

An aerial photograph of New York City, including Manhattan, the Hudson River, and the surrounding areas. A semi-transparent teal overlay covers the entire image. Overlaid on this are numerous white lines of varying thicknesses, representing a network of roads, highways, and possibly transit routes. The lines are most concentrated in the urban areas and along the riverbanks.

Reconceptualising the Periphery

A regional restructuring proposal for Northern New Jersey to catalyse its economic, cultural and environmental capacities from an integrative metropolitan perspective.

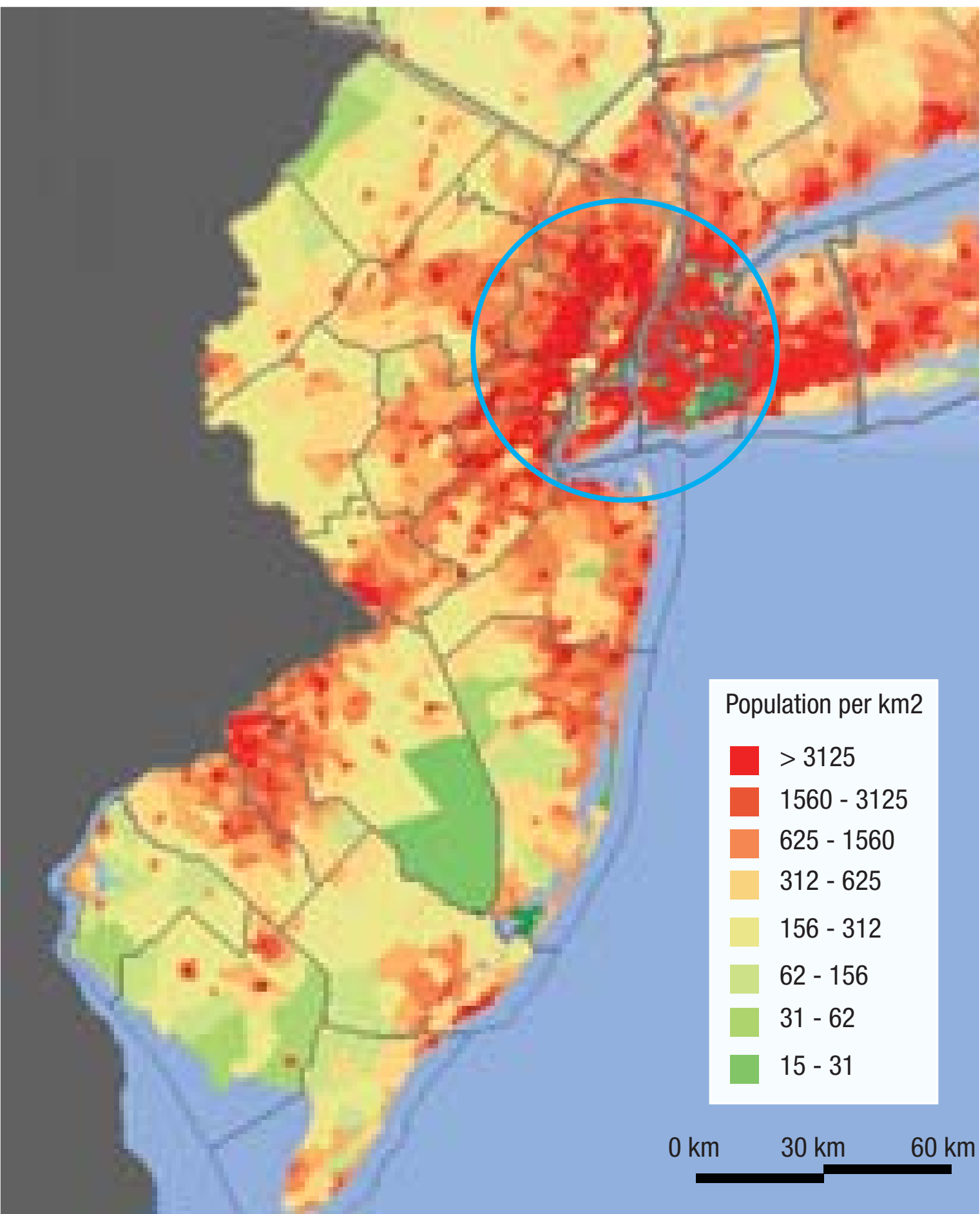
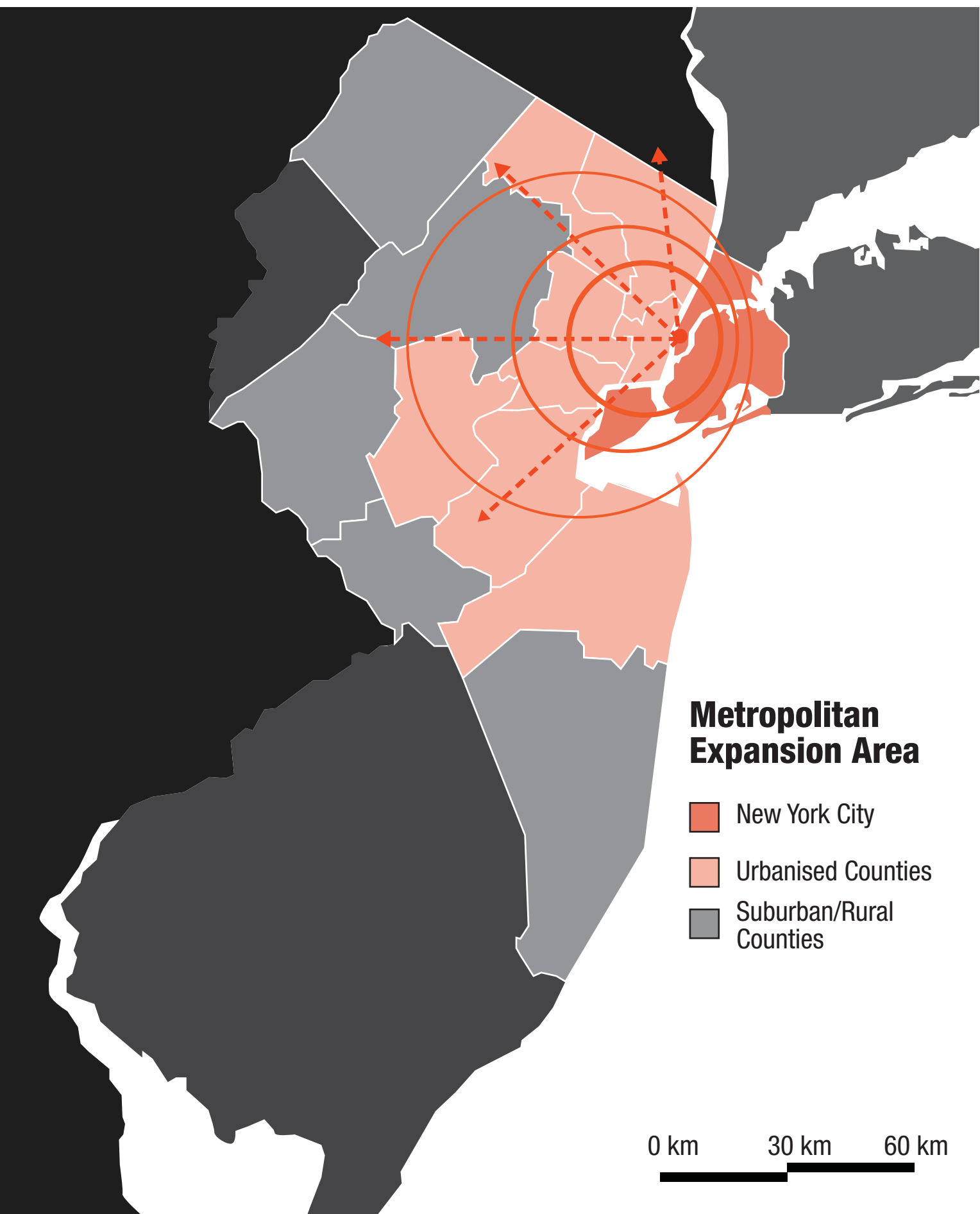
DAVID LEE // P5 PRESENTATION
GRADUATION PROJECT MSc URBANISM
DELFT UNIVERSITY OF TECHNOLOGY

29 August 2014 Presentation

A satellite map of the New York Metropolitan Area, showing the Hudson River, the New York City skyline, and the surrounding land and water. The map is oriented with North at the top. The Hudson River flows from the top left towards the bottom right, where it meets the New York City skyline. The surrounding land is a mix of green (forests) and brown (developed areas). The water is dark blue. The map is framed by a black border.

NEW YORK METROPOLITAN AREA

**34,493 KM² (75% OF NL)
19 MILLION PEOPLE**

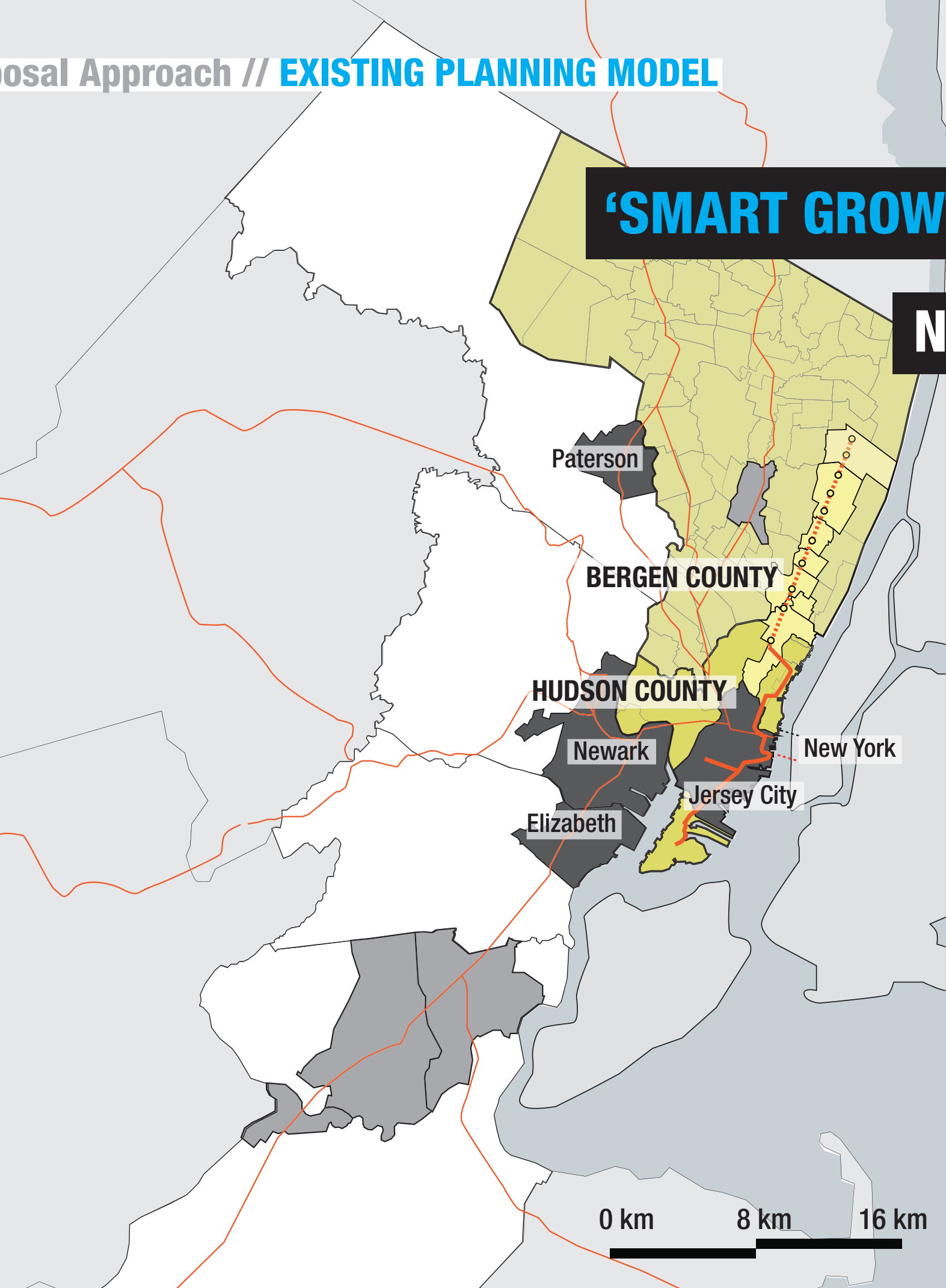


RESPONSE TO URBAN CHALLENGES

‘SMART GROWTH’/TOD AS DETERMINANT MODEL

NORTH JERSEY // GATEWAY REGION

4.3 MILLION PEOPLE



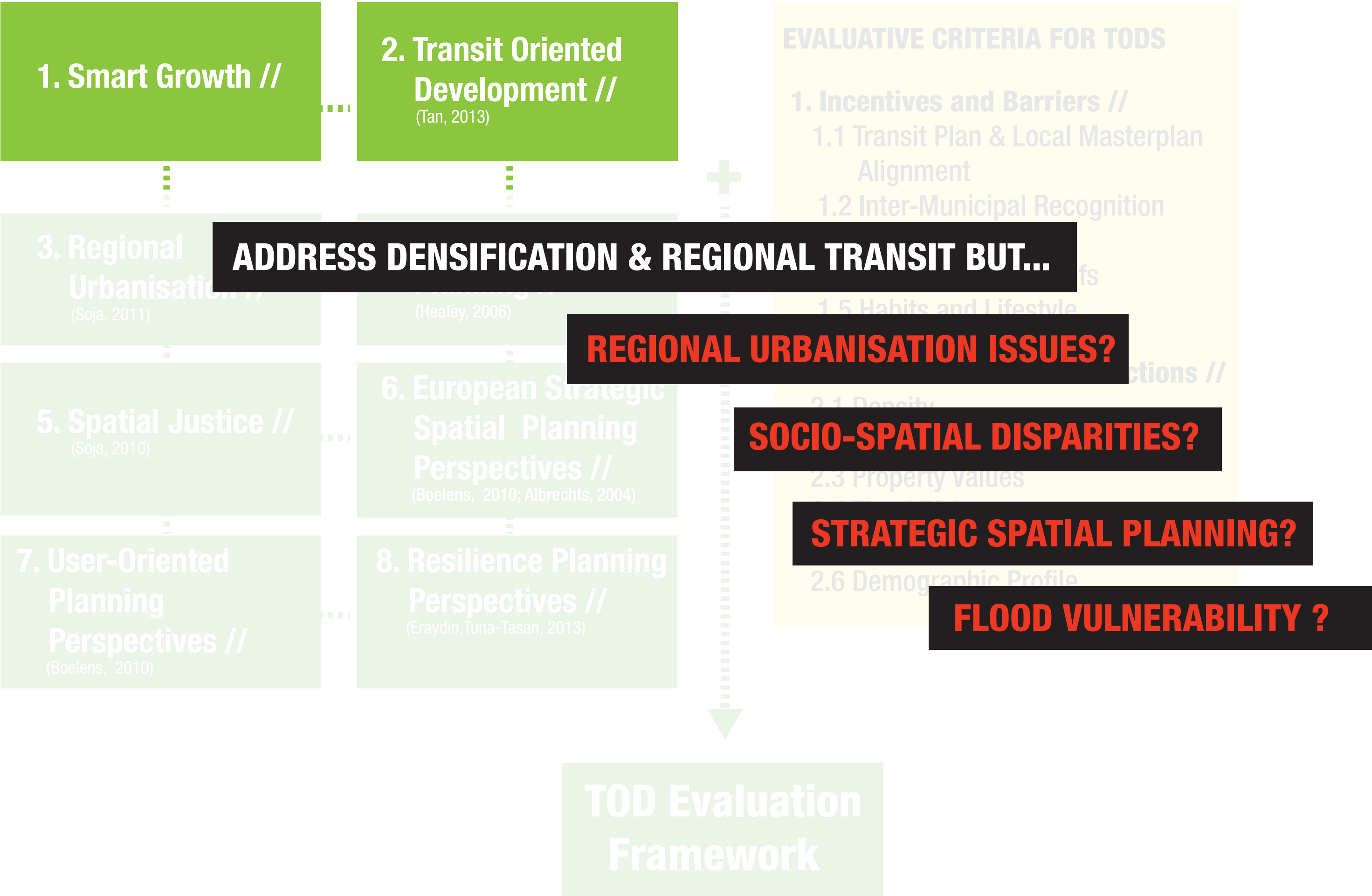
GOVERNMENT RESPONSE // 'SMART GROWTH' & TOD

PATH DEPENDENT SYSTEM IGNORES LOCAL NEEDS

**REINFORCES DIVERGENCES BETWEEN LOCAL & REGIONAL
STAKEHOLDER DEMANDS**

ML King Drive Station Area, Jersey City

Proposal Approach // **TOD AS PLANNING FRAMEWORK**



NO PLANNING CULTURE

TOD-LOCAL
SCALE GAPS //



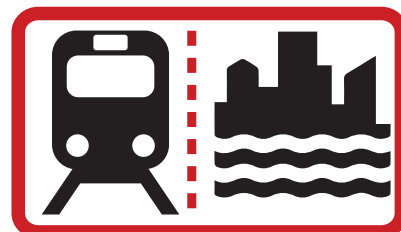
No Regional
Vision



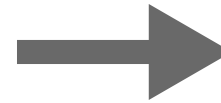
Ignoring Local
Diversity



No Mobility
Integration



No Flood Risk
Strategy



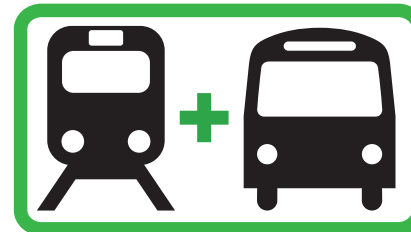
REGIONAL
DIAGNOSIS //



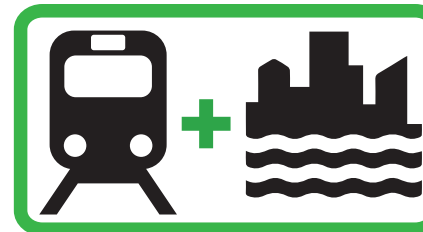
Regional Vision



Inclusive TOD
Tools



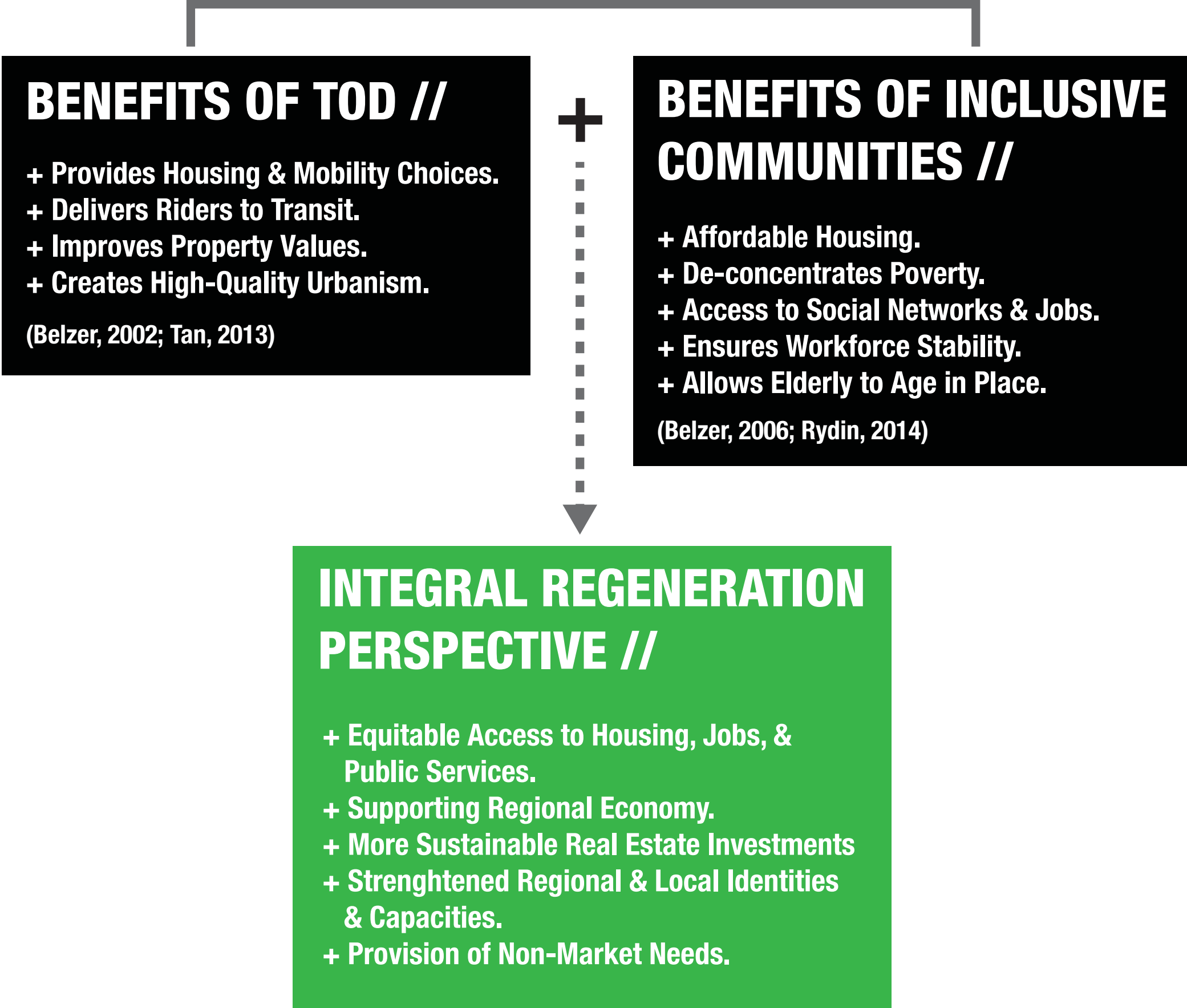
Integrate Mobility
Networks

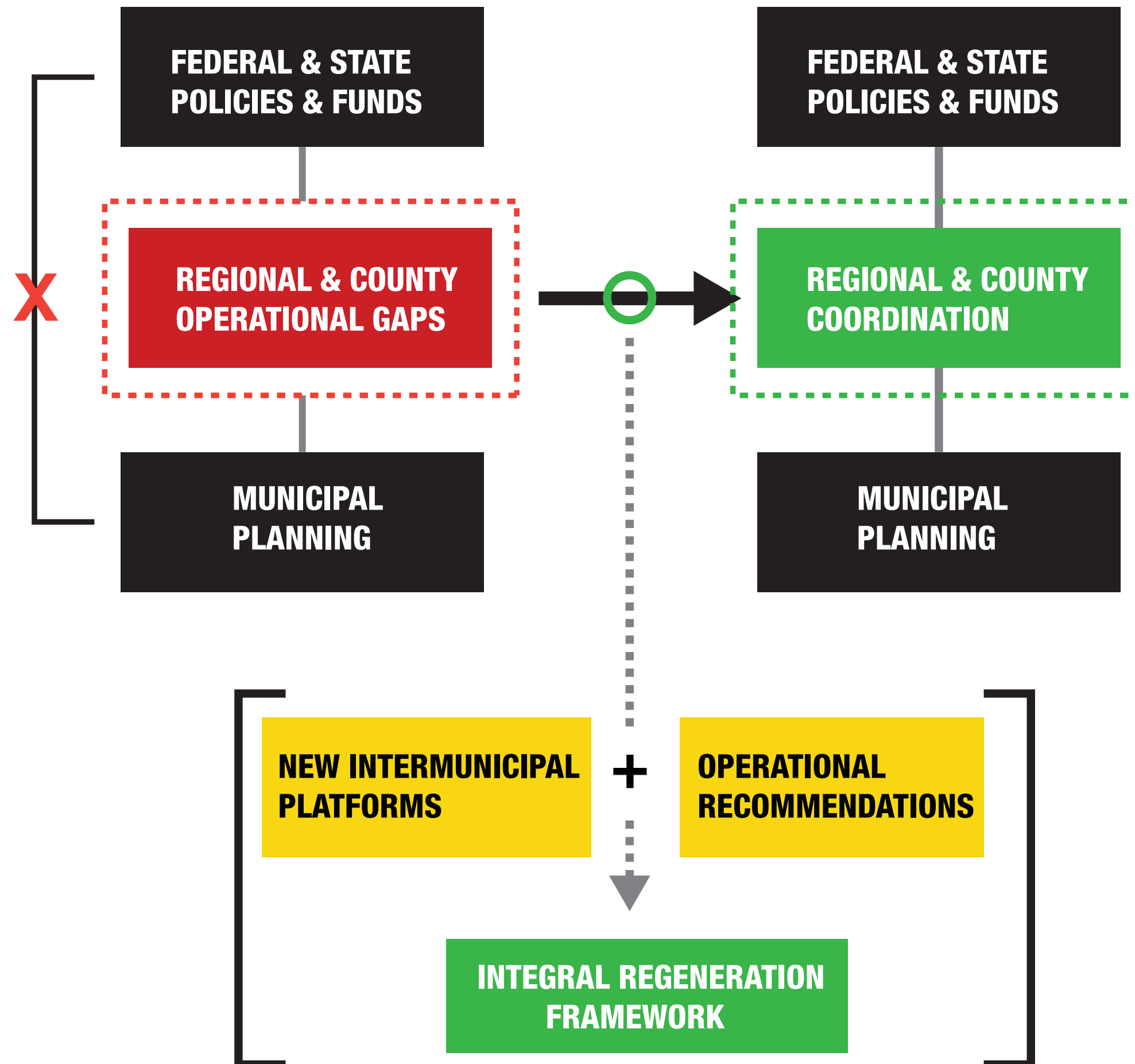


Integrate TOD &
Flood Risk

INTEGRAL PLANNING MODEL

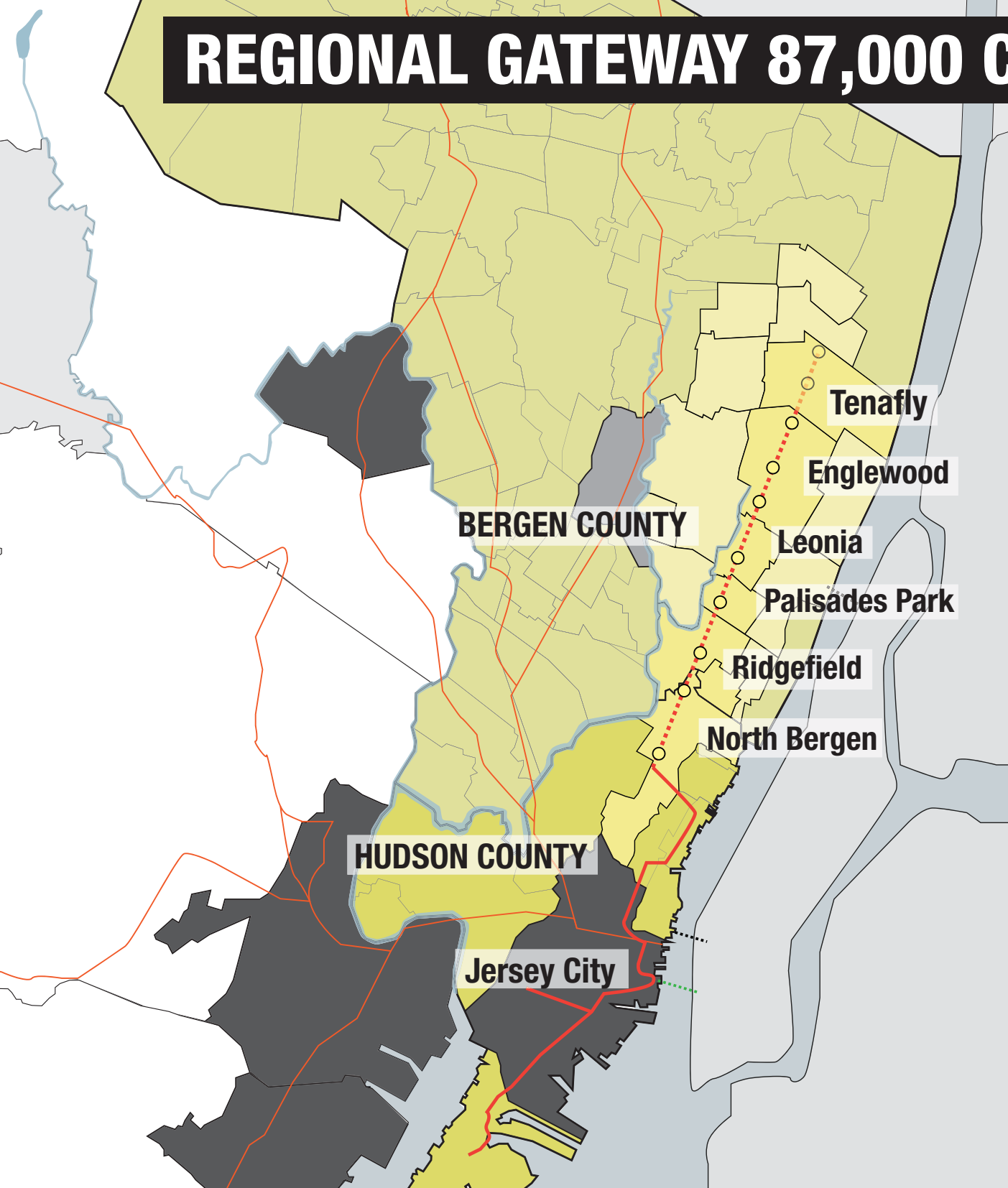
ASSESSING TOD & URBAN REGENERATION





NORTHERN BRANCH LINE EXTENSION PLAN

REGIONAL GATEWAY 87,000 COMMUTERS TO NYC

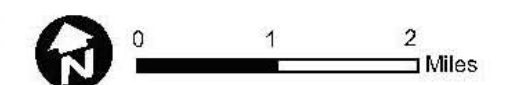


PROJECT STUDY AREA AND PROPOSED STATIONS

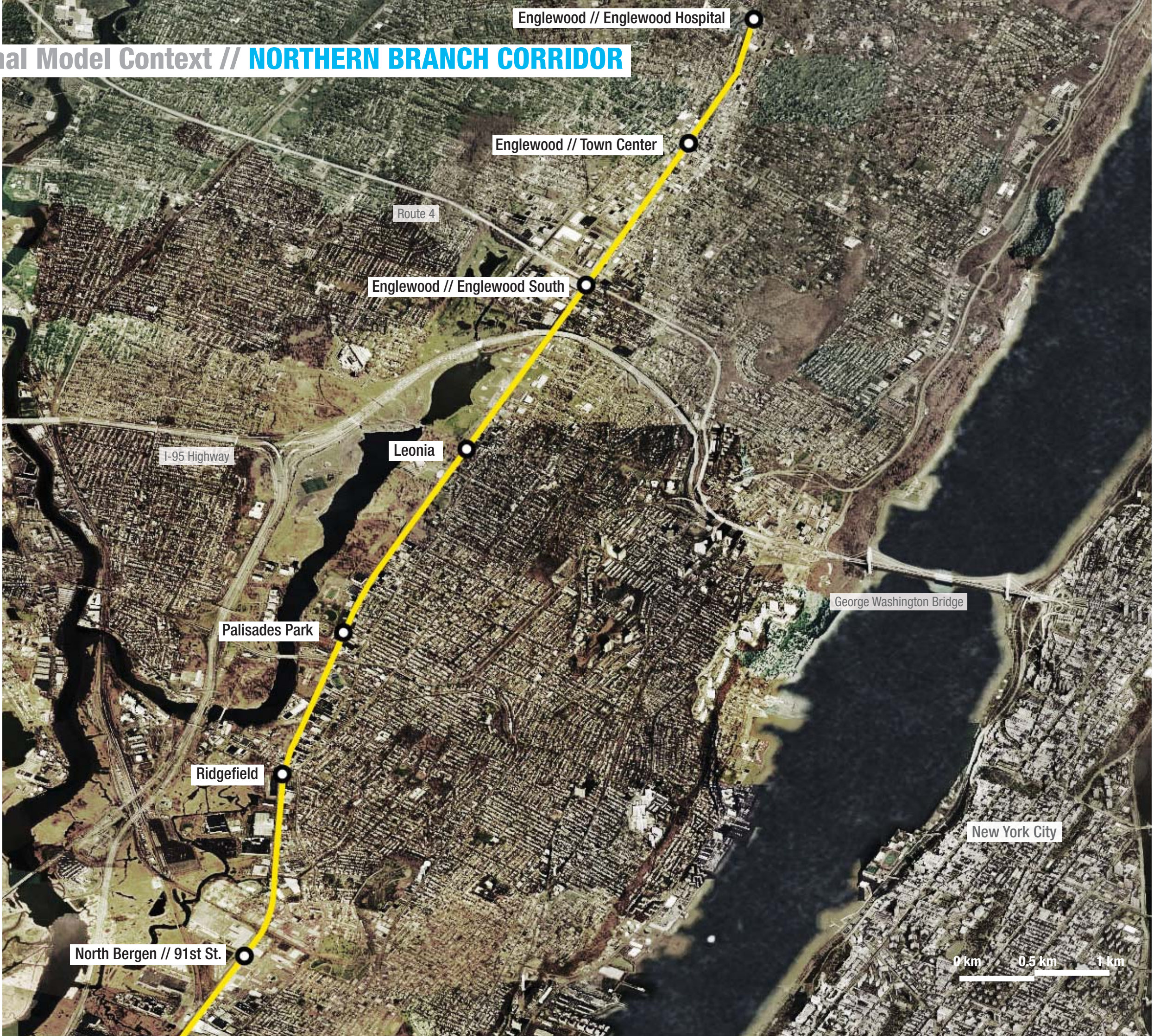
Northern Branch Corridor
Figure 1-3

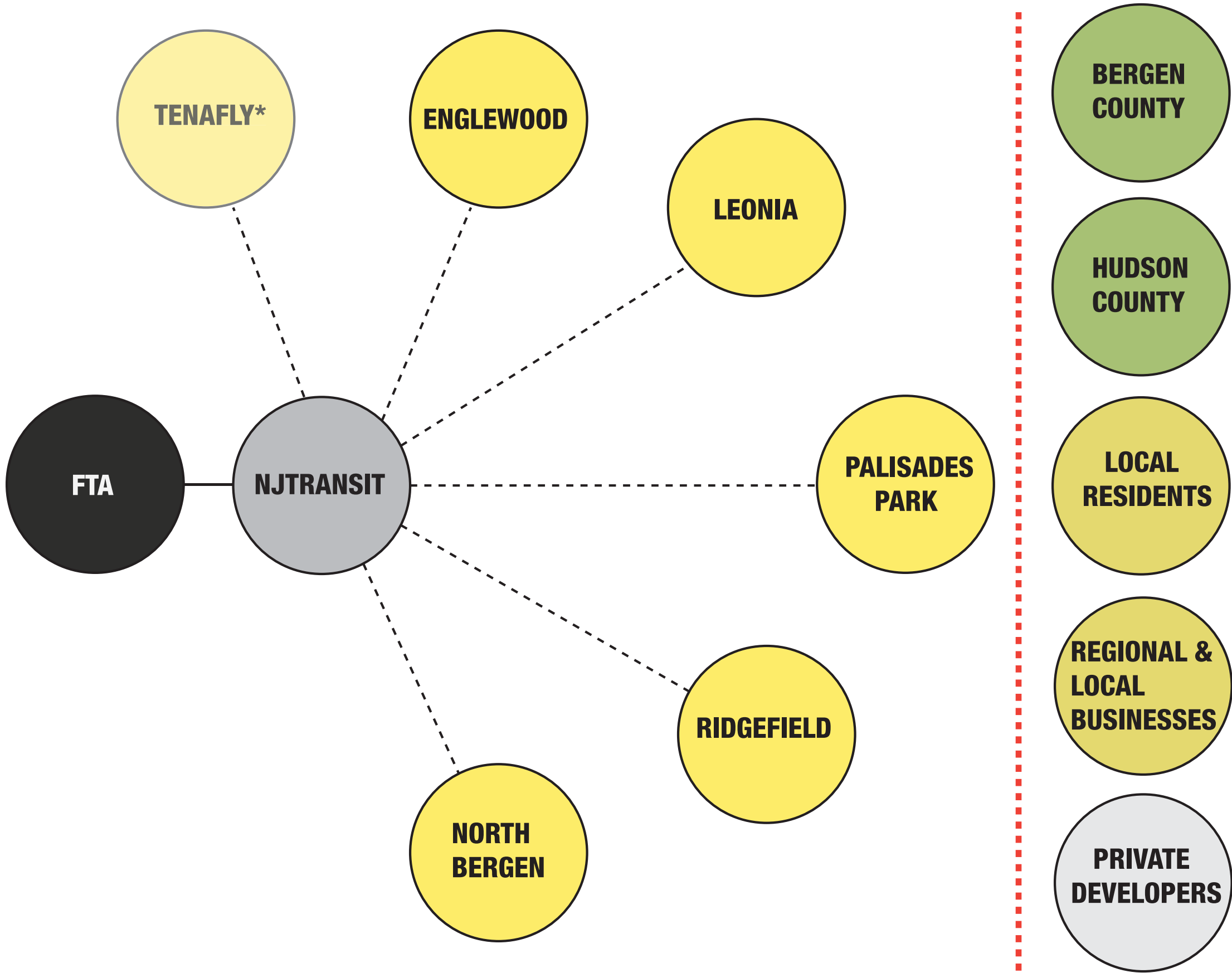


- Station - All Alternatives
- Station - Light Rail to Tenaflly (Preferred Alternative only)
- Viaduct
- Proposed Alignment
- Half-Mile Study Area
- Freight Only
- Hudson-Bergen Light Rail (HBLR)
- Municipal Boundary

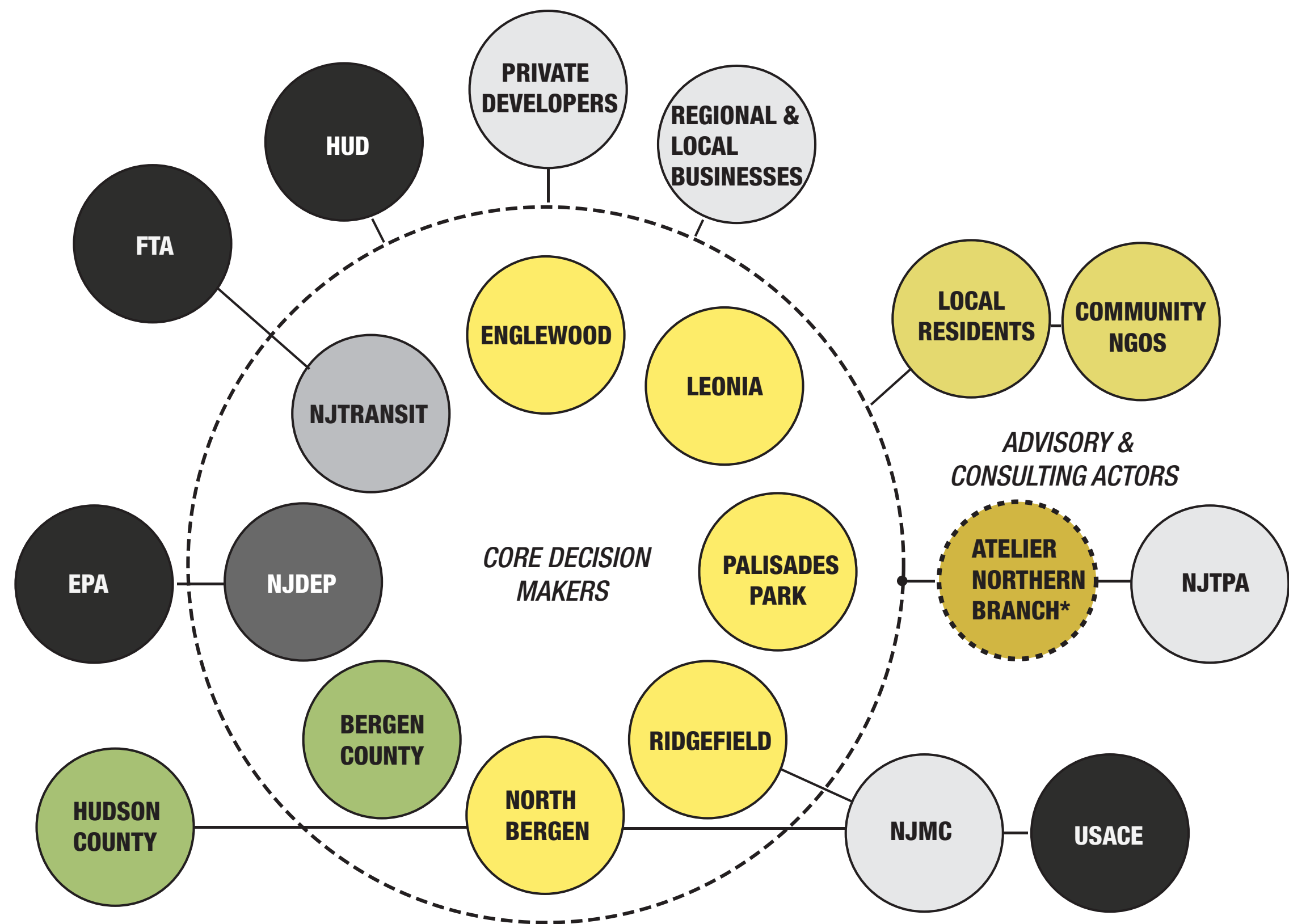


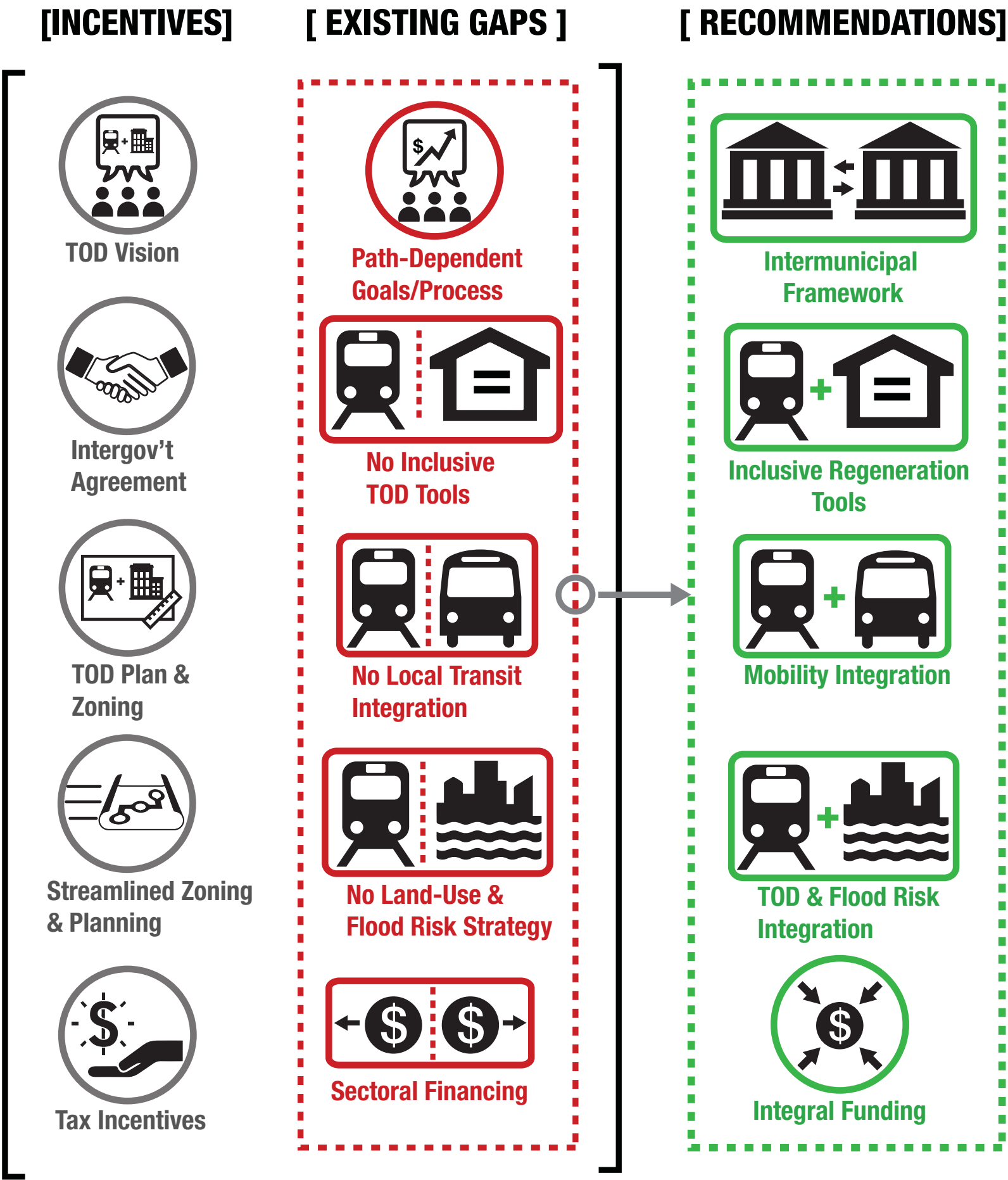
Operational Model Context // **NORTHERN BRANCH CORRIDOR**





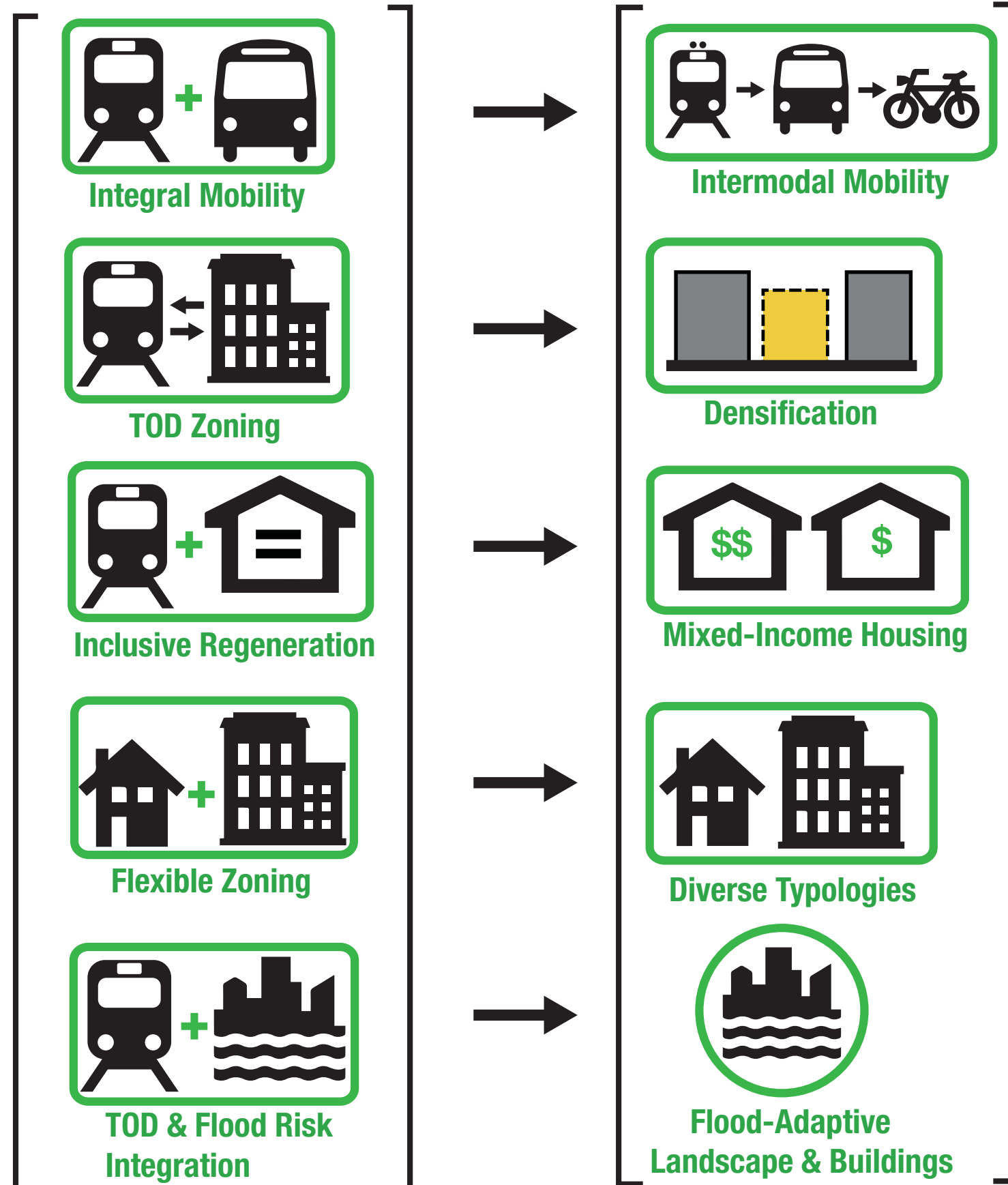
Northern Branch Collaborative

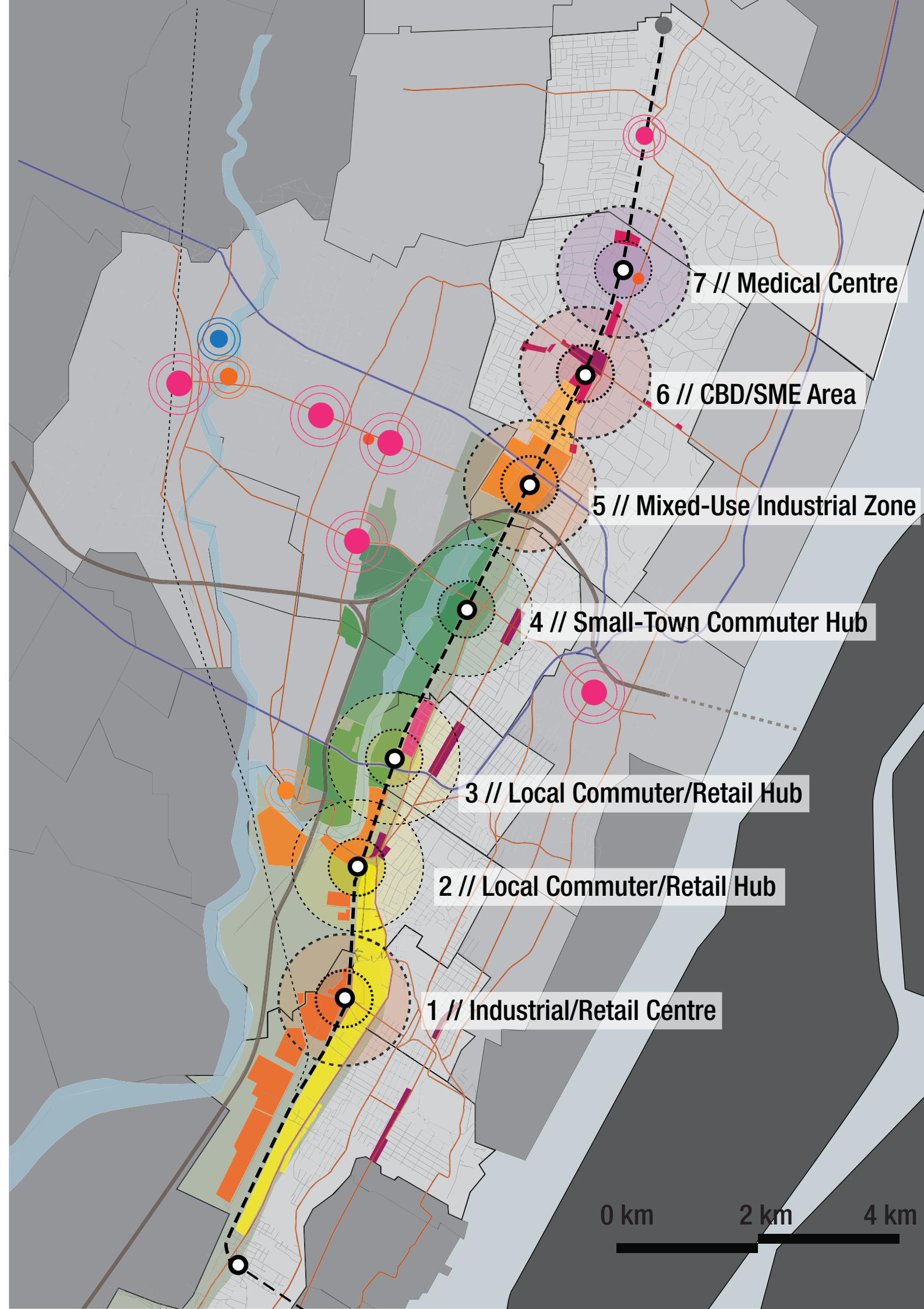




[LOCAL RECOMMENDATIONS]

[PROPOSED GUIDELINES]





PROPOSED REGIONAL VISION SCENARIO //

INFRASTRUCTURE //

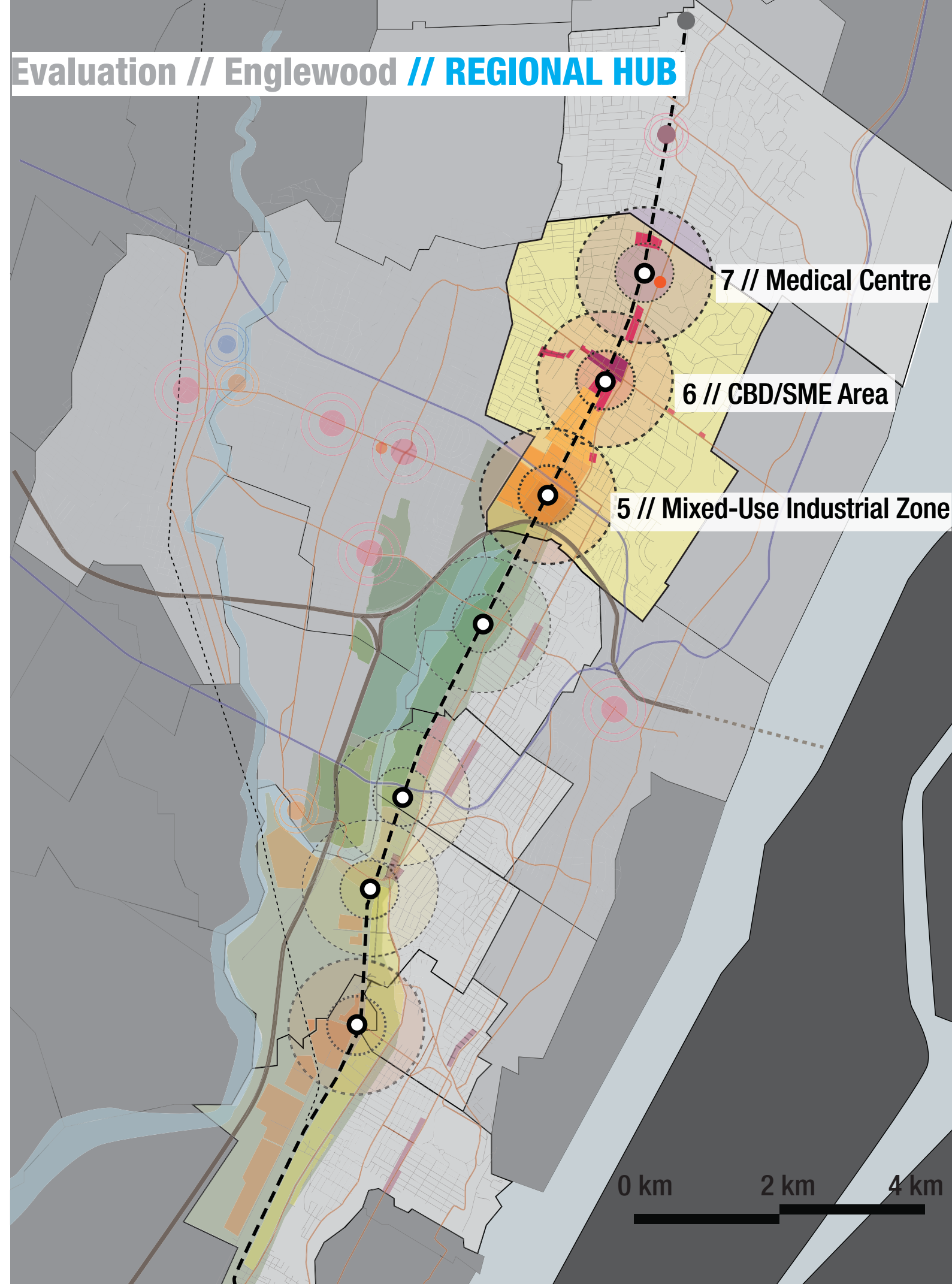
- - Northern Branch Line
- Light Rail Stop
- Alternative Light Rail Stop*
- TOD Area
- I-95 // Interstate Highway
- Route 4 // State Highway
- Local Arterial Roads/Bus Routes*
- Local Streets

EXISTING OR PROPOSED LAND-USES*//

- Mixed-Use Industrial Regeneration Area*
- Medium-Scale Industrial/Retail Regeneration Area*
- Cultural/Small & Medium Enterprise Zone*
- Existing Community Business Area
- Existing City/Town Centre
- Existing Neighbourhood Business Areas
- Existing Commercial/Functional Centre
- Overpeck County Park & Waterfront Zone*
- Meadowlands District (Wetlands Area)

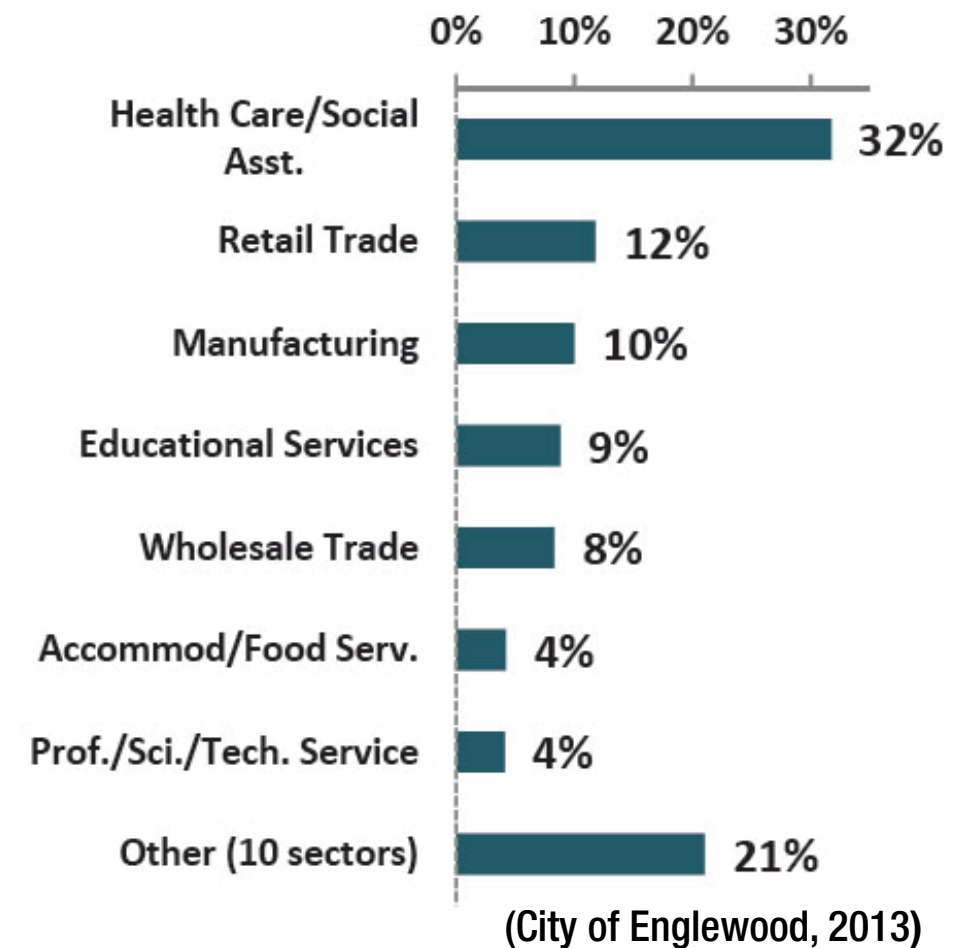
* Proposed Uses

EVALUATING THE FRAMEWORK



LOCAL CITY // 27,147 RESIDENTS

REGIONAL ECONOMIC CENTRE



Attracts more than 12,000 workers everyday in a variety of industries.

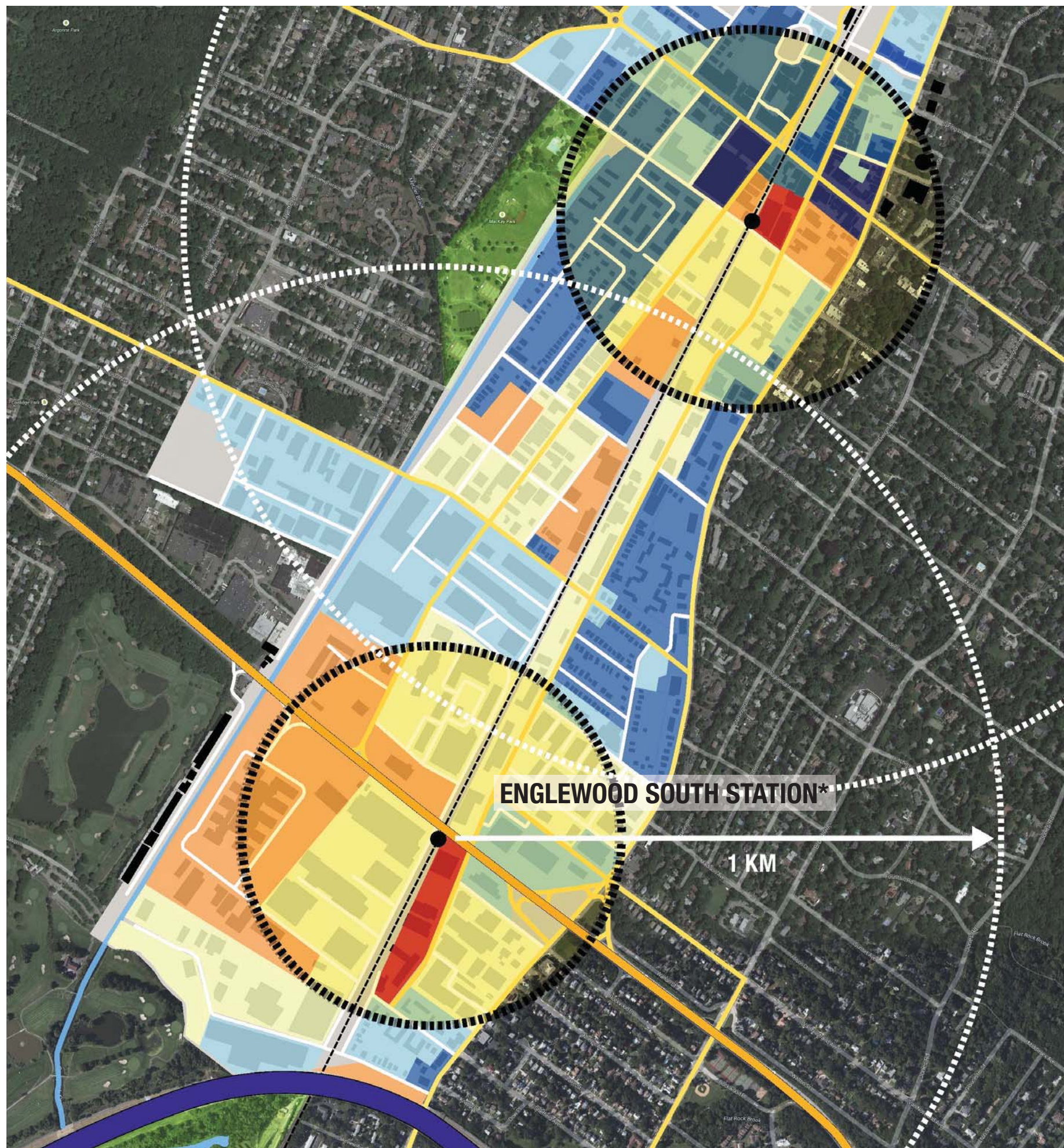
Evaluation // Englewood South // SWOT ANALYSIS FROM INTEGRAL FRAMEWORK



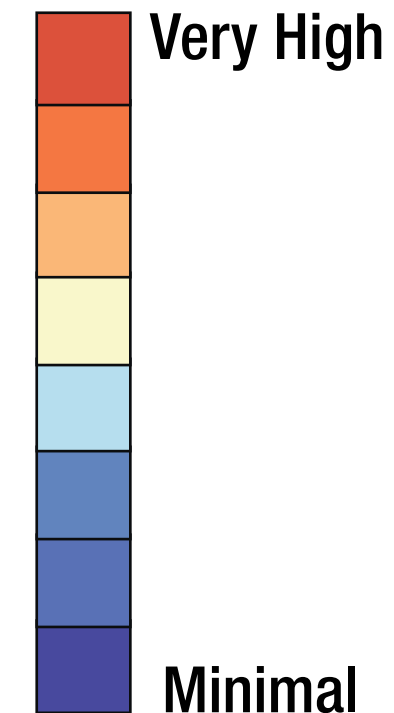
WEAKNESS // SOCIOECONOMIC SEGREGATION



OPPORTUNITY // TOD INTENSIFICATION POTENTIAL



PROJECTED CHANGE //



PROPOSED TOD ZONES //

TOD ZONE 1 // URBAN STRUCTURE & PROGRAMMATIC IMPROVEMENTS.

TOD ZONE 2 // MOBILITY & ACCESSIBILITY IMPROVEMENTS.

Englewood South // AERIAL VIEW

Private golf course

Recently built 4-storey residential superblock

Overpeck Creek

Low-rise offices/
labs & SM/M-scale
industrial buildings

Large-scale industrial
lots & buildings

Route 4, regional
highway/bus route

Large-/medium-scale
industrial lots

Future light rail
line & station area

S. Dean St, major
arterial/bus route

Small-/medium-scale
industrial area

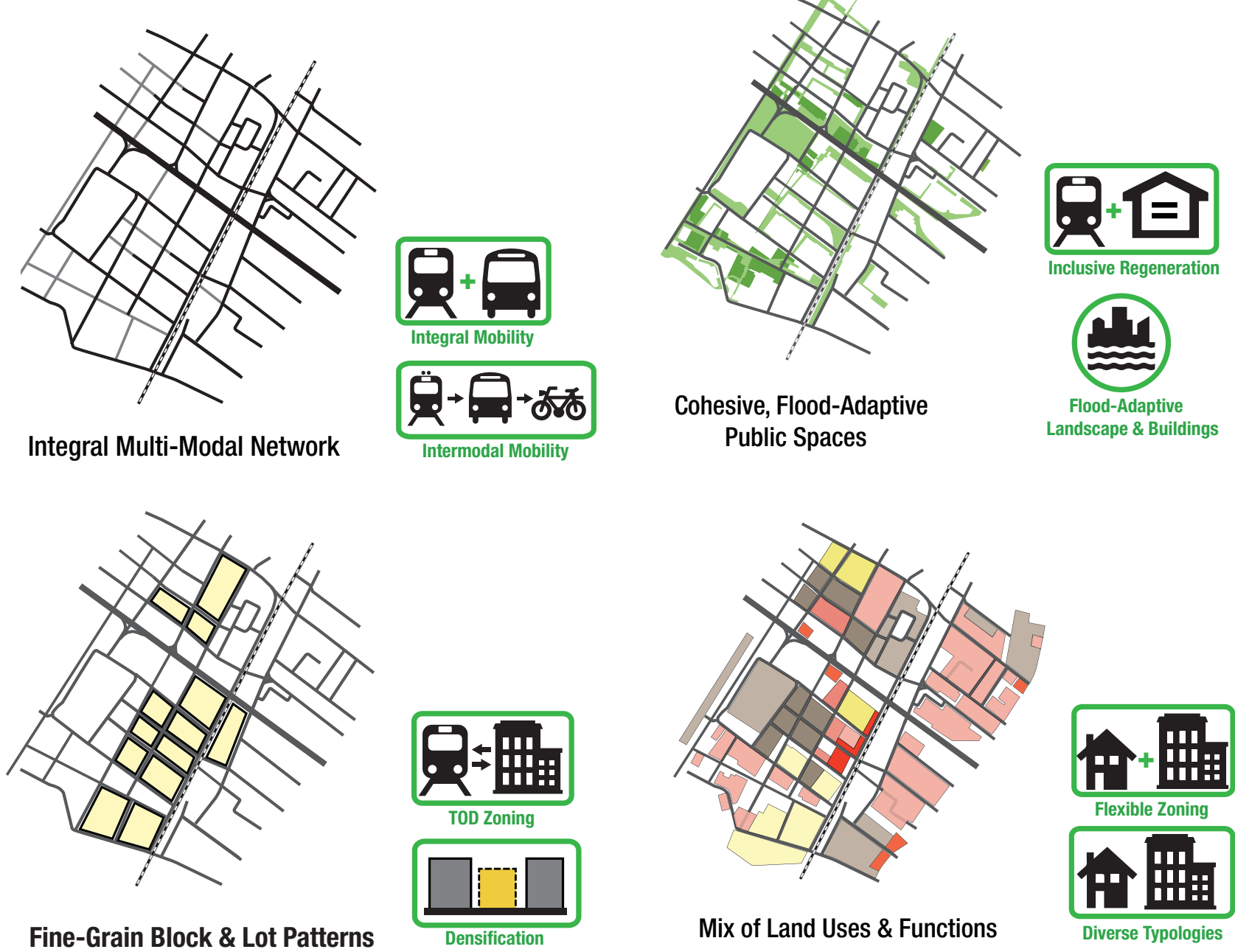
Detached 1-2 family
working-class houses



Local-Scale Diagnosis



Local Integral Design Principles



INTEGRATIVE ANALYSIS // SPACE SYNTAX



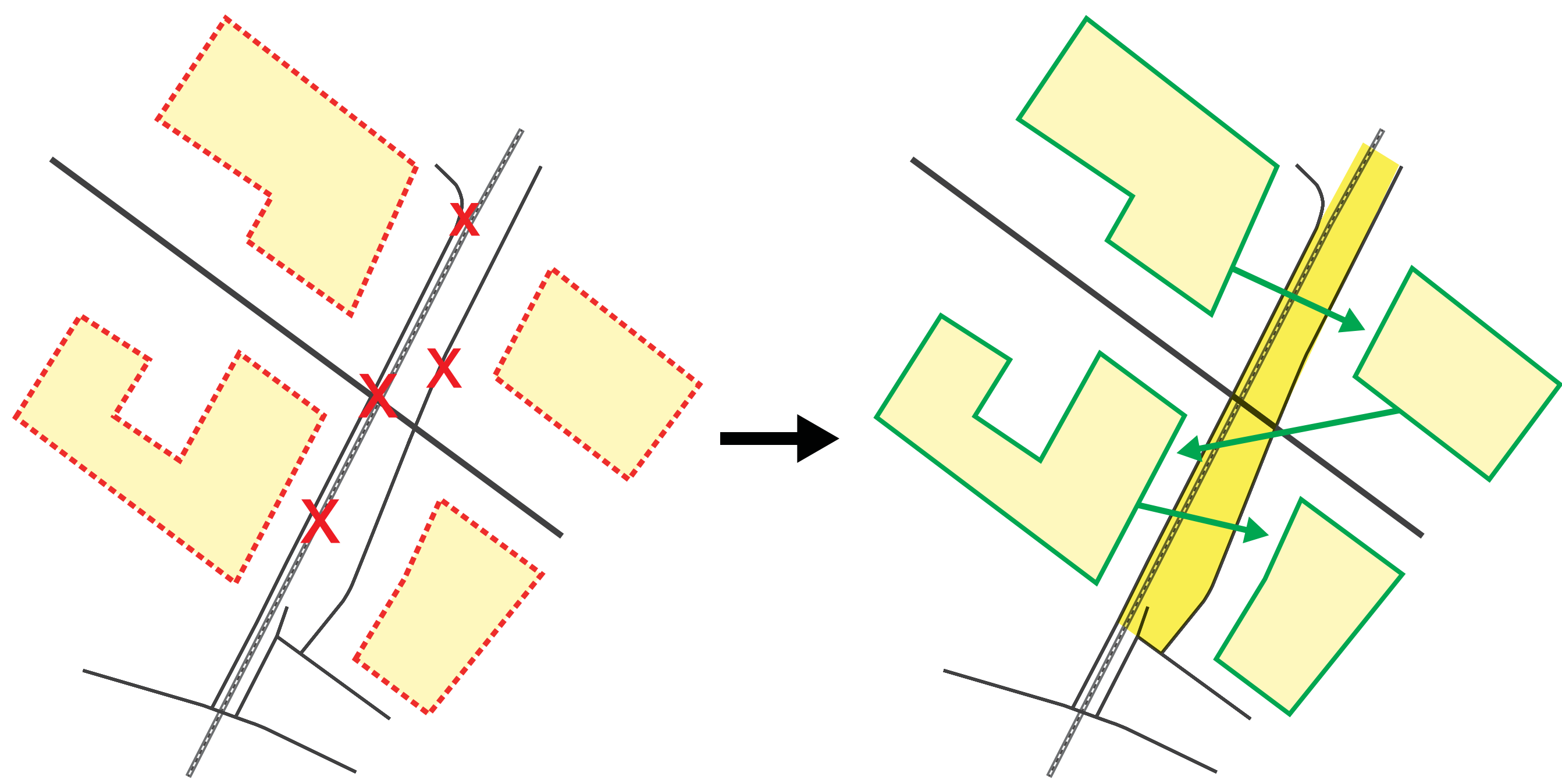
Existing Mobility Structure



Proposed Mobility/Street Pattern

COMPACT MOBILITY NETWORK = WALKABLE GRID

PROPOSED LEAD ROLE FOR MUNICIPALITY & COUNTY



Current Situation // Rail Line as Barrier

Light Rail as Connective Corridor

LIGHT RAIL CORRIDOR AS BACKBONE OF ENGLEWOOD SOUTH

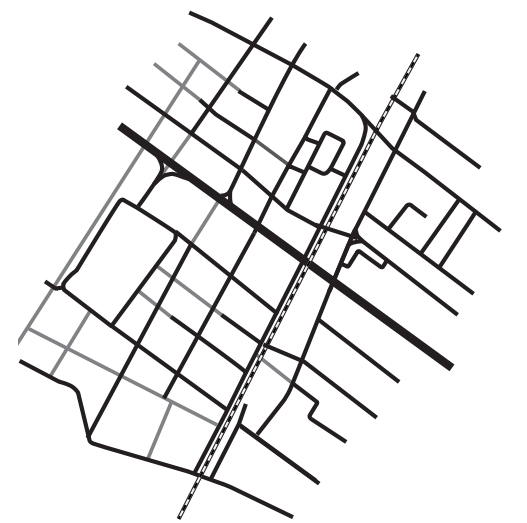
STEP 1 // IMPROVE EXISTING STREET GRID



Integral Mobility



Intermodal Mobility



Integral Multi-Modal Network

0m 200m 400m

MULTI-MODAL STREET SYSTEM



Integral Mobility



Intermodal Mobility



Integral Multi-Modal Network

Integral Mobility System //

- Highway
- Regional Arterial
- Local Arterial
- Collector Road
- Living(Local) Street
- Bike/Pedestrian Path

0m 200m 400m

STEP 2 // INCREASE GREEN/PUBLIC SPACES



Flood-Adaptive
Landscape & Buildings



Cohesive, Flood-Adaptive
Public Spaces

0m 200m 400m

COHESIVE PUBLIC SPACE NETWORK

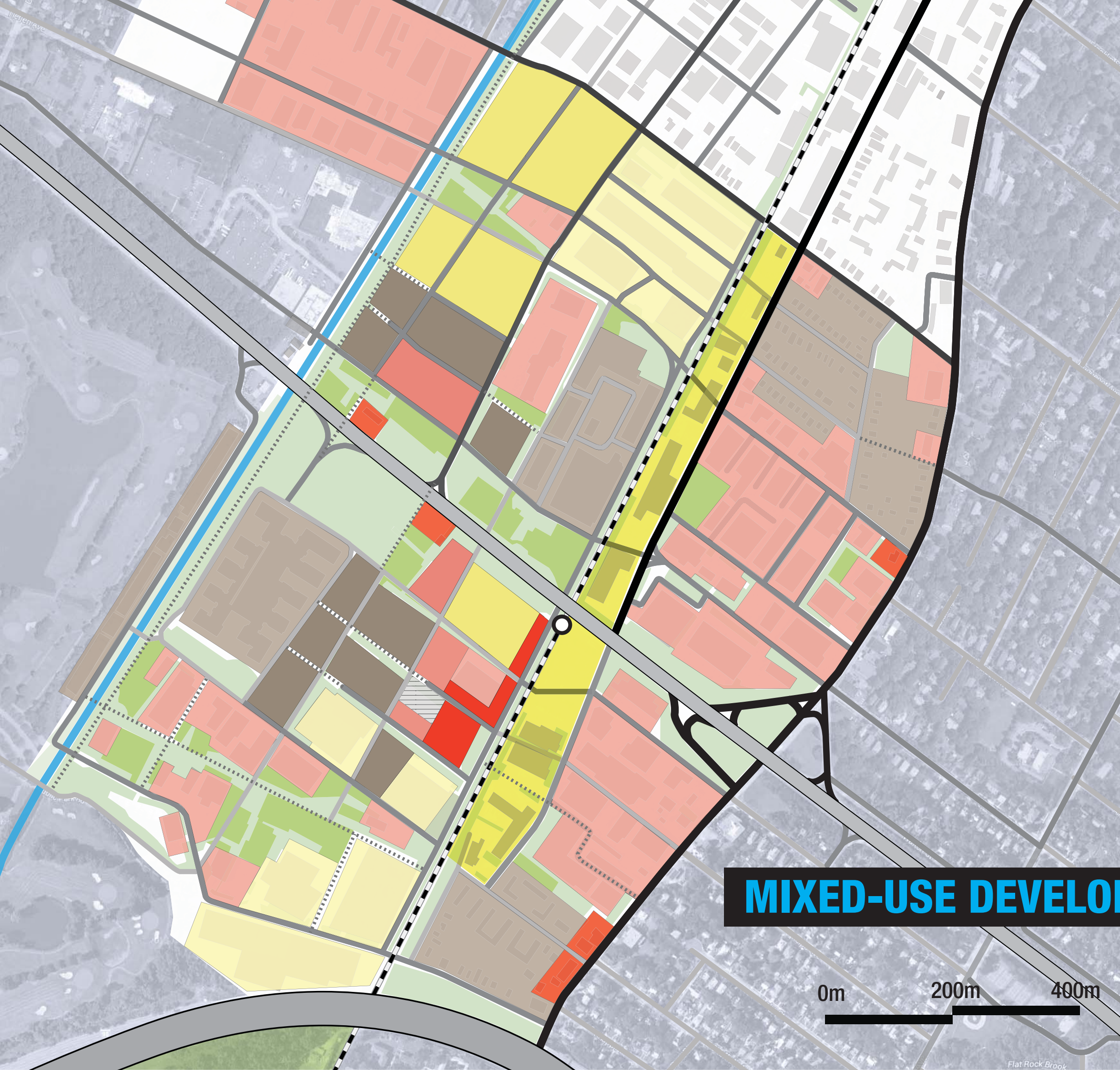


Flood-Adaptive
Landscape & Buildings



Cohesive, Flood-Adaptive
Public Spaces

0m 200m 400m



Station Area Programmatic Strategy //

- R-X // Existing Residential
- RM-1 // Residential Mixed-Use
- C-X // Existing Commercial/Retail
- CM-1 // Commercial Mixed-Use Overlay
- PM-X // Existing Small-Scale Industrial
- PM-1 // Small-Scale Production Mixed-Use
- PM-X2 // Existing Large-Scale Production
- PM-2 // Large-Scale Production Mixed-Use

Integral Public Space & Mobility Systems //

- New Green Spaces
- Existing Green Spaces
- Highway
- Regional Arterial
- Local Arterial
- Collector Road
- Living(Local) Street
- Bike/Pedestrian Path

MIXED-USE DEVELOPMENT POTENTIAL

0m 200m 400m

DEVELOPMENT POTENTIAL // EXISTING BLOCKS OVERVIEW



Large-Scale Industrial Block



Large-Scale Industrial Block



Small-Scale Industrial Block



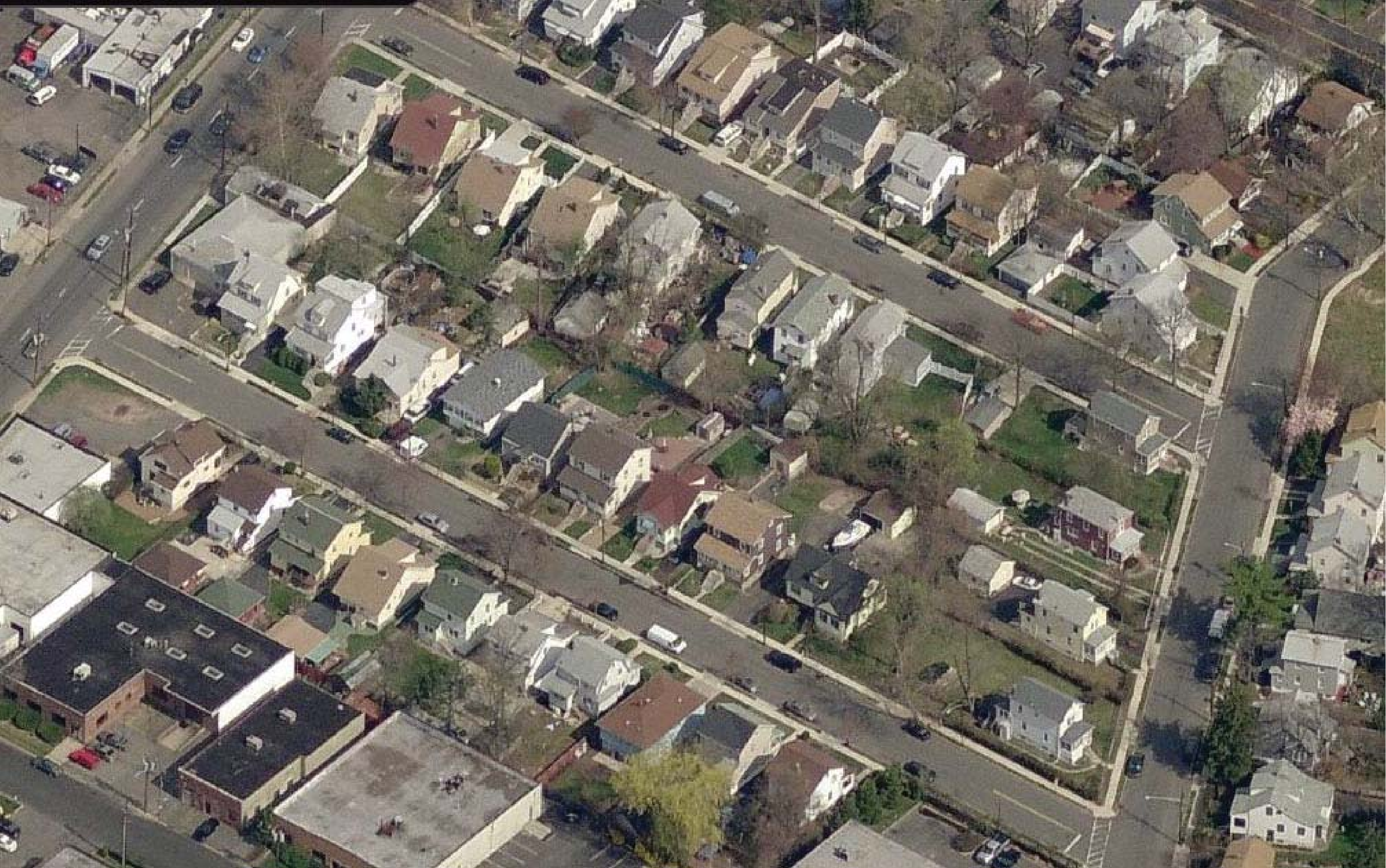
Small-Scale Industrial Block



Large-Scale Residential Block



Large-Scale Residential Block



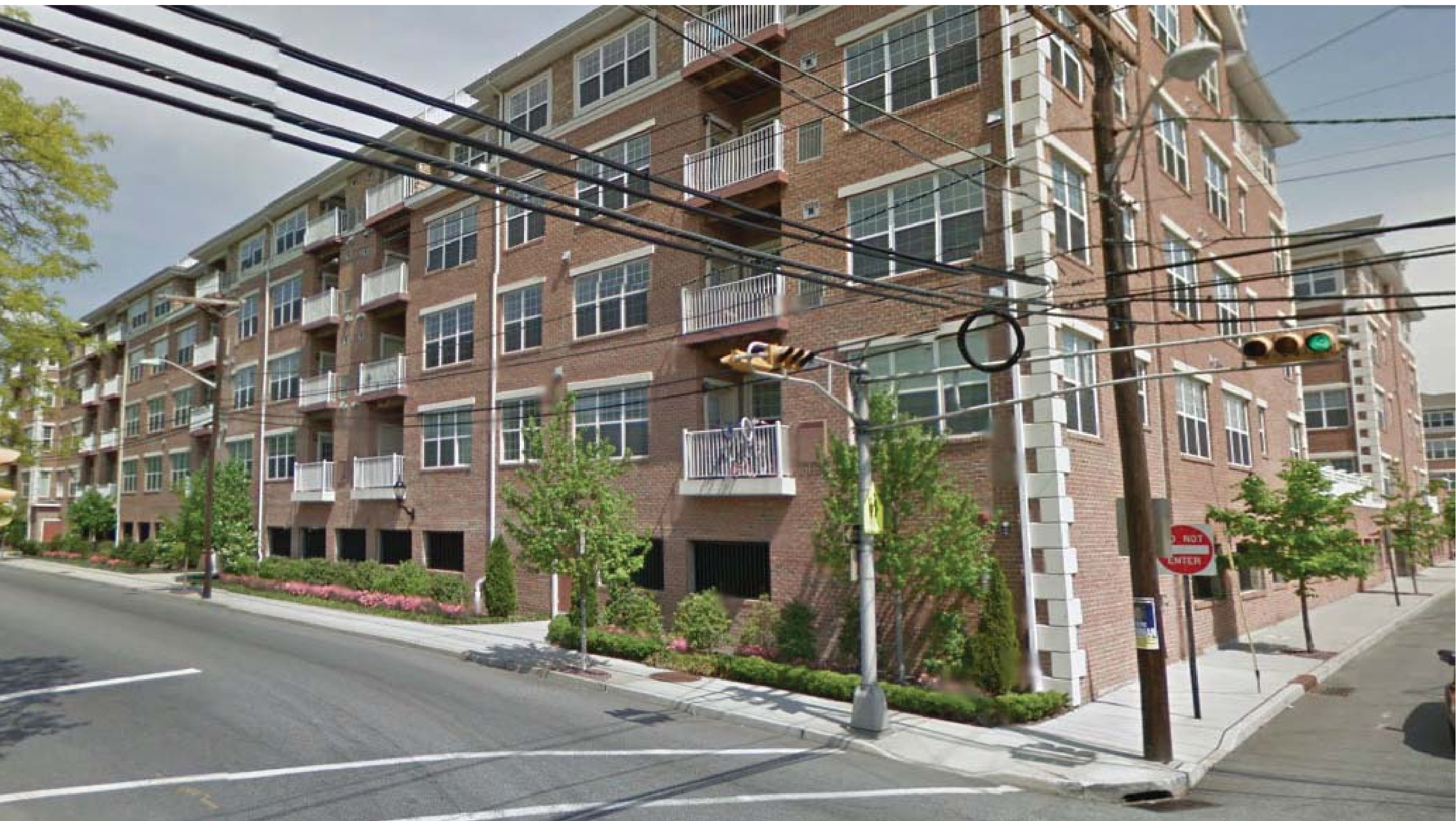
Small-Scale Residential Block



Small-Scale Residential Block



Large-Scale CBD Block



Large-Scale CBD Block



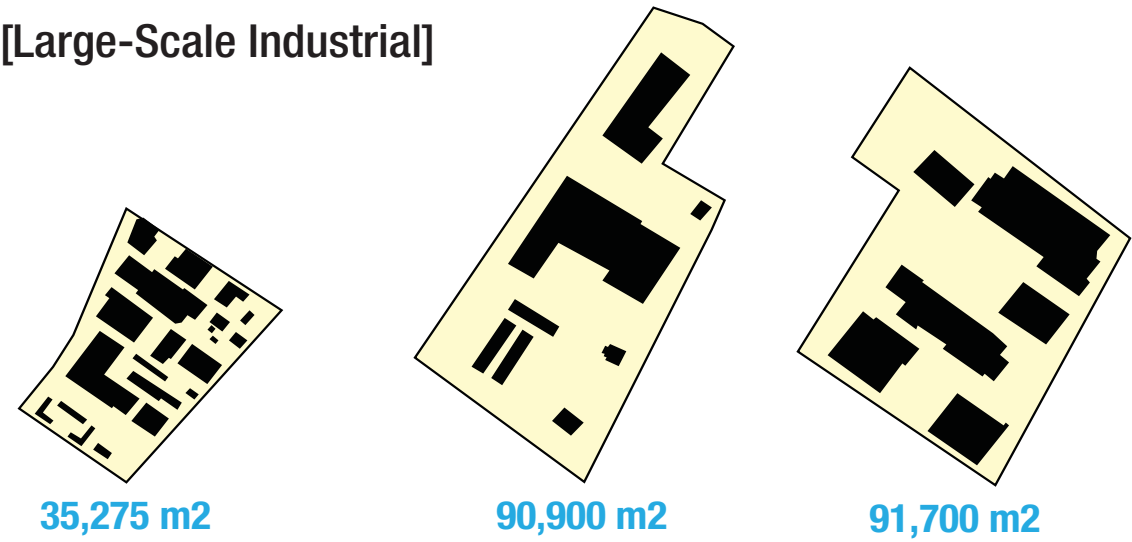
Small-Scale CBD Block



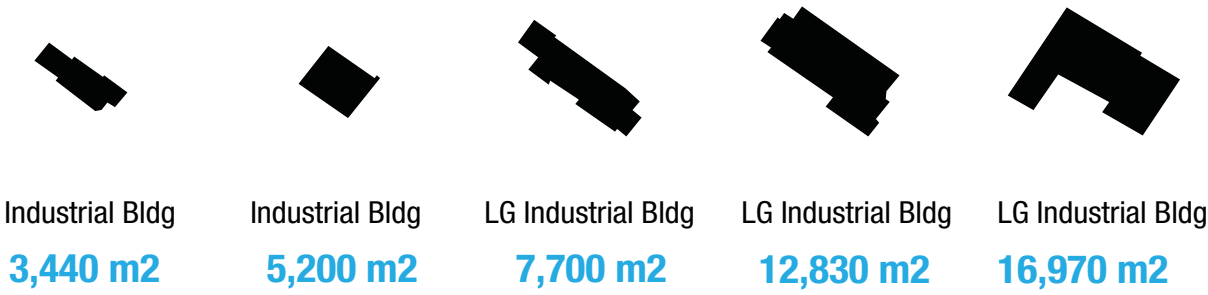
Small-Scale CBD Block

TESTING FRAMEWORK AT BLOCK & PLOT-SCALE

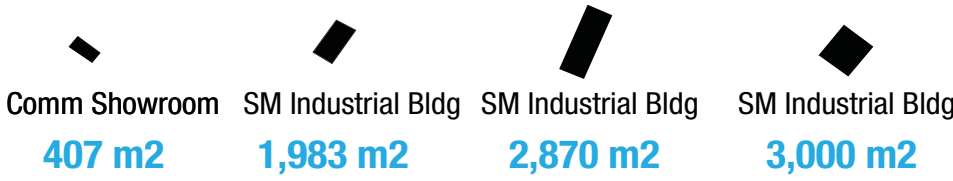
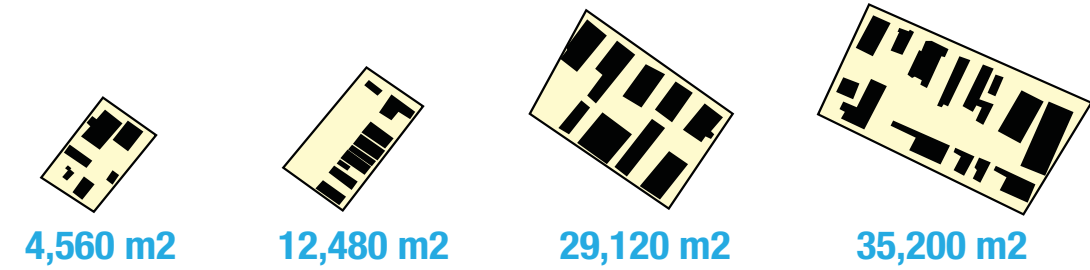
[Large-Scale Industrial]



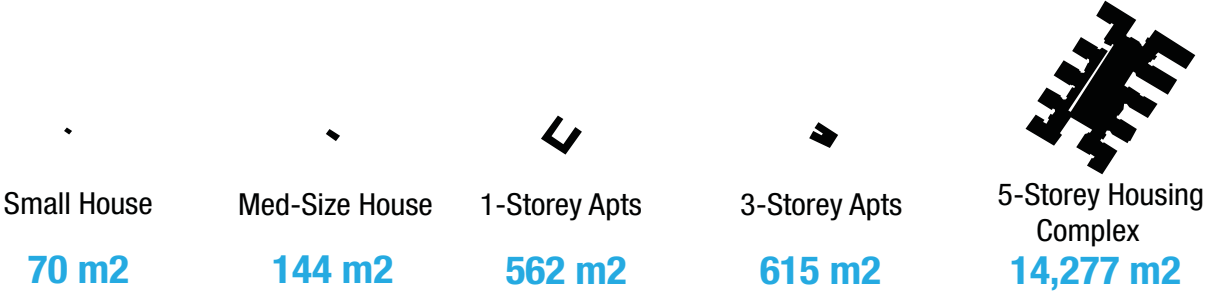
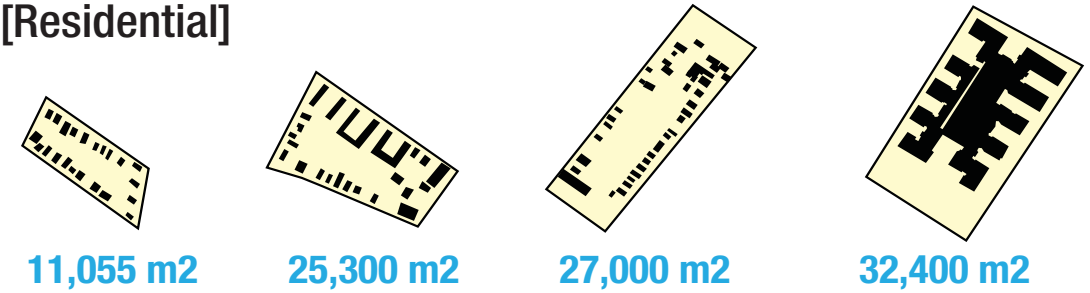
[Typical Building & Parcel Footprints]



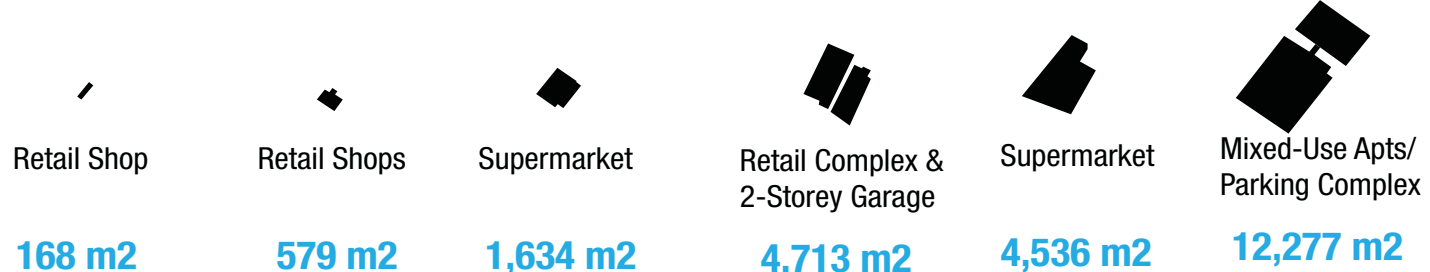
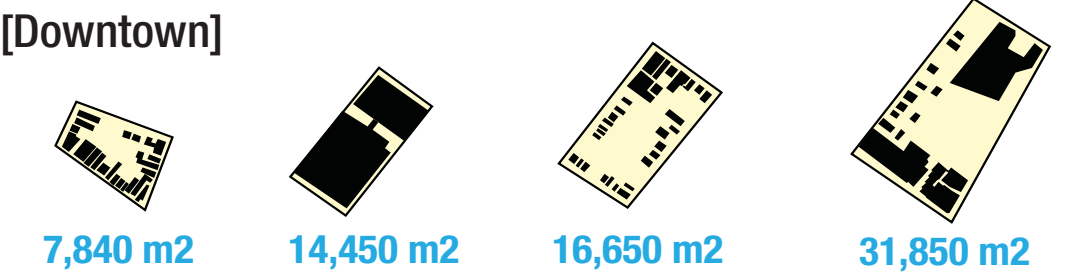
[Med- & Small-Scale Industrial/Comm]



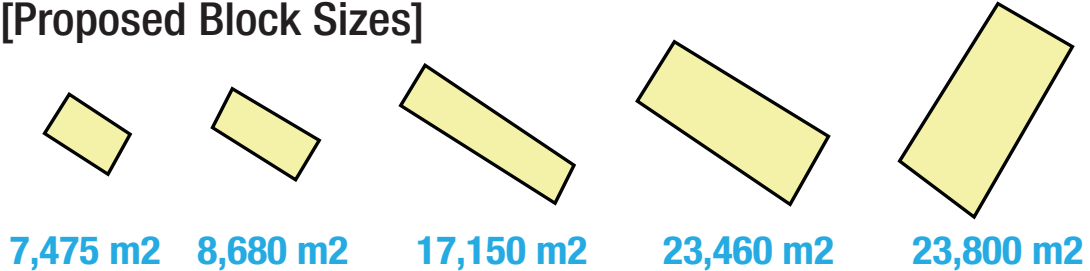
[Residential]



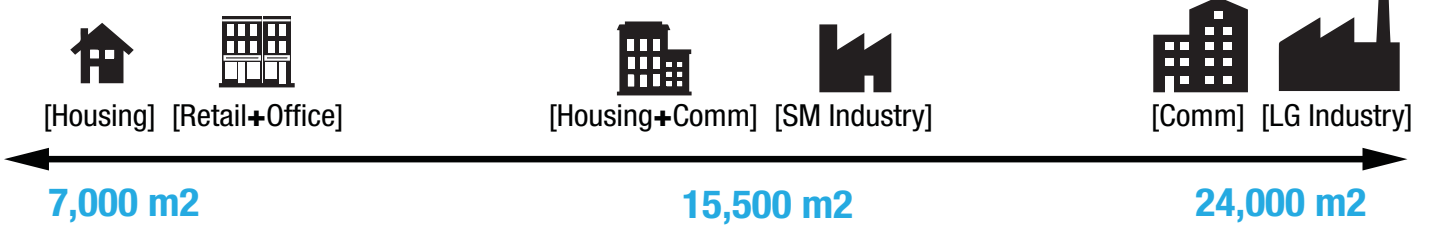
[Downtown]



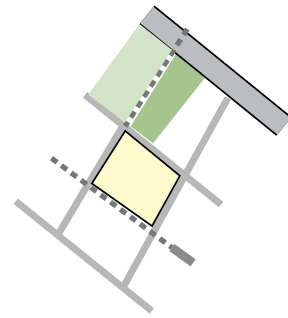
[Proposed Block Sizes]



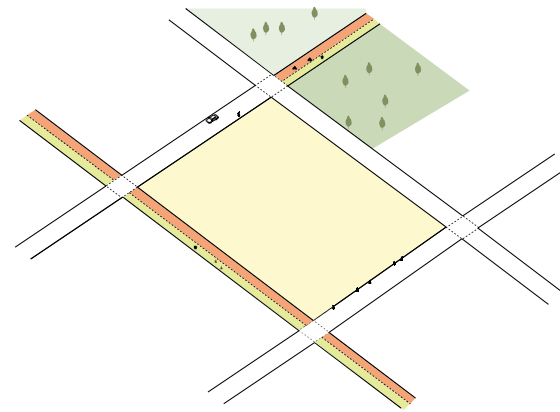
[Proposed Block Programming]



Proposed Residential Block



0m 100m 200m



Residential Block Axonometric

What are the Most Workable Housing Blocks & Typologies?

?



Cohesive, Flood-Adaptive Public Spaces

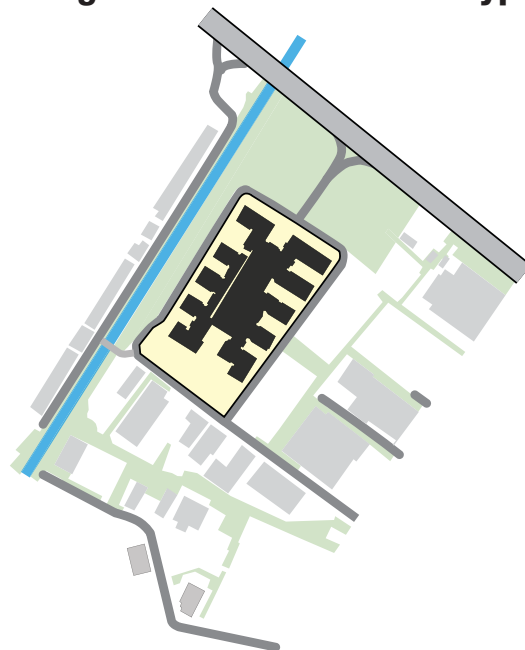


Fine-Grain Block & Lot Patterns



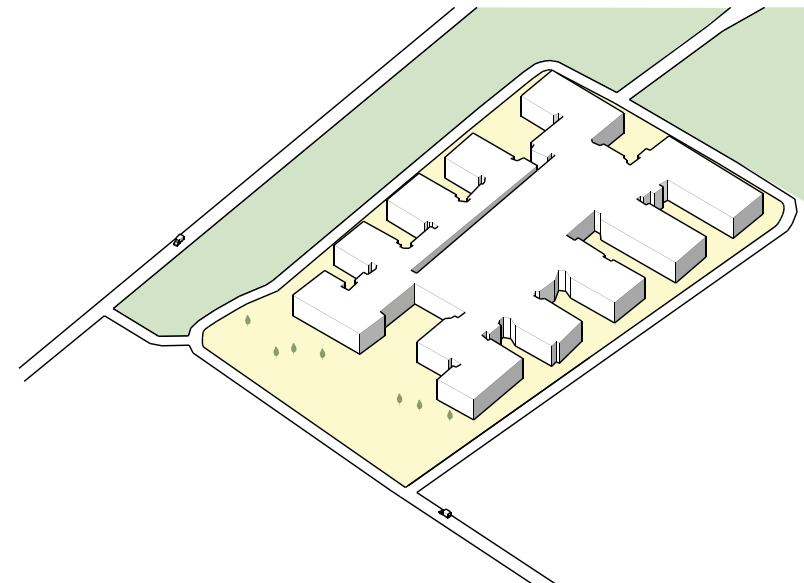
Mix of Land Uses & Functions

Existing Residential Blocks & Typologies //

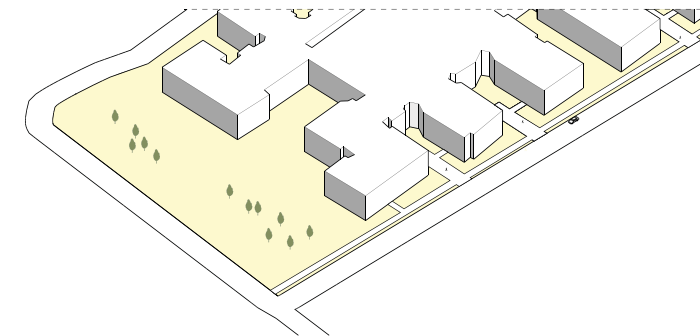


Large-Scale Block // 3-Storey Housing

0m 100m 200m



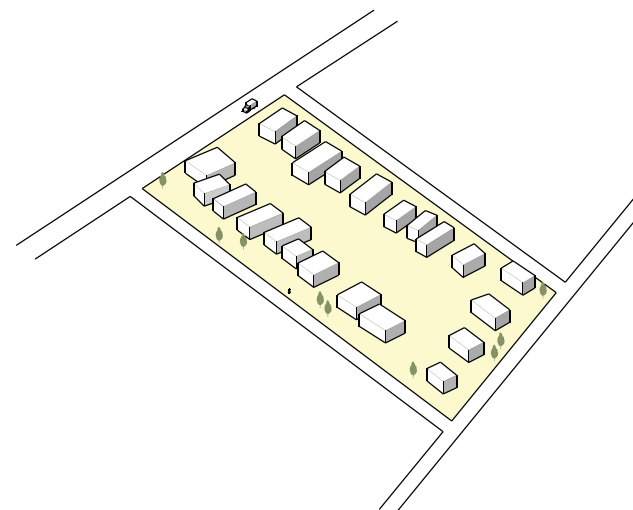
Housing Complex Block Axonometric



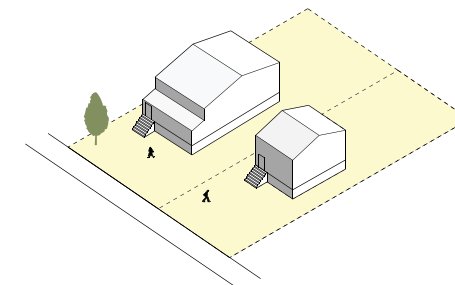
Housing Complex Entry Points
+ Lack of Accessibility & Public Spaces
+ Lack of Public Functions Relative to Scale



Typical Residential Block



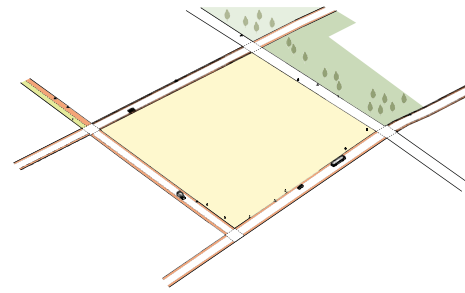
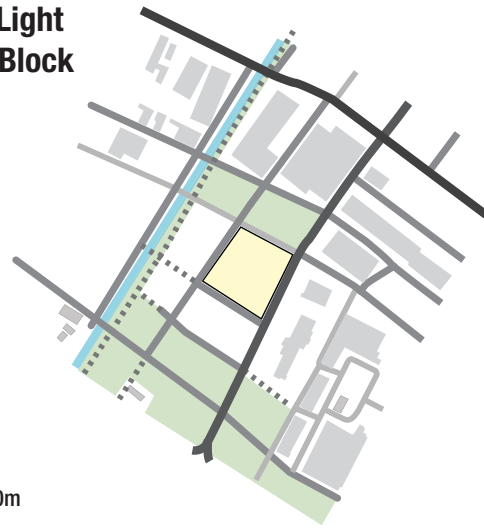
Residential Block Axonometric



Typical Residential Typologies
+ Accessible w/ Good Streetscape Quality
+ Insufficient Densities for TOD

Proposed Light Industrial Block

0m 100m 200m



Light Industrial Block Axonometric

What are the Most Workable Industrial Blocks & Typologies?

?



Cohesive, Flood-Adaptive Public Spaces



Fine-Grain Block & Lot Patterns



Mix of Land Uses & Functions

Existing Industrial Blocks & Typologies //



0m 100m 200m

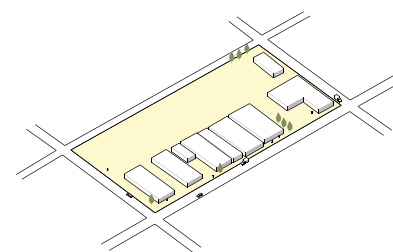
Large-Scale Block



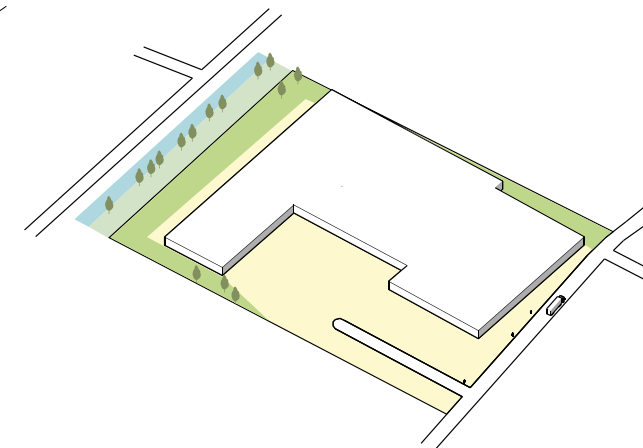
Small-Scale Block



Large-Scale Block Axonometric

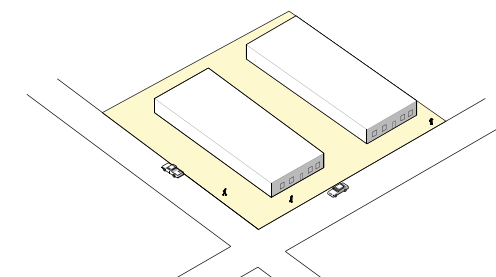


Small-Scale Block Axonometric



Typical Large-Scale Typology

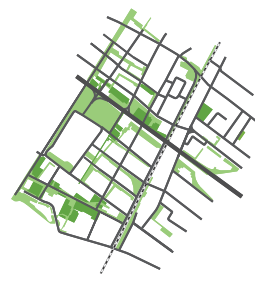
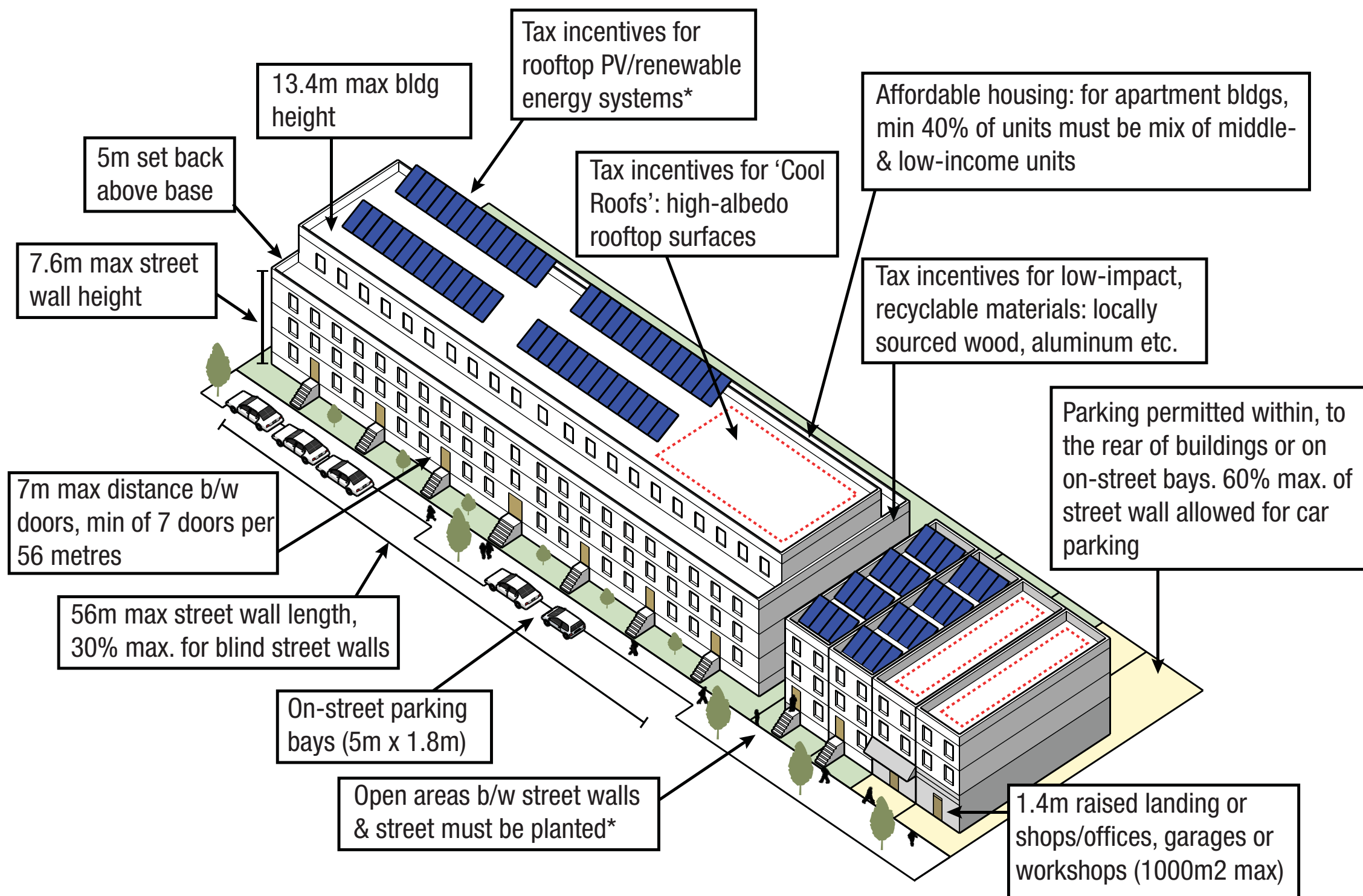
+ Excessive Scale for Proposed Blocks
+ Impermeable Ground Level



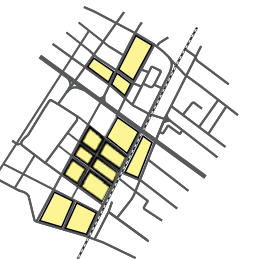
Typical Small-Scale Typologies

+ Appropriate Scale for Fine-Grain Blocks
+ Potential to Insert In-fill Developments

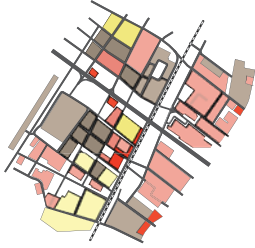
SPATIAL DESIGN & PLANNING REGULATORY FRAMEWORK



Cohesive, Flood-Adaptive Public Spaces



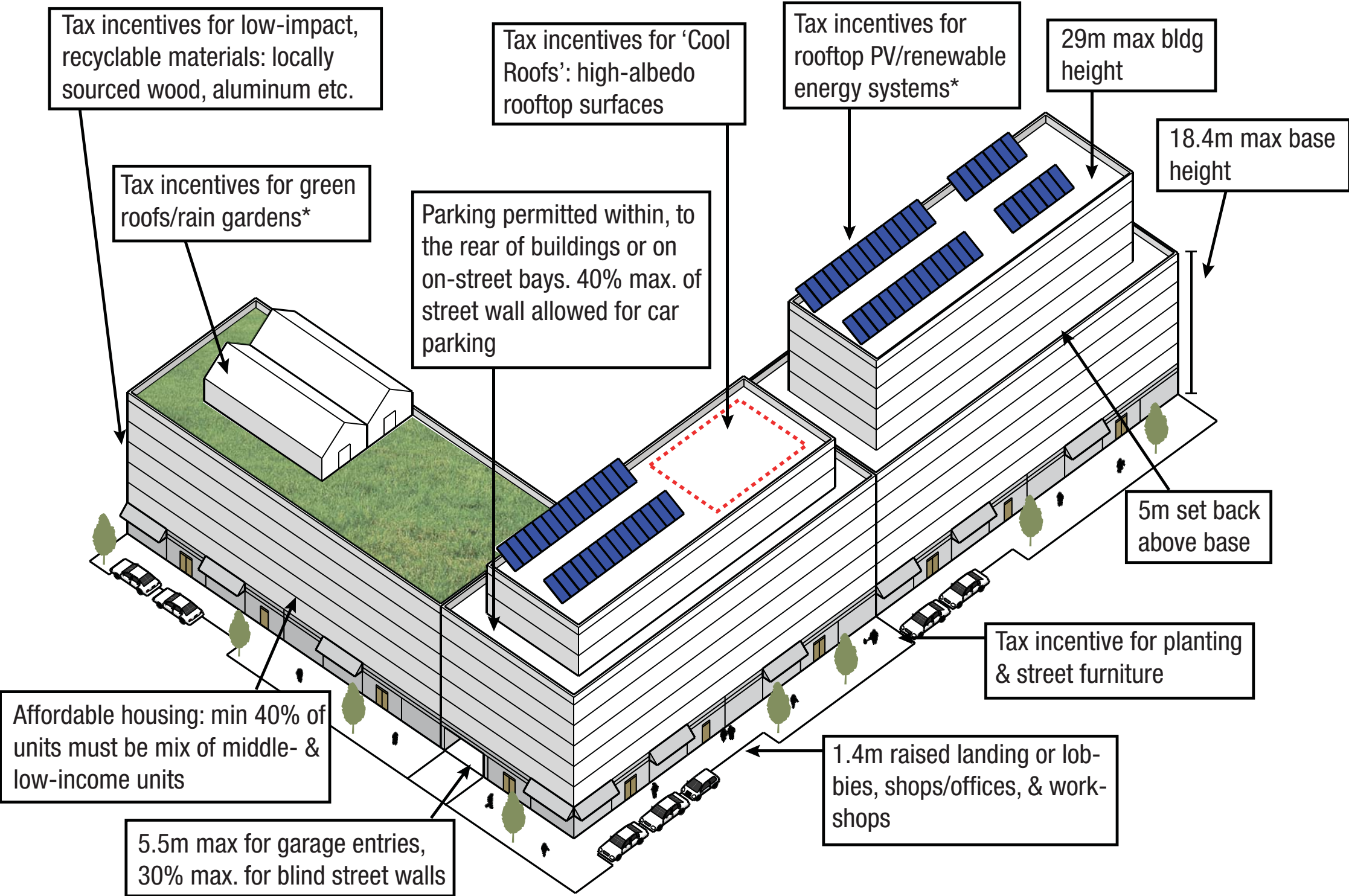
Fine-Grain Block & Lot Patterns



Mix of Land Uses & Functions

R2 // Medium-Density Residential District

Lot Area (min):	171 m2	Front Yard (min):	2.5 m
Lot FAR (max):	1.70	Rear Yard (min):	9 m
Lot Coverage:	50%	Building Height (max):	13.4 m
		Street Wall Height (max):	10.4 m



Cohesive, Flood-Adaptive Public Spaces



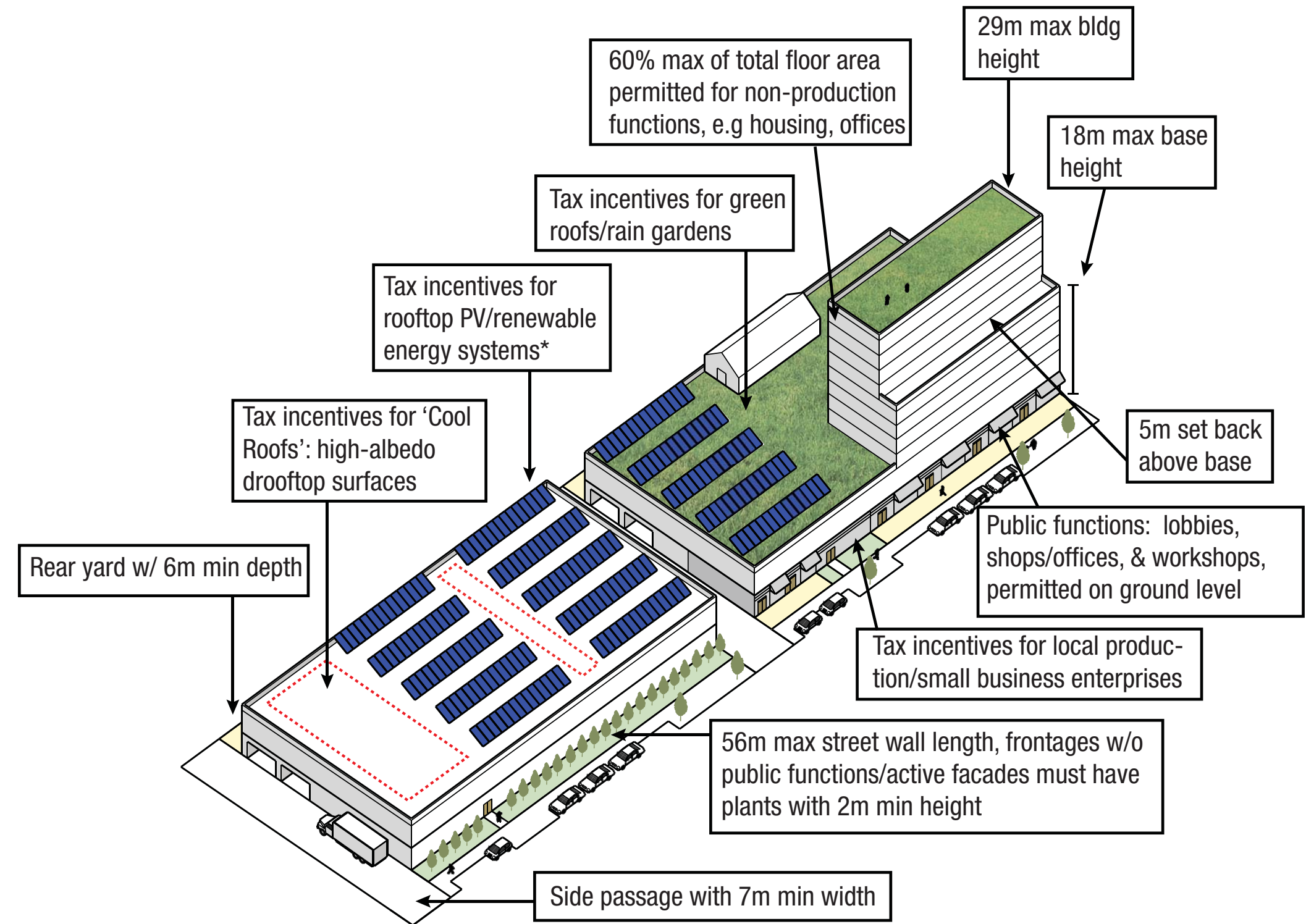
Fine-Grain Block & Lot Patterns



Mix of Land Uses & Functions

R3 // High-Density Residential District

Lot FAR (max): 5.0 Building Height (max): 29 m
Lot Coverage: 80% for corner lot, 60% for interior lot



Cohesive, Flood-Adaptive Public Spaces



Fine-Grain Block & Lot Patterns



Mix of Land Uses & Functions

M1 // Light Industrial Mixed-Use District

Lot FAR (max): 4.76 Building Height (max): 29 m
Lot Coverage: 80% for corner lot, 60% for interi-
or lot Base Height: 12m(min)-18 m(max)

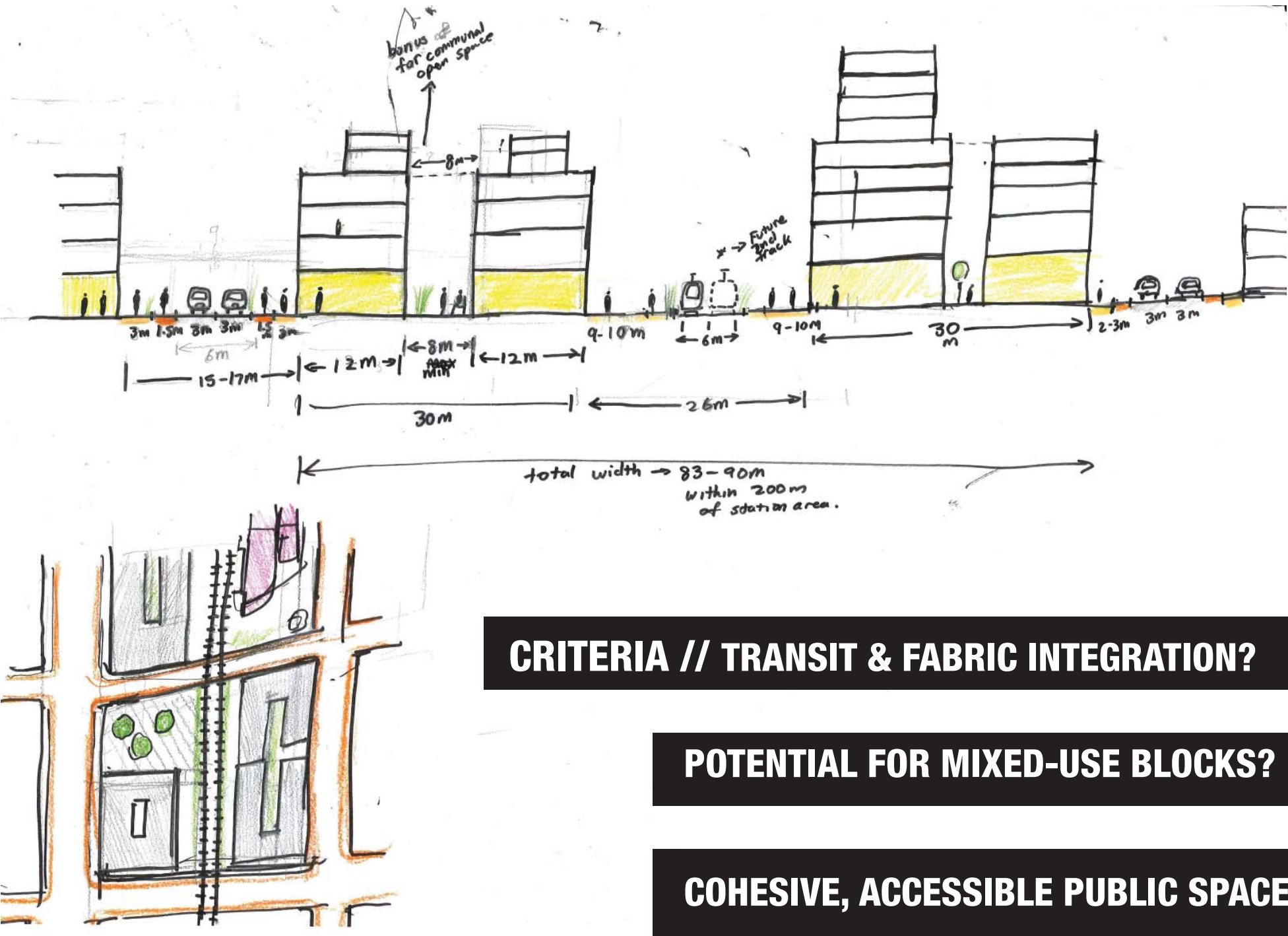
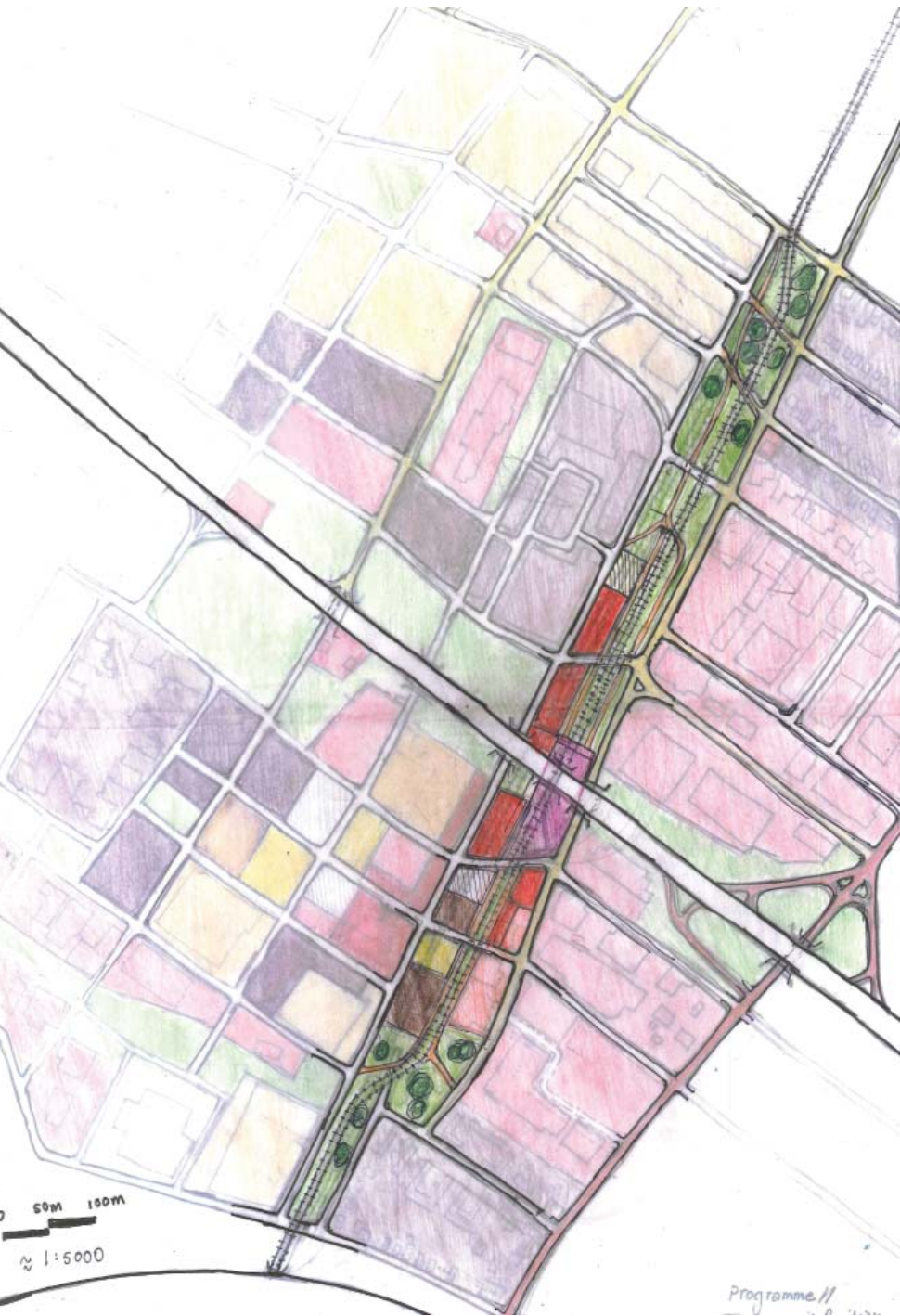
ADAPTABLE RULES CATALYSE LOCAL USERS & DEVELOPERS



Atlanta, USA // BeltLine

TRANSIT AS CORRIDOR ANCHOR



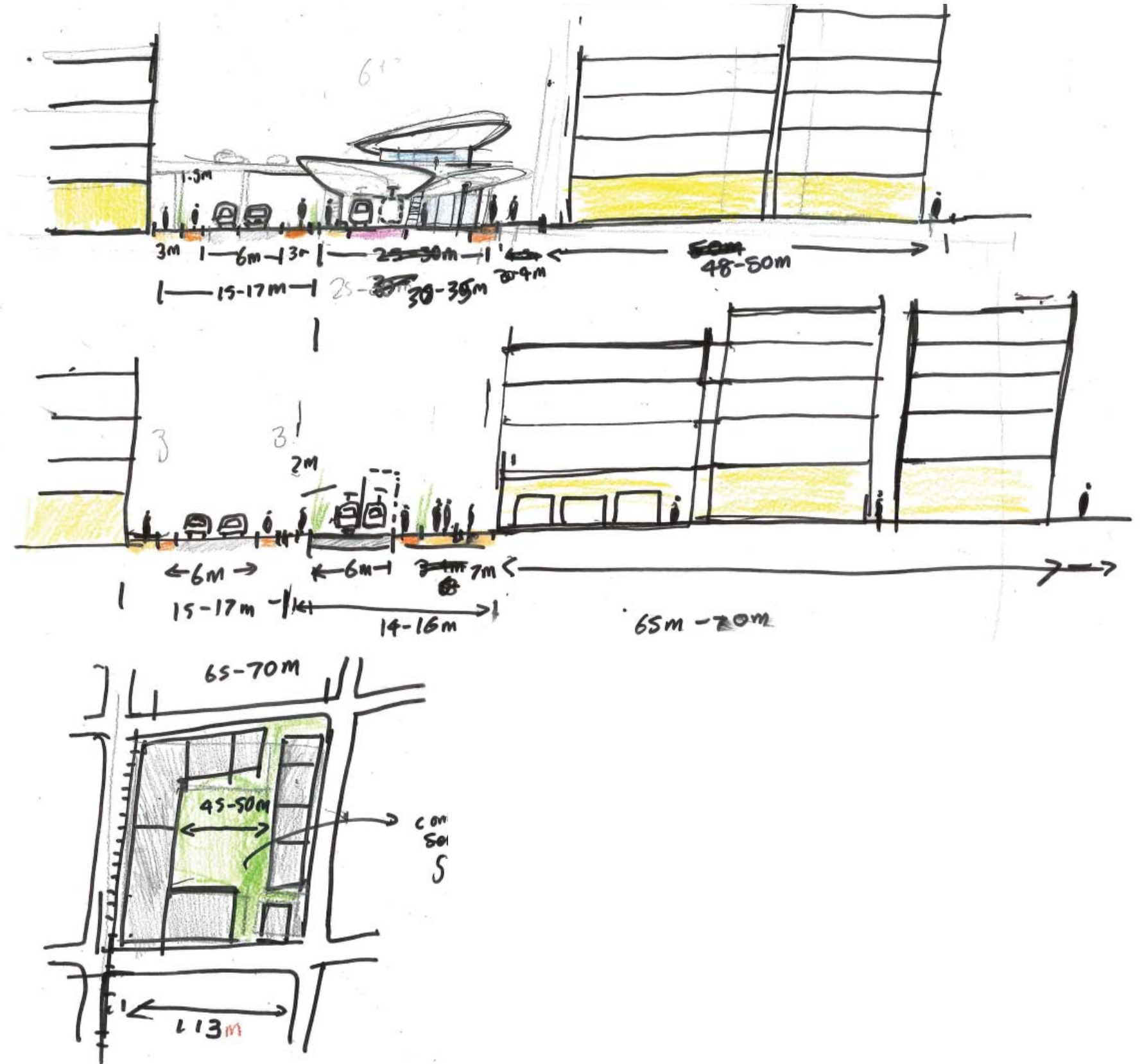


CRITERIA // TRANSIT & FABRIC INTEGRATION?

POTENTIAL FOR MIXED-USE BLOCKS?

COHESIVE, ACCESSIBLE PUBLIC SPACES?

BLOCKS TOO NARROW FOR SUFFICIENT MIXED-USE & PUBLIC SPACES



OPTIMAL PROPORTIONS & QUALITY FOR CORRIDOR



Station Corridor Structural Vision

Proposed Zoning Districts //

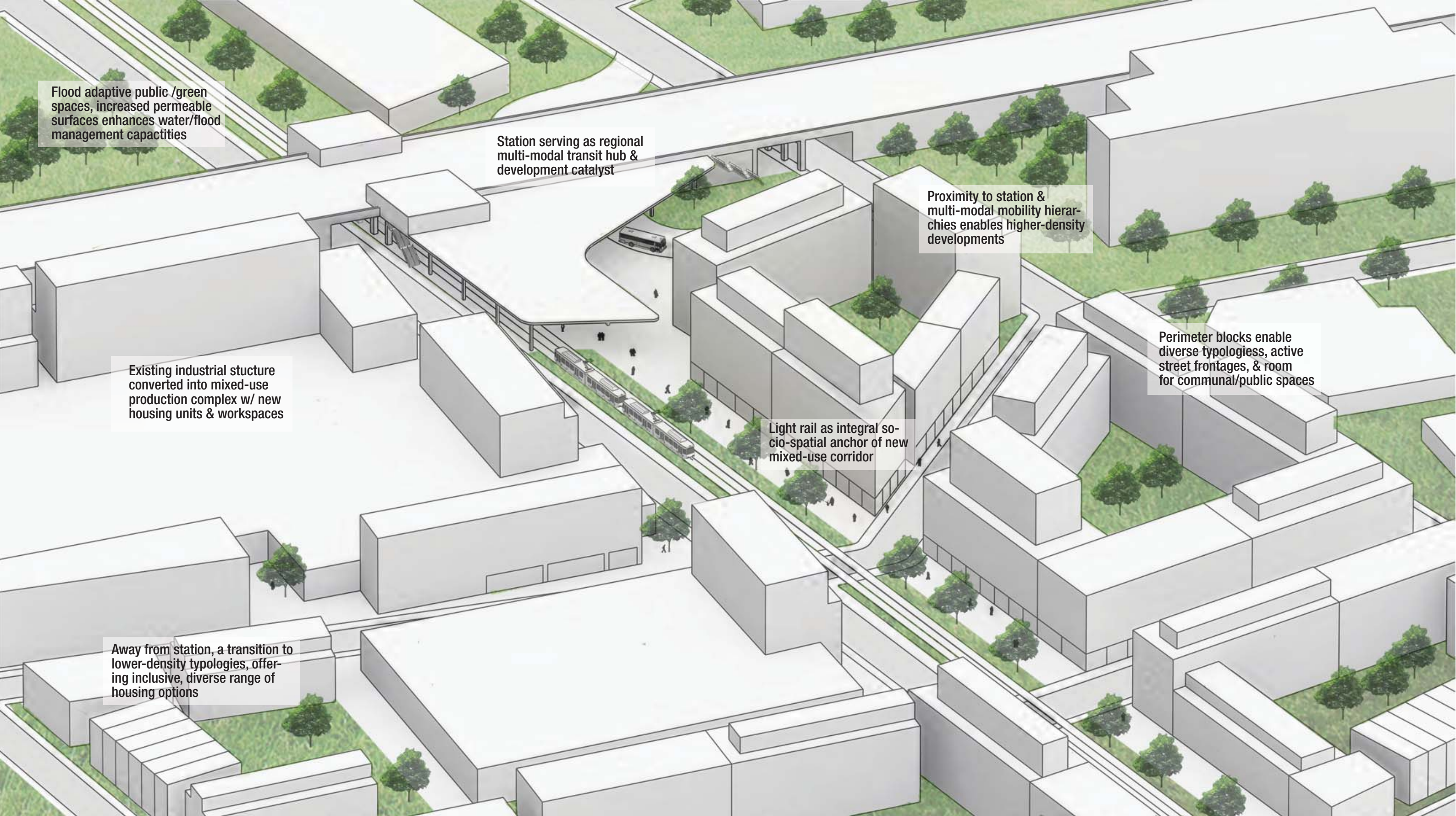
- R-X // Existing Residential
- RM-1 // Residential Mixed-Use
- C-X // Existing Commercial/Retail
- CM-1 // Commercial Mixed-Use Overlay
- PM-X // Existing Small-Scale Industrial
- PM-1 // Small-Scale Production Mixed-Use
- PM-X2 // Existing Large-Scale Production
- PM-2 // Large-Scale Production Mixed-Use

Integral Public Space & Mobility Systems //

- New Green Spaces
- Existing Green Spaces
- Highway
- Regional Arterial
- Local Arterial
- Collector Road
- Living(Local) Street
- Bike/Pedestrian Path

VALIDATES IMPORTANCE OF SPATIAL DESIGN EVALUATION

0m 200m 400m



Flood adaptive public /green spaces, increased permeable surfaces enhances water/flood management capacities

Station serving as regional multi-modal transit hub & development catalyst

Proximity to station & multi-modal mobility hierarchies enables higher-density developments

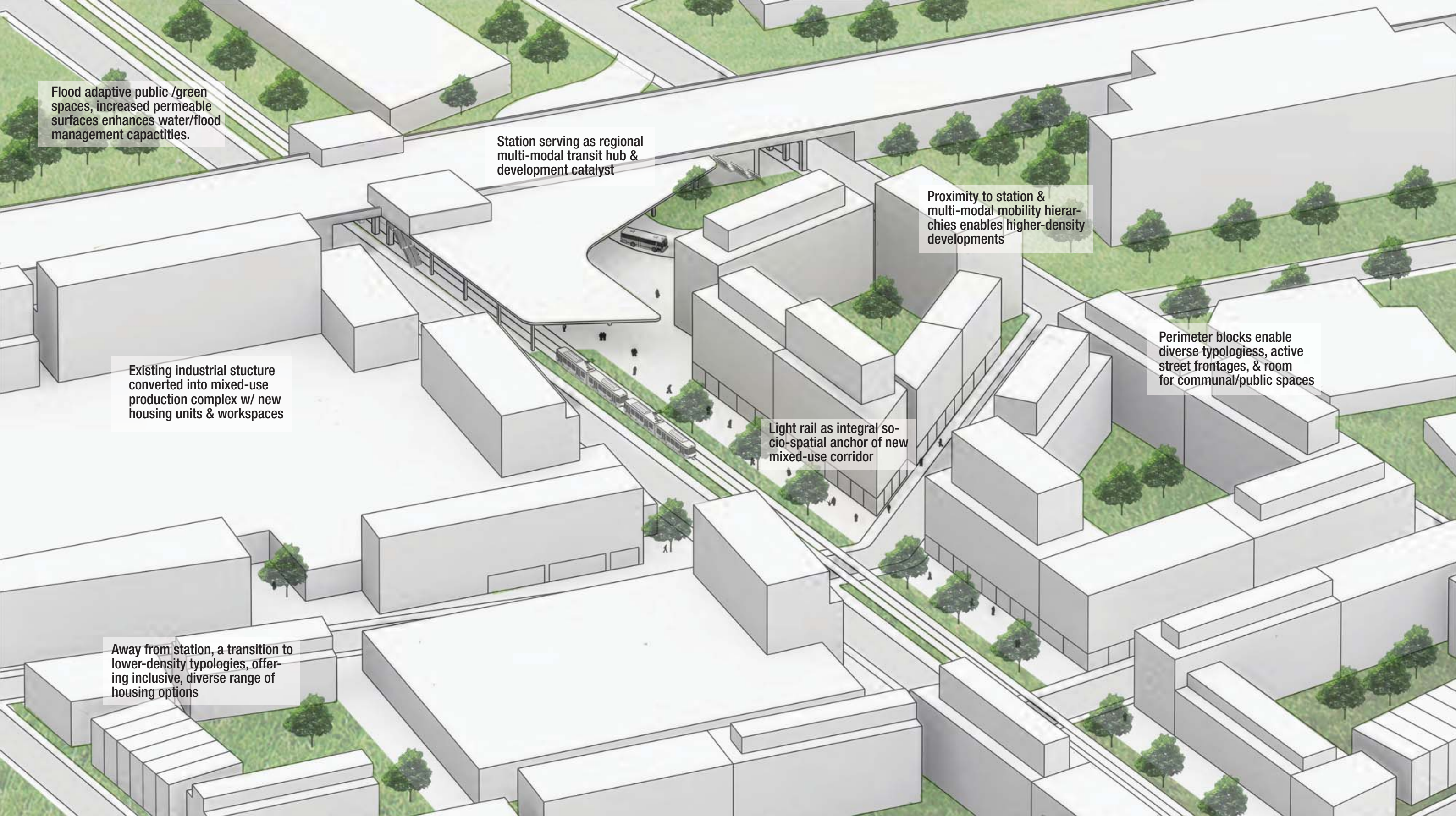
Perimeter blocks enable diverse typologies, active street frontages, & room for communal/public spaces

Existing industrial structure converted into mixed-use production complex w/ new housing units & workspaces

Light rail as integral socio-spatial anchor of new mixed-use corridor

Away from station, a transition to lower-density typologies, offering inclusive, diverse range of housing options

STATION CORRIDOR AS MIXED-USE ANCHOR & CATALYST



Flood adaptive public /green spaces, increased permeable surfaces enhances water/flood management capacities.

Station serving as regional multi-modal transit hub & development catalyst

Proximity to station & multi-modal mobility hierarchies enables higher-density developments

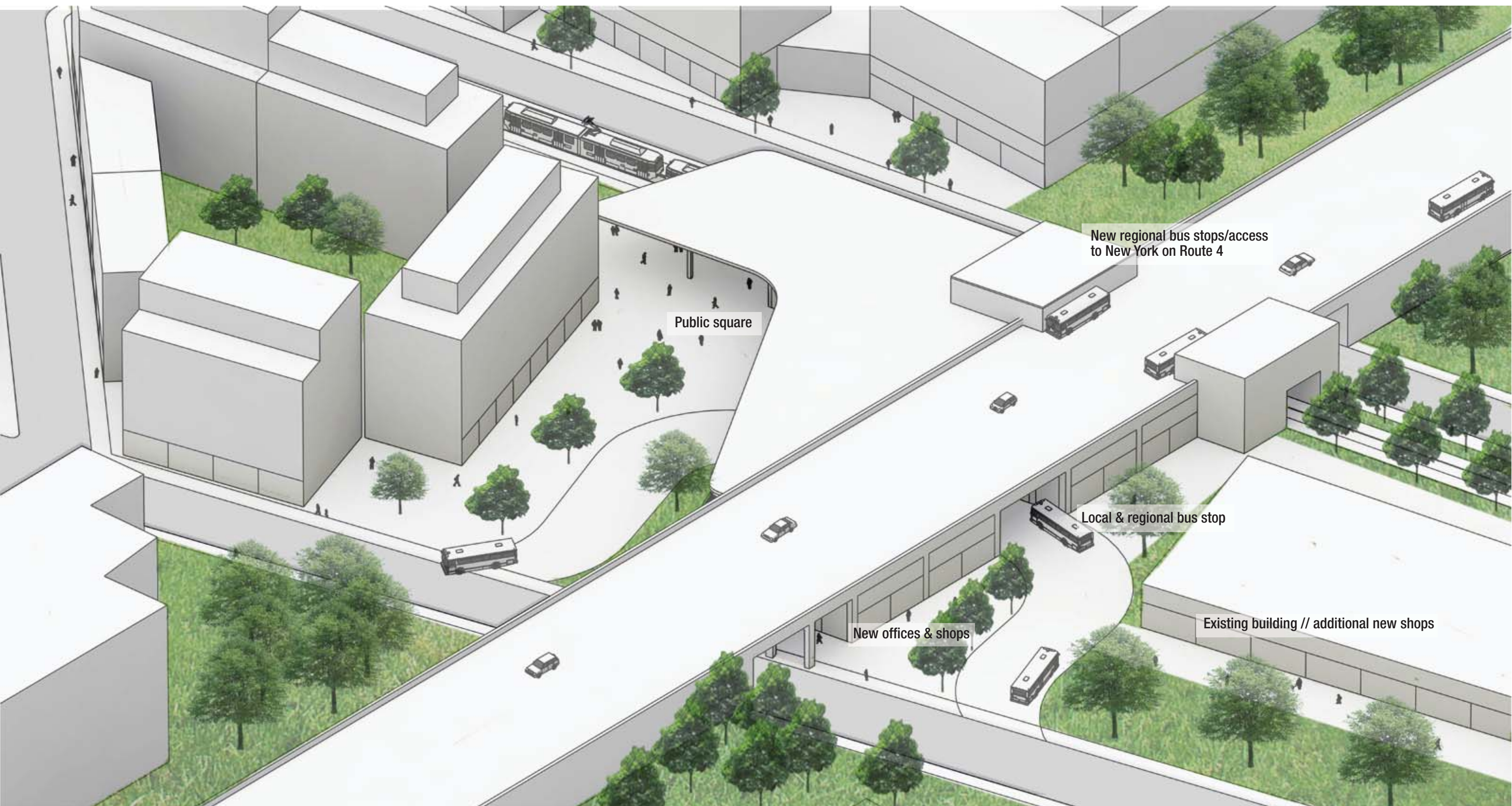
Existing industrial structure converted into mixed-use production complex w/ new housing units & workspaces

Perimeter blocks enable diverse typologies, active street frontages, & room for communal/public spaces

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Away from station, a transition to lower-density typologies, offering inclusive, diverse range of housing options



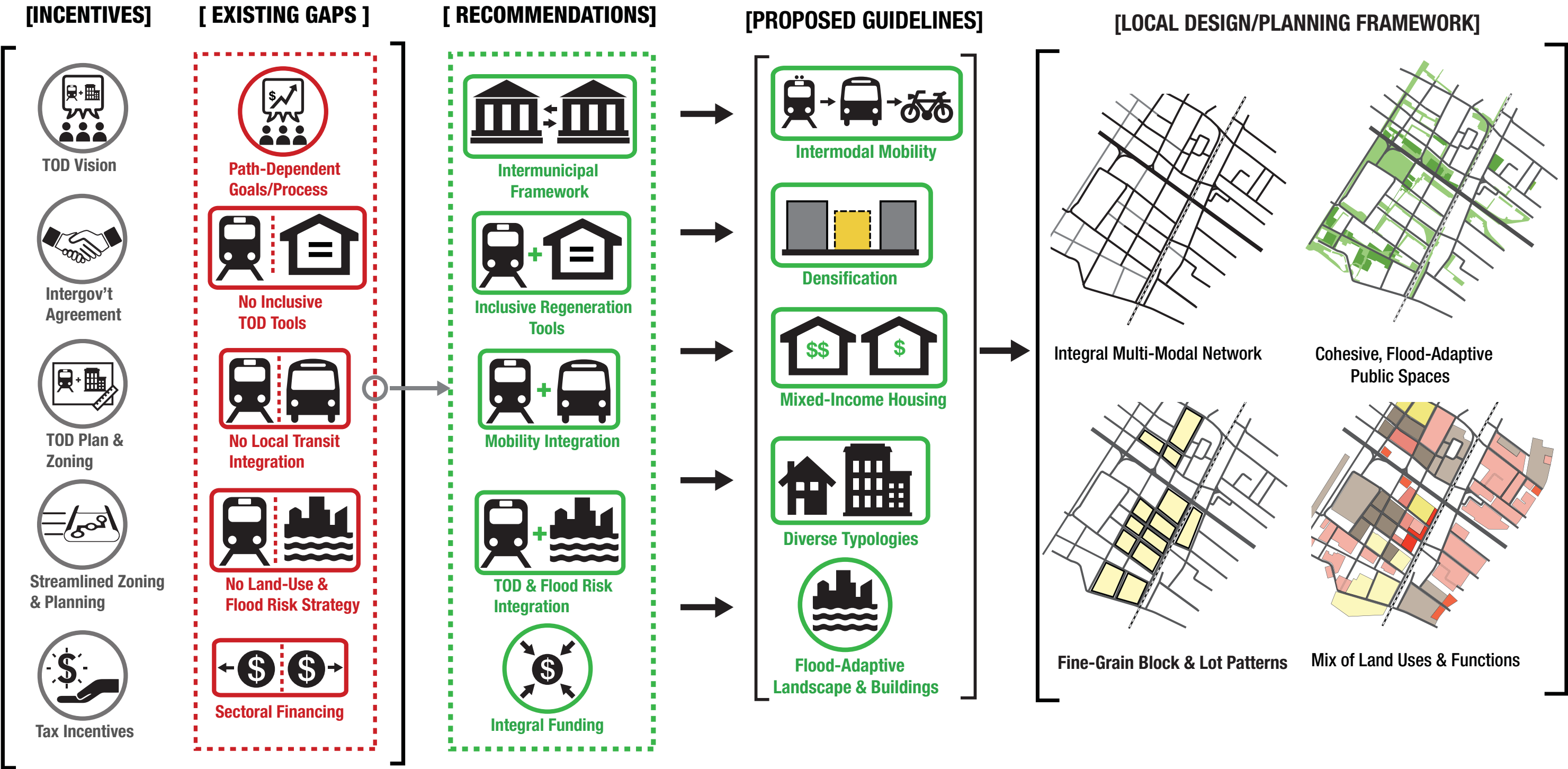


Transit Station Axonometric

STATION AS PROGRAMMATIC & MULTI-MODAL TRANSIT HUB



Station Corridor Perspective



INTEGRAL REGENERATION PROPOSAL AS FRAMEWORK

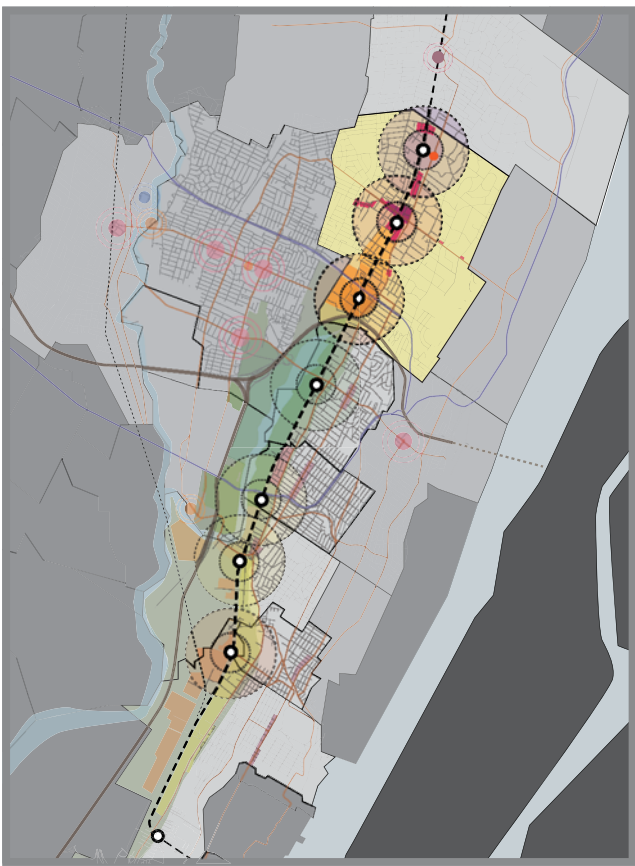
TOD + COMPREHENSIVE DEVELOPMENT STABILITY



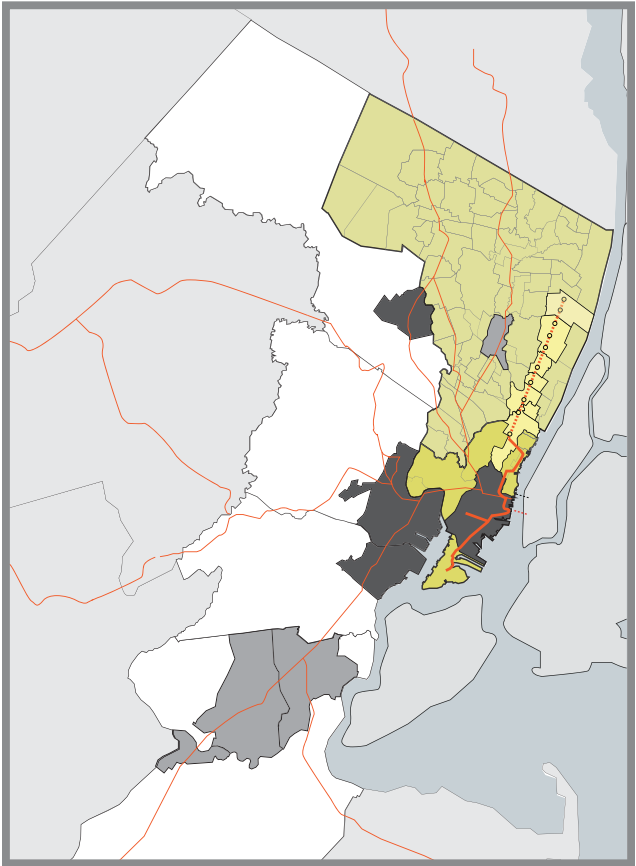
[STATION AREA]



[URBAN]



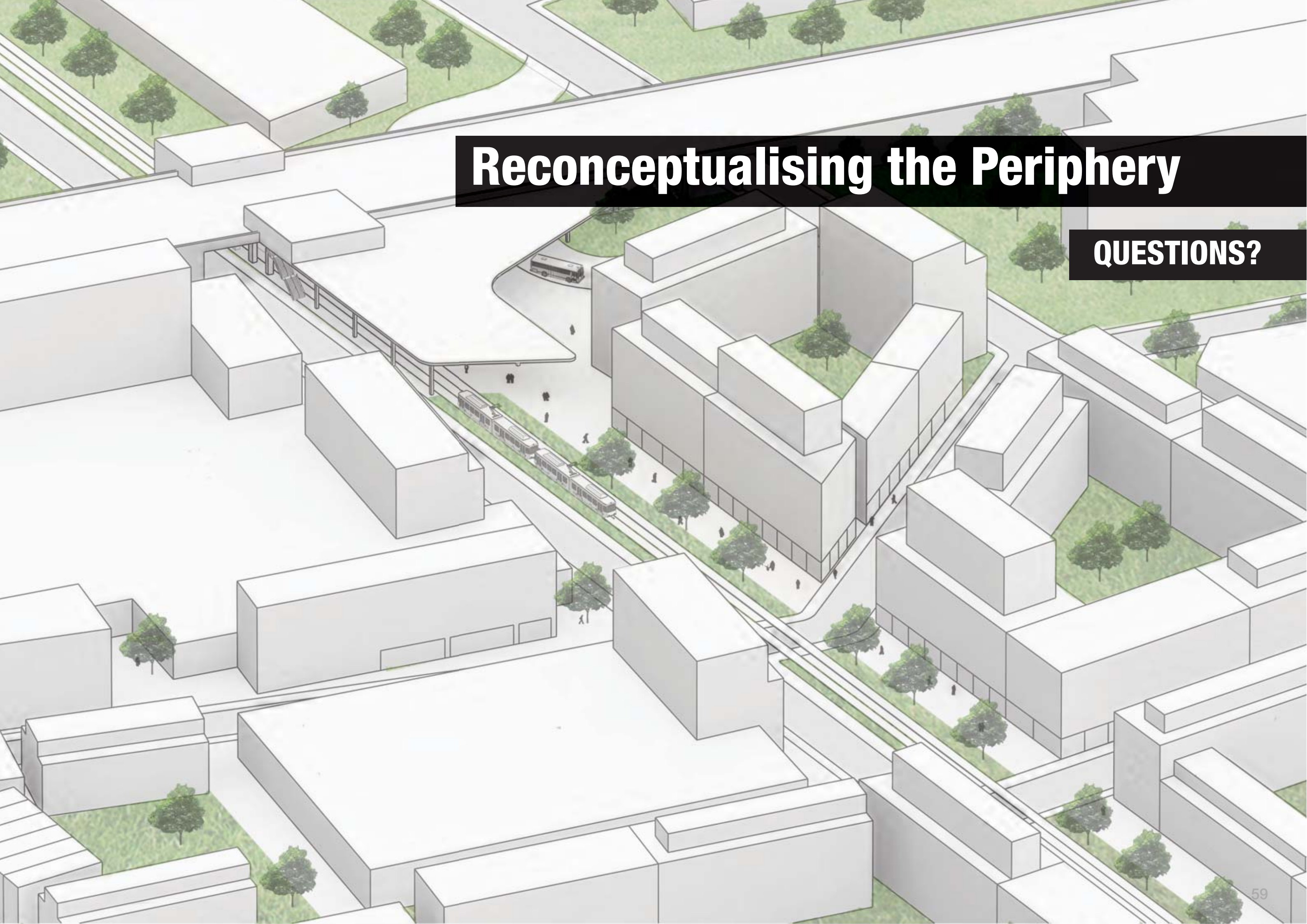
[INTERMUNICIPAL]



[METROPOLITAN]

LARGER DISCOURSE

POLITICAL WILL

An architectural rendering of a city street scene. In the center, a tram travels along a track. The street is lined with modern, multi-story buildings of varying heights and widths. Pedestrians are shown walking on the sidewalks. There are green spaces with trees interspersed among the buildings. A bus is visible in the background on a side street. The overall style is clean and illustrative, typical of urban planning presentations.

Reconceptualising the Periphery

QUESTIONS?