

# LEED for Neighborhood Development: a holistic strategy for sustainable planning and redevelopment

Global Green USA  
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## SUSTAINABLE NEIGHBORHOODS:

1. Are in the right place
2. Facilitate non-motorized forms of mobility, principally walking and biking
3. Have a dense street grid with multiple connections both within the neighborhood and at its border
4. Have a diversity of uses, enabling daily needs to be met on foot
5. Provide housing types for multiple income levels and stages in life
6. Make provisions for the local production and/or procurement of healthy food
7. Reuse and adapt existing buildings while preserving historic ones
8. Provide opportunities for buildings to share energy and water infrastructure
9. Incentivize or require buildings to consume fewer natural resources

## 1. ARE IN THE RIGHT PLACE

- Infill or
- Adjacent to existing development of no less than 7 du/acre, or
- Have adequate transit service, or
- Within ½ mile walk distance of at least seven distinct neighborhood services, and
- Do not encroach on sensitive habitat and avoid areas prone to flooding



1

Lawrence Dodd architect



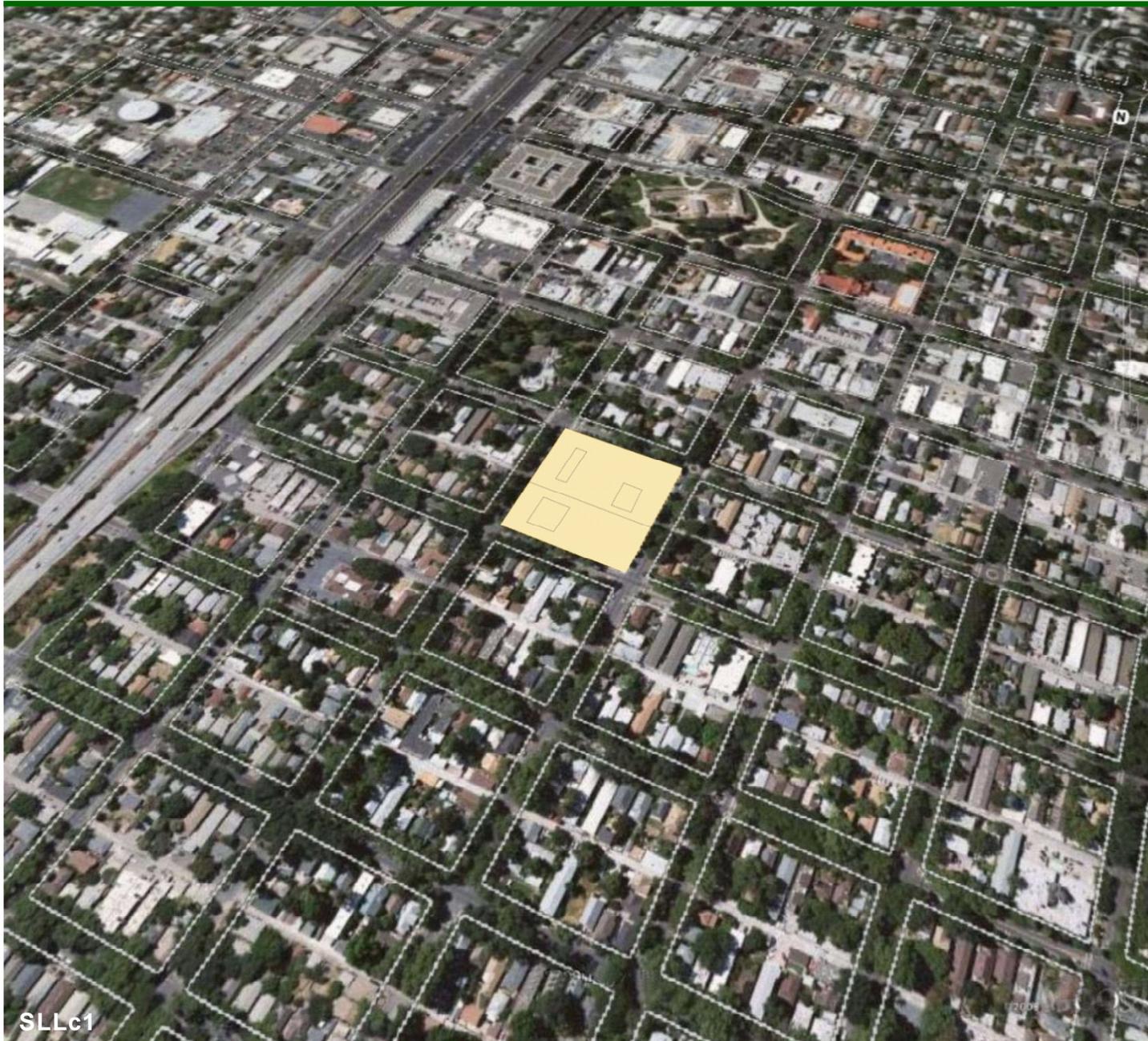
3



2

1. infill
2. adequate transit service
3. adjacent to existing development

# Location & Linkages



**5**

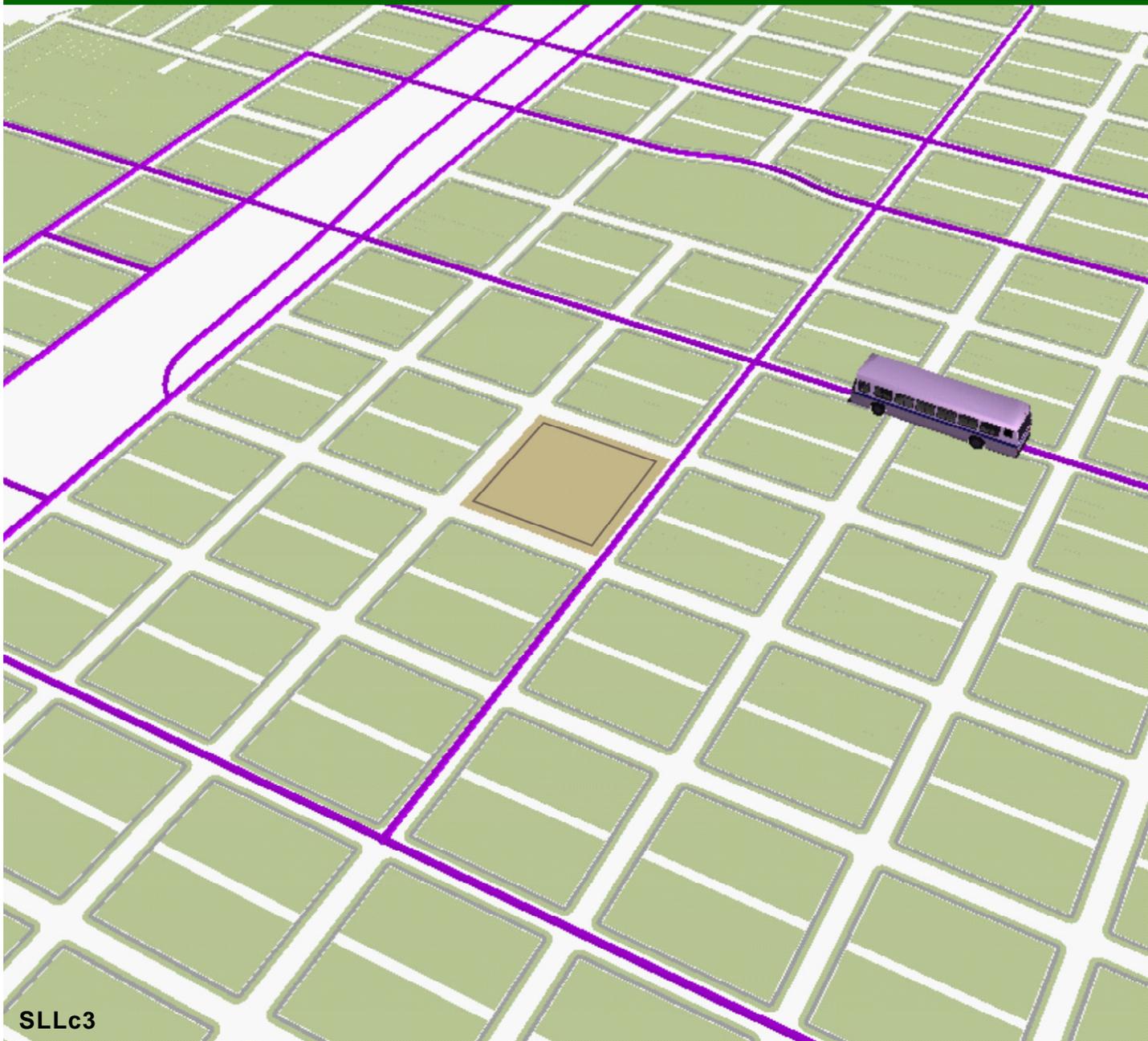
Points

***Infill &  
Previously  
Developed  
Site***

**630**

CO<sub>2</sub> lbs/capita/year

# Location & Linkages



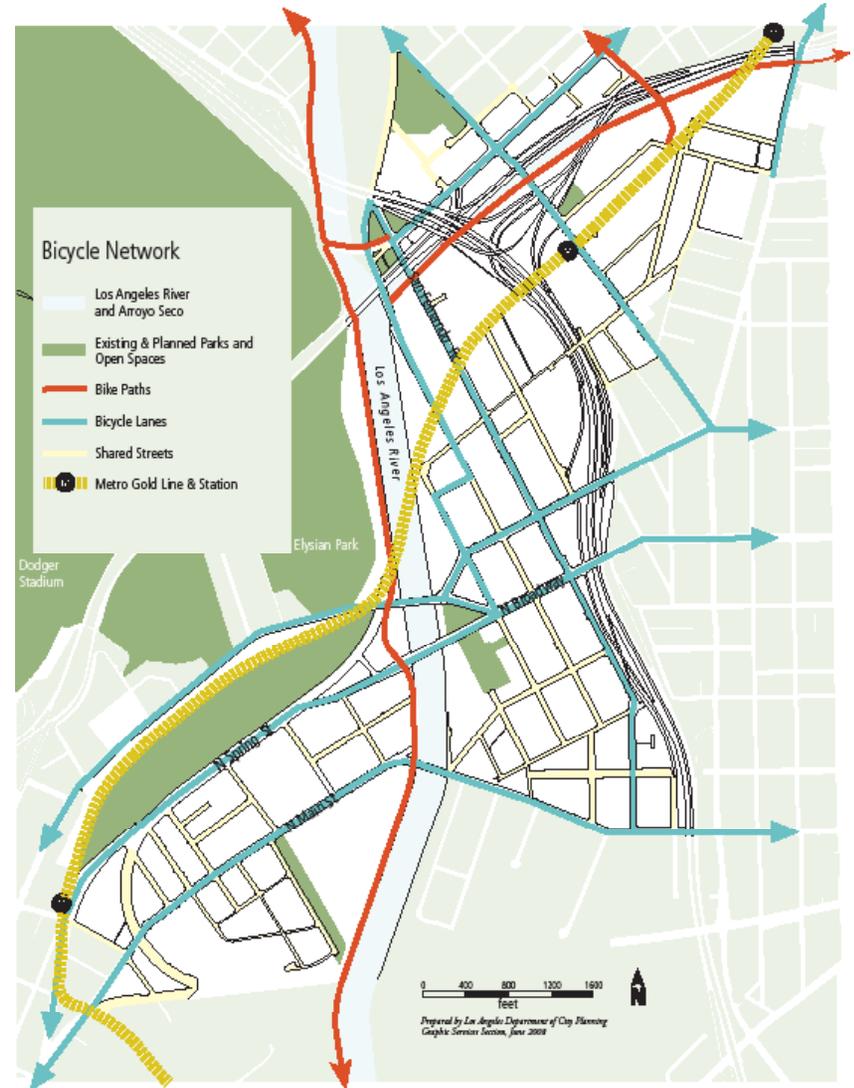
**7**  
Points

***Transit  
Served  
Area***

**890**  
CO<sub>2</sub> lbs/capita/year

## 2. FACILITATE NON-MOTORIZED FORMS OF MOBILITY, PRINCIPALLY WALKING AND BIKING

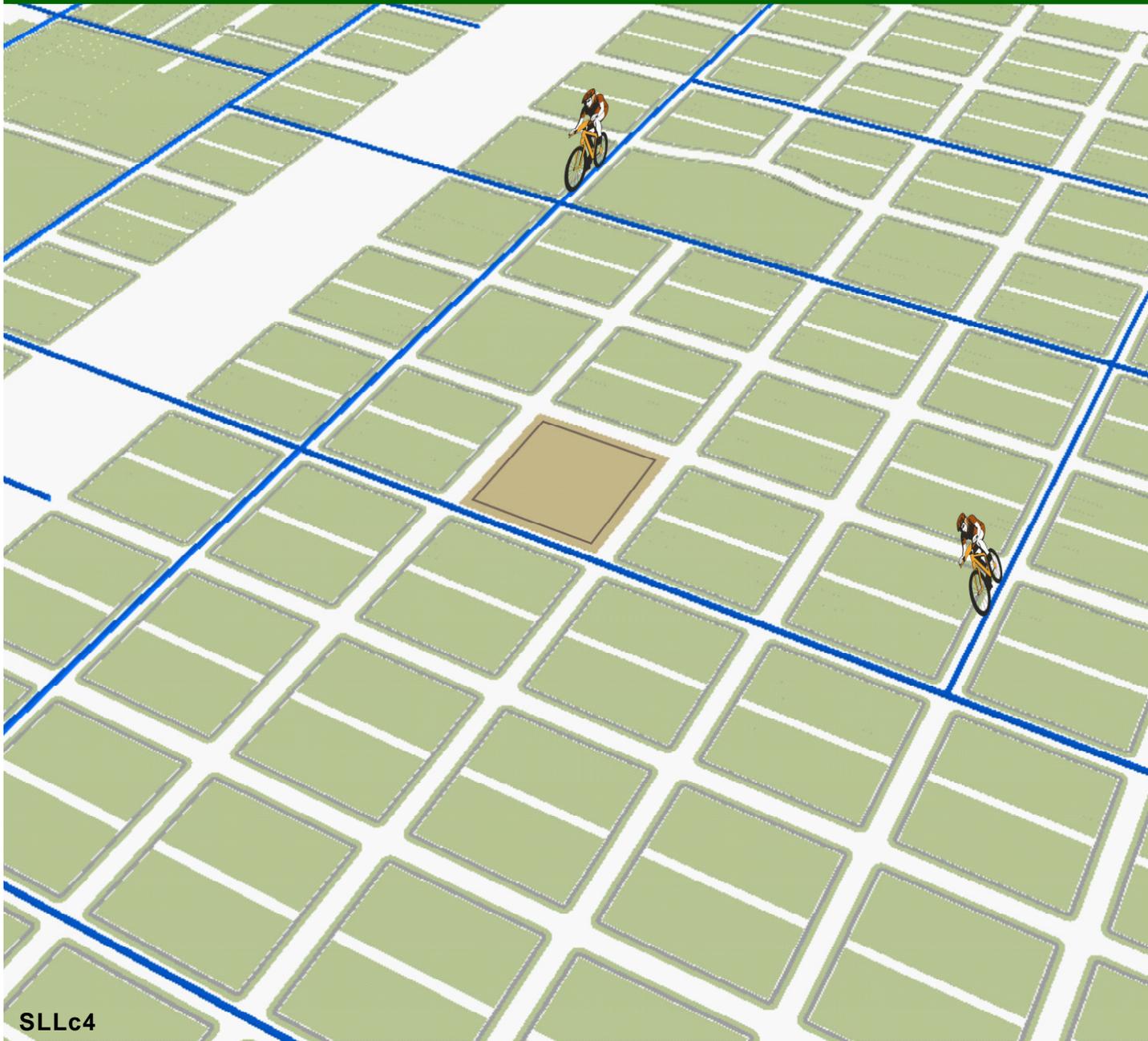
- A network of bicycle lanes (or streets with auto speeds slow enough for safe biking) that connect to major job centers or transit hubs and provisions for safe and secure bike parking and storage
- Buildings facades and entrances that face streets or public spaces (but not parking lots)
- Continuous sidewalks
- Streets that are narrow enough to comfortably cross and slow down automobile traffic
- On-street parking
- Limited building setbacks
- Street trees at intervals no greater than 40 ft.





walking

# Location & Linkages



**1**

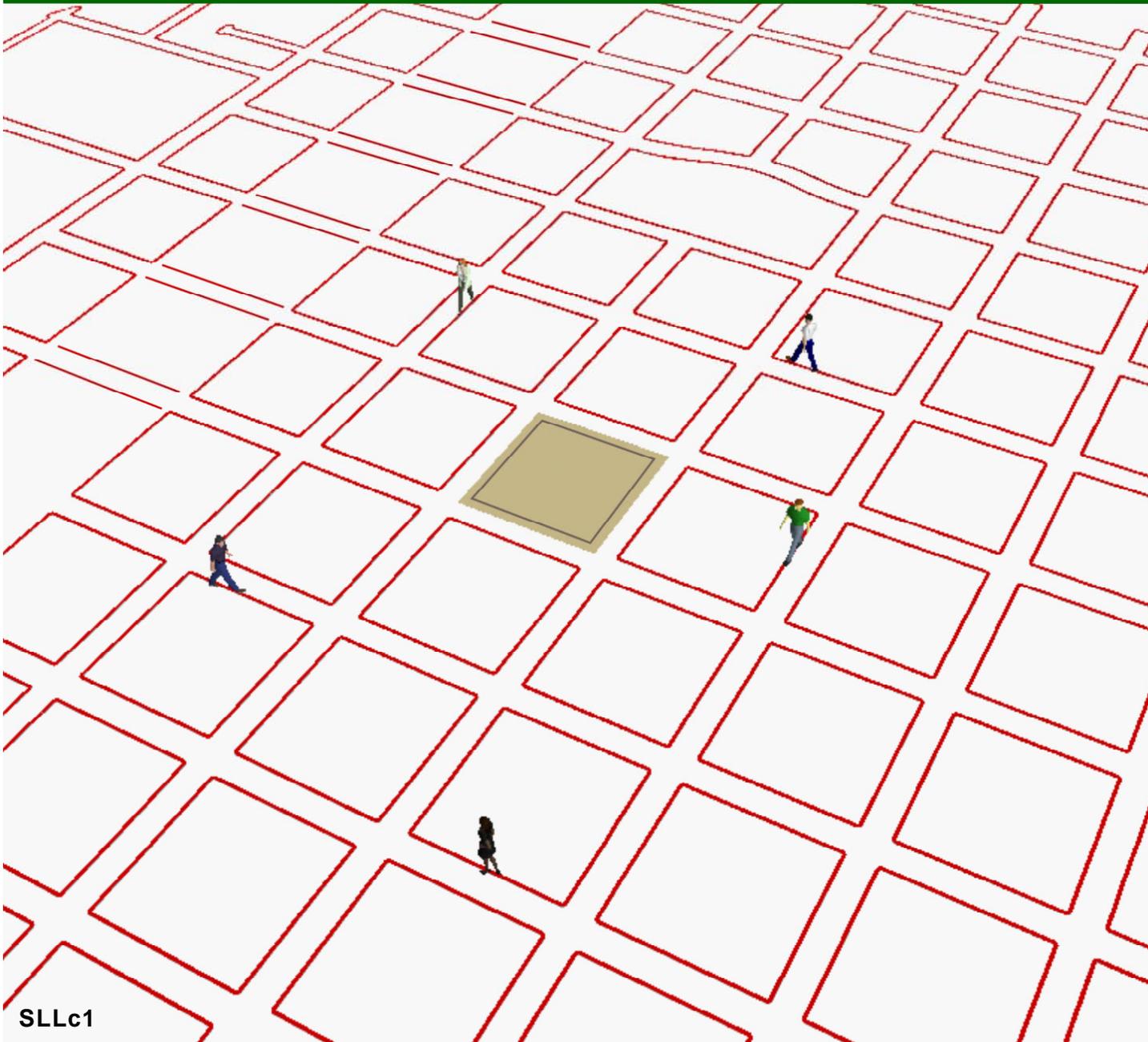
Point

***Bikeable  
Vicinity***

**320**

CO<sub>2</sub> lbs/capita/year

# Location & Linkages



**5**

Points

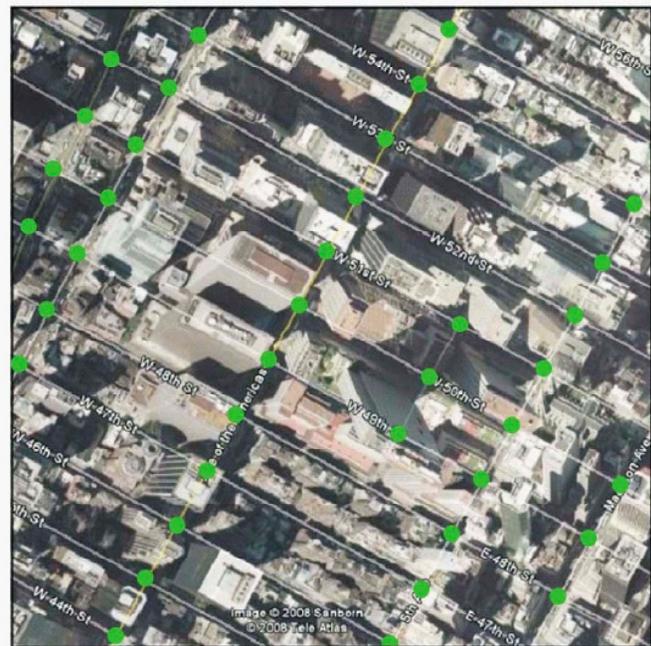
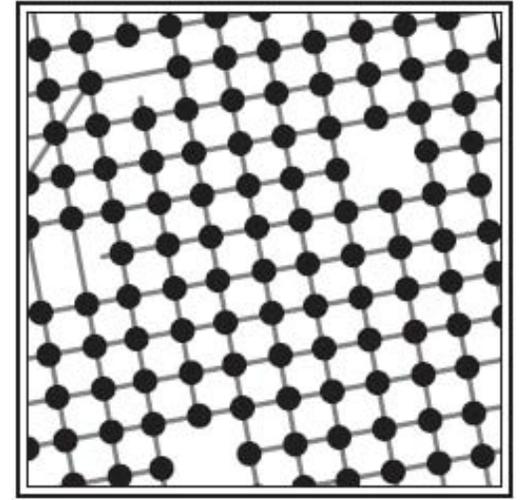
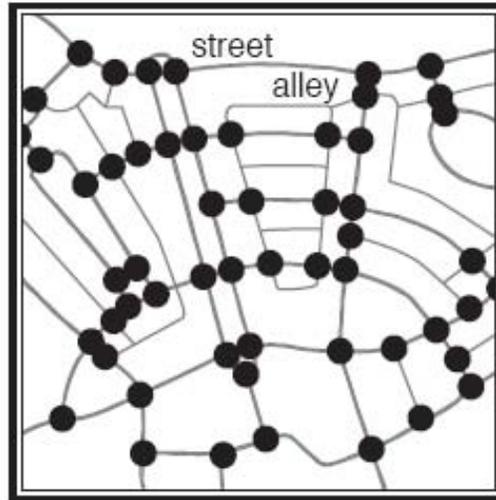
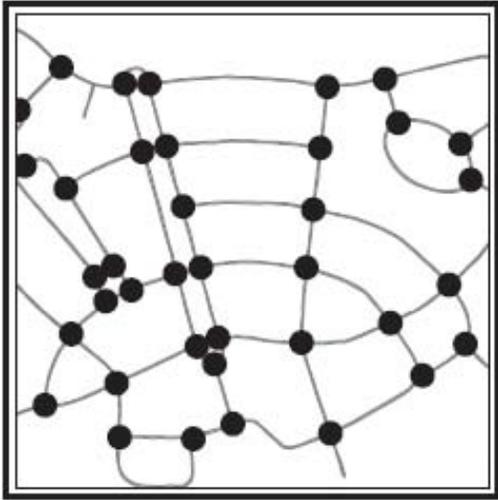
***Walkable  
Vicinity***

**1,100**

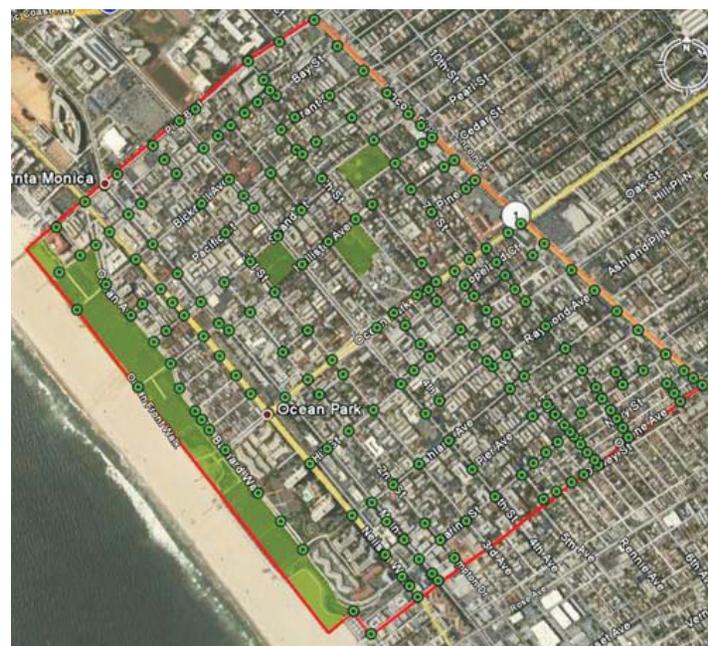
CO<sub>2</sub> lbs/capita/year

### 3. HAVE A DENSE STREET GRID WITH MULTIPLE CONNECTIONS BOTH WITHIN THE NEIGHBORHOOD AND AT ITS BORDER

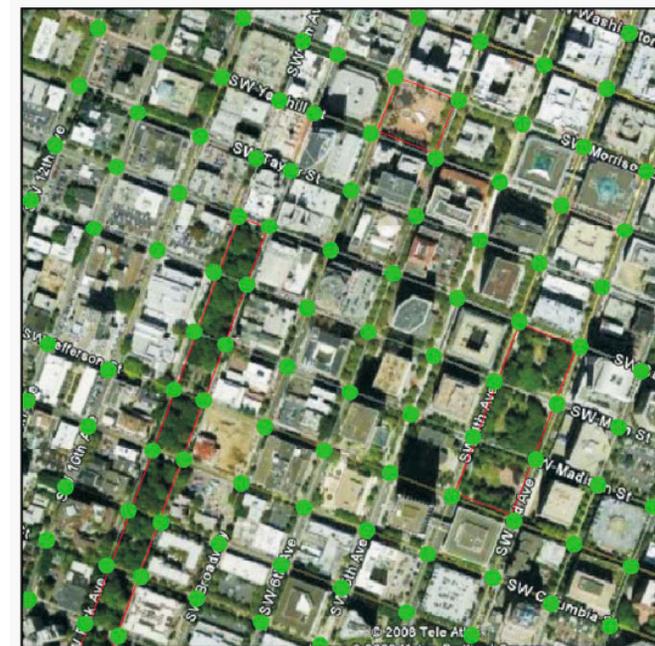
- External connections at a minimum of every 800 feet
- Internal connectivity of at least 150 intersections/square mile (intersections that lead to cul-de-sacs don't count!)



Manhattan | 152



Santa Monica | 316



Portland | 442

external connections at a minimum of every 800 feet  
 internal connectivity of at least 150 intersections per sq mile

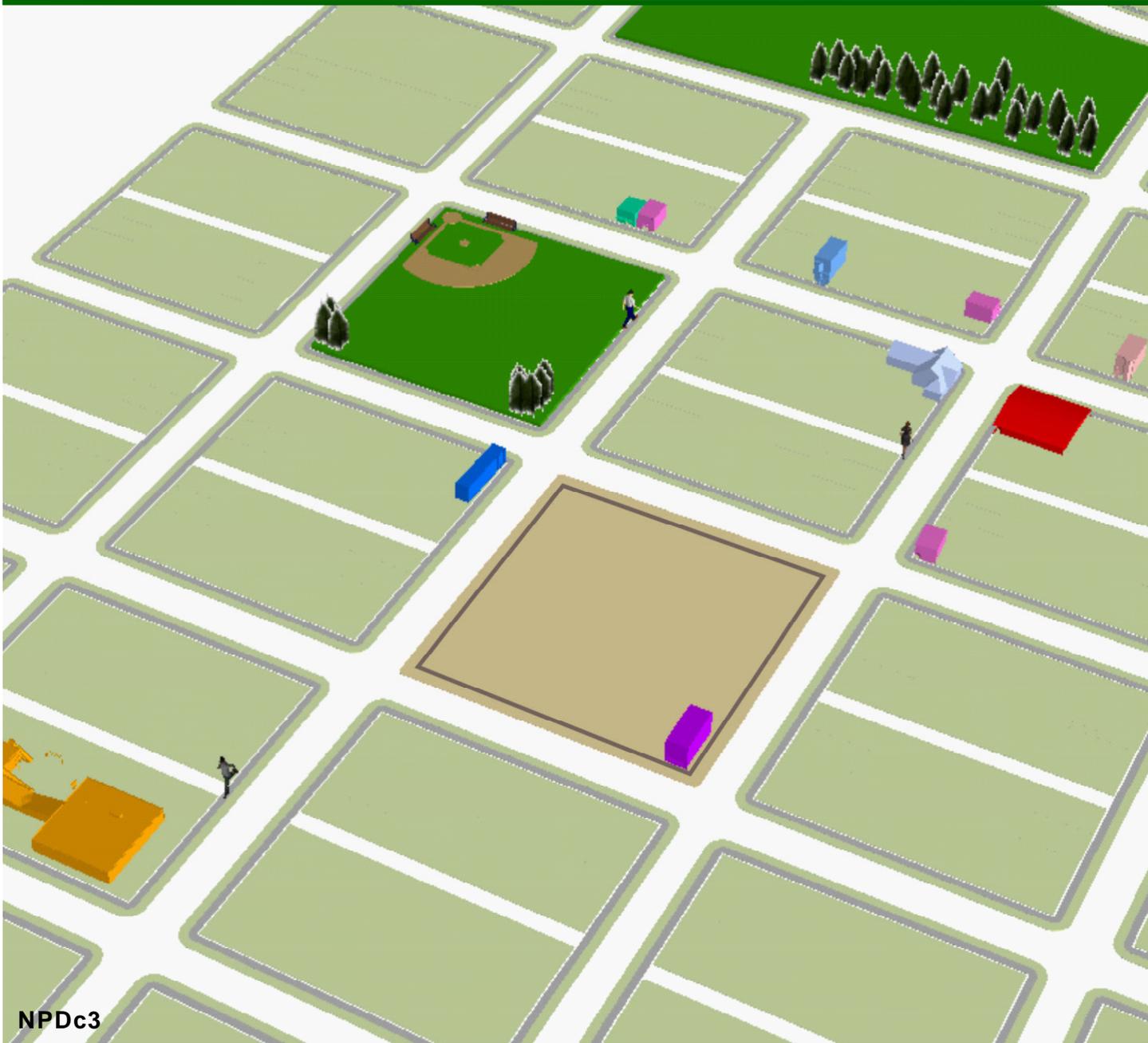
## 4. HAVE A DIVERSITY OF USES, ENABLING DAILY NEEDS TO BE MET ON FOOT

- Within ½ mile walk distance of at least seven distinct neighborhood services that are located in clusters of at least three services



half-mile walk distance of seven neighborhood services

# Pattern & Design



**4**  
Points

***Diverse  
Neighborhood  
Assets***

**300**  
CO<sub>2</sub> lbs/capita/year

## 5. PROVIDE HOUSING TYPES FOR MULTIPLE INCOME LEVELS AND STAGES IN LIFE

- Have enough architectural diversity to serve students and young singles, families with children, empty-nesters, and the elderly
- Have at least 20% of rental units or 10% of for-sale units for households making 80% or less of AMI

Individual/Family



Special Needs



Senior



First-time Buyers



Sweat Equity



Workforce



architectural diversity  
economic diversity

## 6. MAKE PROVISIONS FOR THE LOCAL PRODUCTION AND/OR PROCUREMENT OF HEALTHY FOOD

- Prohibit CC&Rs and discourage zoning that ban the growing of produce
- Set aside at least 60 sf of community gardening space (in a walkable location) for every dwelling unit
- Identify space for regular farmers markets and encourage their development



prohibit regulation that bans growing of produce  
set aside community gardening space  
identify space for regular farmers markets

## 7. REUSE AND ADAPT EXISTING BUILDINGS WHILE PRESERVING HISTORIC ONES

- During redevelopment, set a goal of preserving at least 20% of existing building stock
- Discourage zoning obstacles to adaptive reuse except for strategic economic situations (e.g. preservation of jobs)
- Preserve all historic buildings, defined as listed or eligible to be listed as historic landmarks



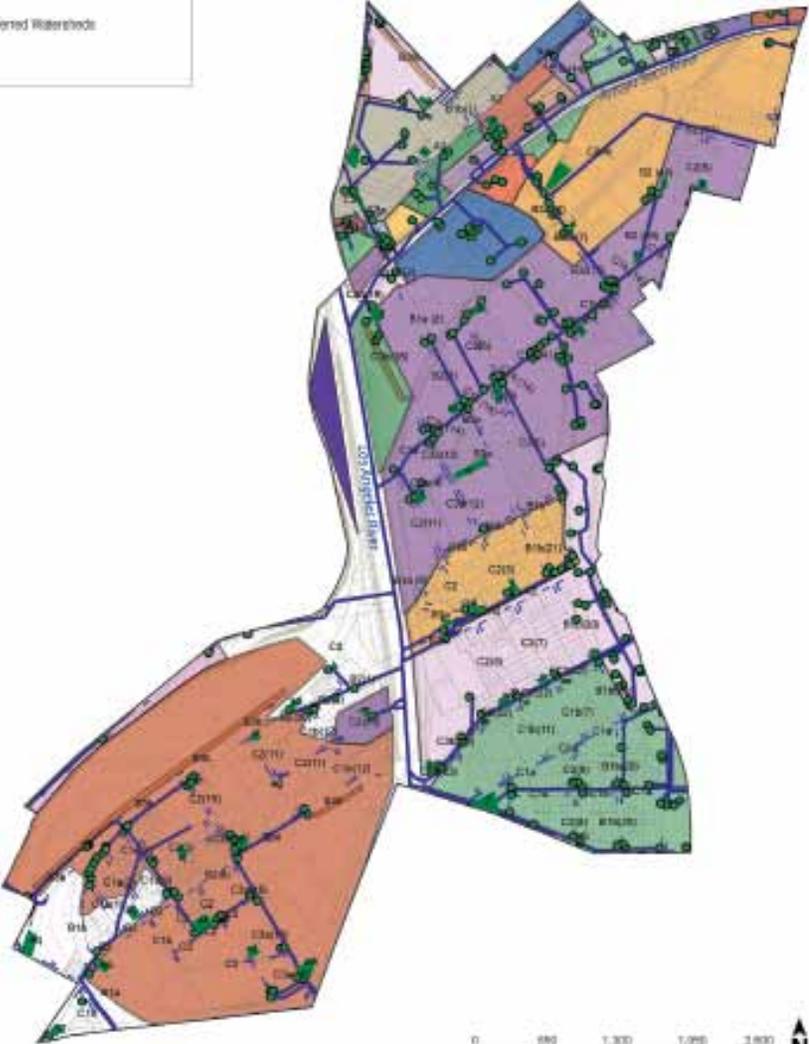
discourage zoning obstacles to adaptive reuse

## 8. PROVIDE OPPORTUNITIES FOR BUILDINGS TO SHARE ENERGY AND WATER INFRASTRUCTURE

- Make investments in localized stormwater and district energy infrastructure so that the burden of pursuing best practices (principally stormwater infiltration and efficient or renewable power generation) can be shared and economies of scale exploited

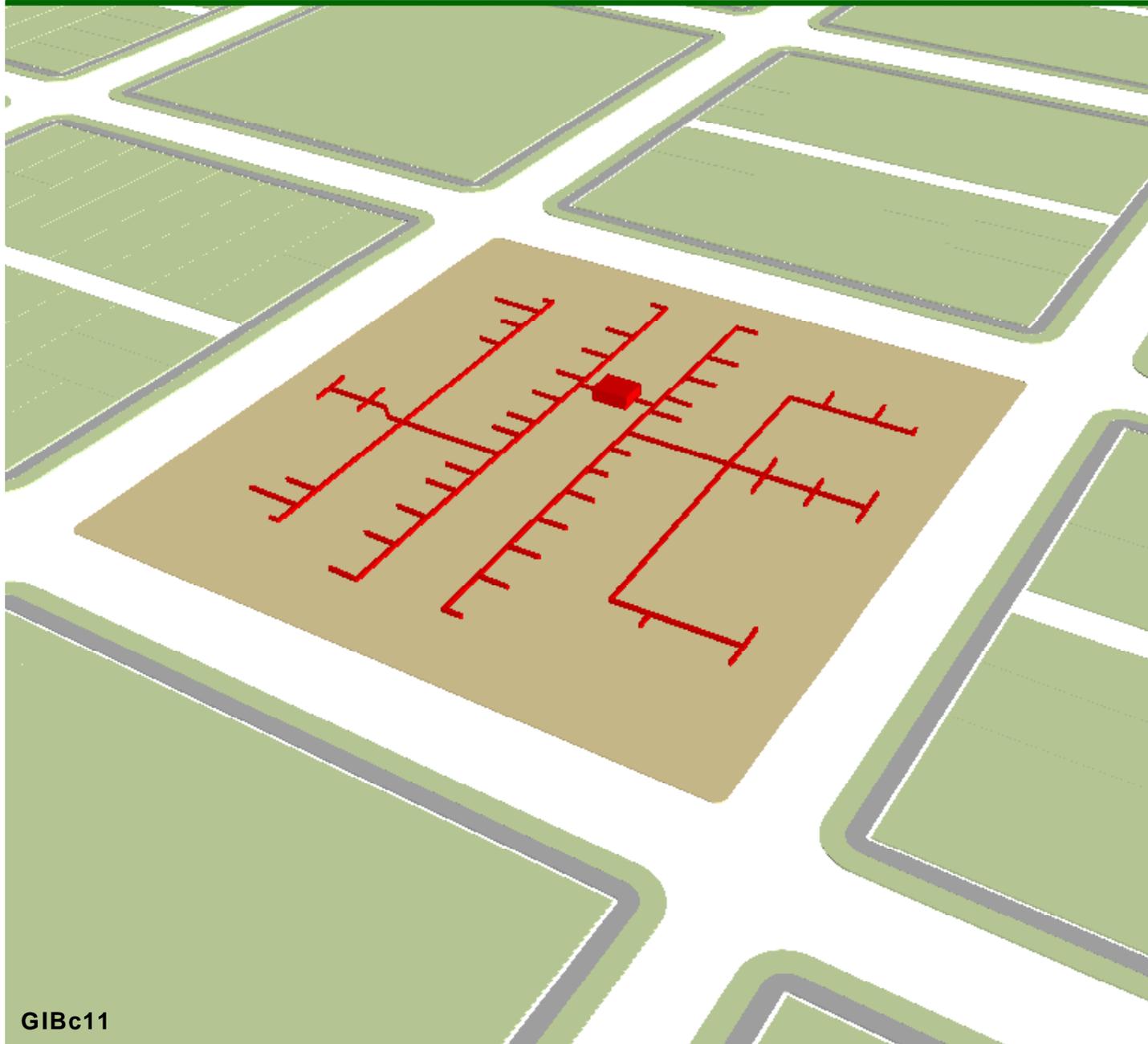
Existing Drainage Conditions

- Storm Drains
- Storm Drain Inlets
- Surface Runoff Flow Direction
- Inferred Watersheds



investment in localized stormwater

# Infrastructure & Buildings



**2**

Points

***District  
Heating &  
Cooling***

**1,230**

CO<sub>2</sub> lbs/capita/year

# Infrastructure & Buildings



8

Points

***Building  
Energy  
Efficiency  
&  
Reuse***

**2,140**

CO<sub>2</sub> lbs/capita/year

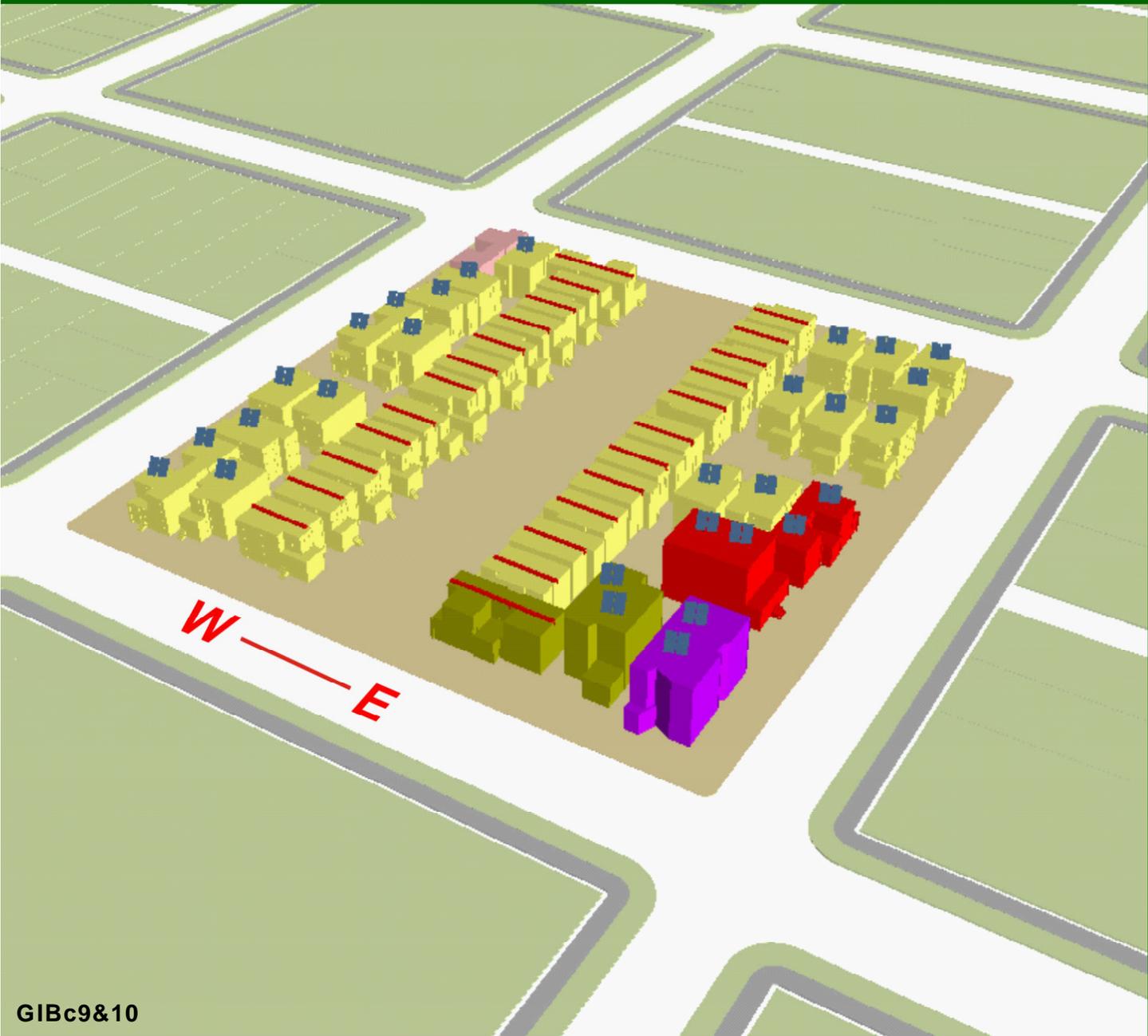
## 9. INCENTIVIZE OR REQUIRE BUILDINGS TO CONSUME FEWER NATURAL RESOURCES

- Require buildings in which agency has an investment, to get certified through a credible, third-party green building program
- Incentivize buildings in areas over which agency has jurisdiction, to get certified



incentivize buildings in jurisdiction to get certified

# Infrastructure & Buildings

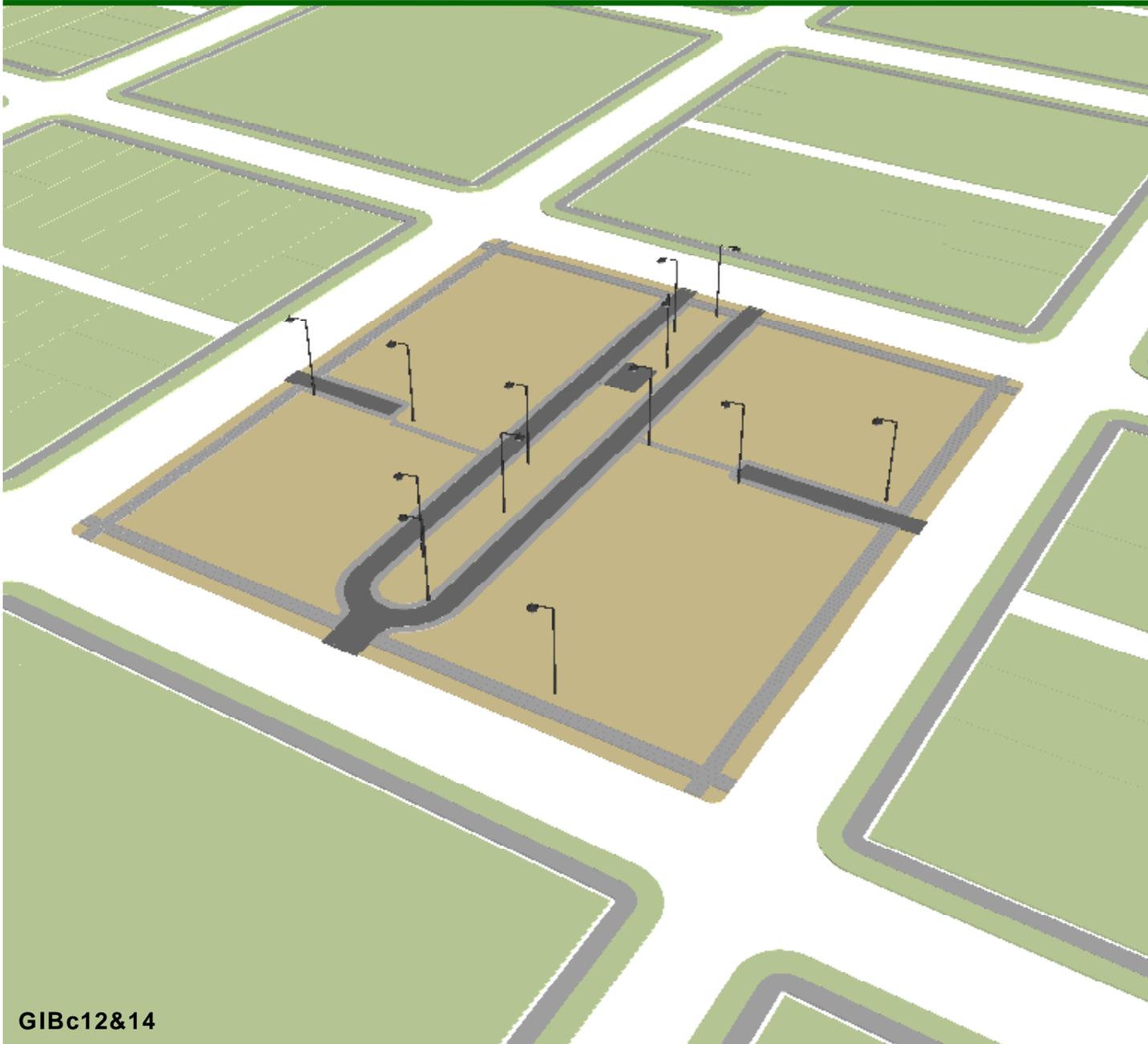


**4**  
Points

*Solar  
Orientation  
&  
Power*

**1,090**  
CO<sub>2</sub> lbs/capita/year

# Infrastructure & Buildings



**2**

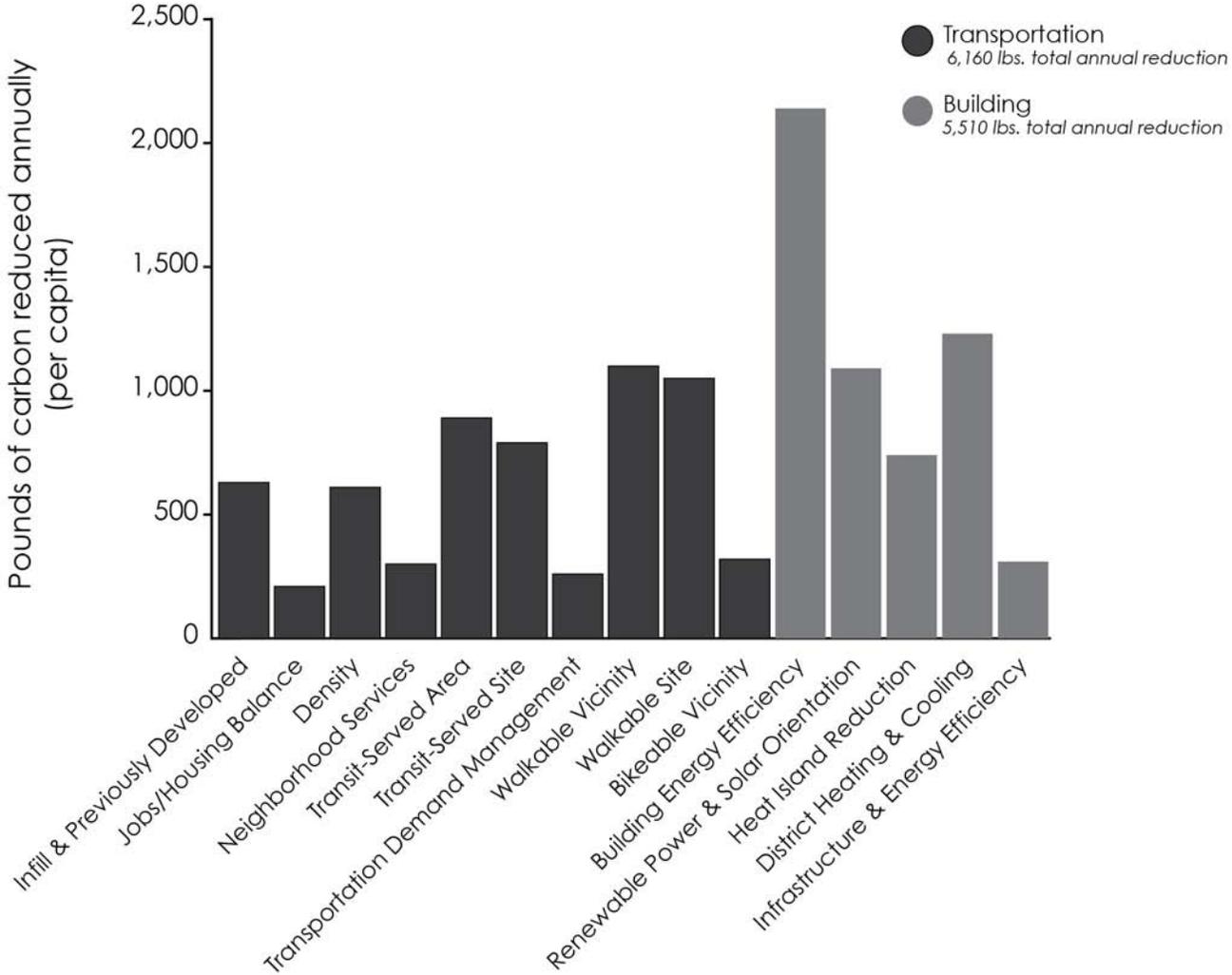
Points

***Infrastructure  
Energy  
Efficiency  
&  
Recycled  
Content***

**310**

CO<sub>2</sub> lbs/capita/year

# Potential Carbon Emission Reduction for Various Project Elements



# MIRAFLORES | RICHMOND, CA

Richmond Redevelopment Agency  
brownfield - former commercial nursery site

**LEED ND certified or silver**

16 acres

160 town homes

61 1 bedroom rentals

110 senior affordable



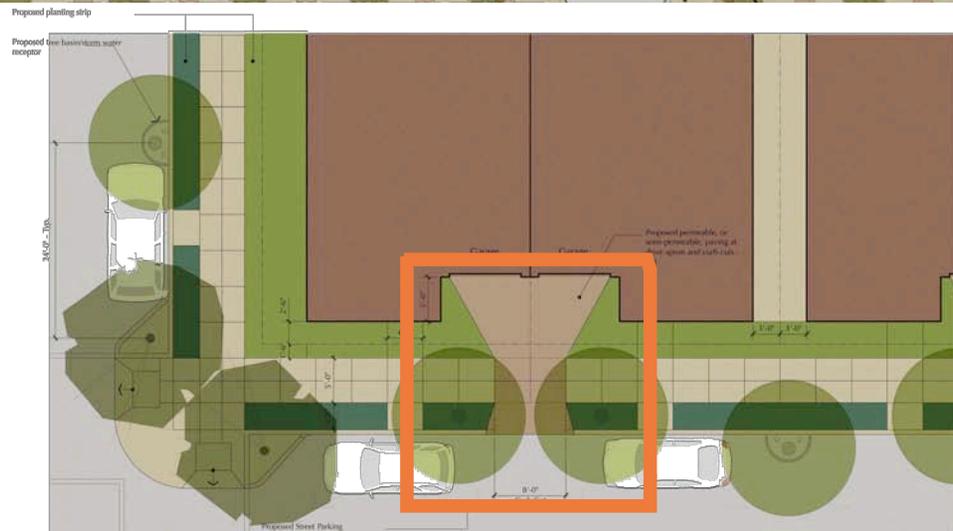


existing conditions

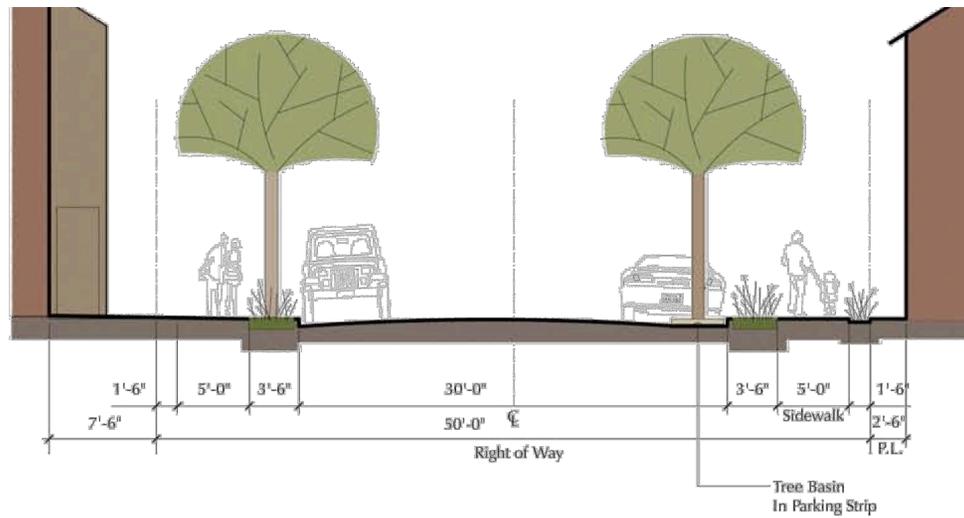




greenway for urban agriculture

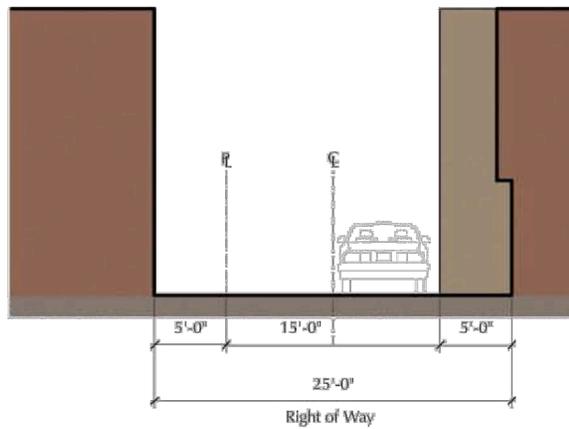


pedestrian sidewalks: drive alleys + curb cuts



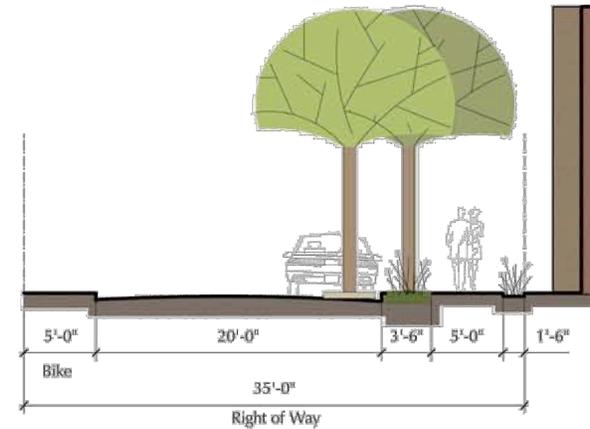
Proposed 50'-0" Street Right of Way Section

Scale: 3/16" = 1'-0"



Proposed 25'-0" Street Right of Way Section

Scale: 3/16" = 1'-0"



Proposed 35'-0" Street Right of Way Section

Scale: 3/16" = 1'-0"



separation of vehicular and pedestrian traffic



historic preservation



**Greenway Features**

**Open Space**—

- An urban agricultural amenity to the both the specific miraflores community as well as the richmond community as a whole
- Innovative development as an interactive site which 'demonstrates the connections between community health, sustainable agriculture, metropolitan infrastructure and growth housing and regional land use'—SAGE mission statement
- Agricultural infrastructure would be determined by both the stakeholders of this community, public agencies, our team of architects and designers with experienced forums such as SAGE + 4th
- Ultimate goal: establishing an economically self sufficient site which nurtures the surrounding urban infrastructure
- Promote the use of bicycles as form of local transportation to and from this site, with a bike hut which offers instruction on building, repairing and maintaining bikes of all types

**Baxter Creek**

- Mitigation and rejuvenation of Baxter Creek
- Development of a program that offers organized interactive participation with local educational institutions both public and private, as well as community based programs which focus on experiential interstices with nature within the urban infrastructure

**Children's Ground**

- devoted to the benefit of children through experiential play. This site will be 85' by 50' located within the core are of the Miraflores Development

**Land Of The Miraflores Development**

- Development of the gardens throughout the development of Miraflores as an opportunity to honor the historical significance of this land by the Japanese community as an economic agricultural use
- Each street would be planted with trees of a distinct variety of flowering cherry...thus offering to our community a visible cultural landscape, which has both memory, meaning and beauty
- Employ the most sustainable forms of paving which reflect current understanding of the most effective forms of drainage and water conservation

## Proposed Housing Blocks

- (A) 30 Ground Floor Units, 14 Possible Third Floor Units, 34 Covered Parking Spaces
- (B) 17 Ground Floor Units, 10 Possible Third Floor Units, 21 Covered Parking Spaces
- (C) 9 Ground Floor Units, 14 Covered Parking Spaces
- (D) 27 Ground Floor Units, 7 Possible Third Floor Units, 30 Covered Parking Spaces
- (E) 20 Ground Floor Units, 8 Possible Third Floor Units, 32 Covered Parking Spaces
- (F) 13 Ground Floor Units, 10 Possible Third Floor Units, 16 Covered Parking Spaces
- (G) 18 Ground Floor Units, 6 Possible Third Floor Units, 36 Covered Parking Spaces
- (H) 10 Ground Floor Units, 20 Covered Parking Spaces
- (I) 4 Single-Family Homes, 8 Covered Parking Spaces
- (J) 6 Ground Floor Units, 4 Possible Third Floor Units, 8 Covered Parking Spaces
- (K) 11 Ground Floor Units, 2 Possible Third Floor Units, 14 Covered Parking Spaces

## Development Features

- 1 Existing Cell Tower to Remain with Landscaping Buffer Screen
- 2 Proposed Dense Evergreen Tree Buffer along Edge of Site
- 3 Proposed 6'-0" wide bike path and vehicular access lane to connect to existing path and greenways
- 4 Proposed two and three story Craftsman-style town homes around a central courtyard. Units feature single-car garages accessed from an alley or the street. Typical lot sizes range from 25'-0" x 50'-0" to 30'-0" x 54'-0".
- 5 Proposed two and three story Spanish-Mediterranean style town homes around a central courtyard. Units feature single-car garages accessed from an alley or the street. Typical lot sizes range from 25'-0" x 50'-0" to 30'-0" x 54'-0".
- 6 Proposed two and three story Spanish-Mediterranean style town homes around a central drive court with tuck-under parking. Typical lot sizes range from 25'-0" x 50'-0" to 30'-0" x 54'-0".
- 7 Proposed two and three story single-family, Craftsman-style homes with enclosed parking. Typical lot size is 25'-0" x 50'-0".
- 8 Proposed alleys, drive courts, and additional parking paved in permeable, or semi-permeable, paving.
- 9 Restored Sakai house, water tower, water tank, and greenhouse #20.
- 10 Proposed tot lot, parking, and community park.
- 11 Programmed open space and economic agricultural enterprise zone including possible new greenhouses and supporting structures.
- 12 Proposed agricultural staging area and parking.
- 13 Restored Baxter Creek.
- 14 Possible commercial development opportunity area for local services.
- 15 Traffic Calming Features including bulb-outs and landscaped traffic circles.

housing diversity



creek daylighting