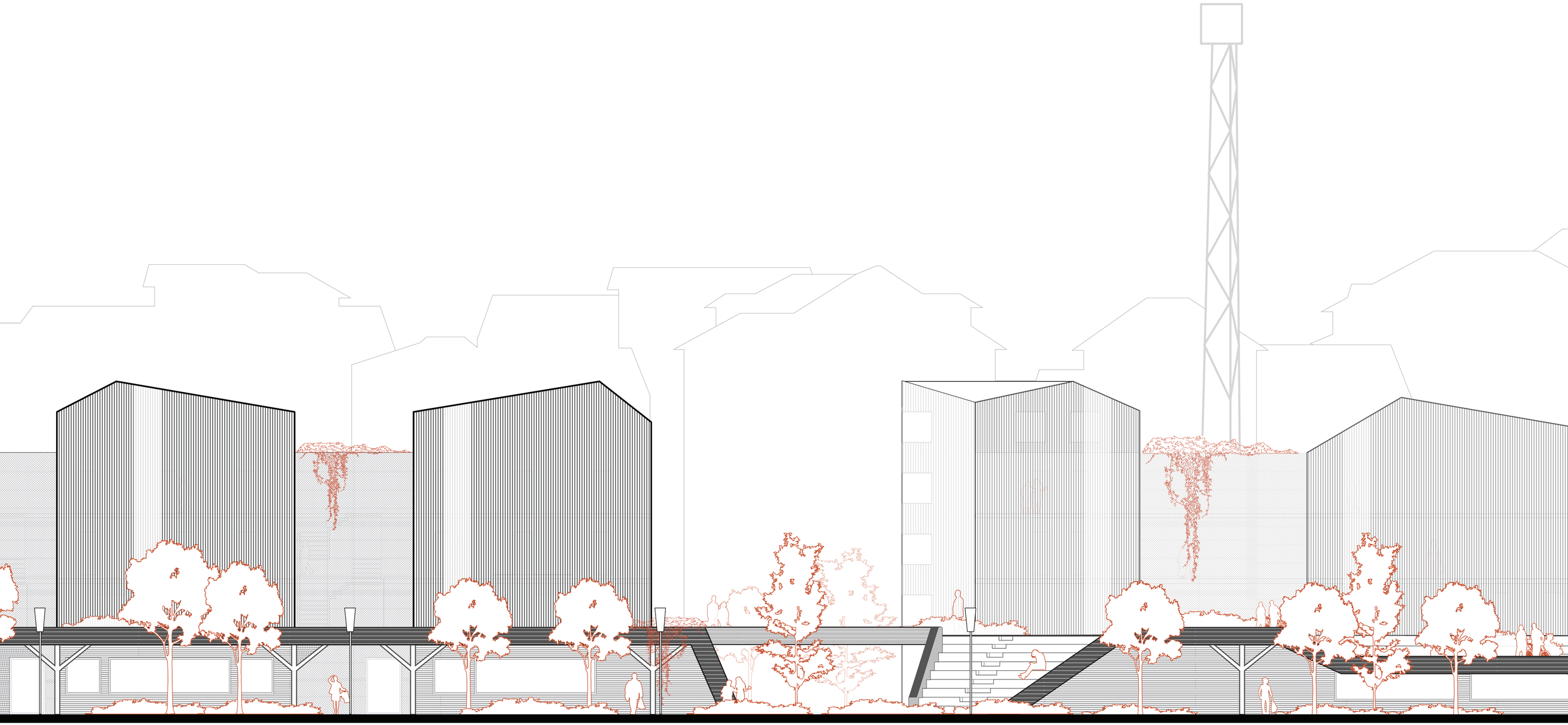
NORTH ELEVATION

LANGUAGE OF PUBLIC REALM | POROSITY | BUILDING GROWTH



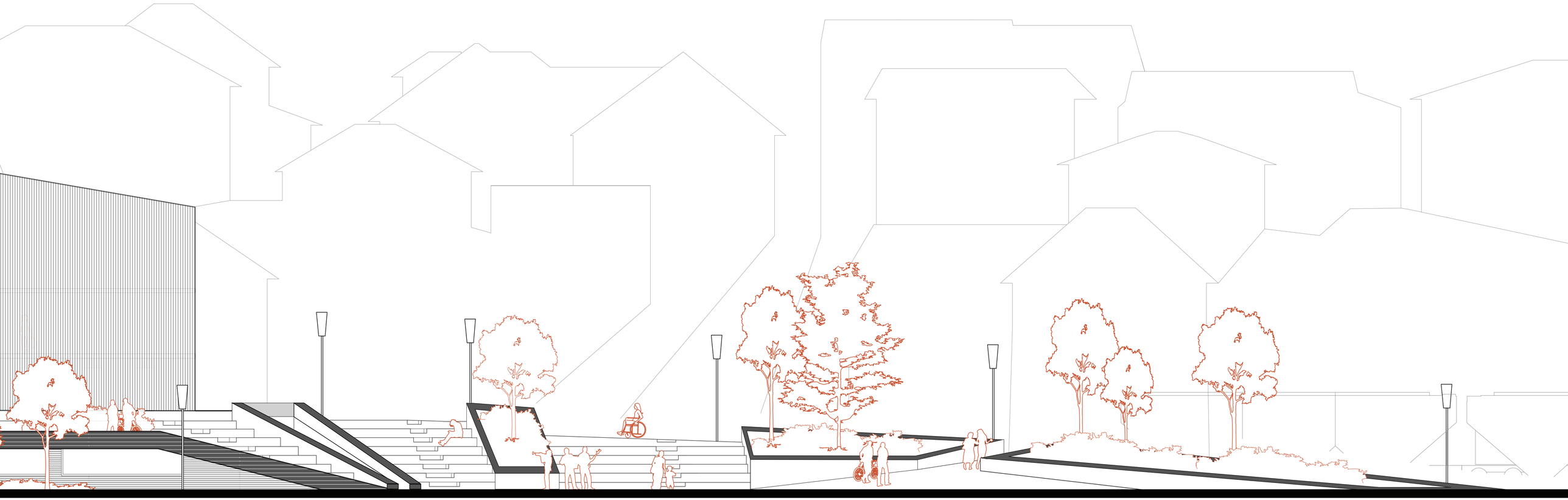
NORTH ELEVATION

LANGUAGE OF PUBLIC REALM | POROSITY | BUILDING GROWTH



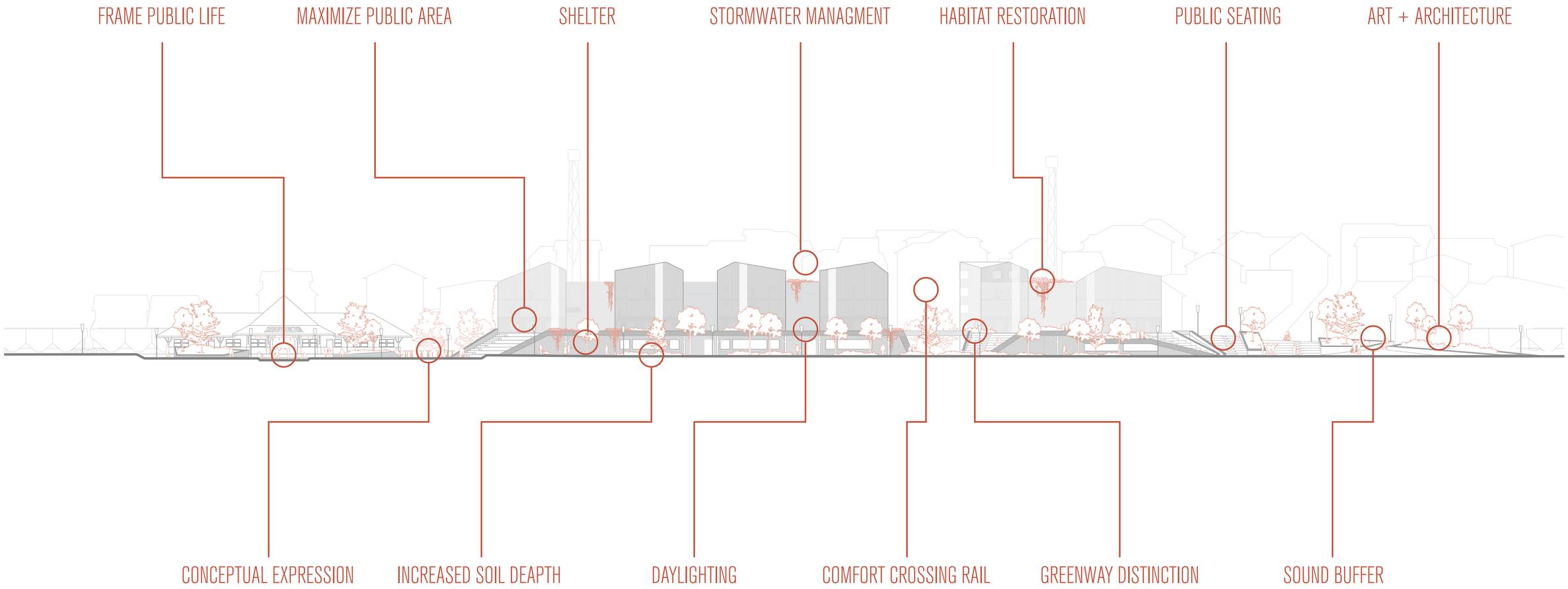
NORTH ELEVATION

LANGUAGE OF PUBLIC REALM | POROSITY | BUILDING GROWTH



NORTH ELEVATION

LANGUAGE OF PUBLIC REALM | POROSITY | BUILDING GROWTH



PERSPECTIVES

EXTERIOR (2) | INTERIOR (2)

EXTERIOR LANDSCAPE 01

NEW GROUND | PUBLIC REALM | RELATION TO EXISTING URBAN FABRIC

EXTERIOR LANDSCAPE 02

HIERARCHY OF PUBLIC SPACE | GREENWAY LANGUAGE

INTERIOR MARKET

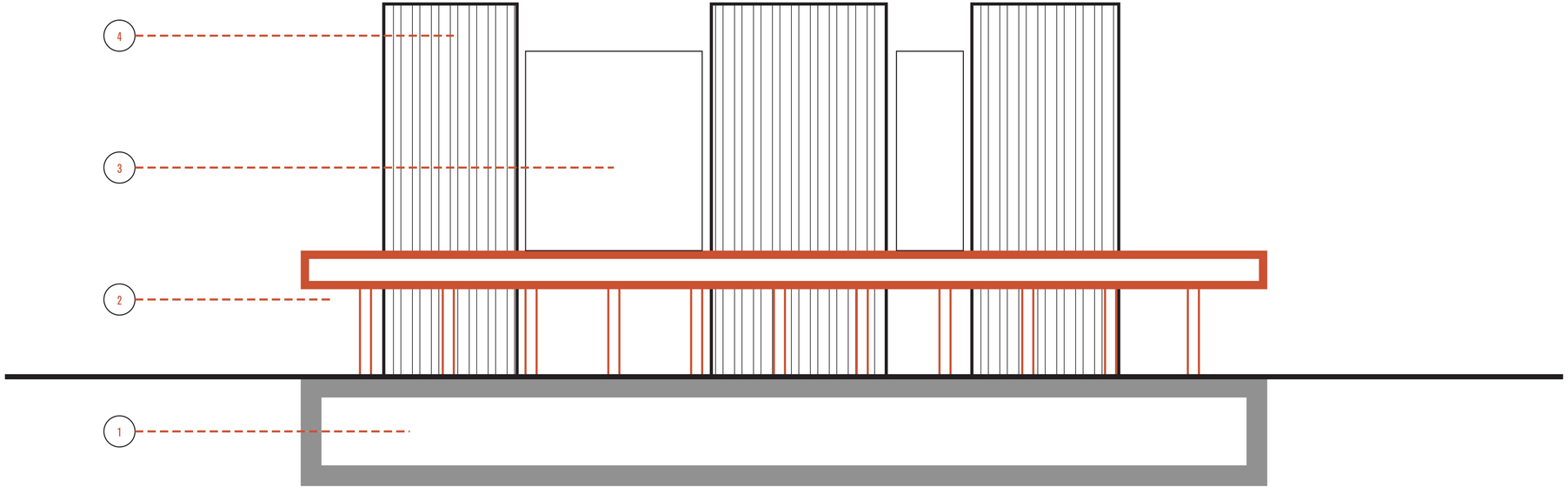
RESIDENTIAL UNIT

STRUCTURAL STRATEGY

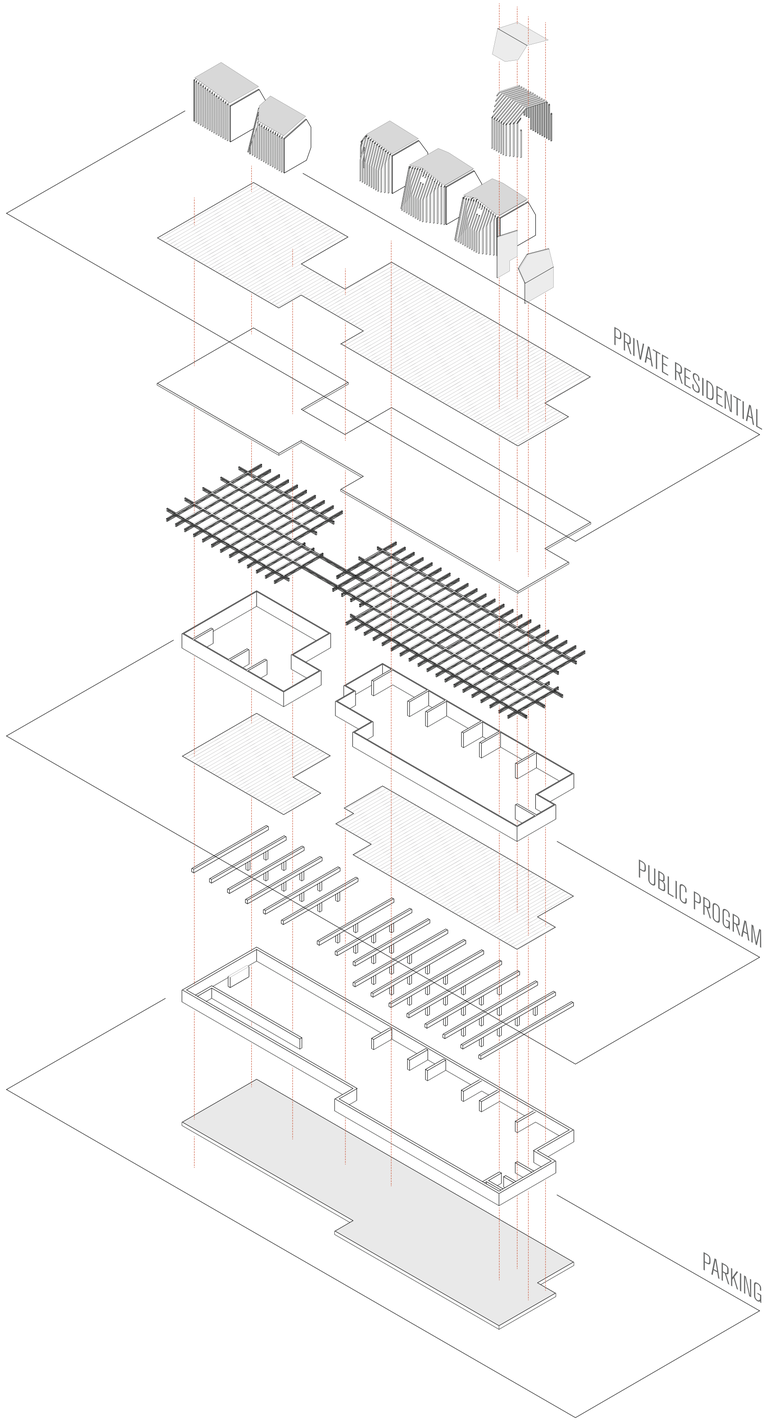
CONCEPT DIAGRAMS | PLANS (3) | SHEAR DIAGRAM | AXONOMETRIC | PRECEDENTS

STRUCTURAL DIAGRAM

BUILDING GROWTH | NEW GROUND



2C AA TO



STRUCTURAL ORGANIZATION

PROVOCATION OF PARKING | TEMPORAL EVOLUTION

5 HANDICAPPED SPOTS

65 SUBTERRANIAN SPOTS - PRIVATE RESIDENTIAL

40 SECURE BIKE STATIONS

27 STREET-LEVEL SPOTS - MARKET

40 220V CHARGING STATIONS

8 SHARED VEHICLE STATIONS

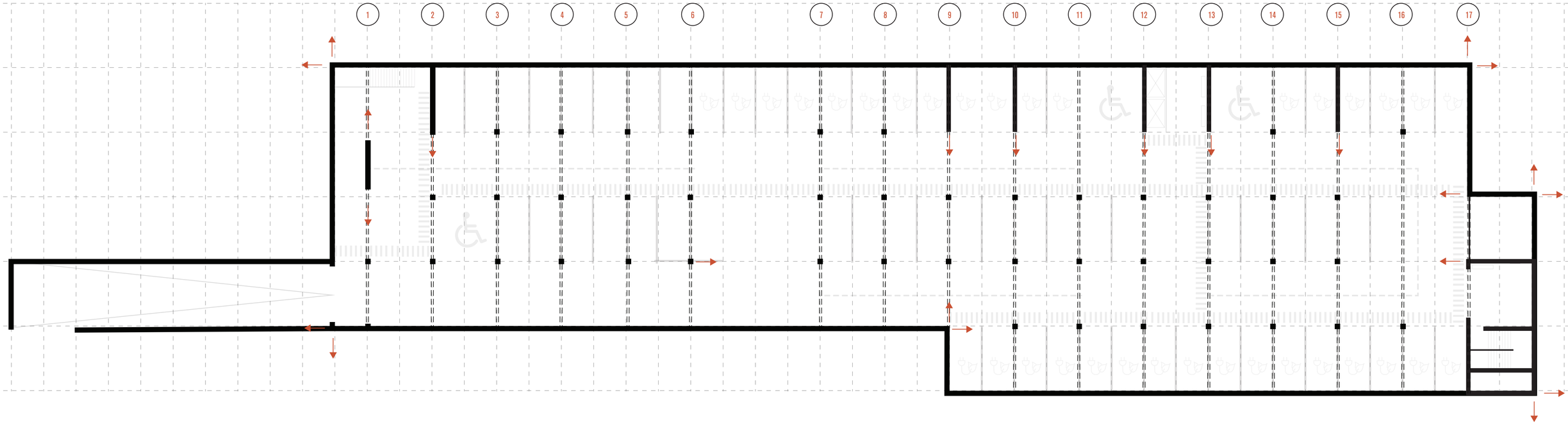
STRUCTURAL PLAN 01 - PARKING

CONVENIENCE OVER EXPERIENCE | POINT-LOAD DISTRIBUTION

STRUCTURAL ASSEMBLY

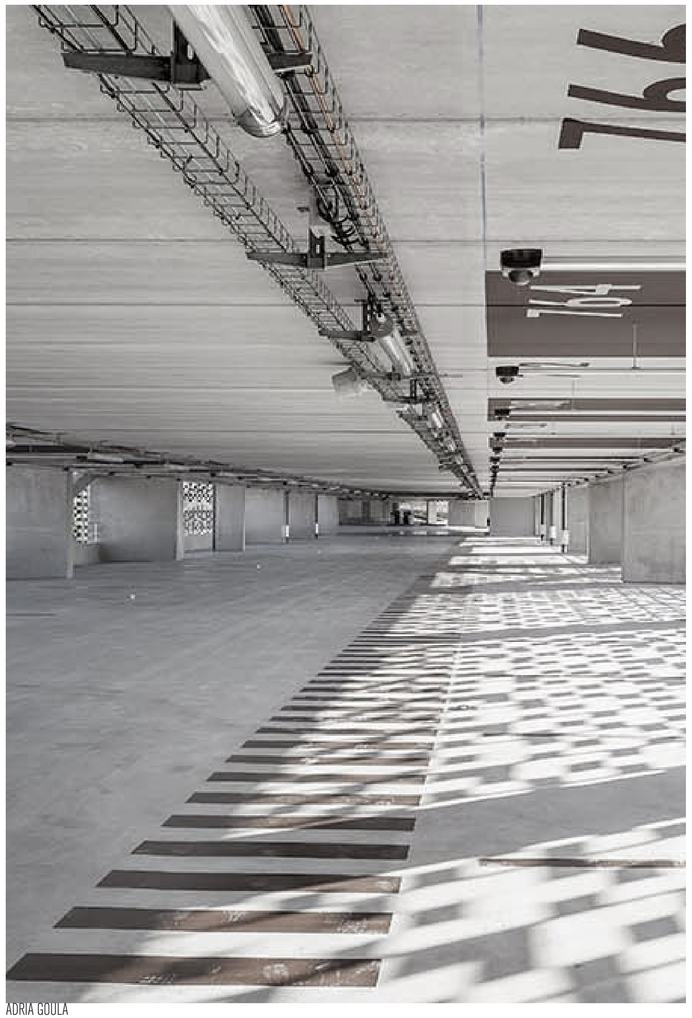
700mm x 1000mm RCC BEAMS w/ STEEL REBAR REINFORCEMENT
700mm x 700mm RCC COLUMNS w/ STEEL REBAR REINFORCEMENT

MAX. SPAN: 60ft / 18.3m
TYP. SPAN: 20ft / 6.1m



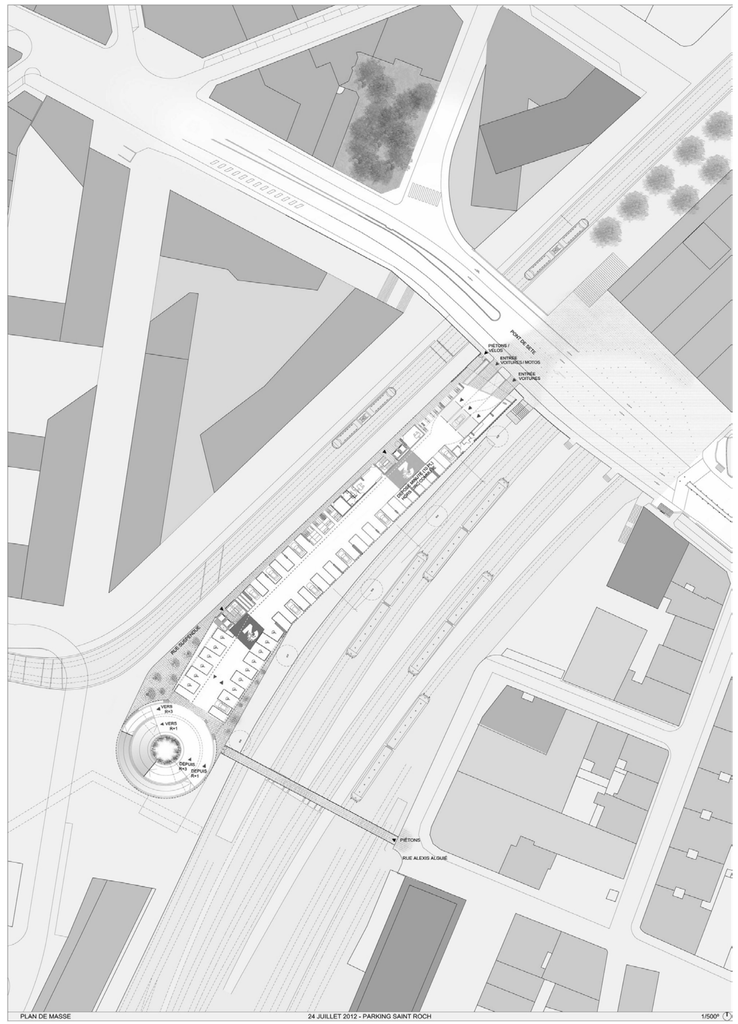
CASE STUDY 01 - PARKING SAINT-ROCH

ARCHIKUBIK | MONTEPELLIER | 2015



ADRIA GOULA

https://www.archdaily.com/782196/parking-saint-roch-archikubik/56c2f424e58ece2af900013a-parking-saint-roch-archikubik-photo



PLAN DE MASSE 24 JUILLET 2012 - PARKING SAINT ROCH 1/500e

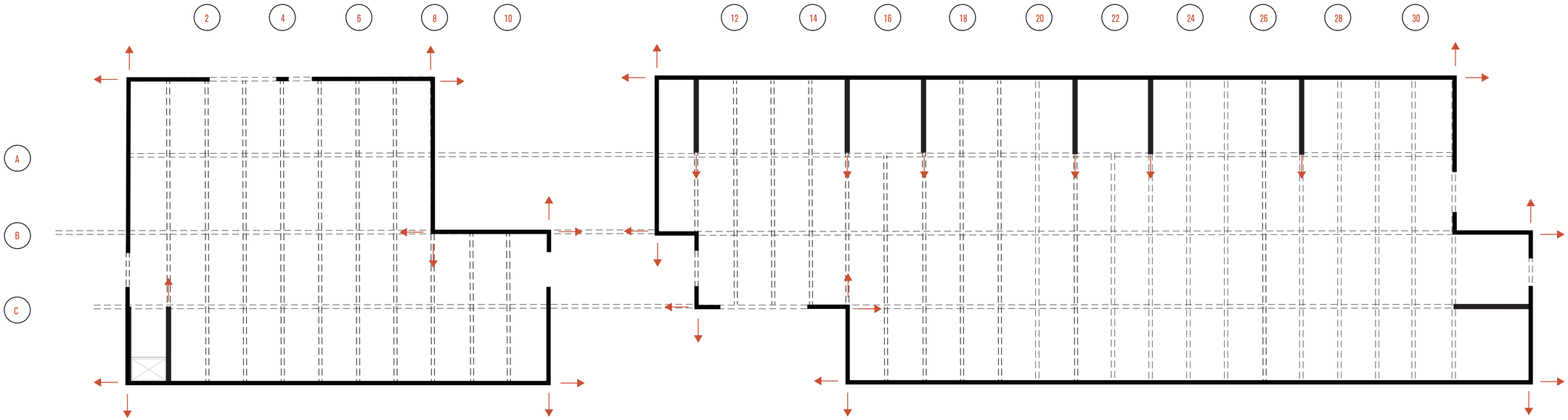
STRUCTURAL PLAN 02 - GROUND FLOOR

MUTUAL REINFORCEMENT | EXPERIENCE | PRAGMATISM | NEW GROUND

STRUCTURAL ASSEMBLY

RECIPROCAL FRAME - 250mm x 750mm TIMBER TRUSS SYSTEM
400mm CLT PREFABRICATED LOAD-BEARING WALLS

MAX. SPAN: 80ft / 24.4m
TYP. SPAN: 20ft / 6.1m

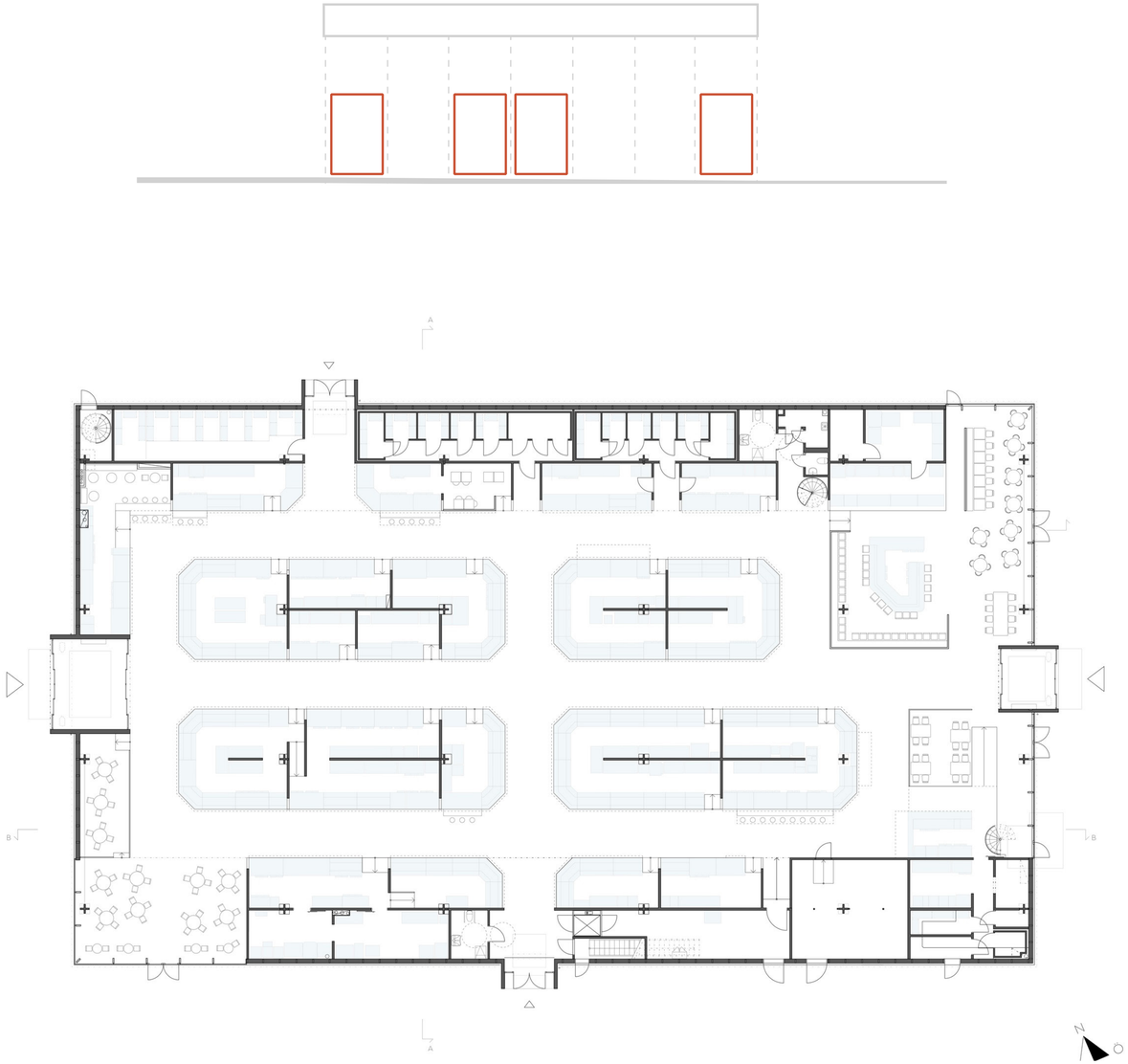


CASE STUDY 02 - ÖSTERMALM'S TEMPORARY MARKET HALL

TENGBOM | STOCKHOLM | 2016

FELIX GERLACH

https://www.archdaily.com/788616/ostermalms-temporary-market-hall-tengbom/574e492ee58ce87b200009a-ostermalms-temporary-market-hall-tengbom-photo

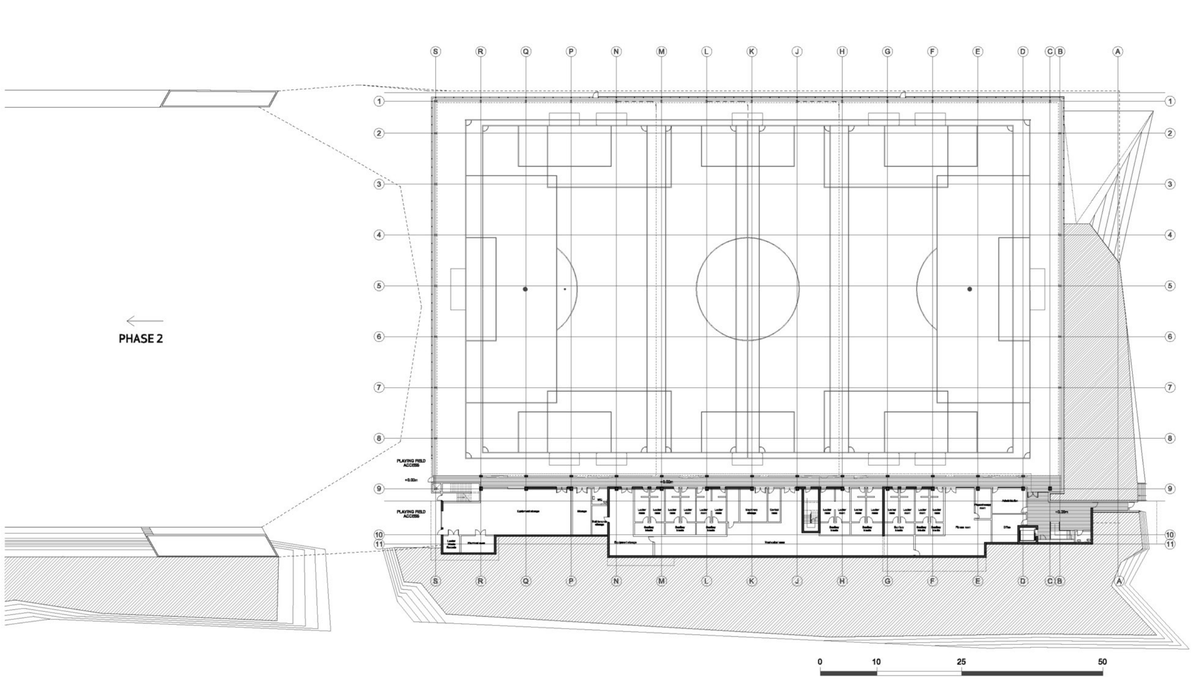


CASE STUDY 03 - STADE DE SOCCER DE MONTREAL

HCMA + SAUCIER ET PEROTTE | MONTREAL | 2015

OLIVIER BLOUIN

https://www.archdaily.com/784751/stade-de-soccer-de-montreal-saucier-plus-perrotte-architectes-plus-hcma/56fd86fde58ece7e85000021-stade-de-soccer-de-montreal-saucier-plus-perrotte-architectes-plus-hcma-photo



SAUCIER + PERROTTE ARCHITECTES / HUGHES CONDON MARLER ARCHITECTS
24 AOÛT 2012

NIVEAU 01
échelle: 1/500

CASE STUDY 04 - VESTRE FJORD PARK

ADEPT | AALBORG | 2017

RASMUS HJORTSHOJ

https://www.archdaily.com/881095/vestre-fjord-park-adept/59d70d0ab22e38daca000212-vestre-fjord-park-adept-photo

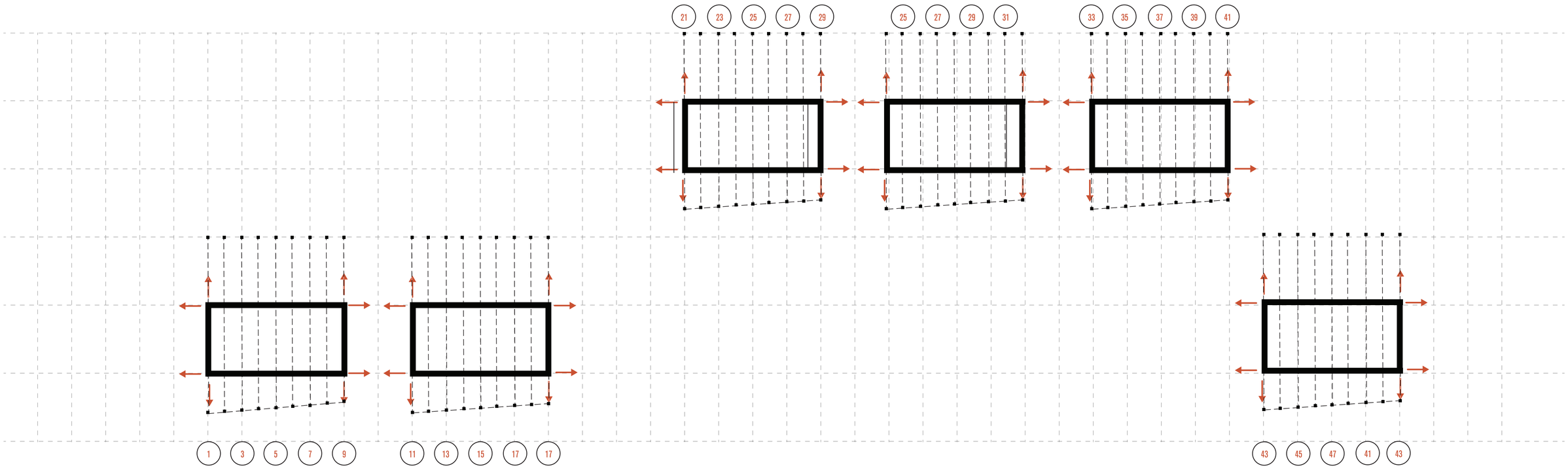
STRUCTURAL PLAN 03 - RESIDENTIAL

GROWTH OF STRUCTURE | LIGHT TREAD | CORES

STRUCTURAL ASSEMBLY

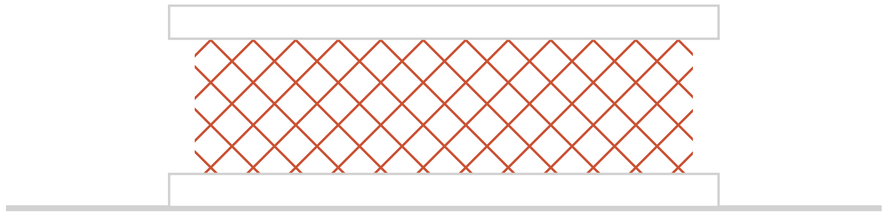
CLT FRAME w/ SHEAR STABILITY
250mm x 750mm TIMBER RECIPROCAL TRANSFER FRAME
500mm DLT LATERAL FLOOR PLATES

MAX. SPAN: 55ft / 16.8m
TYP. SPAN: 15.2m



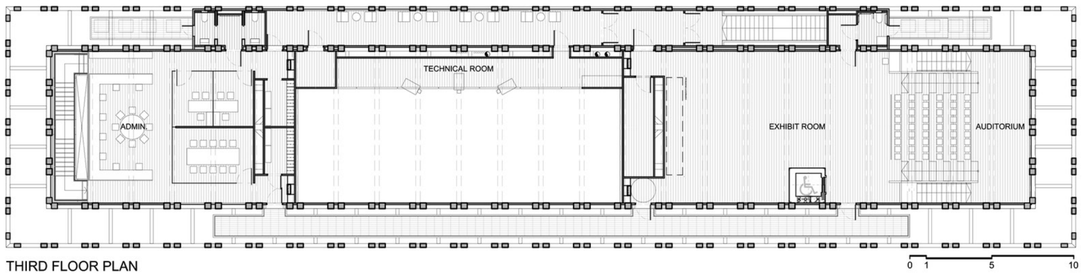
CASE STUDY 05 - CHILE PAVILLION

UNDERRAGA DEVES ARQUITECTOS | TEMUCO | 2017

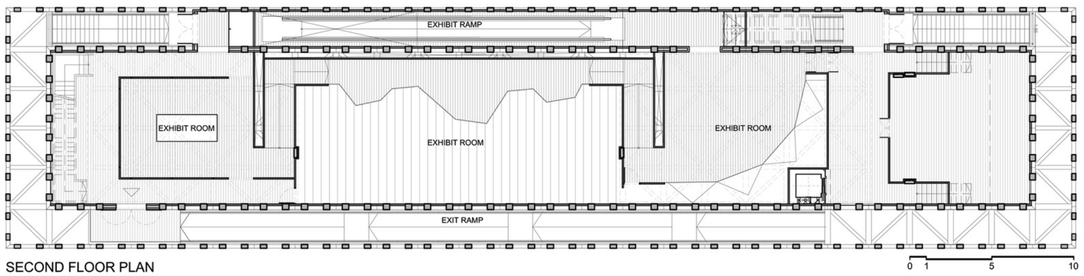


ROLAND HALBE

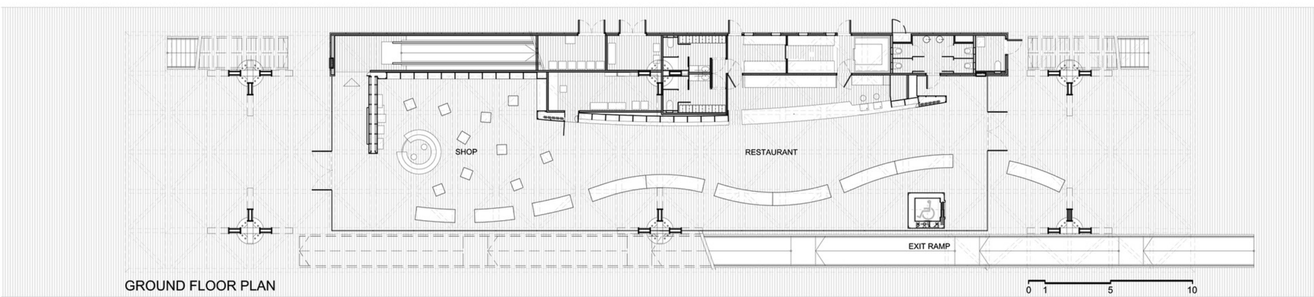
https://www.archdaily.com/892070/chile-pavilion-at-expo-milan-2015-undurraga-deves-arquitectos/5ac6e5a7f197cca45f00098d-chile-pavilion-at-expo-milan-2015-undurraga-deves-arquitectos-photo



THIRD FLOOR PLAN



SECOND FLOOR PLAN



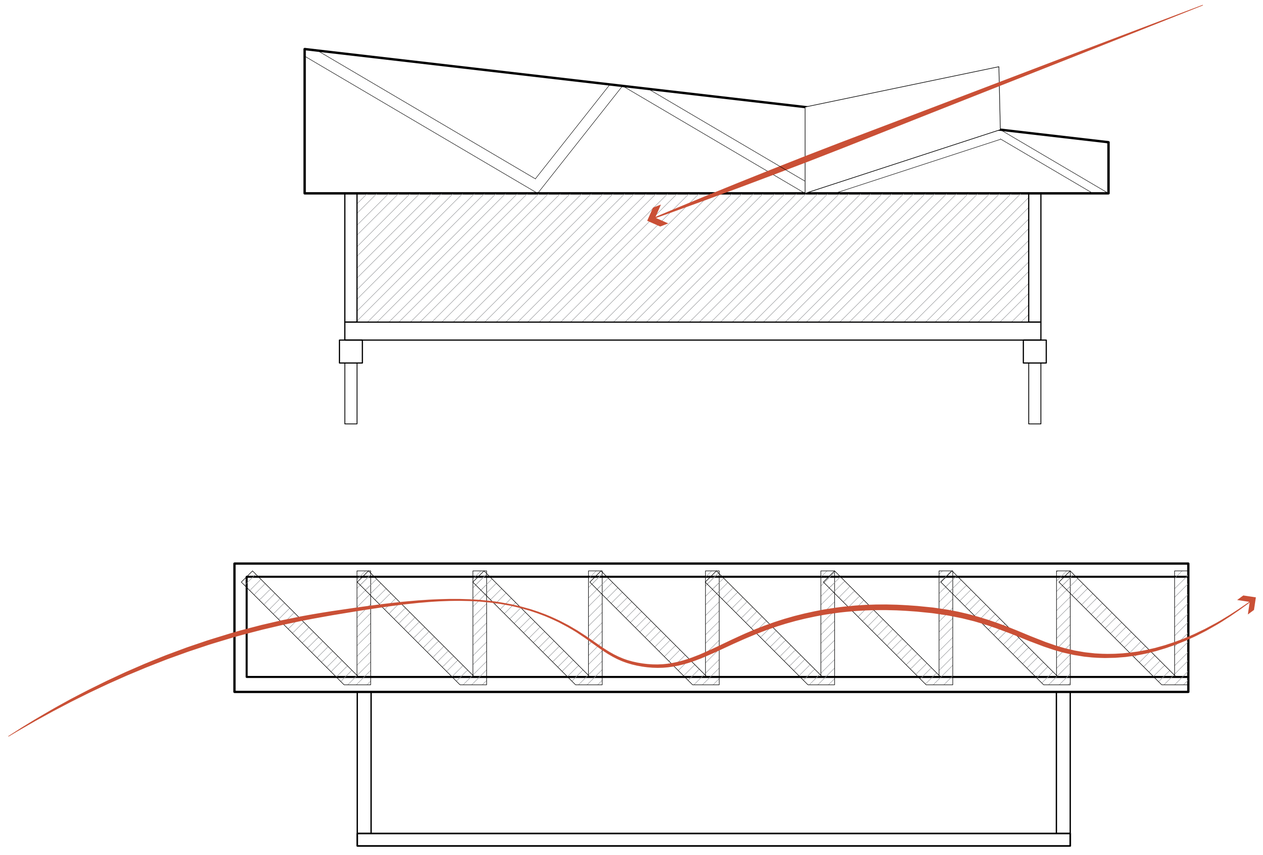
GROUND FLOOR PLAN

CASE STUDY 06 - CHILE PAVILLION

UNDERRAGA DEVES ARQUITECTOS | TEMUCO | 2017

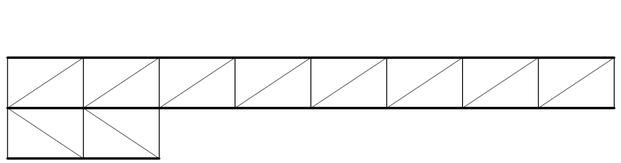
ROLAND HALBE

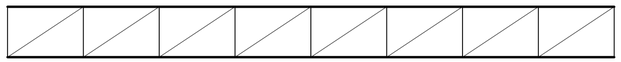
https://www.archdaily.com/892070/chile-pavilion-at-expo-milan-2015-undurraga-deves-arquitectos/5ac6e5a7f197cca45f00008d-chile-pavilion-at-expo-milan-2015-undurraga-deves-arquitectos-photo

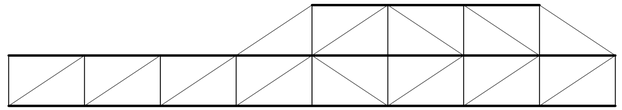


CASE STUDY 07 - RESIDENSE ROY-LAWRENCE

CHEVALIER MORALES | SUTTON | 2014





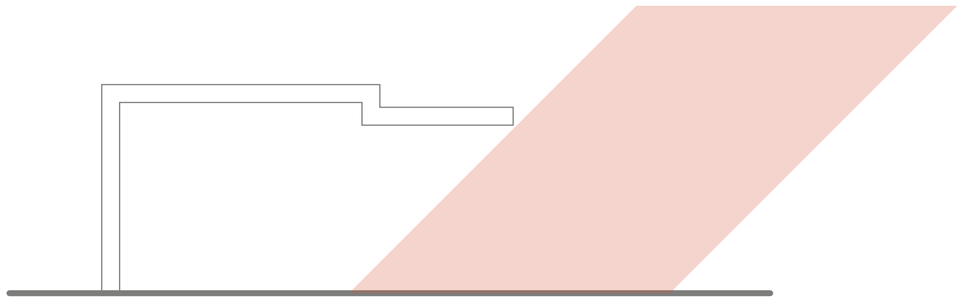


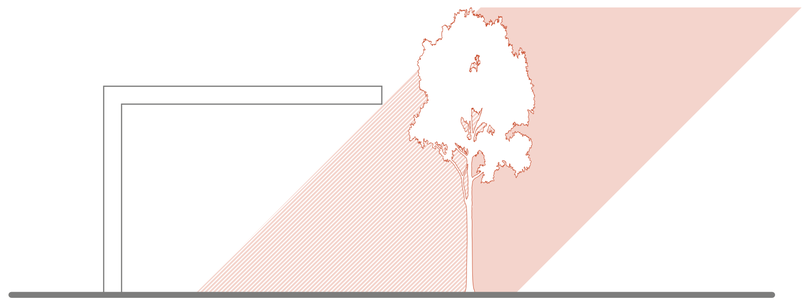
CHEVALIER MORALES
http://www.chevaliermorales.com/rrl/index.html?fbclid=IwAR2r7i154jrfxBLG18w2IKpRGpBBc4-QJfnxsd4oI1cfxvhl4NwEe1d_gGE

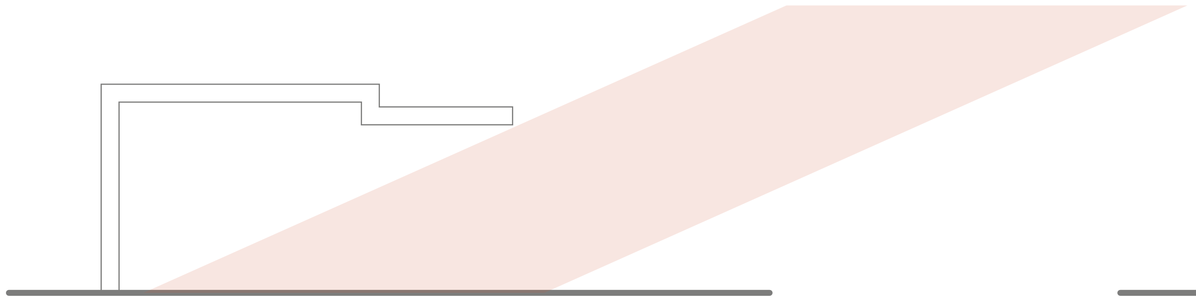
DAYLIGHTING STRATEGIES

ATMOSPHERIC DRAWINGS | STUDY MODELS

2C AA TO

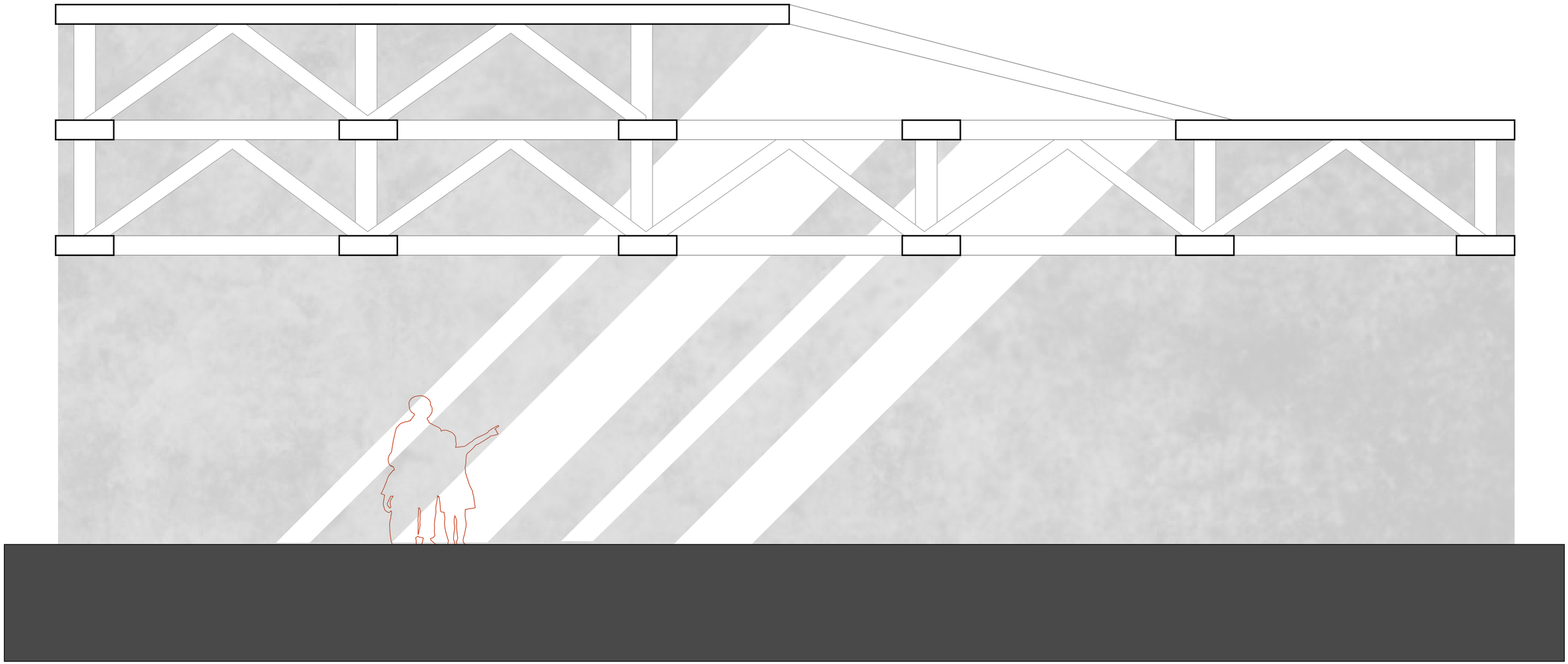






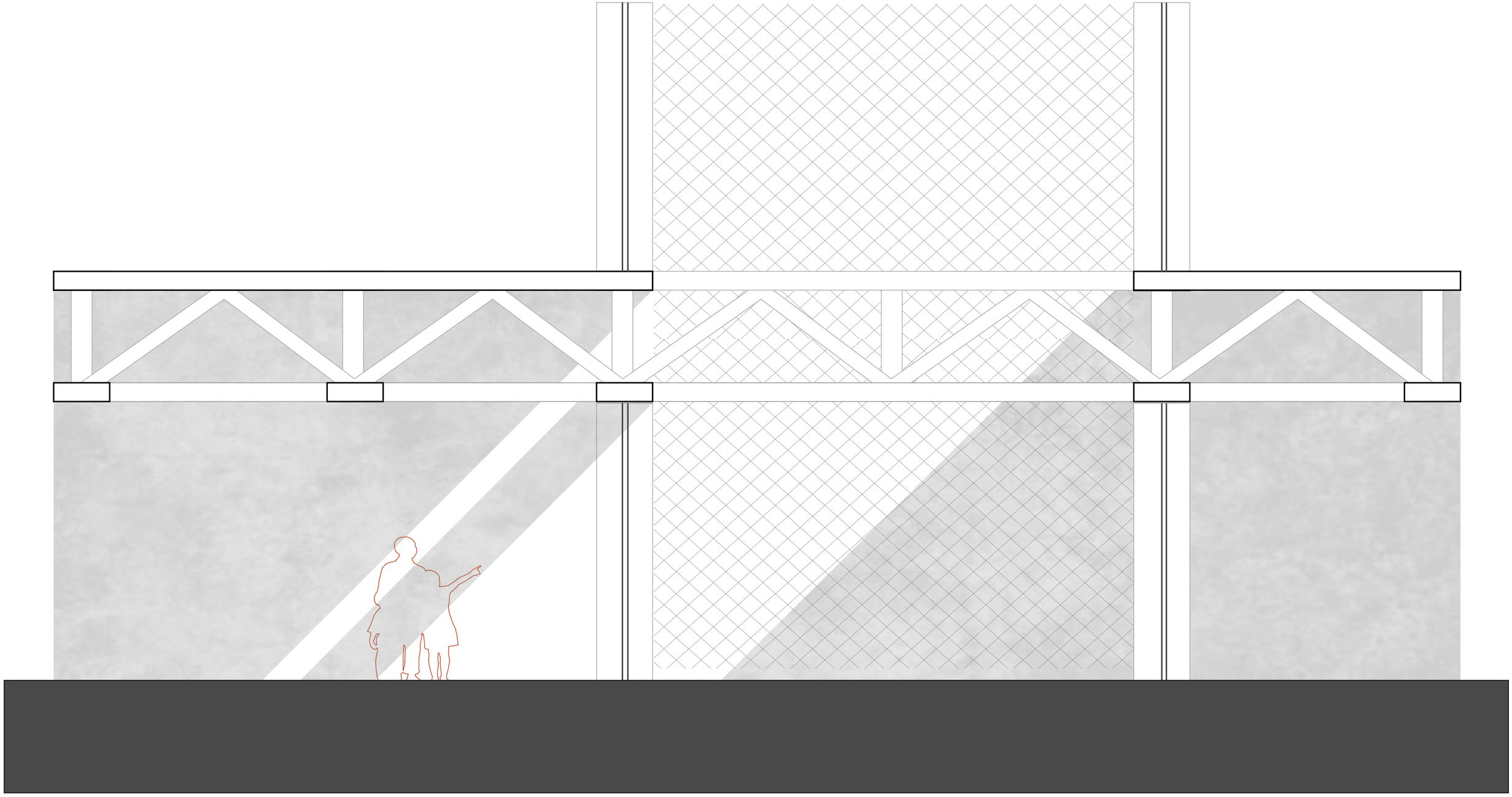
DAYLIGHTING DIAGRAM 01

MARKETPLACE BENEATH LIGHTWELLS

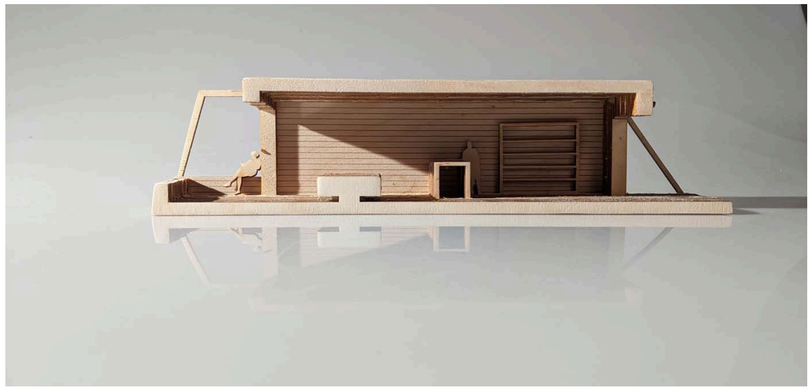


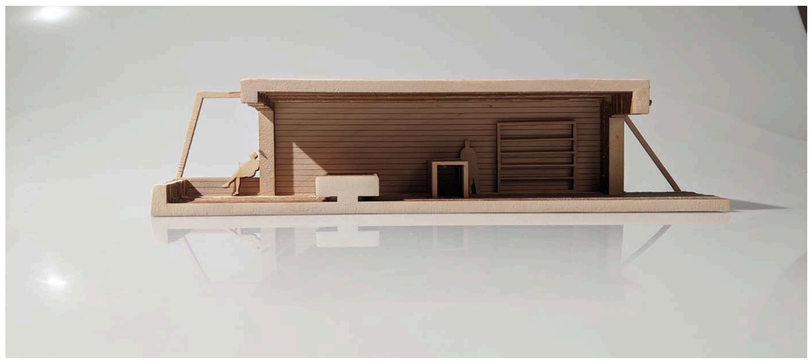
DAYLIGHTING DIAGRAM 02

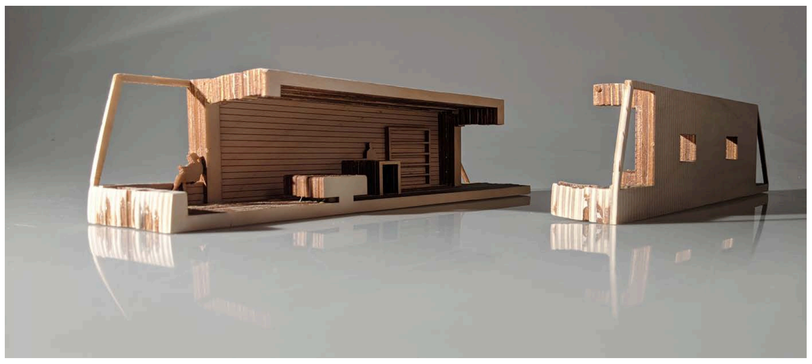
MARKETPLACE BY CIRCULATION CORES



DAYLIGHT MODEL PHOTOS



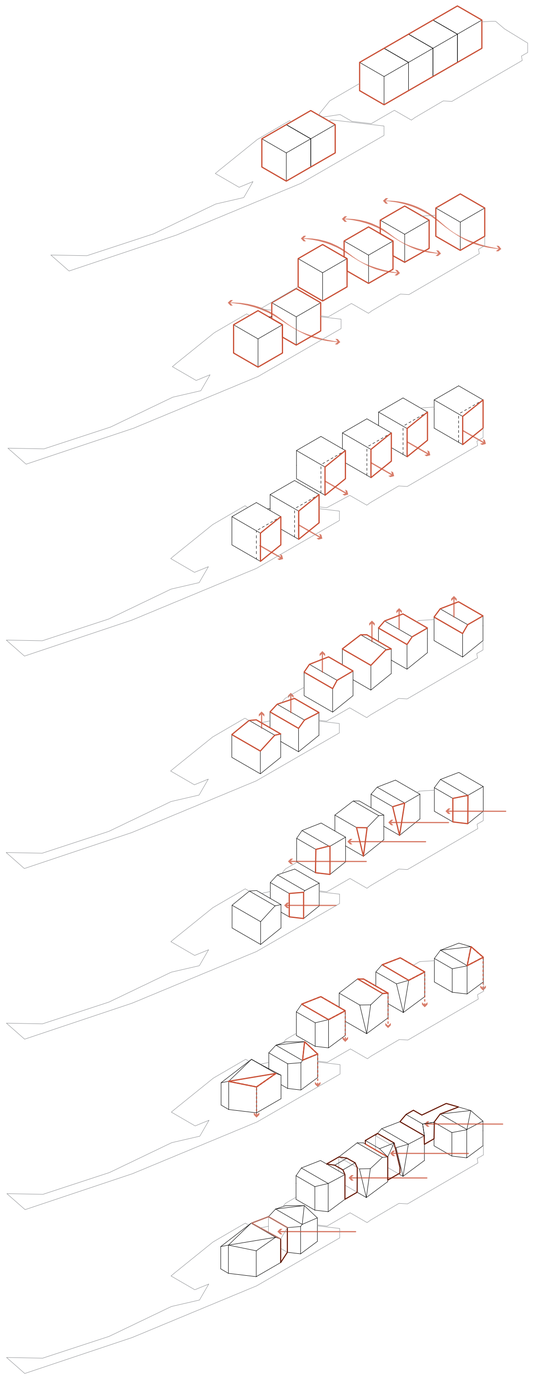


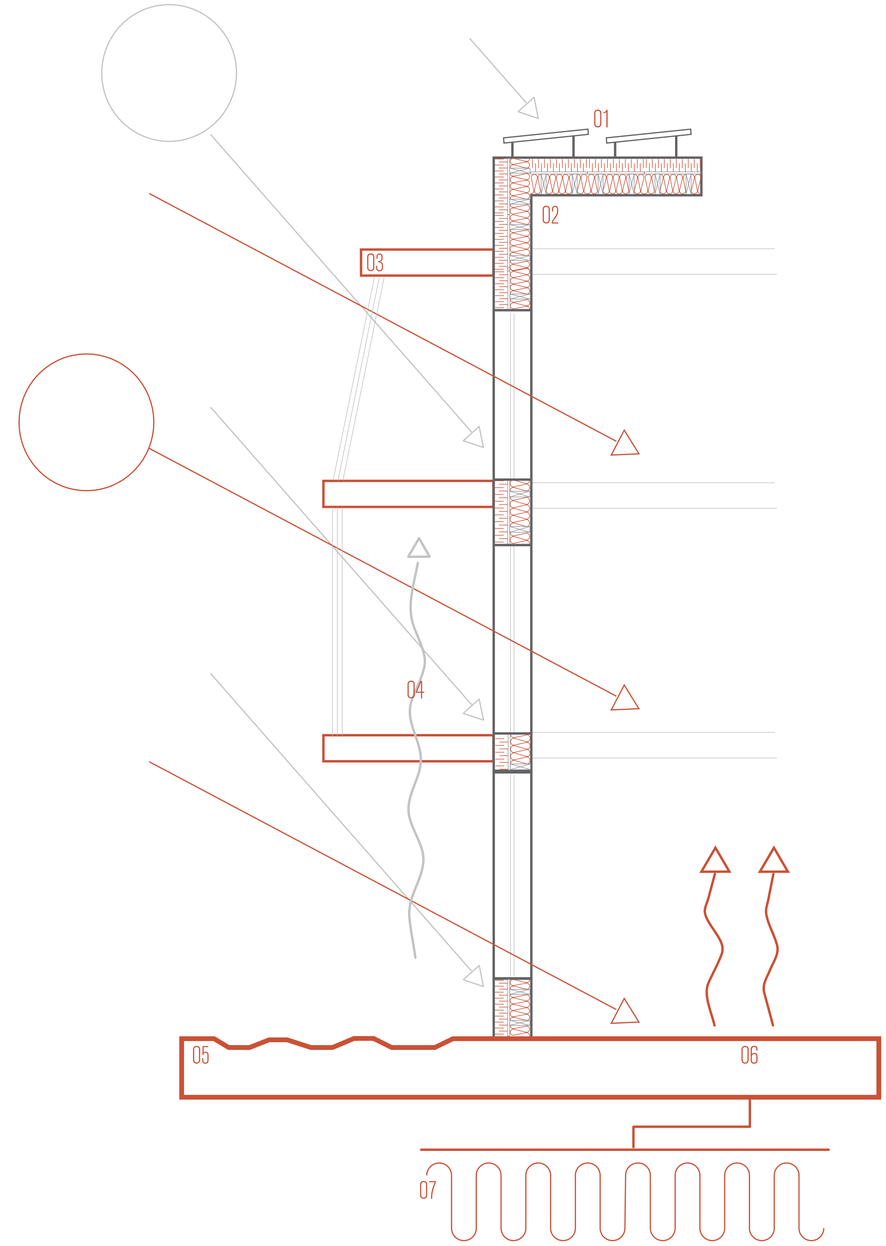


SUSTAINABLE DESIGN

PASSIVE STRATEGIES | SECTIONS (2) | ACTIVE STRATEGIES

2C AA TO

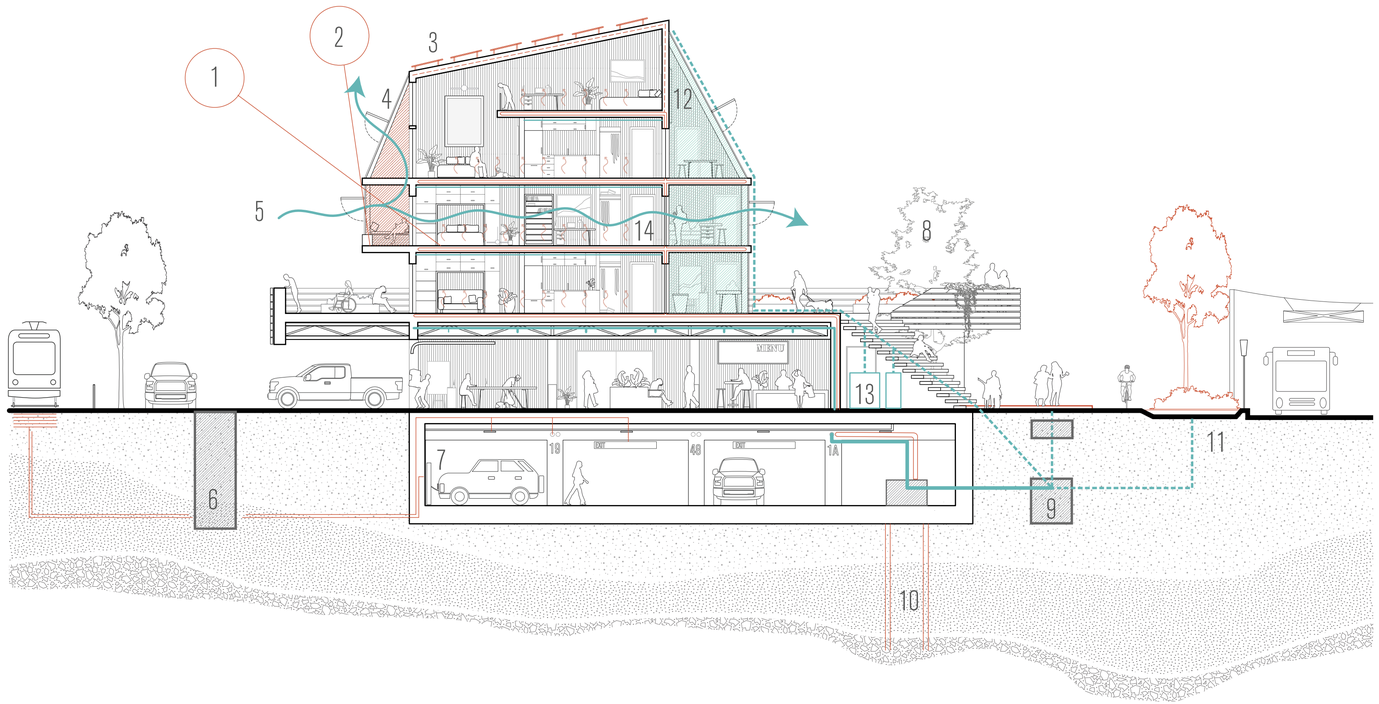




01 - SOLAR POWER GENERATION
02 - THERMAL-BRIDGE FREE ENVELOPE
03 - SEASONAL SOLAR SHADING
04 - STACK VENTILATION
05 - WATER RECLAIMATION
06 - THERMAL MASS
07 - GEOTHERMAL HEAT EXCHANGE

SYSTEMS INTEGRATION - BUILDING SECTION

NATURAL CONDITIONS | ARTIFICIAL CONDITIONS



1 WINTER SUN - 22º Latitude

2 SUMMER SUN - 68º Latitude

3 PV CELLS - Roof-Mounted at 44º

4 SECOND SKIN - Perforated Metal w/ Operable Windows

5 NATURAL VENTIALTION - Vritcal and Horizontal Movement

6 PIEZOELECTRIC CONVERTER - Vibration-based Energy Production

7 VEHICLE CHARGING STATION - 220V Capacity

8 NATURAL VEGETATION - Increased Air Quality and Solar Shading

9 STORMWATER MANAGEMENT - Collection and Filtration Tanks

10 GEOTHERMAL HEAT EXCHANGE - Vertical Loops

11 WASTE WATER RECYCLING - Bioswale

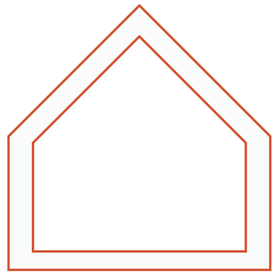
12 MODULAR UNITS - Reduced thermal Bridges and Increased Envelope Performance

13 RAINWATER COLLECTION - Cistern

SUSTAINABLE DESIGN STRATEGIES

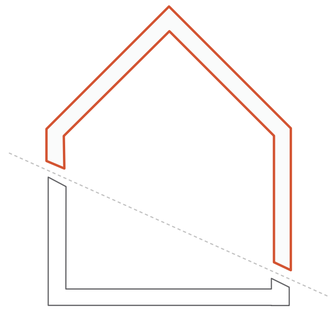
BUILDING ECOLOGY | ACTIVE + PASSIVE SYSTEMS INTEGRATION | CONCEPUTAL RELEVANCE

REDUCED GREENHOUSE EMMISIONS
LOCAL RESOURCES

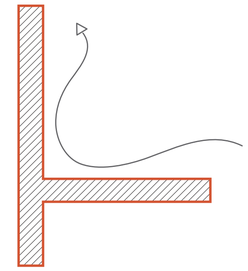


REDUCED ENERGY LOSS
AIRTIGHT ENVELOPE

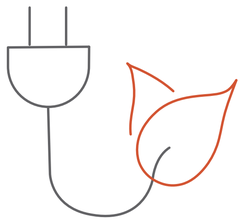
CARBON SEQUESTRATION
WOOD BIOPHILIA CONSTRUCTION



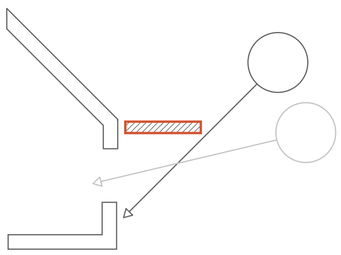
INCREASED LIFECYCLE
FUTURE ADAPTIVE REUSE



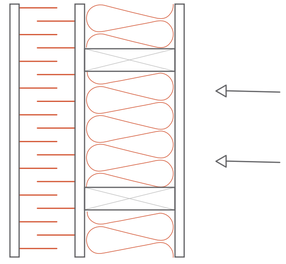
REDUCED THERMAL BRIDGES
PREFABRICATED MODULES



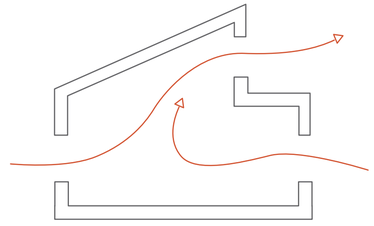
INNOVATIVE POWER GENERATION
PIEZOELECTRIC ENERGY



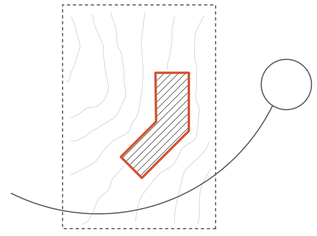
OPTIMIZED SOLAR GAIN
SHADING DEVICES



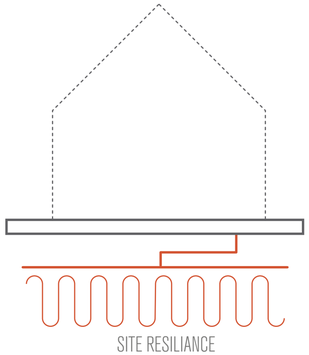
INCREASED ENVELOPE PERFORMANCE
BEYOND-CODE INSULATION



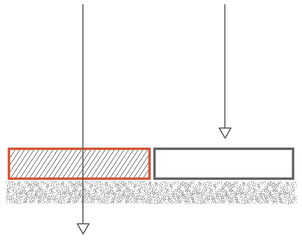
CLEAN AIR
NATURAL VENTILATION



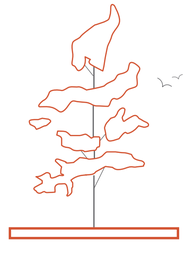
SITE OPTIMIZATION
SOLAR ORIENTATION



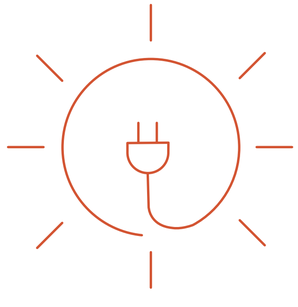
SITE RESILIANCE
GEOTHERMAL HEAT EXCHANGE



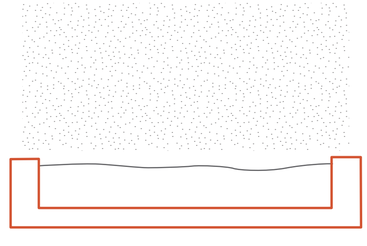
ON-SITE WATER TREATMENT
PERMEABLE SURFACES



HABITAT CONSERVATION AND RESTORATION
CONTINUOUS GREENWAY EXPANSION



RENEWABLE ENERGY GENERATION
SOLAR ENERGY



ON-SITE GRAY WATER USE
STORMWATER MANAGEMENT SYSTEM

The key to revitalizing this seemingly ‘dead’ site in a way that enacts a movement towards **ecological urbanism** is to reimagine Sudbury’s urban fabric as **fertile ground** composed of **symbiotic nutrients**. To these ends, our proposed intervention – Isthmus – addresses the current urban conditions by rebuilding the ground in ways that privilege socially **inclusive topographical relations** and **sustainable temporal evolution**.